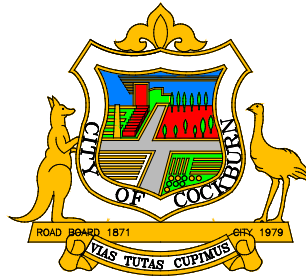


# **CITY OF COCKBURN**



## **ORDINARY COUNCIL**

## **AGENDA PAPER**

### **FOR**

**THURSDAY, 14 SEPTEMBER 2017**

# CITY OF COCKBURN

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## **CITY OF COCKBURN**

### **AGENDA TO BE PRESENTED TO THE ORDINARY COUNCIL MEETING TO BE HELD ON THURSDAY, 14 SEPTEMBER 2017 AT 7:00 PM**

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- 1. DECLARATION OF MEETING**
- 2. APPOINTMENT OF PRESIDING MEMBER (If required)**
- 3. DISCLAIMER (To be read aloud by Presiding Member)**

Members of the public, who attend Council Meetings, should not act immediately on anything they hear at the Meetings, without first seeking clarification of Council's position. Persons are advised to wait for written advice from the Council prior to taking action on any matter that they may have before Council.

- 4. ACKNOWLEDGEMENT OF RECEIPT OF WRITTEN DECLARATIONS OF FINANCIAL INTERESTS AND CONFLICT OF INTEREST (by Presiding Member)**
- 5. APOLOGIES AND LEAVE OF ABSENCE**
- 6. WRITTEN REQUESTS FOR LEAVE OF ABSENCE**
- 7. RESPONSE TO PREVIOUS PUBLIC QUESTIONS TAKEN ON NOTICE**
- 8. PUBLIC QUESTION TIME**

**9. CONFIRMATION OF MEETING**

**9.1 (OCM 14/09/2017) - MINUTES OF THE ORDINARY COUNCIL MEETING - 10 AUGUST 2017**

**RECOMMENDATION**

That Council confirms the Minutes of the Ordinary Council Meeting held on 10 August 2017, as a true and accurate record.

**COUNCIL DECISION**

**10. DEPUTATIONS**

**11. PETITIONS**

**12. BUSINESS LEFT OVER FROM THE PREVIOUS MEETING (If adjourned)**

**13. DECLARATION BY MEMBERS WHO HAVE NOT GIVEN DUE CONSIDERATION TO MATTERS CONTAINED IN THE BUSINESS PAPER PRESENTED BEFORE THE MEETING**

**14. COUNCIL MATTERS**

**14.1 (OCM 14/09/2017) - MINUTES OF THE DELEGATED AUTHORITIES, POLICIES & POSITION STATEMENTS COMMITTEE MEETING - 24 AUGUST 2017 (182/001; 182/002; 086/003) (G BOWMAN) (ATTACH)**

**RECOMMENDATION**

That Council receive the Minutes of the Delegated Authorities, Policies and Position Statements Committee Meeting held on Thursday, 24 August 2017 and adopt the recommendations contained therein.

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**

<b>COUNCIL DECISION</b>
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### **Background**

The Delegated Authorities, Policies and Position Statements Committee conducted a meeting on 24 August 2017. The Minutes of the meeting are required to be presented.

### **Submission**

N/A

### **Report**

The Committee recommendations are now presented for consideration by Council and if accepted, are endorsed as the decisions of Council. Any Elected Member may withdraw any item from the Committee meeting for discussion and propose an alternative recommendation for Council's consideration. Any such items will be dealt with separately, as provided for in Council's Standing Orders. The primary focus of this meeting was to review the Delegated Authorities, Policies and Position Statements relative to Council (SC).

In addition, those Delegated Authorities, Policies and Position Statements which were required to be reviewed on an as needs basis have also been included.

### **Strategic Plan/Policy Implications**

#### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes.
- Ensure sound long term financial management and deliver value for money.
- Listen to and engage with our residents, business community and ratepayers with greater use of social media.

### **Budget/Financial Implications**

As contained in the Minutes.

### **Legal Implications**

As contained in the Minutes.

### **Community Consultation**

As contained in the Minutes.

### **Risk Management Implications**

Failure to adopt the Minutes may result in inconsistent processes and lead to non-conformance with the principles of good governance, and non-compliance with the Local Government Act 1995 for delegations made under the Act.

### **Attachment(s)**

Minutes of the Delegated Authorities, Policies and Position Statements Committee Meeting – 24 August 2017.

### **Advice to Proponent(s)/Submissioners**

N/A

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

## **15. PLANNING AND DEVELOPMENT DIVISION ISSUES**

- 15.1 (OCM 14/09/2017) - PLANNING APPLICATION – CHANGE OF USE FROM SINGLE HOUSE TO SINGLE HOUSE AND PLACE OF WORSHIP (BUDDHIST MEDITATION CENTRE) LOCATION: 34 (LOT 207) PROUT WAY, BIBRA LAKE- OWNER: DIANE MARGARET BLOOMFIELD - APPLICANT: DIAMOND WAY BUDDHIST ASSOCIATION OF WA INC. (DA17/0414) (A VAN BUTZELAAR) (ATTACH)**

### **RECOMMENDATION**

That Council

- (1) grant Planning Approval for the change of use of 34 (Lot 207) Prout Way, Bibra Lake from a Single House to a Single House and Place of Worship (Buddhist Meditation Centre), in accordance with the following conditions and advice notes:

### Conditions

1. Development may be carried out only in accordance with the details of the application as approved herein and any approved plan. This includes the use of the land. The development has approval to be used for a Single House and Place of Worship only. In the event it is proposed to change the use of the tenancy, a further planning application needs to be made to the City for determination.
2. A maximum number of 15 people are permitted to occupy the Place of Worship at any one time.
3. All meditation sessions are to cease by 9:00pm.
4. Prior to the initial occupation of the building hereby approved, the 6 parking bays, driveway/s and points of ingress and egress shall be sealed, kerbed, drained, line marked and made available for use in accordance with the approved plans.
5. A minimum of 1 bicycle stand/rack that conforms to Australian Standard 2890.3 (as amended) shall be provided in close proximity to the entrance of the building prior to occupation of the building.
6. All outdoor lighting shall be installed and maintained in accordance with Australian Standard AS 4282 - 1997 *"Control of the Obtrusive Effects of Outdoor Lighting"*.
7. All noise attenuation measures, identified by the Lloyd George Acoustics Report "Addendum to Transportation Noise Assessment" (Ref 17084082-01; dated 13 August 2017), are to be implemented prior to occupancy of the development (or as otherwise required by the City) and the requirements of the Acoustic Report are to be observed at all times.
8. The builder shall provide written confirmation that the requirements of the Acoustic Report referred to in Condition No.6 have been incorporated into the completed development with the Form BA10, prior to occupation of the development.
9. The development site shall be connected to the reticulated sewerage system of the Water Corporation before commencement of any use.

10. All onsite waste water disposal systems, including all tanks and pipes and associated drainage systems (soak well or leach drains) as well as any stormwater disposal systems, shall be decommissioned, prior to the commencement of the use or occupation.

Advice Notes

1. This is a Planning Approval only and does not remove the responsibility of the applicant/owner to comply with all relevant building, health and engineering requirements of the City, or with any requirements of the City of Cockburn Local Planning Scheme No. 3 or with the requirements of any external agency.
2. The use of the development hereby approved is Place of Worship. A Place of Worship is defined in the City of Cockburn Town Planning Scheme No. 3 as “premises used for religious activities such as a church, chapel, mosque, synagogue or temple”.
3. In the event that the subject lot is proposed to be subdivided a further planning application will be required to ensure that there is sufficient car parking available for the approved Place of Worship.
4. The development shall comply with the noise pollution provisions of the *Environmental Protection Act 1986*, and more particularly with the requirements of the *Environmental Protection (Noise) Regulations 1997*. The installation of equipment within the development including air-conditioners, machinery, water chillers, air and recycling pump and similar equipment shall not result in noise emissions to neighbouring properties exceeding those imposed by the *Environmental Protection (Noise) Regulations 1997* (as amended).
5. This development has been defined as a public building and shall comply with the relevant provisions of the *Health (Miscellaneous Provisions) Act 1911* (as amended), and the *Health (Public Buildings) Regulations 1992*.
6. The Applicant is advised to seek the advice of a Certified Building Surveyor concerning the requirements under the National Construction Code concerning the provision of toilets for the proposed building.



7. With regard to Condition No.9 above, under the Health (Treatment of Sewerage and Disposal of Effluent and Liquid Waste) Regulations 1974 the onsite waste water disposal system is to be removed, filled with clean sand and compacted. Proof of decommissioning is to be provided in the form of either certification from a licensed plumber or a statutory declaration from the landowner/applicant, confirming that the site has been inspected and all components such as the septic tanks, soak wells, leach drains and any associated pipework have been removed.
  8. Accessible car parking and access shall be provided and designed in accordance with the Australian Standard AS 2890.6.
  9. Any Signage is to be in accordance with the requirements of the City of Cockburn Local Planning Scheme No. 3 and Local Planning Policy LPP3.7 – Signs and Advertising. Non-exempt signage will require separate planning approval.
  10. You are advised that a Sign Permit may be required in accordance with the City's Local Laws (2000) prior to the erection of a sign. A permit is obtainable from the City's Building Services Department.
- (2) notify the applicant and those who made a submission of Council's decision.

## COUNCIL DECISION

### Background

The subject lot is 2858m<sup>2</sup> in area and is bound by the a freight rail corridor to the south, Prout Way to the east, Hatch Place to the west and two private residences to the north. At present the lot contains a detached garage and the Jandakot Hotel (fmr) which has been converted into a private residence.

The existing 92m<sup>2</sup> garage is situated on the south eastern corner of the lot. The northern elevation contains 2 roller doors for vehicles and a

standard entry door. The southern elevation contains 3 windows while the northern and southern elevations contain no openings. It is currently being used for domestic storage and the parking of vehicles associated with the dwelling.

The proposed change of use is being presented to Council for determination as the garage is proposed to be used for the purposes of a Place of Worship (Buddhist Meditation Centre) and is contained within the lot boundaries of a place contained within the City of Cockburn Heritage List (Jandakot Hotel (fmr)) and objections were received during the public consultation period.

### **Submission**

N/A

### **Report**

#### Proposal

The Diamond Way Buddhist Association of WA is proposing to change the use of the existing detached garage to a Place of Worship (Buddhist Meditation Centre). There is no change proposed to the existing dwelling.

The applicant proposes to conduct guided meditation sessions for members from within the existing garage. The Diamond Way Buddhist Association of WA currently has a financial membership base of 25 people. Approximately 6 to 10 members are proposed to attend guided meditation sessions three times a week. A total of 2 guided meditation sessions will be run between Monday to Friday and 1 guided meditation session will be run on Sunday. Meditation sessions will run between 10 minutes to 1 hour and will take place between the hours of 7:30pm – 8:00pm on weeknights and 6:00pm - 6:30pm on Sundays. All mediation sessions will cease before 9:00pm. A maximum of 15 members are expected to take part in 2 annual guided meditation sessions with visiting guests.

The existing Single House (Jandakot Hotel (fmr)) will continue to be used as a single house with approximately 4 - 5 members of the Diamond Way Buddhist Association of WA residing in the premises.

## Planning Framework

### *Zoning*

The subject lot is zoned 'Urban' under the Metropolitan Region Scheme (MRS) and Residential-R25 under the City of Cockburn Local Planning Scheme No. 3 (LPS 3).

A 'Place of Worship' is defined in LPS 3 as a:

*"premises used for religious activities such as a church, chapel, mosque, synagogue or temple".*

The use is discretionary ('D') within the Residential Zone. This means that the use is not permitted unless the local government has exercised its discretion by granting planning approval. The use is however is capable of approval in the zone.

### *Local Government Inventory and City of Cockburn Heritage List*

The garage is contained within the same lot as the Jandakot Hotel (fmr) which is included on the City of Cockburn Local Government Inventory (LGI) as a 'Management Category B' Place, and is included on the Heritage List (Heritage Place 43) pursuant to LPS 3.

The Statement of Significance for this heritage place, set out in the LGI Place record is:

*"Jandakot Hotel (fmr) has social significance as a former hotel which retains some of the original fabric."*

At present the garage is used for domestic storage and the parking of vehicles, it is not considered to contribute significantly to the heritage significance of the place as a former hotel, nor is it considered to be 'significant fabric'.

The use of the garage as a Place of Worship will not distort or obscure the social significance of the former Jandakot Hotel or detract from its interpretation and appreciation.

### *Local Planning Policy LPP 4.4 – Heritage Conservation Design Guidelines*

The City's Local Planning Policy LPP4.4 – *Heritage Conservation Design Guidelines* (LPP4.4) states that

*“adaptive reuse of heritage places may be supported provided:*

- (i) The proposed use(s) will not impact negatively on the amenity of the surrounding area.*
- (ii) Any required modifications do not substantially detract from the heritage significance of the place and are consistent with the provisions of this policy.*
- (iii) The use is consistent with LPS 3 and other relevant Council policies.”*

The garage is considered to be ancillary to the former hotel as it is detached and setback from the former hotel. Furthermore, the garage does not significantly contribute to the social significance of the former hotel as it does not embrace the qualities for which the former hotel became a social focus of the local community (e.g. age, beauty, artistry, or association with a significant person or event).

The garage is setback approximately 5.5m from the former hotel and as such is not considered to contribute to the setting of the heritage listed building. The materials and colours of the garage are sympathetic to that of the former hotel and will be largely unchanged by this proposal apart from some minor changes to the windows, doors, eaves and ceiling to address noise attenuation from the adjacent freight rail line. These alterations are discussed in further detail later on in this report.

It is important to note that the proposed change of use is likely to necessitate alterations and/or additions to toilets and access arrangements under the building and health approval processes. These changes may be required in order achieve compliance with the *National Construction Code*, applicable *Australian Standards* and *Health (Public Buildings) Regulations 1992*. Under LPP4.4 alterations to the interior of a heritage place to suit a current and compatible future use will be supported where the proposal does not compromise the heritage significance of the place. In the event that modifications to the single house or additions are required, another development application will need to be lodged. Upon future assessment, consideration will be given to the proposed alterations and/or additions to ensure the retention of original materials and finishes and the use of sympathetic and complementary colours, materials and textures.

#### Public Consultation

This application was advertised to 415 nearby and adjacent landowners for a period of 21 days. A total of 4 submissions were received consisting of 3 objections and 1 non-objection.

The main objections include:

- Noise
- Traffic Generation
- Membership growth beyond the physical limitations of the site.

### *Noise*

The meditation sessions will be guided in English and take about 20 to 30 minutes to complete. They will involve participants sitting on cushions in silence or listening to lectures about Buddhist teachings. There will be no music, gongs, bowls or bells used within the meditation sessions. Given the quiet nature of the proposed activities the amount of noise produced is highly unlikely to cause a disturbance to nearby and adjoining residents or create excessive noise emissions that exceed the permitted noise decibel levels specified under the *Environmental Protection (Noise) Regulations 1997*.

However, a number of façade upgrades will need to be made to the existing garage as part of this development application to mitigate external transport noise generated by the freight rail line. In doing so this will further address noise emissions generated from any internal meditation activities.

As part of this application a Transportation Noise Assessment was prepared by Lloyd George Acoustics Pty Ltd to address freight rail noise and vibration impacts on the proposed Place of Worship (Buddhist Meditation Centre). In summary, the following recommendations were made by the acoustic consultant to achieve compliance with the requirements of *State Planning Policy 5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning* (SPP5.4):

1. Windows facing the railway are to consist of a minimum of 10mm thick glass in either a fixed or awning style frame.
2. Roller doors to be replaced with glazing consisting of a minimum 6mm thick glass in either fixed or awning style frames.
3. The existing single hinged door is to be 35mm thick solid timber core fitted with perimeter and drop seals.
4. The eaves are to be enclosed with 6mm thick fibre cement.
5. The ceiling is to be 1 x 13mm thick sound-rated plasterboard.

Should Council support the proposal, the above recommendations would need to be implemented prior to occupancy of the development. The level of vibration caused by the adjacent freight rail line may cause light objects to rattle, however is unlikely to result in any structural damage. Vibration could be further minimised by installing a floating floor, however it must be noted that vibration would still be present in the walls.

### *Parking and Traffic*

Under LPS 3 a Place of Worship requires 1 car parking space for every 4 seats or people accommodated (whichever is greater). Under the Residential Design Codes (R-Codes) the existing Single House requires 2 car parking spaces. A maximum of 15 members are proposed to be present on site for meditation sessions at any one time. This necessitates the provision of a total of 4 car bays under LPS 3. With the additional requirement of 2 car parking spaces required for the existing Single House a total of 6 car parking spaces are required altogether.

A total of 22 car parking spaces have been proposed on existing grassed areas and hardstand which results in a surplus of 13 car parking spaces within the lot boundaries. Of the 22 car parking spaces, 6 will be required to be sealed, drained, line marked and made available for use in accordance with the approved plans. The remaining 16 car parking spaces will not be sealed or line marked but will be made available as additional overflow parking if the need arises.

In the unlikely event that all 25 financial members of the Diamond Way Buddhist Association of WA were to attend a meditation session a total of 7 car parking spaces would be required under LPS 3.

With approximately 6 to 10 members attending guided meditation sessions three times a week the potential additional traffic generation will not exceed the capacity of the local road network. There are two crossovers to the subject lot facilitating access via both Prout Way and Hatch Place. With both an entry and exit point there will be an efficient traffic flow from the site.

### *Membership*

The applicant has advised that for the past 13 years, the membership base of the Diamond Way Buddhist Association of WA has remained relatively stable ranging between 20 to 26 members. The applicant has stated that there will be approximately 6 to 10 members attending guided meditation sessions three times a week and a maximum of 15 members expected to take part in 2 annual guided meditation sessions with visiting guests. The Diamond Way Buddhist Association of WA has advised that like most organisations they have a desire to grow and attract new members. However, historically this has not come to fruition. Should Council support the proposal, a condition should be imposed limiting the number of people occupying the Place of Worship to 15 at any one time. If the number of people attending the Place of Worship increases in future a further planning application will be required and offsite impact will be reassessed.

## Conclusion

The proposed change of use from a Single House to a Single House and Place of Worship (Buddhist Meditation Centre) is supported for the following reasons:

- The proposal is consistent with the planning framework applicable to the site.
- The proposal is a low intensity land use which is considered appropriate within a residential context.
- The proposal will not negatively or unreasonably affect the health and amenity of surrounding residents in terms of noise or traffic.
- The proposal respects the heritage significance associated with Heritage Place 43 - Jandakot Hotel (fmr) and enhances the enjoyment of the heritage place.

It is therefore recommended that Council approve the proposed change of use subject to conditions.

## **Strategic Plan/Policy Implications**

### **Community, Lifestyle & Security**

- Provide safe places and activities for residents and visitors to relax and socialise.

### **Economic, Social & Environmental Responsibility**

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development.
- Continue to recognise and celebrate the significance of cultural, social and built heritage including local indigenous and multicultural groups.

## **Budget/Financial Implications**

Nil.

## **Legal Implications**

Nil.

## **Community Consultation**

The application was advertised to 415 nearby landowners in accordance with clause 64(3) of the deemed provisions within the *Planning and Development (Local Planning Schemes) Regulations*

2015. A total of 4 submissions were received during the advertising period. See Consultation section of the report above.

### **Risk Management Implications**

Should the applicant lodge a review of the decision with the State Administrative Tribunal, there may be costs involved in defending the decision, particularly if legal Counsel is engaged.

### **Attachment(s)**

1. Plan
2. Site Plan
3. Floor Plan and Elevation Plans

### **Advice to Proponent(s)/Submissioners**

The Proponent(s) and those who lodged a submission on the proposal have been advised that this matter is to be considered at the 14 September 2017 Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

## **15.2 (OCM 14/09/2017) - PROPOSED STRUCTURE PLAN - COCKBURN CENTRAL EAST OWNER: MULTIPLE LAND OWNERS APPLICANT: CITY OF COCKBURN (110/155) (R PLEASANT) (ATTACH)**

### **RECOMMENDATION**

That Council

- (1) adopts the schedule of submissions prepared in respect of the proposed structure plan;
- (2) pursuant to *Schedule 2, Part 4, clause 20 of the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015*, recommend to the Western Australian Planning Commission that the proposed Structure Plan for Cockburn Central East (Structure plan) be approved subject to the following modifications:
  1. Modify the Structure Plan Part 1 and 2 to:
    - a. Include the administrative amendments requested by the Department of Planning, Lands and Heritage within their correspondence dated 12.07.17.
    - b. Include within Section 6.8 the Water Corporations advice relating to future development requirements



- including infrastructure upgrade considerations.
  - c. Include within Section 6.8 the ATCO Gas advice relating to future development requirements and consultation.
  - d. Include within Section 4.2 the need for a wetland management plan to be undertaken as a condition of subdivision and/or development for Lot 800 and/or Lot 802.
  - e. Recognise within Part 2, Section 4.8 that if sensitive land uses are proposed in the Structure Plan area (noting these are non-preferred), an applicant must address the requirements of State Planning Policy 5.4 and include a new Section within 4.2 highlighting noise planning requirements at the subdivision and/or development stage.
2. Amend the Structure Plan map to:
- a. Extend the Light and Service Zone over Lot 62 Verde Drive - setback 50m from Verde Drive, with the remaining frontage along Verde Drive remaining Mixed-Business.
  - b. Include a round-about at the Solomon Road and Verde Drive intersection.
  - c. Include arrows to depict left-in-left-out arrows at both the midpoint between Verde Drive/Armada Road intersection and the existing Verde Drive roundabout; in addition to the entrance, mid-block along Armada Road.
- (3) forward the final approved Local Water Management Strategy to the Western Australian Planning Commission with the Structure Plan document;
- (4) forward the schedule of submissions and write to Main Roads Western Australia supporting the consultation and engagement with landowners affected by the Armada Road and North Lake Road Bridge Interchange project;
- (5) upon final endorsement of the Structure Plan, the City to review the North Lake Road Local Planning Policy 5.6 to respond to the modifications proposed for Verde Drive; and
- (6) upon final endorsement of the Structure Plan, the City to meet with landowners directly affected by the Verde Drive alignment to discuss agreements currently in place and road delivery options.

## COUNCIL DECISION

### Background

At the 8 June 2017 Ordinary Council Meeting, Council supported the Cockburn Central East Structure Plan (Structure Plan) for the purpose of advertising. The Structure Plan was subsequently advertised for 28 days from 4 July to 28 July 2017.

It is recommended subject to the modifications listed above the proposed Structure Plan be adopted by Council and forward to the Western Australian Planning Commission for final endorsement.

Council also resolved at the 8 June Ordinary Council Meeting to request the Western Australian Planning Commission (WAPC) to extend Planning Control Area (PCA) 122 within the Metropolitan Region Scheme (MRS). The purpose of the PCA122 is to allow for the investigation, and to ensure land is protected, for the Armadale Road and North Lake Road Bridge Interchange Project.

The WAPC has advised that an amendment request to PCA122 will be presented to either the September or October 2017 State Planning Committee (SPC) meeting. Consistent with the City's request, the report seeks to extend the PCA area over all lots severed to the south of the realigned Armadale Road, including Knock Place for the purposes of reserving land for a consolidated PTA commuter car park. The extension also includes land subject to any other adjustments to account for the final alignment of the Armadale Road and North Lake Road Bridge Interchange project, freeway widening requirements and drainage needs associated with the works along the freeway corridor.

The revised PCA122 area is likely to be in place prior to the finalisation of the Structure Plan and as a result the land use planning framework requirements will likely be in place by the end of the year to facilitate the Armadale Road and North Lake Bridge Interchange project.

Main Roads Western Australia (MRWA) have confirmed a timeframe for the commencement of the Armadale Road and North Lake Bridge Interchange project which includes the tender process commencing at the end of 2018 and construction commencing in 2019.

## Submission

N/A

## Report

The purpose of this report is for Council to consider submissions on the Structure Plan. The 8 June OCM report extensively discussed the proposal and the site and its context, therefore will not be discussed at length again, however in summary the key elements of the advertised Structure Plan (Structure Plan map at Attachment 1) include:

- An extension of the flexible Mixed-Business Zone over underutilised land west of Solomon Road - excluding residential development given the presence of industrial uses not compatible with sensitive land uses including residential development.
- A minimum lot size within the Mixed-Business Zone of 2,500sqm. This recognises larger lots provide a greater flexibility for the end user in terms of design, functionality and variety of uses. Furthermore lots within CCW, specifically designed for mixed-use high density residential development, are consistent with this range. Importantly this range is also suitable for lower scale commercial type uses within the short term.
- Promoting opportunities for the retention of the 7.5ha site under WAPC ownership to remain a single lot or a collection of super lots. Including the consideration of ground leases over the shorter term to activate the use of preserved lands including large format warehouses on super lots with 50 year leases, for example an Ikea.
- The newly formed precinct bound by the Armadale Road alignment, the Cockburn Train Station and Lot 500 Armadale Road provides the opportunity to consolidate the 5 PTA commuter car parks including the opportunity to relocate the two PTA commuter car parks out of the Cockburn Town Centre. The relocation of commuter car parking out of the Town Centre will allow for high density residential development of the two lots currently leased to the PTA and under WAPC ownership. Furthermore this will secure the site as a single landholding until such time as the precinct is ready for redevelopment.
- As a result of development already delivered in the eastern portion of the Structure Plan area, land use changes for these lots are not proposed. Rather the Structure Plan seeks to propose zone changes to land located between Solomon Road and the Kwinana Freeway where land remains undeveloped and a

response is required to address the local road layout, PTA car park requirements and land use planning direction for newly created lots. The exception is for lots located on Verde Drive, between Biscayne Way and Armadale Road where the Mixed-Business Zone boundary is amended to follow recent changes to lot boundaries.

- In terms of the road network, provision has been made to connect Verde Drive with the Armadale Road alignment. The Prinsep Road alignment has been modified slightly to connect with Verde Drive. All other more minor roads will require a response by individual landowners at the subdivision stage.

### Community consultation

The Structure Plan was advertised for 28 days from 4 July to 28 July 2017. Letters were sent to all affected landowners, business owners and residents inviting comment on the Structure Plan.

A total of 32 submissions were received, of which included:

- 12 of support;
- 9 from government agencies and service providers generally providing advice for future development stages, and;
- 10 objections from land/business owners and residents.

All of the submissions are outlined and addressed in Attachment 2.

### Consideration of key issues

The below details the City's response to the matters arising as part of the assessment of submissions received.

#### *Impact of road alignment on landowners – seek adjustment of the Armadale Road alignment*

Two submissions received from landowners whose land is severed by the proposed Armadale Road alignment seek a review to reduce the impact of the new alignment on their land. One submission suggesting the alignment can be shifted slightly to the south and for the roundabout at Armadale Road and Solomon Road to be replaced with traffic lights.

The associated route definition study, prepared by MRWA, has thoroughly considered all the design options before arriving at a preferred concept. This considers all the relevant design issues, and how the constructability and operability of the project can be optimised. There is no opportunity for further changes to the road design, given the extensive research and analysis which underpinned arriving at the

route provided within the route definition study. A traffic light option was also not capable of being implemented, given the modelled traffic volumes and the need to achieve grade separation.

As per Council's consideration of the route definition study, it has been specifically recommended to MRWA about the need for early engagement with landowners and businesses as this project now moves to the detailed design and delivery phase.

*Site access for businesses, residents in Atwell and ongoing signage needs for the Solomon Road Businesses*

Several business and land owners understandably have concerns regarding site access to their properties and businesses both during the construction phase of the local road upgrades in addition to access once the Armadale Road and North Lake Road Bridge Interchange project is complete.

In response the City recognises the need for a traffic management plan to be prepared. This plan will identify access opportunities to minimise disruption for businesses during construction for both the local road network upgrades in addition to the Armadale Road and North Lake Road Bridge Interchange project. This will likely be undertaken by both MRWA and the City closer to the commencement of construction for road upgrades.

One submission, consistent with the Cockburn Central Activity Centre Strategy, highlighted the need for a signage strategy to be prepared for the Cockburn Central East precinct. In response the City agrees that directional signage should be provided to signal to passing trade the entrance locations for the businesses in the Cockburn Central East precinct. The City recognises the role MRWA can provide in integrating signage into their design with other directional sign needs and therefore alongside all relevant submission comments relating to transport and access needs will forward this request to MRWA. It is however noted that this request was also passed on to MRWA when the submissions were finalised for the wider Cockburn Central Activity Centre Strategy in 2015. Once the MRWA signage provisions are understood the City will investigate further signage opportunities if so required.

Additionally, it is further noted that within the 8 June OCM report of which commented on MRWA route definition report a recommendation was made to MRWA to undertake an education program with local business owners regarding the new access arrangements including access and using the two new roundabouts.

One submission raised concerns for access into and out of the suburb of Atwell. In response the City highlights proposed access to the north of Atwell onto Armadale Road is provided for by two intersections; the Tapper Road intersection is planned to be a full turning round about and is expected to improve traffic flow. The second is the intersection of Freshwater Drive of which will significantly improve access for Atwell residents as a result of the Armadale Road and North Lake Bridge Interchange project – this project is expected to remove up to 70% of vehicles travelling between the current Armadale Road west of Solomon and into the activity centre. This, in addition to the introduction of a roundabout at Solomon and Armadale Road will provide considerable breaks in traffic and therefore improve access for Atwell residents.

One submission raised concerns regarding the public access easement proposed along Verde Drive, suggesting that lots fronting this road reserve may amalgamate into the future and as a result the access easement may not be the only solution for site access for a number of lots. Furthermore the submission questioned the need for the easement suggesting the downgrading of Verde Drive would no longer require the existing road reserve width and as a result the car parking could be accommodated within the road reserve.

In response the City notes the traffic impact assessment informing the Structure Plan supports the need for protecting Verde Drive with an adequate road reserve width in order to maintain flexibility as traffic volumes grow. While a dual carriageway will be unlikely, there are design options especially in order to prioritise through movements through the addition of central mediums, turning pockets and the like. There is no consideration to adjust the requirement for access easements on private allotments, as these will remain important to controlling access rather than a suggestion of repurposing parts of the road reservation for this.

The City as stated within the Structure Plan intends on embellishing this road with a considerable amount of landscaping including street trees through the centre line of the road in order to create a separating edge between industrial uses and the mixed-business zone therefore the need for the 32m road reserve is further warranted.

It is recognised that landowners fronting Verde Drive may seek to work together and amalgamate lots to improve the lot layouts in this location and that as a result there may be alternative solutions to the intent of the easement in gross. In response the City recognises the WAPCs position on structure plans in that “due regard” is given to them. As a result “due regard” will be given to the intent of the easement in gross when and if a further solution is presented as a subsequent subdivision or development application stage. At such a time the City will work with

landowners and address the necessary changes to the associated North Lake Road Local Planning Policy (noting also this policy requires updating post structure plan approval).

The City will consult with landowners when modifications are made to the North Lake Road Local Planning Policy following the structure plan adoption.

*Expansion opportunities for an existing business - adjust alignment of Mixed-Business zone on the Structure Plan map*

One submission relates to a request to extend the Light and Service Zone over Lot 62 Verde Drive - setback 50m from Verde Drive, with the remaining frontage along Verde Drive remaining Mixed-Business.

In response while the City recognises the majority of landowners within proximity to the train station support the Mixed-Business zone and the longer term objectives stated, it is also recognised that FFI Holdings seek to ensure the current tenant can expand their business in the near future on Lot 63. It is understood from a meeting held with FFI Holdings in May 2017, this submission, and plans sent through to further support this submission that FFI intend to subdivide Lots 62 and 63 to expand Lot 63 to the north. As a result FFI have requested the Light and Service Industry zone be expanded to include all of the newly proposed Lot 62, leaving a 50m setback from Verde Drive as a mixed-business zone for Lot 63. It is understood this is required as a result of the Transport Depot use and truck wash area approval over lot 62 being an 'X' use within the Mixed-business Zone and 'P' use within the Light and Service Industry zone.

The City supports this request as it is recognised that this will facilitate both the City's strategic plans (by encouraging commercial type development along the Verde Drive frontage), and accommodate Viola wastes expansion – ensuring the company can continue to operate.

*Increased traffic levels - Prinsep Road (North)*

Two submissions from residents located along the northern alignment of Prinsep Road express concern regarding the impact of increased traffic levels and negative impacts on dwelling located along Prinsep Road.

In response the City highlights the Prinsep road alignment is identified within the existing Solomon Road Structure Plan and is further identified as being required within the Cockburn Central East Structure Plan Transport Impact Assessment (TIA). The TIA importantly recognises the necessity to upgrade Prinsep Road so as to reduce the concentration of traffic along Verde Drive and Solomon Road. Without

an upgrade to Prinsep Road, daily vehicle trips along Verde Drive and Solomon Road will reach unacceptable levels.

Furthermore an agreement has been in place for Landcorp to construct the southern extension of Prinsep Road since 2004. The need to upgrade the road was a requirement of subdivision relating to the surrounding lots several years ago. The City has not yet requested the upgrade from Landcorp as a result of the Verde Drive alignment not yet being in place.

However the City does recognise the expected increased vehicle trips per day along Prinsep Road (North) and is aware of the noise complaints currently received from residents fronting Prinsep Road and in proximity to the Glenn Iris Golf course. Complaints relate to noise from trucks accessing the Solomon Road Industrial Area. In response the City recognises that while vehicle trips per day will increase, these numbers relate to an increase in cars associated with the PTA commuter car park. Nonetheless the Structure Plan recommends the Prinsep Road upgrade design phase should consider a range of options including the benefits associated with a road realignment, a slip lane and/or appropriate levels of landscaping to act as an edge to the residential area, for example.

*The Colliers Market Feasibility Analysis Report and no provision for residential development within the Structure Plan area*

The Colliers Market Feasibility Report supporting the Structure Plan identifies that given the current state of the property market in Perth and the excess of supply, particularly for residential, industrial and office, it is likely that there will be limited appetite for development within Cockburn Central East in the short term. Additionally, given the office market is likely to take 10 years for vacancy in the Perth CBD to normalise it is unlikely office developments will be attracted to Cockburn Central for some time.

One submission questioned the validity of the Colliers report and further suggested an alternate view that the market would attract opportunities for high density mixed-use development within Cockburn Central East in the short term. In response the City provides Colliers response to the validity of the report within Attachment 2 and highlights the wider issue currently preventing residential development within the Structure Plan area – that being that while State level strategic planning policy supports and promotes high density mixed-use developments within the walkable 400m-800m catchments of train stations, industrial type land uses currently operating within the Structure Plan area and along Cutler Road and are incompatible with residential uses. Industrial uses currently prevent residential development being located within the Structure Plan area.



It is considered a sub-optimal planning outcome to prioritise further residential or mixed use development opportunities within Cockburn Central East, when the key ingredient to further grow the activity centre remains one of ensuring adequate business and employment growth. On the west side of the freeway, there is in excess of 15 years plus of readily developable land to accommodate residential and mixed use development. This west side is characterised by high levels of residential amenity, greater degrees of accessibility and co-location with civic facilities. It is important therefore to emphasise the west side for this purpose, and protect the east side for its intended long term planning objective for business and employment growth generation to mature the activity centre.

Although, over the long term (20 plus year time horizon) the City has made provisions to facilitate and promote the transitioning of the precinct over time. This has been achieved through such elements as the designation of the Mixed-business zone, minimising the further fragmentation of land by prescribing minimum lot sizes. The PTA commuter car park will also ensure land in close proximity to the train station is retained so that it can transition over the long term to mixed-use high density residential development.

Regardless of whether different parties agree on what the market will or will not deliver in the short to medium term, the existing constraints, including the underlying Industrial zone in the Metropolitan Scheme currently prevent residential development. The Department of Planning have been very clear in their views/advice that – *“Any amendment to the Structure Plan that contemplates amending land use permissibility for residential uses is contingent upon the Metropolitan Region Scheme (MRS) first being amended to Urban (currently zoned Industrial except for Lot 500 Armadale Road and Knock Place). The MRS amendment will need to consider the form and function of the Cockburn Central Activity Centre at that point in time and address the provision of adequate employment land for the South West region and the locality, recognising the objectives of the strategic planning framework.”*

Such a proposal would need to address the transitioning of industrial uses out of the centre and at this point in time the City does not support this approach, instead recognising the need to also accommodate existing businesses operating in the precinct, and to grow further business and employment opportunities.

#### *Flora and fauna requirements*

The Department of Biodiversity, Conservation and Attractions, consistent with the Flora and Fauna survey undertaken in September

2016 supporting the Structure Plan, highlights within their submission the need to conduct further targeted flora assessments in September 2017 for *Caladenia huegelii* and other threatened flora. While it is recognised that this survey could usually be undertaken at the subdivision stage and that the City is not a landowner and will not be the party to clear land, the City is undertaking the survey given the crucial time constraints relating to when the study needs to be conducted – in September. This will contribute to the MRWA timeline for the Armadale Road and North Lake Road Bridge Interchange project.

The Department of Biodiversity, Conservation and Attractions also promotes the preparation of a wetland management plan for Lot 802. In response the City supports the preparation of a wetland management plan as a condition of subdivision and/or development.

#### *Land acquisition and assembly process post Structure Plan*

Submissions received from landowners directly affected by the alignment of the Armadale Road and North Lake Road Bridge Interchange alignment make requests concerning land swap options, compensation and reimbursement of costs. In response the City notes the detail of the land acquisition and assembly process is a process that will be undertaken by the State Government. Landowners will have an opportunity to discuss options directly with the WAPC. Such discussions and options will be guided by the Land and Administration Act 1997.

With regard to Verde Drive and the deeds of agreements currently in place – the City acknowledges the current deeds of agreement that are in place between the City and landowners. The City will meet with landowners one-on-one to discuss these following the finalisation of the Structure Plan.

On the basis that issues raised in submissions of objection can be adequately overcome, it is recommended that Council adopt the Structure Plan and recommend it to the WAPC for approval.

### **Strategic Plan/Policy Implications**

#### **Moving Around**

- Reduce traffic congestion, particularly around Cockburn Central and other activity centres
- Identify gaps and take action toward extending the coverage of the cycle way, footpath and trails network
- Improve connectivity of transport infrastructure

- Improve parking facilities, especially close to public transport links and the Cockburn town centre

### **Community, Lifestyle & Security**

- Provide for community facilities and infrastructure in a planned and sustainable manner.
- Foster a greater sense of community identity by developing Cockburn Central as our regional centre whilst ensuring that there are sufficient local facilities across our community.

### **Budget/Financial Implications**

Currently the City's Town Planning Scheme 3 (TPS3) requires landowners affected by the Other Regional Road reservation (Verde Drive) to cede the land free of cost, and contribute towards its construction. A key recommendation will be to undertake further discussions with affected landowners, given the need to deliver this road infrastructure with the MRWA major project.

### **Legal Implications**

Clause 20 (1) of the deemed provisions requires the City to prepare a report on the proposed structure plan and provide it to the Commission no later than 60 days following the close of advertising.

Infrastructure delivery and upgrades required to meet the land use objectives of the Structure Plan area will be required to be undertaken by individual landowners at the time of subdivision or development, where such relates to local level infrastructure. Currently the Scheme also requires landowners affected by the Other Regional Road reservation to cede the land free of cost, and contribute towards its construction.

### **Community Consultation**

The Structure Plan was advertised for 28 days from 4 July to 28 July 2017. Letters were sent to all affected landowners, business owners and residents inviting comment on the Structure Plan.

### **Risk Management Implications**

If the proposed Structure Plan is not supported, there will be no planning framework in place over the subject land to guide the Armadale Road North Lake Bridge Interchange project. This will result in delays in the delivery of the vital piece of infrastructure.

### **Attachment(s)**

1. Advertised Cockburn Central East Structure Plan map.
2. Schedule of submissions.

### **Advice to Proponent(s)/Submissioners**

The Proponent(s) and those who lodged a submission on the proposal have been advised that this matter is to be considered at the 14 September 2017 Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

- 15.3 (OCM 14/09/2017) - PLANNING APPLICATION – CHANGE OF USE (SINGLE HOUSE TO MEDICAL CENTRE), CHANGE OF USE (CONSULTING ROOMS TO MEDICAL CENTRE) AND CAR PARK RECONFIGURATION – LOCATION: 196 & 198 (LOTS 152 & 153) LYON ROAD AUBIN GROVE – OWNER: PATRICK WEE, CATHERINE WEE & FORTUNE HOLDINGS PTY LTD – APPLICANT: PATRICK WEE (DA17/0445 & 052/002) (R TRINH) (ATTACH)**

#### **RECOMMENDATION**

That Council

- (1) grant planning approval for a change of use from Single House and Consulting Rooms to Medical Centre and Car Park Reconfiguration at No's.196 & 198 (Lots 152 & 153) Lyon Road Aubin Grove, in accordance with the attached plans and subject to the following conditions and advice notes.

#### Conditions

1. Development may be carried out only in accordance with the details of the application as approved herein and any amendments marked in red on the approved plans. This includes the use of the land and/or tenancy. The approved development has approval to be used for 'Medical Centre' only. In the event it is proposed to change the use, a further planning application needs to be made to the City for determination.
2. The Medical Centre on Lot 152 is restricted to a maximum of 4 consultants and the Medical Centre on Lot 153 is restricted to a maximum of 3 consultants working from the premises at any one time.

3. The hours of operation of the Medical Centres are restricted to:  
Monday to Friday – 8:00am to 7:00pm; and Saturday – 8:00am to 5:00pm.
4. No building or construction activities shall be carried out before 7.00am or after 7.00pm, Monday to Saturday, and not at all on Sunday or Public Holidays.
5. All services and service related hardware, including antennae, satellite dishes and air conditioning units, being suitably located away from public view and/or screened to the satisfaction of the City.
6. The premises shall be kept in a neat and tidy condition at all times by the owner/occupier to the satisfaction of the City.
7. The car parking areas on Lots 152 and 153, access ways and landscaping shall be maintained to the satisfaction of the City, and shall not be used for storage of any type.
8. All works associated with this approval as shown on the approved plans shall be completed prior to occupation or use of the approved 'Medical Centres' subject of this approval.
9. Prior to use of the buildings for 'Medical Centre' purposes, the 35 car parking bays (20 allocated to the Medical Centre on Lot 152 and 15 allocated to the Medical Centre on Lot 153), driveways and points of ingress and egress shall be sealed, kerbed, drained, signed and line marked and made available for use in accordance with the approved plans to the satisfaction of the City.
10. Staff tandem bays shall be permanently marked, maintained and accessible at all times for use exclusively by staff to the property, be clearly visible and suitably sign posted to the satisfaction of the City of Cockburn.
11. Crossovers shall be designed, located and constructed to the City's specifications.
12. A detailed landscaping plan shall be submitted to and approved by the City, prior to the issue of a Building Permit for the fit out of the Medical Centre, and shall include the following:-
  - a. the location, number, size and species type of

- existing and proposed trees and shrubs, including calculations for the landscaping area;
- b. any lawns to be established;
- c. any existing landscape areas to be retained;
- d. those areas to be reticulated or irrigated; and
- e. verge treatments.

13. Landscaping including verge planting shall be installed, reticulated and/or irrigated in accordance with an approved plan and maintained thereafter to the satisfaction of the City. The landscaping plan shall be implemented during the first available planting season post completion of development and any species which fail to establish within a period of 12 months from planting shall be replaced to the satisfaction of the City.
14. Front walls and fences within the primary street setback area shall be visually permeable 1.2 metres above natural ground level in accordance with the deemed to comply provisions of the Residential Design Codes of Western Australia.
15. Where a driveway and/or parking bay abuts a public street, associated walls, fences and/or adjacent landscaping areas shall be truncated within 1.5 metres thereof or limited in height to 0.75 metres.
16. All stormwater shall be contained and disposed of on-site to the satisfaction of the City.
17. All waste and recycling materials shall be contained within bins.
18. Prior to the commencement of works, the site plan shall be modified showing the crossover from Lot 153 to Vienna Link being reduced in width and all traffic throughout both sites being amended to one-way only to the satisfaction of the City. The revised plan shall then be implemented prior to commencement of the use of the sites for Medical Centre purposes.

#### Footnotes

1. This is a Planning Approval only and does not remove the responsibility of the applicant/owner to comply with all relevant building, health and engineering requirements of the City, or with any requirements of the City of Cockburn Local Planning Scheme No. 3 or with the requirements of

any external agency.

2. You are advised that a Sign Licence may be required in accordance with the City's Local Laws (2000) prior to the erection of the sign. A Licence is obtainable from the City's Building Services Department.
3. A plan and description of any signage and advertising not exempt under Local Planning Scheme No. 3 shall be submitted to and approved by the City prior to the erection of any signage on the site/building.
4. With regards to Condition 9, the parking bay/s, driveway/s and points of ingress and egress shall be designed in accordance with the Australian Standard for Off-street Carparking (AS2890.1 and AS2890.6) and be constructed, drained and marked in accordance with the design and specifications certified by a suitably qualified practicing Engineer and are to be completed prior to the development being occupied and thereafter maintained to the satisfaction of the City.
5. With regards to Condition 11, copies of crossover specifications are available from the City's Engineering Services and from the City's website [www.cockburn.wa.gov.au](http://www.cockburn.wa.gov.au).
6. With respect to Condition 14, visually permeable means vertical surface that has:
  - Continuous vertical or horizontal gaps of at least 50mm width occupying not less than one third of its face in aggregate of the entire surface or where narrower than 50mm. occupying at least one half of the face in aggregate as viewed directly from the street; or
  - A surface offering equal or lesser obstruction to view.
7. With respect to Condition 16, all stormwater drainage shall be designed in accordance with the Australian Standard, and the design shall be certified by a suitably qualified practicing Engineer or the like, to the satisfaction of the City, and to be designed on the basis of a 1:100 year storm event.
8. The development shall comply with the noise pollution provisions of the *Environmental Protection Act 1986*, and more particularly with the requirements of the *Environmental Protection (noise) Regulations 1997*. The

installation of equipment within the development including air-conditioners, spas, pools and similar equipment shall not result in noise emissions to neighbouring properties exceeding those imposed by the *Environmental Protection (Noise) Regulations 1997* (as amended).

9. All toilets, ensuites and kitchen facilities in the development are to be provided with mechanical ventilation flued to the outside air, in accordance with the requirements of the National Construction Code (Building Code of Australia), the *Sewerage (Lighting, Ventilation and Construction) Regulations 1971*, Australian Standard S1668.2-1991 "The use of mechanical ventilation for acceptable indoor air quality" and the City of Cockburn Health Local Laws 2000. The City's Health Service further recommends that laundries without external windows and doors should be ventilated to external air and condensating clothes dryers installed.
  10. The occupier of premises in which clinical waste is produced shall comply in all respects with the *Environmental Protection (Controlled Waste) Regulations 2004*. For further information please contact the Department of Water and Environment Regulation.
  11. With regards to Condition 17, bins shall be stored in the external enclosure located and constructed to the satisfaction of the City. This information shall be submitted to and approved by the City prior to the issue of a Building Permit.
- (2) notify the applicant and those who made a submission of Council's decision.

## COUNCIL DECISION

## Background

The subject site consists of 196 (Lot 152) and 198 (Lot 153) Lyon Road, Aubin Grove and is on the corner of Lyon Road and Vienna Link.



The site is approximately 430m north of the Aubin Grove Shopping Centre (corner of Lyon and Gaebler Roads) and 700m south of the Harvest Lakes Shopping Centre at the intersection of Lyon Road and Gibbs Road. The site is also approximately 800m from the Aubin Grove Rail Station.

Lot 152, which is proposed to be converted into a Medical Centre is 928m<sup>2</sup> in area and contains an existing single storey brick and tile dwelling comprising 4 bedrooms, 2 bathrooms and a double garage. The dwelling is well setback from the street (10m). Lot 153 was also originally developed with a single dwelling but was converted to (and approved) for use as 'Consulting Rooms' (Skin Check WA) in 2007. The business operates with two practitioners and contains 12 car parking spaces.

Both lots are relatively unique to the area in that they are significantly larger in area than the typical residential lots in the area as the original dwellings were constructed prior to the area being rezoned from 'Rural' to 'Urban' well before the area was developed for housing. Most other residential lots in the vicinity are approximately 600m<sup>2</sup> (or less) with lesser setbacks. A Location Plan is contained below:



At its ordinary meeting held on 8 December 2016, Council refused an application to change the use of the existing dwelling to a Childcare Premises which was subsequently appealed in the State Administrative Tribunal (SAT). Through the SAT mediation process, Council was invited to reconsider its decision of refusal and at its ordinary meeting held on 11 May 2017, Council reaffirmed its decision to refuse that proposal (contrary to staff recommendation) based on the following reasons:

- ‘1. *Approval of the proposal is likely to adversely impact on the amenity of the locality as per Clause 67 of the Planning and Development (Local Planning Schemes) Regulations 2015.*
2. *The lot is not capable of accommodating all necessary parking on site.*
3. *The lot size results in unreasonable setbacks of outdoor play areas to adjoining properties this is also inconsistent with the minimum lot size specified under the City’s Local Planning Policy 3.1 – Child Care Centres.’*

Consequently, the applicant elected not to proceed to a full hearing and withdrew the SAT application.

The proposed development is being referred to Council for determination as objections were received during the public consultation period.

## **Submission**

N/A

## **Report**

### Proposal

The application seeks to retain the existing buildings on the lots and make alterations and additions to the existing ‘Single House’ building on Lot 152 to accommodate the ‘Medical Centre’ and seeks to modify the parking layout on Lot 153 that currently operates as ‘Consulting Rooms’. The application also seeks to repurpose rooms and add an additional consulting room on Lot 153 to be reclassified from ‘Consulting Rooms’ to ‘Medical Centre’.

The application proposes a change of use to the existing dwelling on Lot 152 from ‘Single House’ and existing building on Lot 153 from ‘Consulting Rooms’ to ‘Medical Centre’ and seeks to modify the parking

layout on Lot 153 that currently operates as 'Consulting Rooms'. The specific details of the proposal include:

- External modifications to the existing façade and entry of the building on Lot 152;
- Internal modifications to the buildings on Lot 152 and 153;
- Reconfiguration of car parking on Lot 153;
- Construction of 35 car bays;
- Reciprocal parking across Lot 152 and 153;
- Retention of existing crossover locations to Lyon Road;
- Widening of the existing crossover to Vienna Link to 6m; and
- Operating hours Monday to Friday 8:00am-8:00pm, Saturday 8:00am-5:00pm (closed Sundays and Public Holidays).

The internal modifications for Lot 152 include:

- Conversion of the existing double garage into a consulting room;
- 4 Medical Consulting Rooms;
- Treatment Room;
- Manager's Office; and
- Associated Reception, waiting areas, kitchen and bathrooms.

The internal modifications for Lot 153 include:

- Conversion of the existing office into a consulting room;
- 3 Medical Consulting Rooms;
- Treatment Room;
- Manager's Office; and
- Associated Reception, waiting areas, kitchen and bathrooms.

### Consultation

The proposal was advertised to 49 adjoining and nearby landowners potentially affected by the proposal in accordance with the requirements of Local Planning Scheme No.3 (LPS 3). A total of five submissions were received, one indicating no objection and four objecting to the proposal.

The main issues and concerns raised during consultation include:

- Increased traffic
- Increased pedestrians around the site
- Noise
- Safety
- Undesirable precedent being set
- Increase in crime in the area
- Parking on Lyon Road due to proximity of roundabout

Other non-planning related concerns including reduction in property values and lack of need for another medical centre in the area were also raised.

### Statutory Planning Framework

#### *Metropolitan Region Scheme (MRS)*

The subject site is zoned 'Urban' under the Metropolitan Region Scheme (MRS) and the proposal is consistent with this zone.

#### *Local Planning Scheme No. 3 (LPS 3)*

The subject site is zoned 'Development' under LPS 3 and is located within Development Area 11 (Lyon Road). A Local Structure Plan (Lots 14, 2-4 Lyon Road Aubin Grove) has been approved over the subject property that shows a 'Residential-R20' zoning over the subject site.

The objective of the 'Residential' zone under LPS 3 is:

*'To provide for residential development at a range of densities with a variety of housing to meet the needs of different household types through the application of the Residential Design Codes'.*

LPS 3 defines a 'Medical Centre' as:

*'Premises, other than a hospital, used by one or more health consultant(s) for the investigation or treatment of human injuries or ailments and for general outpatient care (including preventative care, diagnosis, medical and surgical treatment, and counselling).'*

A 'Medical Centre' is an 'A' use (discretionary subject to advertising) within the 'Residential' zone and is generally not permitted unless the local government has exercised its discretion and has granted planning approval after giving special notice in accordance with clause 64(3) of the deemed provisions within the *Planning and Development (Local Planning Schemes) Regulations 2015*.

#### *Residential Design Codes (R-Codes)*

The proposed development, if approved would remain compliant with the Residential Design Codes (R-Codes) with regards to setbacks, open space, wall heights etc. and will still appear as a single house when viewed from the street.

## Planning Considerations

### *Land Use*

There was some concern expressed that the proposed Medical Centre should not be permitted within a residential area. However, as discussed above, a Medical Centre is an 'A' use within the residential zone, meaning it can be considered on its merits subject to the application being advertised. In relation to concerns raised about an oversupply of Medical Centres in the area, this is not a valid planning matter with the demand for this type of use determined by the market. Council cannot limit the number of Medical Centres within its boundaries.

### *Noise*

The proposal is unlikely to generate a level of noise that would negatively impact on the amenity of neighbours and based on this, the City did not request any form of noise assessment from the applicant. Notwithstanding this, the development will be required to comply with the *Environmental Protection (Noise) Regulations 1997* at all times. Should Council support the proposal, a condition restricting hours of operation should also be imposed given the residential setting.

### *Car Parking*

Car parking for the proposal including both sites has been assessed as per the following:

Use	Rate	Required	Provided
Existing Consulting Rooms (Lot 153)	5 bays per consulting room	15 (3 consulting rooms)	15 (6 tandem and 4 under existing garage & patio)
Proposed Medical Centre (Lot 152)	5 bays per consulting room	20 (4 consulting rooms)	20 (2 tandem)
<b>Total</b>		35	35

Whilst the number of car parking bays is technically compliant, 8 of the car parking bays are in a tandem arrangement and 2 of those tandem bays are under a garage and patio. Tandem bays can be effective if used only by staff as it would be highly inconvenient for a customer to use a tandem bay. Given the 7 consulting rooms across both buildings, this would indicate 7 medical consultants plus administrative staff. Therefore, it is reasonable that all 8 tandem bays would be used by staff only.

A sufficient number of car parking bays have been supplied onsite in accordance with the requirements of LPS3 and all parking is required to be contained onsite.

Therefore, should Council approve the proposal, a condition should be imposed requiring the tandem bays to be appropriately signed and marked for use by staff only.

#### *Traffic and Access*

Comments regarding safe vehicular access and increased traffic volumes were provided during the public consultation period. A Traffic Impact Statement (TIS) was provided with the initial application that reviewed the impact of the proposed development on the surrounding road network. Review of the TIS demonstrated that reasonable consideration was given to the potential traffic generated by the proposed development and that the impact on the surrounding road network would be low.

Two-way access is proposed from both entry points along Lyon Road that becomes a one way route beyond the car park area in front of the buildings. One way entry and exit is recommended by the City's Traffic Engineer to ameliorate the confusing internal traffic configuration. Should Council approve the proposal, amendments to the plans should be made requiring a reduction to the crossover width along Vienna Link and an amended traffic configuration for one way access only.

#### *Hours of Operation*

The hours of operation proposed are 8:00am-8:00pm Monday to Friday and 8:00am-5:00pm Saturday. Given the proximity to existing residential dwellings, it would be more reasonable to restrict hours of operation to end at 7:00pm on week nights instead of 8:00pm as proposed. Should Council support the proposal, a condition can be imposed restricting the hours of operation.

#### *Landscaping*

The proposal includes 193m<sup>2</sup> of landscaping across both lots. This results in approximately 10% total landscaping for both lots and consistent with the landscaping requirements for commercial uses. The landscaped areas are located in front of the buildings and between adjoining lot boundaries. Landscaping of the adjacent verge was also proposed as part of this application.

Should Council support the proposal, a condition should be imposed to require a detailed landscaping plan from the applicant that includes

high quality landscaping of the verge that will discourage verge parking from occurring.

### Conclusion

The existing single storey building remains sympathetic to the existing streetscape with appropriate setbacks and open space similar to those required for residential development. The proposal is not considered to generate unreasonable levels of traffic congestion in the area or detract from the amenity of neighbours or the street.

The location of the site is considered suitable due to its close proximity to public transport, shops, aged care housing and other amenities that the area offers which will encourage non-car based transport to the site. The Medical Centre will provide an increase in medical services in the area which has a large and growing residential catchment. It is therefore recommended that Council approve the application subject to conditions and advice notes.

### **Strategic Plan/Policy Implications**

#### **City Growth**

- Ensure planning facilitates a desirable living environment and meets growth targets

#### **Budget/Financial Implications**

N/A

#### **Legal Implications**

N/A

#### **Community Consultation**

The application was advertised to 49 nearby landowners in accordance with clause 64(3) of the deemed provisions within the Planning and Development (Local Planning Schemes) Regulations 2015. A total of five submissions were received during the advertising period. See the Consultation section of the report for further details.

#### **Risk Management Implications**

Should the applicant lodge a review of the decision with the State Administration Tribunal, there may be costs involved in defending the decision, particularly if legal Counsel is engaged.

### **Attachment(s)**

1. Location Plan
2. Existing Site Plan
3. Site Plan
4. Demolition Floor Plan – Lot 152
5. Floor Plan – Lot 152
6. Roof Plan – Lot 152
7. Demolition Elevation Plan – Lot 152
8. Elevations – Lot 152
9. Elevations 2 – Lot 152
10. Floor Plan – Lot 153
11. Traffic Impact Statement

### **Advice to Proponent(s)/Submissioners**

The Proponent(s) and those who lodged a submission on the proposal have been advised that this matter is to be considered at the 14 September 2017 Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

N/A.

## **15.4 (OCM 14/09/2017) - STONE WALL AND RUINS HERITAGE STUDY (ADOPTION FOR ADVERTISING) (099/228) (D DI RENZO) (ATTACH)**

### **RECOMMENDATION**

That Council adopt the Draft Stone Wall and Ruins Heritage Study as included at Attachment 2 and its recommendations for the purposes of community consultation.

### **COUNCIL DECISION**

### **Background**

The *Heritage of Western Australia Act 1990* requires each local government to identify buildings of cultural heritage significance in its district through a Local Government Inventory ("LGI").



In 2014 a dry limestone wall in Munster built in approximately 1946 was included on the City of Cockburn's LGI as a 'Management Category B' place, having 'Considerable Significance'. It was also included on the Heritage List pursuant to City of Cockburn Town Planning Scheme No. 3 ("the Scheme").

Since that time a number of other similar stone walls and other stone ruins have been identified in the City of Cockburn, primarily in the area formerly referred to as 'South Coogee'.

In response to this, Council resolved at the 10 August 2017 Ordinary Meeting to prepare a Stone Wall and Ruins Heritage Study to identify and assess the conservation heritage value of these structures, and to make recommendations regarding heritage listing and management.

The purpose of this report is to present the Study for Council adoption to advertise.

### **Submission**

N/A.

### **Report**

The purpose of this report is for Council to consider adopting the Draft Stone Wall and Ruins Heritage Study included at Attachment 2 for the purposes of community consultation.

The purpose of the study is to:

1. Identify stone walls and ruins in the City of Cockburn that may have cultural heritage significance.
2. Undertake an assessment of the heritage values of those structures.
3. Identify safety, maintenance, stabilisation, management responsibility and other practical issues associated with these structures.
4. Make recommendations for future management and heritage listing of these structures.

### **History of Dry Stone Walls**

Dry wall construction is a building method by which structures are built from stones without any mortar to bind them together. Dry stone walls are seen throughout the world across a variety of eras, and have been traditionally used as arable land and pasture boundaries across Europe.

Of particular note the Croatian coast is known for its dry walls (suhozidi or gromace). Due to the karst landscape, many of dry walls along the Croatian coast and on islands were built out of agricultural necessity. It was hard work for local farmers; they had to move rocks and stones to clear space if they wanted to grow olive trees and grapevines. Those rocks were then used to construct walls.

In Ireland and the United Kingdom these were sometimes known as 'consumption' walls because they were built to 'consume' the cleared stones when the field was brought into cultivation.

Dry stone walling in Australia emerged in the mid 1800's in areas where a proliferation of stone in the geological landscape necessitated a clearing of the land. They are predominately seen in South Australia, Victoria and Tasmania. Constructed by both Anglo Celtic and European Migrants the walls are historically and culturally significant, standing as testimony to a time when artisan skills portrayed the patterns of our early settlement.

Many of the dry stone walls dating from the 1800s in Victoria and South Australia are afforded heritage protection. In Victoria dry stone walls constructed prior to 1940 are automatically protected and planning approval is required prior to their demolition.

In Western Australia dry stone walls from this era are generally not seen, and the Dry Wall Association of Australia does not recognise any such walls in Western Australia.

### History of South Coogee

Development in the South Coogee area began between 1890 and 1903 on the site of the abandoned village of the pensioner guard near Lake Coogee. The settlement thrived with vines, orchards and vegetable gardens established. Establishing a property at South Coogee was harder work than at Jandakot and progress was usually slow. One of the reasons for this was that the land held a lot of stone.

While this growth was slower than Jandakot it was also more certain, and it was to become the nursery of market gardening skills in the Cockburn District for half a century.

Post war South Coogee led the way towards larger landholdings and specialised crops. Production grew too great for the domestic market and turned towards export markets in South East Asia. Some of the descendants of the original market gardeners in South Coogee pioneered a moved south to the Baldivis area where there were larger landholdings, and others followed.

It was after 1945 that saw Croatian and Italian market gardeners move into the South Coogee area, after earlier settling predominately in Spearwood from 1911 onwards.

The City's oldest aerial photograph of this area is from 1953, and the majority of remnant stone walls are not visible in the landscape at this time. Most of the stone walls appear later in the 1963 aerial photograph. This timing coincides with the Croatian and Italian market gardeners settling in the area, suggesting a possible connection.

#### Place No. 114 'Limestone Wall and Ruins, Munster'

At the 11 September 2014 OCM Council included a dry stone wall at Lot 103 West Churchill Avenue, Munster (Place No. 114 'Limestone Wall and Ruins, Munster') on the LGI.

The wall and ruins were erected in 1946, or shortly after, by Jakov Vidovich, a Croatian (then known as Slavic) market gardener.

The limestone wall comprises a section of dry stone wall located on the southern boundary of Lot 103 West Churchill Avenue, Munster, directly adjacent to the end of Velaluka Drive. It runs east west along part of the length of the southern boundary of the lot, and is up to 2m in height.

The wall (and associated stone ruins) is constructed as double skin walls, with smaller rubble infill.

The stone wall and ruins were assessed using the Heritage Council's 'Criteria for the Assessment of Local Heritage Places and Areas' and were determined to have the following heritage significance:

- Significant for its association with the market garden industry which was the predominant source of employment in the area for most of the 20th century.
- High archaeological potential to reveal aspects of the market gardening industry from the mid-20th century.
- Scientific value as representing a method of dry stone walling uncommon in Western Australia.
- Associated with Jakov and Jakubina Vidovich, Croatian (Slavic) market gardeners who arrived in Western Australia in 1939, and who settled in Munster in 1946.

- If appropriately interpreted, has the potential to be an educational/recreational resource for the community, demonstrating the market gardening industry in the City of Cockburn.

It was determined that this place should be included on the LGI as a 'Management Category B' place, having considerable significance, being very important to the heritage of the locality, with conservation of the place being highly desirable; and any alterations or extensions being sympathetic to the heritage values of the place.

It was also included on the Heritage List pursuant to the Scheme, where it is afforded a greater level of statutory protection. Inclusion on the Heritage List means that planning approval is required prior to any works being undertaken to the wall or ruins.

Local Planning Policy No. 4.4 'Heritage Conservation Design Guidelines' sets out a presumption against demolition of places on the Heritage List.

#### Identifying stone walls and ruins

The Draft Stone Wall and Ruins Study included examination of historical aerial photographs, and site visits were undertaken to identify the possible location of stone walls. Land title searches have been used to look at the history of landownership.

Through this process three dry stone walls and one ruin have been identified as follows:

39 & 41 Britannia Ave, Beeliar - Dry stone wall  
50 Albion Avenue, Munster - Dry stone wall  
22 Jervois Street, Beeliar - Dry stone wall  
96 Coogee Road, Munster – Stone ruins

A stone wall (with mortar) at Naval Base Holiday Park has also been identified and assessed through the study.

Examination of historical aerial photographs has identified the following stone walls that are no longer extant, and these have been recorded in Appendix A of the study:

- \* Coogee Road - Stone wall
- \* Korcula Court - Stone wall
- \* Britannia Avenue, Beeliar - Stone wall

The dry stone walls, both extant and removed, have been mapped and are shown in Attachment 1. This information provides an understanding of the prevalence and distribution of stone walls in the

area both currently and historically. This information suggests that use of stone walls was scattered through the area, and was not typical of market gardening in the area.

### Assessing Heritage Significance

Each of the stone walls and structures that are still intact have been recorded and assessed in the Draft Stone Wall and Ruins Study (Attachment 2).

They have been assessed against the 'Criteria for the Assessment of Local Heritage Places', as recommended by the Office of Heritage. These criteria adhere to well-established 'best practice' in the identification and assessment of heritage places in WA and throughout Australia, both at the State and local levels. This ensures that assessments are:

- accountable and can be tested
- comparable
- consistent

A place or area will be of significance to the locality if it meets one or more of the criteria under the following headings:

- aesthetic value
- historic value
- research value
- social value
- rarity
- representativeness
- condition, integrity and authenticity.

Historical aerial photographs indicate that the dry stone walls in Beeliar and Munster (former South Coogee area) were generally constructed between 1953 and 1965, and are commonly associated with the Croatian and Italian market gardeners of that time.

It is likely that the dry stone walls in this area had a dual purpose:

- To clear stone from the site to allow market gardening activities;
- Delineate property boundaries.

Most certainly stone would not have been imported to erect such walls. Rather, it was a pragmatic solution to re-using the stone material taken from the ground to convert the ground in to a market garden resource. The fact that most walls are segments, and not complete walls, indicates that construction was only taken to the extent necessary to use up the available stone materials.

These dry stone walls are considered to have some cultural heritage significance, specifically:

- Aesthetic significance as landmark features.
- Historical interest for their association with market gardening.
- Scientific interest because of the dry stone construction method.

#### *Aesthetic Value*

In areas where dry stone walls are prevalent they can be intrinsically part of the landscape. A number of Victorian local government areas have landscapes that are a 'chequerboard network' of extensive walls, kilometres in length, and they have become an important part of the landscape visually, and a cultural connection to the past.

A review of historical aerial photographs provides an indication of the extent of stone walls in the former South Coogee area, depicted in Attachment 1. This demonstrates that they were not prevalent in the area. Rather discrete segments only.

Therefore while these walls have some landmark character and aesthetic value individually, they are not considered to be extensive enough to contribute significantly to the landscape character of the area.

The extant dry stone walls that were examined were generally in poor condition with evidence of significant deterioration. This is also considered to reduce their aesthetic value because in a deteriorated state they are not a good representation of the original appearance.

Place No. 114 'Limestone Wall and Ruins, Munster' is considered to be the best, most intact example of a dry stone wall constructed by market gardeners in the former South Coogee area. This is because of its substantial height and length, and relatively good condition. The associated limestone ruins also enhance its aesthetic value because the wall and ruins can be read together as a 'precinct'.

#### *Historical and Social Value*

Given that dry stone walls were not prevalent in the former South Coogee area (as shown in Attachment 1), this suggests that their construction was not common practice, and that they do not have a strong association with the activity of market gardening generally in the former South Coogee area.

Their limited association with market gardening is best reflected in 'Place No. 'Limestone Wall and Ruins, Munster' where the story of the wall, and the builder is known, adding to its historic value.

### *Scientific and Archaeological Value*

In terms of meeting the criteria for inclusion on the LGI, 'Place No., 'Limestone Wall and Ruins, Munster' is the most intact, and one of the most well-made examples and therefore serves best to offer scientific and archaeological potential. Its association with ruins on the site enhances its archaeological potential, and interpretation opportunities.

### Heritage Recommendations

#### *Dry Stone Walls*

The three dry stone walls assessed through this study have some heritage significance, but as discussed above they are considered to be 'below threshold' and do not meet the criteria for inclusion on the LGI.

Place No. 114 'Limestone Wall and Ruins, Munster', which is already included on the LGI and protected pursuant to the Scheme, is considered to be the best example to demonstrate the heritage values of these walls, and it itself has been assessed and demonstrated to meet the criteria for inclusion on the LGI.

However, it is acknowledged that that these structures do have some cultural heritage value, and they are of interest as part of the history of the area. For this reason it is considered appropriate that they are recorded and their retention is encouraged.

Including these structures on the LGI (but not the Heritage List) would still trigger the requirement for planning approval prior to demolition or removal of these structures pursuant to the Scheme.

Where there is fabric remaining the purpose of including a place on the LGI as a 'Management Category D' place (the lowest category) is to ensure that an archival record can be obtained prior to demolition. This is achieved through the requirement for planning approval prior to demolition of a 'Management Category D' place, which is then conditioned with a requirement for an archival record (photographs and scaled drawings). In this circumstance a record of the dry stone walls has been made by the City and there is not seen to be any benefit from requiring the landowner to seek planning approval prior to demolition of the wall which would incur additional costs and time delays.

It is therefore recommended that a new section be included within the LGI document where information about historical sites can be recorded. This section would include:

- Sites/structures that are of historical interest as part of the story of the district but are not considered to have the cultural significance to warrant inclusion on the LGI (i.e. do not meet the criteria for inclusion on the LGI).
- Sites/structures where statutory protection is not considered necessary or appropriate.
- Where it is considered undesirable and unnecessary to trigger any additional requirements for planning approval for the landowners, including demolition.
- A record of the site and relevant information for historical purposes and to facilitate possible interpretation opportunities.
- Encourage retention and recognition of the dry stone walls where possible.

*Stone Ruins – 96 Coogee Road, Munster*

96 Coogee Road, Munster contains dilapidated stone ruins located in the south eastern corner of the site, visible as a footprint on the 1953 aerial.

It is noted that the land has been subject to extensive clearing and earthworks over the years which makes it difficult to determine what the structures were, or when they were built.

The subject land was originally part of William Ledyard's 200 acre land grant; however, there is no evidence that that he constructed anything on the land. Evidence suggests that he did not make any improvements to the land.

It is considered likely that the structures on the site were either constructed prior to 1939, during the period ownership of Frederick John Allen Early and Charles Early (1928-1939), or later during the ownership of Joze Matijas (1940-1989) who was from Marina, Yugoslavia. The land was in his ownership until he died in 1989.

No further information regarding these ruins is known at this stage; therefore it is not considered there is sufficient evidence to suggest the ruins meet the criteria for inclusion on the LGI and/or Heritage List.

The vacant land is owned by Landcorp and is located in the Australian Marine Complex Structure Plan area. It is recommended that the City encourage Landcorp to investigate the ruins as part of any subdivision or development application for the subject land.



### *Naval Base Holiday Park Wall*

There is a small stone wall located on the Naval Base Holiday Park site, which is thought to be associated with the railway line that once ran north south through the site.

The Naval Base Holiday Park site is included on the LGI and is also a designated 'Heritage Area' pursuant to the Scheme. Therefore the stone wall located on the site is protected through the requirement for planning approval prior to any works.

However, it is recommended that the place record be modified to include a reference to the wall to ensure it is recognised.

### Future Management Issues

If well-made and undisturbed, dry stone walls can stand for centuries; however they can also be prone to deterioration and collapse especially when interfered with. This is because they are characterised by very shallow footings, usually only a few inches deep, and they are susceptible to ground movement on soft land, as well as root damage from nearby trees. Removal of sections of the wall, which often occurs as land use changes over time, also undermines their structural stability.

It is anticipated that there would be costs and a lack of local expertise in retaining and maintaining dry stone walls on private property. It is also noted that there are no recognised dry stone wallers listed with the Dry Wall Association of Australia, reflective of the lack of local expertise.

However, it is acknowledged that that these structures do have some cultural heritage value, and they are of interest as part of the history of the area. For this reason it is considered appropriate that they are recorded and their retention is encouraged where possible.

### Retention on Public Land

The dry stone walls located elsewhere in Australia are generally located on private rural land where they remain relatively undisturbed. Dry stone walls in the public realm raise issues regarding safety and ongoing maintenance, particularly where the area may be subject to high levels of use by the public, such as parks. Leaving the dry stone walls as they are is considered to be problematic because they are designed to stand where they remain undisturbed.

In the public realm, such as within road reservations or public open space, dry stone structures will be subject to greater levels of interference that could undermine their stability.

In the first instance they will be subject to disturbance from earthworks as part of any subdivisional works, including land re-contouring, fill, compaction, and vegetation removal/modifications.

The use of the area by the public, which could include climbing of the walls, creates the risk that the stability of the wall/structure would be undermined. For this reason any dry stone walls on public land will need to be appropriately stabilised to ensure their safety. The method of stabilisation must take into consideration the heritage values of the wall, and should not detract from the aesthetic values of the wall/structure.

### Interpretation Opportunities

Heritage supports urban and rural amenity by providing familiarity and the presence of landmarks, by underpinning our 'sense of place', and by enhancing the quality of our built environment generally.

Whilst not representative of rural settlement of the area more broadly, the dry stone walls and structures do provide a unique insight into the former predominate use of the area for market gardening. They are also a unique landscape element in themselves. In this regard they provide great interpretation opportunities.

Where a structure plan is prepared for a landholding containing a dry stone wall the Structure Plan should consider:

- Retention of the wall, or sections of the wall where they can be stabilised, with the method of stabilisation specified both during earthworks and construction, and in the future.
- Interpretative artwork that recognises the history of the site and the dry stone wall.
- Interpretation that re-uses the stones from the dry walls, for example in gabion artworks, street furniture, fencing, retaining and landscaping.
- Where reused as gabion fencing the intent is not that it mimics the old wall but that it reflects a re-interpretation, and may be incorporated into landscaping elements in public open space.
- Street naming opportunities.

Where the City's Percent for Artwork Local Planning Policy applies to development that is located on land where a stone wall is located the following is encouraged:

- Incorporation of the stones themselves in interpretive artwork, such as gabion structures, street furniture and landscaping elements.
- Artworks that reflect the dry stone walls and the market gardening history of the area.

This provides the opportunity for artworks to reflect the area's character and to create a unique sense of place for the future.

#### Place No. 114: Limestone Wall and Ruins, Munster

Place No. 114 'Limestone Wall and Ruins, Munster' is included on the City of Cockburn LGI and Heritage List. Pursuant to City of Cockburn Local Planning Policy No. 4.4 'Heritage Conservation Design Guidelines' and State Planning Policy 3.5 Historic Heritage there is a presumption against demolition of places on the Heritage List. Therefore, there is a presumption against demolition of the wall and ruins, and any modifications would require planning approval so that the impact on the heritage values of the structures could be assessed.

Retention of these wall and ruins will require an innovative approach to the design of public open space that incorporates the wall and ruins whilst also providing a recreational function for the community.

Any structure plan that affects Place No. 114 'Limestone Wall and Ruins, Munster' should demonstrate:

- Retention of the wall and ruins within public land to secure its future retention and management.
- Public open space being designed to appropriately incorporate the ruins and wall in a manner that facilitates interpretation while providing a recreational function for the community.
- Methods of stabilising and protecting the wall and ruins during earthworks and subdivisional works.
- Methods of stabilising the stone wall and ruins in a way that does not detract from the heritage significance, particularly the aesthetic values of the structures.

The wall and ruins provide this structure plan area with a point of difference and with careful planning and design will create a very distinctive park that contributes to a unique sense of place for the area.

#### Community Consultation

It is recommended that the Draft Stone Wall and Ruins Heritage Study be advertised for public comment, which would include:

- Direct consultation with the landowners, clearly explaining the purpose of the study and the proposed recommendations.
- Consultation with the general community seeking their feedback and any additional information they may have regarding stone walls.

### Conclusion

It is recommended that Council adopt the Draft Stone Wall and Ruins Heritage Study as included at Attachment 2 for the purposes of community consultation.

### **Strategic Plan/Policy Implications**

#### **Community, Lifestyle & Security**

- Provide for community facilities and infrastructure in a planned and sustainable manner
- Provide safe places and activities for residents and visitors to relax and socialise

#### **Economic, Social & Environmental Responsibility**

- Continue to recognise and celebrate the significance of cultural, social and built heritage including local indigenous and multicultural groups

#### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes
- Provide for community and civic infrastructure in a planned and sustainable manner, including administration, operations and waste management

### **Budget/Financial Implications**

Nil.

### **Legal Implications**

Nil.

### **Community Consultation**

In accordance with Section 45(2)(b) of the Heritage of WA Act 1990, the City is required to undertake extensive consultation in relation to the updates to the LGI.

The requirements for consultation for places on the Heritage List are set out under Provision 8(3) of the City of Cockburn Town Planning Scheme No. 3 Deemed Provisions as follows:

- (3) *The local government must not enter a place in, or remove a place from, the heritage list or modify the entry of a place in the heritage list unless the Local Government —*
- (a) *notifies in writing each owner and occupier of the place and provides each of them with a description of the place and the reasons for the proposed entry; and*
  - (b) *invites each owner and occupier to make submissions on the proposal within 21 days of the day on which the notice is served or within a longer period specified in the notice; and*
  - (c) *carries out any other consultation the local government considers appropriate; and*
  - (d) *following any consultation and consideration of the submissions made on the proposal, resolves that the place be entered in the heritage list with or without modification, or that the place be removed from the heritage list.*

### **Risk Management Implications**

The officer's recommendation takes in to consideration all the relevant planning factors associated with these proposals. It is considered that the officer recommendation is appropriate in recognition of making the most appropriate planning decision.

If a heritage study of the remnant stone walls and ruins in the City of Cockburn is not undertaken they could be removed by the landowners and the opportunity to assess their heritage value (and potentially protect them or record them if deemed appropriate) will be lost.

### **Attachment(s)**

1. Location Plan
2. Draft Stone Wall and Ruins Study

### **Advice to Proponent(s)/Submissioners**

N/A.

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**15.5 (OCM 14/09/2017) - CONSIDERATION TO INITIATE SCHEME AMENDMENT NO. 122 – LOCATION: LOT 25 ACOURT ROAD, TREEBY – OWNER: TILLBROOK NOMINEES PTY LTD – APPLICANT: URBIS (109/120) (T VAN DER LINDE) (ATTACH)****RECOMMENDATION**

That Council

- (1) require the following modifications to the proposed Scheme Amendment No. 122:
  1. The Acoustic Assessment prepared by Resonate Acoustics and dated 7 June 2017 (ref: P17113RP1, Revision 1) be updated to assess only those Additional Uses listed in recommendation (2)2 below, remove reference to a fast food outlet and child care premises, and include investigation of potential noise emissions from Jandakot Airport.
  2. The Traffic Impact Assessment prepared by Transcore and dated April 2017 (ref: t16.083, r01a) be updated to assess only those Additional Uses listed in recommendation (2)2 below and remove reference to a fast-food restaurant and day care centre.
- (2) in pursuance of Clause 75 of the *Planning and Development Act 2005* (“Act”), initiate the amendment to City of Cockburn Town Planning Scheme No. 3 (“Scheme”) for the following purposes:
  1. Designating Additional Use No. 19 over portion of Lot 25 Acourt Road, Treeby as designated on the Scheme Amendment Map, in order to bring the Scheme in to conformity with the zoning under the Metropolitan Region Scheme.
  2. Amending Table 6 – Additional Uses to include the following provisions relating to the Additional Use No. 19 portion of Lot 25 Acourt Road, Treeby:

<b>No.</b>	<b>Description of Land</b>	<b>Additional Use</b>	<b>Conditions</b>
AU 19	Portion of Lot 25 Acourt Road, Treeby	Market – A Restaurant – A	Development Approval for Lot 25 Acourt Road are subject to:

		Service Station – A	a) Due consideration to groundwater risk minimisation.
		Convenience Store – A	b) All development being connected to a reticulated sewer system.
		Veterinary Centre – A	c) Stormwater is to be managed as described in the Department of Environment's Stormwater Management Manual for Western Australia or relevant equivalent.
			d) With regard to any application for development approval likely to generate noise emissions that may impact surrounding development, the preparation and lodgement of a report by a suitably qualified acoustic consultant demonstrating how the proposed use has been acoustically assessed and designed for the purposes of minimising the effects of noise intrusion and/or noise emissions in accordance with the Environmental Protection (Noise) Regulations 1997.
			e) With regard to any application for development approval, the preparation and lodgement of a report by a suitably qualified bushfire consultant demonstrating that the proposed development complies with the requirements of State Planning Policy 3.7 Planning in Bushfire Prone Areas.
			f) Development is to comply with the requirements for

			<p><i>'Commercial and Industrial Uses' within LPS 3.</i></p> <p><i>g) All service areas are to be concealed from public view.</i></p> <p><i>h) Built form to be designed to be complementary to the character of the surrounding area.</i></p> <p><i>i) A vegetation strip to be provided on the boundary to the lots to the north-west and southwest, in order to maintain an appropriate rural interface with those Resource zoned lots.</i></p> <p><i>j) Any application for development approval must demonstrate the provision of a minimum front setback of 15m, in order to accommodate the provision of a 3m landscaping strip, 5.5m car parking area and a 6m access way. This area is to be protected by an appropriate public access easement for the full frontage of the subject land to Warton Road.</i></p> <p><i>k) No right hand turn in to the site from Warton Road will be supported unless, at the development approval stage, a Traffic Impact Assessment can demonstrate to the satisfaction of the local government that such access can be accommodated in a safe manner and will not create congestion in the immediate road network.</i></p> <p><i>l) Proposed development being accompanied by a</i></p>
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			<p><i>Fauna Relocation Plan.</i></p> <p><i>m) The Market use is to be limited to a maximum net lettable area of 3000sqm floor space.</i></p> <p><i>n) The Market use is to be limited to the operating hours of 8am to 3pm, and only from Thursday to Sunday.</i></p> <p><i>o) The Restaurant use is not to be developed as a Fast Food Outlet.</i></p>
<p>(3) note the amendment referred to in resolution (1) above is a 'complex amendment' as it satisfies the following criteria of Regulation 34 of the <i>Planning and Development (Local Planning Schemes) Regulations 2015</i> ("Regulations"): <i>an amendment that is not addressed by any local planning strategy;</i></p> <p>(4) pursuant to Clause 81 of the Act, refer the Scheme amendment to the EPA by giving to the EPA written notice of this resolution and such written information about the amendment as is sufficient to enable the EPA to comply with section 48A of the <i>Environmental Protection Act 1986</i> in relation to the proposed Scheme amendment;</p> <p>(5) pursuant to Regulation 37(2) of the Regulations, submit two copies of the proposed Scheme amendment to the Commission, to obtain consent to advertise the Scheme amendment; and</p> <p>(6) subject to Clause 81 and 82 of the Act, if the Commission advises the City of Cockburn that it is satisfied that the complex amendment is suitable to be advertised, advertise the proposed Scheme amendment pursuant to the details prescribed within Regulation 38. Regulation 38 specifies advertising must not be less than a period of 60 day.</p>			

## COUNCIL DECISION

## Background

The subject land comprises a 2.3ha portion of Lot 25 Acourt Road Treeby, located at the most eastern extent of the City. The City of Canning local authority is located to the north, the City of Gosnells to the north-east and the City of Armadale to the east and south (see Attachment 1 – Location Plan). It is a unique land area, situated mostly outside of the Rural Water Protection zone of the Jandakot Water Mound. That is, it is not subject to the same constraints which ‘Resource’ zoned land within Banjup and Jandakot are, according to the region and local schemes.

The subject land is mostly zoned ‘Rural’ under the Metropolitan Region Scheme (“MRS”), with only a minor sliver in the western portion within the Rural Water Protection zone of the MRS. This creates a requirement for the City’s Scheme be consistent with the ‘Rural’ zoning of the MRS, over the majority of the land. The City’s Scheme currently zones the land as ‘Resource’, despite it mostly not coinciding with the Rural Water Protection zone of the MRS. This has created opportunity for the landowner to request the City to bring its Scheme in to better conformity with the MRS, as per the requirements of the Planning and Development Act 2005 (“Act”). Also currently under the City’s Scheme, the subject land is located within Additional Use 7 area which allows for the development of cattery and dog kennels, commonly referred to as the “kennel zone”.

The proposed Scheme amendment seeks to introduce a new additional use to the Rural zoned portion of the land under the MRS. It is recommended that Council initiate this Scheme amendment, based upon:

- the need to bring the local scheme into conformity with the region scheme;
- the additional use introducing what are considered to be compatible uses recognising the interfacing urban and rural setting, at this eastern extent of the city;
- no changes being contemplated within the Resource zoned sliver on the subject land.

## Submission

N/A

## Report

The proposed Scheme amendment request was lodged by Urbis on behalf of the landowner, Tillbrook Nominees Pty Ltd. The proposal seeks to introduce Additional Use 19 over the subject land to introduce a specific set of additional uses to be developed on site. Attachment 2

– Scheme Amendment Map illustrates the proposed changes to the Scheme Map.

The subject land is generally located on the corner of Warton Road, Nicholson Road and Acourt Road and is vacant of development. Vegetation at the subject land is generally degraded and consists of shrub regrowth following clearing of the site for agricultural purposes approximately 30 years ago.

CY O'Connor Village is located approximately 100m south of the subject land within the City of Armadale and incorporates several eateries, a medical centre, retail stores and various other community services. Land to the east within the City of Armadale consists of residential estates. Banksia Hill Detention Centre is located north-east within the City of Gosnells and land to the north within the City of Canning is reserved for 'Parks and Recreation'.

### Zoning

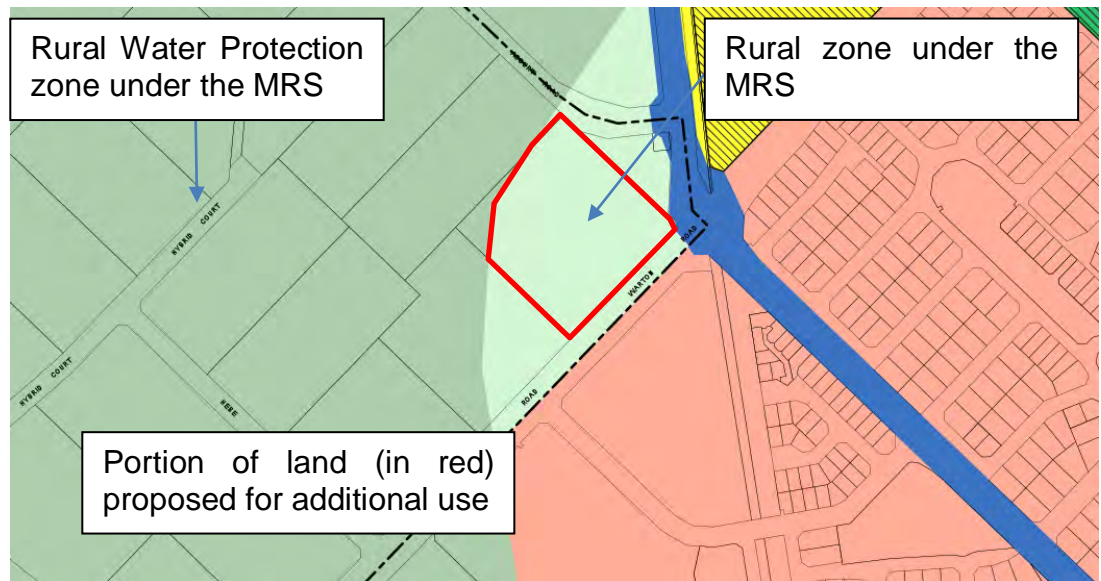
The subject land is zoned 'Rural' under the MRS and thus provides a context for uses which are compatible with a rural setting as being able to be considered. The current zoning under the local scheme is 'Resource', and the applicant takes the position that the local scheme needs to be reflect the designation for the land under the region scheme.

In taking this point further, the local scheme's zone objective for the 'Resource' zone is:

*"To provide for the protection of the Perth Metropolitan underground water resource in accordance with the requirements of Statement of Planning Policy No. 6 published by the Western Australian Planning Commission on 12 June 1998."*

This creates the issue that the current zoning of the land as Resource, being outside the Jandakot water mound, means that technically the Resource zone does not appropriately designate a local planning response to the Rural zone under the MRS.

Statement of Planning Policy No. 6 is the Jandakot Groundwater Protection Policy which is now referred to as State Planning Policy 2.3 ("SPP 2.3"). Lot 25 is zoned 'Resource' under the Scheme due to only a small portion of the lot being located within the Jandakot Groundwater Protection Policy area ("Protection area"). However, the subject land is located wholly outside of this area and thus does not fall under the requirements of SPP 2.3. This is shown following:



The MRS zonings over Lot 25 reflect the exclusion of the subject land from the Protection area, with the portion of land located within the Protection area zoned 'Rural – Water Protection' and the remainder of the lot (the subject land) being zoned 'Rural'. The 'Rural – Water Protection' zone imposes more onerous requirements on the development of land and restricts land uses in accordance with SPP 2.3. Since the subject land is zoned 'Rural' under the MRS these same restrictions do not and should not apply to development of this land.

Lots 24, 25 and 892 Acourt Road and Lot 13 Warton Road are the only lots zoned 'Resource' under the Scheme that are not entirely within the Protection area or zoned 'Rural – Water Protection' under the MRS. The City is required to bring the Scheme into conformity with the MRS, and thus development of the subject land should reflect the 'Rural' zoning of the MRS rather than the 'Rural – Water Protection' zoning that applies to all other land zoned 'Resource' under the Scheme. Thus, a wider range of land uses may be considered at the subject land in accordance with the 'Rural' zone under the MRS as opposed to land zoned 'Rural – Water Protection'.

#### Proposed Additional Uses

The subject land is located within a small pocket of 'Rural' zoned land under the MRS with land to the west and north zoned 'Rural – Water Protection'. Land to the south and east is zoned 'Urban' and land to the north-east is zoned 'Public Purpose – Prison' (see Attachment 3 – MRS Zoning).

To the south of the subject land, within the City of Armadale, land zoned 'Urban' under the MRS directly interfaces with 'Rural – Water Protection' zoned land, that is, 'Urban' zoned land directly follows the boundary of the Protection area. However, where the 'Rural – Water

Protection' zone boundary moves north across Warton Road into the City of Cockburn and traverses Lot 25, the 'Urban' zoning stops at Warton Road appearing to delineate Warton Road as the boundary for 'Urban' zoned land. This was likely done to 'round off' the urban area using logical road reserve boundaries and has resulted in a small, isolated pocket of 'Rural' zoned land, including the subject land, located between the Protection area and 'Urban' zoned land. Development of the subject land is thus required to manage the expectations of landowners within the 'Urban' zoned land to the south of Warton Road as well as the expectations of landowners to the west of the subject land located within the 'Rural – Water Protection' zone. These expectations need to be balanced and land uses at the subject land will need to appropriately transition from 'Rural – Water Protection' to 'Urban', while ensuring these uses are compatible with the 'Rural' zone.

The proposed Scheme amendment and additional uses appropriately address this balance. The Market and Veterinary Centre are low intensity rural uses, compatible with the existing rural development within the 'Resource' zone to the west of the subject land. The Veterinary Centre will be able to service the catteries and dog kennels in the area, as well as the wider residential community to the east. The Market is intended to give local farmers the opportunity to sell their produce and thus support rural pursuits while servicing urban areas. In order to ensure the Market is developed as a low intensity and small scale use to protect the amenity of nearby rural pursuits, the floor space of the Market is to be limited to a maximum of 3000m<sup>2</sup>. Furthermore, operating times are to be limited from 8am to 3pm, Thursday to Sunday. This requirement has been included in the additional use conditions listed above. The Concept Plan prepared in support of the Scheme amendment and included at Attachment 4, proposes the Veterinary Centre and Market on the south-western portion of the site as an appropriate interface with the 'Rural – Water Protection' zoned land to the west.

The Service Station, Convenience Store and Restaurant are uses that are appropriate within the 'Rural' zone and are commonly found in rural areas throughout the metropolitan region. These uses are particularly appropriate at the subject land due to the close proximity of urban development south of Warton Road. CY O'Connor Village to the south of the subject land is planned to expand further north, with Mixed Use development proposed directly opposite the subject land. The proposed additional uses will act as a transition between the Mixed Use and rural uses while also contributing to a town centre environment. The Restaurant is not to be developed as a Fast Food Outlet which would compromise the rural character and amenity of the locality. This requirement is included within the additional uses conditions listed above. These uses are proposed to be located on the

north-eastern portion of the site, closest to existing urban development to minimise the impact of noise and light emissions on rural uses to the west. A vegetation strip will be required to be provided along the north-west and south-west boundaries of the subject land as a buffer between the rural land uses and proposed Additional Uses.

#### State Planning Policy 2.3 Jandakot Groundwater Protection Policy

The aim of SPP 2.3 is *“to protect the Jandakot Groundwater Protection area from development and land uses that may have a detrimental impact on the water resource”*. SPP 2.3 also states that land use planning is to be guided by priority areas and the principles of risk avoidance, risk minimisation and risk management.

Groundwater is a highly valued resource of the State, and the Protection area currently provides a significant volume of high quality water that needs to be protected into the future. It is understood groundwater protection is dependent on appropriate and integrated land use planning, water and health management processes. Thus, any land use that has the potential to impact the Protection area whether inside or outside the policy area should be investigated.

The subject land while not within the Protection area is located in close proximity to the Protection area and is thus required to demonstrate that proposed development will not increase risk of groundwater contamination. The proposed Scheme amendment includes a condition requiring that any future development at the subject land will be required to have due consideration to groundwater risk minimisation. This may include investigations demonstrating the proposed uses do not pose an unacceptable risk to groundwater quality. Any development application will also need to be supported by an appropriate water management plan, which will address groundwater management and contamination.

#### Noise

The subject land is in close proximity to Warton and Nicholson Roads, the kennel zone, and is also located within the Jandakot Airport Frame Area and thus may be impacted by noise from any or all of these sources. The proposed additional uses are also a source of noise that has the potential to impact surrounding landowners.

An Acoustic Assessment has been prepared and lodged with the City to support the proposed Scheme amendment and determine whether the impacts on the subject land, as well as emissions proceeding from the proposed additional uses, are acceptable under the planning and environmental legislative framework.

The Acoustic Assessment demonstrates that predicted noise emissions from the subject land are acceptable and can be managed to meet legislative requirements. Noise emissions impacting the subject land from Warton and Nicholson Roads and dog kennels were also assessed as acceptable.

However, the Acoustic Assessment and recommended management practices are based on additional uses that are no longer proposed by the Scheme amendment. The Acoustic Assessment also does not address potential noise from Jandakot Airport given the subject land is located within the Jandakot Airport Frame Area. For this reason, as per recommendation (1)<sup>1</sup> above, the Acoustic Assessment is required to be updated. This is not expected to reveal an increase in noise emissions from or on the subject land or compromise the acceptability of the proposed Scheme amendment for initiation. It is recommended that the Acoustic Assessment be updated prior to advertising.

Further acoustic reporting will be required to support any future development application as detailed in the proposed additional use conditions. A more accurate and detailed noise assessment will be possible once the exact position of proposed uses on site is known.

### Traffic and Access

The proposed additional uses are expected to attract relatively high volumes of traffic to the subject land, and internal access ways, turning lanes and crossovers will need to be constructed to accommodate expected traffic volumes safely. The subject land currently has no formal access to the surrounding road network so any future development application at the site will need to be supported by appropriate upgrades to the road network and intersection treatments.

The Traffic Impact Assessment ("TIA") prepared to support the proposed Scheme amendment demonstrates that additional traffic generated by the proposed additional uses can be accommodated within the existing road network. Crossovers and intersections are proposed along Acourt Road and Warton Road to provide access to and from the subject land. Internal access ways can be designed to service each of the proposed uses, and sufficient parking can be provided on site. However, the City will not support right-in access to the subject land from Warton Road as proposed by the TIA due to volumes of traffic along Warton Road and the proximity of this access point to the Warton Road / Nicholson Road roundabout making this manoeuvre unsafe. If traffic is congested south of the Warton Road / Nicholson Road roundabout, vehicles turning right into the subject land will be required to cross two lanes traffic, increasing the risk of collision if one lane of congested traffic obscures vision of moving vehicles in the other lane. A right-in turn from Warton Road will only be permitted if

it can be demonstrated that this access can be accommodated safely and will not create further congestion. This requirement is included within the additional use conditions listed above.

Furthermore, like the Acoustic Assessment, the TIA has been prepared based on additional uses that are no longer proposed by the Scheme amendment. Thus, as per recommendation (1)2 above, the TIA is required to be updated prior to advertising of the Scheme amendment to ensure the predicted traffic volumes generated by each use are consistent with the additional uses that are proposed.

Further investigations and requirements relating to parking and access will be undertaken at the development application stage when proposed scale and location of land uses on site is known.

A portion of Lot 13 to the south-west of the subject land is also partly located outside of the 'Rural – Water Protection' zone under the MRS and the City has been approached by the landowners of this lot expressing interest in developing this portion of the property. Due to the relatively high volumes of traffic along Warton Road, crossovers to Warton Road at both Lot 25 and Lot 13 are not preferred by the City. Thus, the proposed Scheme amendment includes a condition to provide a 15m setback to Warton Road to be protected by a public access easement which would allow future connection to Lot 13 through Lot 25. This will be further addressed at the development application stage.

In conclusion, the City has been requested by the applicant to bring its local scheme in to better conformity with the region scheme. The most optimal planning response to do this is through the introduction of an additional use, in order to provide the unique planning response needed to transition the expectations of urban residents, with the expectation of those residents within the Resource zone. It is recommended that Council initiate the Scheme amendment.

## **Strategic Plan/Policy Implications**

### **Economic, Social & Environmental Responsibility**

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development
- Increase local employment and career opportunities across a range of different employment areas through support for economic development



- Sustainably manage our environment by protecting, managing and enhancing our unique natural resources and minimising risks to human health

### **Budget/Financial Implications**

The applicant has paid the fees associated with the Scheme amendment.

### **Legal Implications**

Under Section 123 of the *Planning and Development Act 2005*, it is required that local schemes be consistent with region schemes. It specifically states:

- (1) *A local planning scheme is not to be approved by the Minister under this Act unless the provisions of the local planning scheme are in accordance with and consistent with each relevant region planning scheme.*

The applicant has made the request to bring the local scheme in to better conformity with the region scheme. Under Section 124(4) of the Act, it states that:

- (4) *In preparing the local planning scheme or amendment the local government is to have due regard to the purpose and planning objectives of the region planning scheme or amendment to the region planning scheme*

The amendment proposed is considered to meet this requirement, and address the issue of conformity between the local and region schemes.

### **Community Consultation**

As per Part 5 of the Planning and Development (Local Planning Schemes) Regulations, there several amendment types: basic, standard and complex. These are defined in Part 5, Division 1, Regulation 34.

A complex amendment (such as this) requires 60 days consultation in recognition that such proposals have a greater impact on the community. Whereas a basic amendment requires no consultation and a standard amendment is 42 days consultation.

### **Risk Management Implications**

The proposed Scheme amendment presents an opportunity to develop the subject land with a range of land uses that would benefit the local and wider community. The proposed additional uses are appropriate within the 'Rural' zone and act as a transition between the rural land to the west and urban land to the east. The proposed additional use conditions and supporting technical reports demonstrate that development of the subject land will not have a detrimental impact on surrounding land uses and residents. The subject land is currently underutilised, being vacant of development. Given its strategic location and proximity to the neighbourhood centre on the south-east side of Warton Road, it is appropriately located for additional uses like that proposed to occur. If this proposed Scheme amendment is not initiated, there is a missed opportunity to consider the subject land for development of these uses and further investigate and receive feedback from the community on this proposal.

### **Attachment(s)**

1. Location Plan
2. Scheme Amendment Map
3. Zoning
4. Concept Plan

### **Advice to Proponent(s)**

The Proponent(s) has been advised that this matter is to be considered at the 14 September 2017 Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

#### **15.6 (OCM 14/09/2017) - PROPOSED AMENDMENT TO CELL 9, YANGEBUP AND CELL 10, BEELIAR STRUCTURE PLAN – LOCATIONS: LOTS 10-13 AND 101 (NO. 34, 36, 38, 40 & 46) TINDAL AVENUE, YANGEBUP – APPLICANT: MW URBAN (110/174) (T VAN DER LINDE) (ATTACH)**

#### **RECOMMENDATION**

That Council

- (1) adopts the Schedule of Submissions prepared in respect to the Proposed Structure Plan amendment;
- (2) pursuant to Clause 20 of the Deemed Provisions of City of Cockburn Town Planning Scheme No. 3, recommend to the

Western Australian Planning Commission the Proposed Structure Plan Amendment for Lots 10-13 and 101 Tindal Avenue, Yangebup, be approved; and

- (3) advise the landowners within the structure plan area and those who made a submission of Council's recommendation accordingly.

## COUNCIL DECISION

### Background

The Cell 9, Yangebup and Cell 10, Beeliar Structure Plan ("Structure Plan") was originally endorsed by the Western Australian Planning Commission ("Commission") in October 2001 and has been modified multiple times since.

This Proposed Structure Plan Amendment seeks to rezone Lots 10-13 and 101 (Nos. 34, 36, 38, 40 & 46) Tindal Avenue, Yangebup ("subject land") from Residential R20 to Residential R30 and R40 (see Attachment 1) to facilitate future subdivision and development of these lots. A Location Plan is included at Attachment 2.

The purpose of this report is for Council to consider the Proposed Structure Plan Amendment following the advertising process and a detailed assessment by City officers as discussed below.

### Submission

NA

### Report

#### Site Context and Zoning

The subject land consists of five lots fronting Tindal Avenue, varying between 517m<sup>2</sup> and 643m<sup>2</sup> in area with the total area of all five lots amounting to 3009m<sup>2</sup>. Four of the five lots (Lots 10-13) are vacant of development and have been vacant since the original dwelling

spanning all four lots was demolished in 2005. Lot 101 contains a single dwelling.

The subject land is zoned 'Urban' under the Metropolitan Region Scheme ("MRS") and 'Development' under City of Cockburn Town Planning Scheme No. 3 ('TPS 3'). The subject land is located within Development Area 4 ('DA 4'). The Structure Plan currently designates a 'Residential R20' coding over the subject land. The subject land is also located within Developer Contribution Areas 5 ('DCA 5') and 13 ('DCA 13') and contributions towards these are required at the subdivision and/or development stage.

The subject land is 200m north of Beeliar Drive and 250m west of Spearwood Avenue. Beeliar Village and South Coogee Primary School are located approximately 850m south-west. Cockburn Central Gateway's Shopping Centre is located 4.3km east of the subject land and offers a wide range of retail, commercial, supermarkets and food and beverage establishments. Visko Park and Spinnaker Reserve are located 500m and 200m west of the subject land respectively and offer a variety of passive and active recreation opportunities. High frequency bus routes servicing Fremantle to Cockburn Central are located within 250m of the site along Beeliar Drive and Spearwood Avenue. Thus, the subject land is well connected and located in relatively close proximity to a wide range of services and facilities in the surrounding locality.

### Proposed Density

Directions 2031 and Beyond ("Directions 2031") and Liveable Neighbourhoods ("LN") promote 15 dwellings per hectare, as the standard density for new greenfield development in urban areas, and an overall target of 47% of all new dwellings as infill development. This percentage equates to 154 000 of the required 328 000 dwellings future dwellings for Perth forecast growth to 2031, being located within existing zoned areas. Perth and Peel@3.5million reinforces these density targets and promotes urban consolidation and diversity in housing density.

The subject land comprises several of the last remaining vacant residential lots within Yangebup and is one of the largest agglomerations of vacant residential lots in the suburb. Thus, the proposed recoding presents a good opportunity to coordinate higher density development and contribute to the infill dwelling targets specified within the State planning framework. Furthermore, the majority of land within the Structure Plan area is coded R20 and so the proposed R30 and R40 densities provide greater diversity within the locality, translating into a range of future household types and responding to the objectives of the State and Local planning framework.

Land immediately to the south and east of the subject land is coded R40 and developed as single residential dwellings and grouped dwellings. Macrozamia Park is located approximately 20m south-east of the subject land and is 1870m<sup>2</sup>. All residential lots surrounding and fronting this park are coded R40. The R40 coding extends further north of the park up to Salina Way, opposite the subject land. The proposed R40 coding over Lots 12-13 and 101 represents a logical 'rounding off' of R40 development along this portion of Tindal Avenue and surrounding Macrozamia Park, and ensures a consistency in streetscape and built form on either side of Tindal Avenue. Essentially it creates an R40 corridor of development along Tindal Avenue, ensuring consistencies in built form outcomes on either side of the road.

Lots 10-11 are proposed to be developed at an R30 density as a transition from the proposed R40 to the existing R20 to the north and east of the subject land on the northern side of Salina Way. The proposed R30 coding of these two lots is appropriate and ensures there is not a significant disparity in built form outcomes between these lots and the existing R20 development on the east side of Tindal Avenue.

A future park and local centre are to be developed 150m and 200m south-west of the subject land respectively, offering nearby services, amenities and recreation opportunities to future residents at the subject land. The subject land's close proximity to high frequency public transport and a wide range of services and facilities as discussed above is further justification for the increase in density coding in this location.

Furthermore, the vast majority of land within the Cell 9, Yangebup and Cell 10, Beeliar Structure Plan area has been underdeveloped, with R20 and R40 coded lots (developed as single dwellings) being of a significantly larger size than the average required under the Residential Design Codes ("R-Codes"). For example, within the area containing the subject land bound by Bayview Terrace to the north, Tindal Avenue to the east, Yardie Crescent to the south and Spinnaker Heights to the west, the average R20 lot size is 563.8m<sup>2</sup>, when the R-Codes allow a minimum of 450m<sup>2</sup>. The average lot size of R40 lots developed with single residences in this same area is 319.3m<sup>2</sup>, when the R-Codes allow a minimum of 180m<sup>2</sup>. Thus, the proposed increase in density is an opportunity to recover the lost development opportunity resulting in the underdevelopment of land within the Structure Plan area.

## Traffic

The proposal results in the number of dwellings permitted to be developed within the subject area increasing from 5 to 10. An additional 5 dwellings will have negligible impact on traffic generation within the locality and can easily be accommodated within the existing road network. Local Development Plans (“LDPs”) will be required to be prepared for any lots with less than a 12m frontage to address driveway and crossover requirements to ensure the number of crossovers is minimised.

Furthermore, as stated in the preceding report, due to the underdevelopment of the Structure Plan area, volumes of traffic within the locality are likely to be lower than those originally anticipated by the Structure Plan. Thus, the local road network designed as part of the Structure Plan is able to accommodate the minimal additional traffic generated by an increase in coding at the subject land.

It is recommended that this amendment to the structure plan be adopted, on the basis that it represents a more effective design response to the transition of density. It also helps to locate density within an area which has locational advantages in being able to accommodate higher density housing.

## **Strategic Plan/Policy Implications**

### **City Growth**

- Ensure planning facilitates a desirable living environment and meets growth targets
- Continue revitalisation of older urban areas to cater for population growth and take account of social changes such as changing household types
- Ensure a variation in housing density and housing type is available to residents

## **Budget/Financial Implications**

The required fee was calculated on receipt of the Proposed Structure Plan Amendment and has been paid by the proponent. There are no other direct financial implications associated with the Proposed Structure Plan Amendment.

## **Legal Implications**

Clause 20(1) of the deemed provisions requires the City to prepare a report on the Proposed Structure Plan Amendment and provide it to the Commission no later than 60 days following the close of advertising.

## **Community Consultation**

In accordance with clause 18(2) of the deemed provisions, the Proposed Structure Plan Amendment was advertised for a period of 28 days commencing on 25 July 2017 and concluding on 22 August 2017. Advertising included a notice in the Cockburn Gazette and on the City's webpage, letters to landowners in the vicinity of the Proposed Structure Plan Amendment area, and letters to relevant government agencies.

In total Council received five submissions, two from landowners and three from government agencies. No government agencies provided objections to the proposal, with one landowner providing support and one landowner objecting to the proposal. The objection stated that the proposed recoding would devalue property values and cause congestion on local roads. There is no evidence that a relatively minor increase in density coding would decrease property values in the area and the minor increase in dwellings at the subject land would have negligible impact on the local road network.

Further analysis of the submissions has been undertaken within the Schedule of Submissions included at Attachment 3.

## **Risk Management Implications**

If the subject land is not recoded, there will be a lost opportunity to address density targets under the State planning framework and provide a greater diversity of housing in the area in a logical location, adjacent and opposite existing R40 development and in close proximity to an existing park. This results in an underutilisation of land and lost opportunity for residents to live in strategic location in close proximity to a wide range of services and high frequency bus routes.

## **Attachment(s)**

1. Structure Plan Amendment Map
2. Location Plan
3. Schedule of Submissions

### **Advice to Proponent(s)/Submitters**

The Proponent(s) and those who lodged a submission on the proposal have been advised that this matter is to be considered at the 14 September 2017 Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

## **15.7 (OCM 14/09/2017) - JANDAKOT VISION PROCESS - PERTH AND PEEL @ 3.5 MILLION (L SANTORIELLO) (ATTACH)**

### **RECOMMENDATION**

That Council note as follows:

- (1) the Jandakot visioning survey formally concluded advertising on 31 August 2017; and
- (2) the formal consideration of the Jandakot Vision survey is expected to be formally presented to Council at its 12 October 2017 meeting.

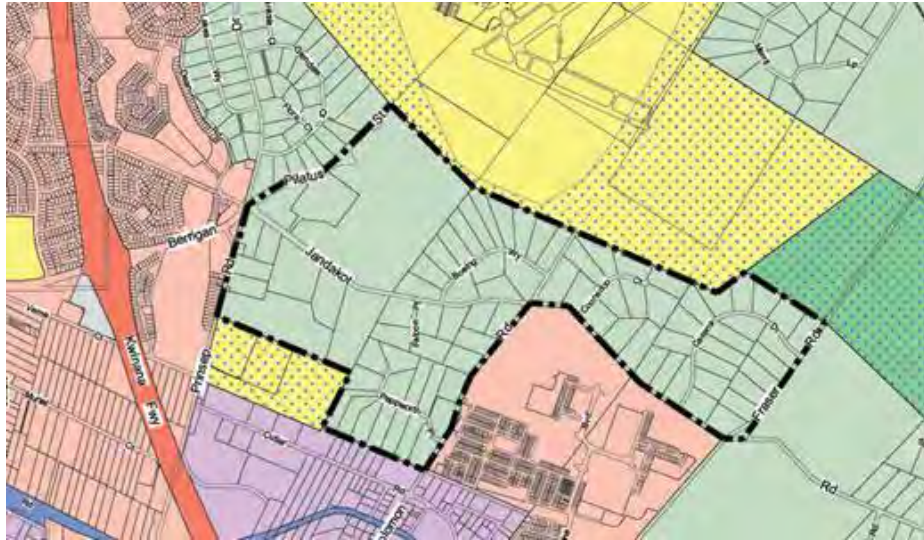
### **COUNCIL DECISION**

### **Background**

On 8 June 2017 Council resolved to direct the Chief Executive Officer to prepare a 'Vision' survey for part of Jandakot.

The project area, as per Council's resolution, is identified as an area north of Jandakot Road, south up to Cutler Road, Fraser Road to Berrigan Drive, Solomon Road to Berrigan Drive. This is shown following for ease of reference;





The purpose of this report is to provide a project update to Council, noting the original Council resolution set a timeframe of 90 days for this to be completed (by 6 September). This was under Part (2)3 as follows: *Advise the WAPC that a connected plan and vision for the entire area will be provided within 90 days.*

Due to the process of designing the engagement, and ensuring Elected Members were able to review the proposed engagement, it has not been possible to report on the vision in September (this meeting). Instead, this will be undertaken in the October meeting.

It is recommended that Council note this update as provided in the report. As of late August, the visioning process has received 42 submissions, with further expected before the end of the process at 31 August.

## Submission

N/A

## Report

The Jandakot vision survey commenced formal advertising on 31 July 2017, with a community information session held to launch the process. The survey formally concluded advertising on 31 August 2017. As of the date of drafting this report, which was late August, 42 submissions had been received.

The issue of designing a successful process in which to obtain input to the vision was carefully done. It was recognised that a successful vision process needed to:

- Engage landowners to comprehensively think about the kind of place we want to create for our community into the future?

- Ensure landowners were given information to fully inform their views as to what potential there may be for a future place;
- Be built upon a thorough understanding of the current and future situation for the area;
- Recognise and respect that the ultimate decision on long term land use and development, rests with the State Government.

In understanding the context, both the online survey process and community launch event (held on 31 July), featured detailed information on:

- The planning context (Liveable Neighbourhoods; Perth and Peel Plan; State Rural Land Policy; State Bushfire Planning Policy; State Jandakot Airport Policy; Movement network issues);
- The environmental context (Bush Forever; Water issues; Bushland and wetland issues);
- Public health context (Sewer policy issues; noise issues).

It also portrayed the strong regional level of planning that currently existed for the area, particularly shaped by the presence of the public drinking water supply of the Jandakot water mound, and the presence of Jandakot airport. A vision for the future needed to be accountable in dealing with the relevant contexts, and why it was aimed to ensure landowners were fully informed. A fully informed community would provide the most optimal process in which to obtain feedback.

The contextual information was provided in the format of 10 separate maps. Each of these maps reflected existing State government site analysis data, with reference to the source of the specific State Government document from which the data originated.

The survey provides the community with the opportunity to be exposed to the relevant State government documents and provides the community with the opportunity to deliver input in respect to the WAPC's Strategic planning framework for Jandakot.

As covered in the Background section above, City officers intend to prepare a formal report to Council for the meeting of 12 October 2017 for Council's consideration on the feedback to the vision process. Upon Council deciding its position, communication will take place to ensure the WAPC are made aware of the vision with a request that they take this in to account in their deliberations on the Perth and Peel Plan.

## **Strategic Plan/Policy Implications**

### **Economic, Social & Environmental Responsibility**

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development

- Sustainably manage our environment by protecting, managing and enhancing our unique natural resources and minimising risks to human health

### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes

### **Budget/Financial Implications**

Nil.

### **Legal Implications**

Nil.

### **Community Consultation**

Community Consultation commenced on 31 July 2017 following a Community consultation workshop. The visioning survey concluded on 31 August 2017. A report will be presented to the October meeting.

### **Risk Management Implications**

As this report provides an update on the current status of the Jandakot Vision Survey, this section is considered to be not applicable in this instance.

### **Attachment(s)**

1. Survey maps
2. Survey Questions

### **Advice to Proponent(s)/Submissioners**

As this is an update for Council, no submissioners have been made aware of this report. All submissioners will be made aware of the report to the October meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**15.8 (OCM 14/09/2017) - CONSIDER SUBMISSIONS – TREEBY DISTRICT STRUCTURE PLAN (110/141) (C CATHERWOOD) (ATTACH)**

**RECOMMENDATION**

That Council

- (1) adopts the Schedule of Submissions prepared in respect to the Proposed District Structure Plan;
- (2) adopt the Treeby District Structure Plan as a guiding document to coordinate future structure plans within the District Structure Plan area only, subject to:
  1. Clarification that the ‘green linkage’ shown on the Treeby District Structure Plan does not impinge on the Dollier Road and Biscayne Way lots, and their access arrangements are not changed.
  2. Updating the District Water Management Strategy to the most current version approved by the Department of Water and Environmental Regulation.
  3. Additional information being included within the District Structure Plan text that recognises that at the time of adopting the District Structure Plan, a separate vision process is being undertaken for land outside of the District Structure Plan area on the north side of Jandakot Road.
  4. Additional information being included within the District Structure Plan text that recognises that at the time of adopting the District Structure Plan, a separate process of considering a preferred design and timing for the Jandakot Road upgrade is being undertaken.
  5. Update text and mapping to reflect the current zoning and current address of Lot 1 (east).
  6. Include reference to City of Cockburn’s Noise Attenuation Local Planning Policy and Guidelines (LPP 1.12).
  7. Part One reference to “Transport Noise Assessment” be updated to read “Noise Impact Assessment”.
  8. Section 1.3.3.4 in Part Two addressing SPP5.3 Jandakot Airport Vicinity be updated to clearly identify that a Noise Management Plan addressing aircraft noise is required for all lots within the TDSP area.
  9. Section 1.3.3.5 in Part Two addressing SPP5.4 to be

broken into more than one paragraph to improve legibility.

10. Section 2.6 in Part Two addressing Context Analysis and Opportunities and Constraints correct “ANEAF” to read “ANEF” and include proximity to the Cockburn Fremantle Pistol Club on the list as any Noise Management Plan for Lot 4 Armadale Road would need to address noise emissions from the Pistol Club as a pre-existing land use in their Noise Management Plan under the City’s LPP.
11. Figure 9 Opportunities and Constraints Plan – add reference to the Frame Area for Jandakot Airport.
12. Figure 9 Opportunities and Constraints Plan – add reference to the Dog Kennels Buffer (in a similar manner as the 20 ANEF is shown to demonstrate that it is outside the buffer) and annotate any proposal to rezone these lots would need to address proximity to the kennel zone.
13. The Skotsch Road precinct Resource lots being indicated as ‘potential residential’ (pending inclusion by the WA Planning Commission in the Perth and Peel @ 3.5 million documents), and if this eventuates Skotsch Road being appropriately connected and integrated with the broader TDSP area.  
  
Should those landowners seek to rezone that precinct, then the school’s capacity may not be sufficient. This would be an important consideration the Skotsch Road landowners would need to address, in liaison with the Department of Education as part of any potential rezoning if it were contemplated.
14. Include an annotation in the eastern node (in proximity to the centre, school and playing field for the potential to relocate the Banjup War Memorial (specific location to be determined at LSP stage).
15. Updating the Appendix – Environmental Assessment Report to include:
  - a. Reference in Section 2.1.2 to State Planning Policy 5.3 Land Use Planning in the Vicinity of Jandakot Airport; Environmental Protection (Noise) Regulations 1997 and the future Public Health Act 2016; and
  - b. Noting in Section 4.11.2 concerning Jandakot Airport, to include information on or a reference to the N Contours which are also included in the Jandakot

**Airport Master Plan.**

- (3) forward a copy of the endorsed Treeby District Structure Plan (as modified) to the Western Australian Planning Commission ("WAPC") for information purposes only;
- (4) advise the WAPC that in light of a finalised TDSP, the City requests that the WAPC expedite an amendment to the MRS to introduce the appropriate urban zone for the residential and potential residential areas depicted in the now adopted TDSP and;
- (5) advise landowners within the Treeby District Structure Plan area, submitters, and affected public authorities of the adoption of the District Structure Plan as modified.

**COUNCIL DECISION**

**Background**

In November 2015, Council supported the preparation of the Banjup (now Treeby) District Structure Plan and endorsed a Project Plan to prescribe how this work should be undertaken.

Since then, background work and analysis has occurred and a draft document was endorsed for advertising in May 2017 for a period of 60 days. This period extended from 13 June till 12 August 2017 and a total of 80 submissions were received.

It is recommended that, subject to a number of minor modifications, the draft Treeby District Structure Plan be adopted by Council as a guiding document to coordinate future structure plans within the District Structure Plan area.

There are some peripheral matters unrelated to the District Structure Plan, which have been raised in some submissions made during advertising of the District Structure Plan. Such peripheral issues are to be dealt with via future reporting to Council that deals specifically with those peripheral issues. These issues being the status of the Jandakot Road upgrade and the status of the Jandakot visioning.

Officers will ensure any points raised in submissions made on the Draft District Structure Plan, which relate to the peripheral issues of Jandakot Road upgrade and/or the Jandakot visioning, are dealt with in those respective reports to Council.

As mentioned, subject to minor modifications, it is recommended the Treeby District Structure Plan be adopted.

### **Submission**

N/A

### **Report**

The purpose of this report is for Council to consider submissions on the draft Treeby District Structure Plan ("TDSP") and whether adoption of the Plan as a guiding document is appropriate.

The TDSP will guide the form of future development of the locality, with a key aim to provide opportunities to enhance the qualities of this existing neighbourhood. The TDSP is seen as an important step for the Treeby urban precinct, considering how its strategic placement within the heart of the rapidly expanding south west corridor adjacent to Cockburn Central Station. At the same time, the constraints of the locality presents unique challenges, which demand careful study and reflection in terms of ensuring that planning for the area is suitable to enhancing opportunities for current and future residents of Treeby.

At the time of progressing the TDSP, and indeed reflecting the dynamic nature of planning, there are separate matters underway by Council which are peripheral to the TDSP. These peripheral issues have understandably received some comment in the submissions received on the TDSP. The peripheral issues are specifically:

- The Jandakot Road upgrade planning;
- The Jandakot Resource Zone visioning

Officers have ensured that submissions raising points relevant to these peripheral issues have been appropriately captured such that they also be included for consideration as part of future reporting to Council on both of these matters. The officer recommendation of this report also modifies the TDSP to acknowledge the current status of these peripheral issues. This status is succinctly as follows:

#### *Jandakot Road upgrading*

*The City is looking to construct a second carriageway for Jandakot Road (between Berrigan Drive and Fraser Road) as well as upgrade Solomon Rd (south of Jandakot Road).*



*The City has been undertaking community engagement with affected landowners to inform the design of the road widening to achieve the most optimal outcome for the community. The project consists of the following stages:*

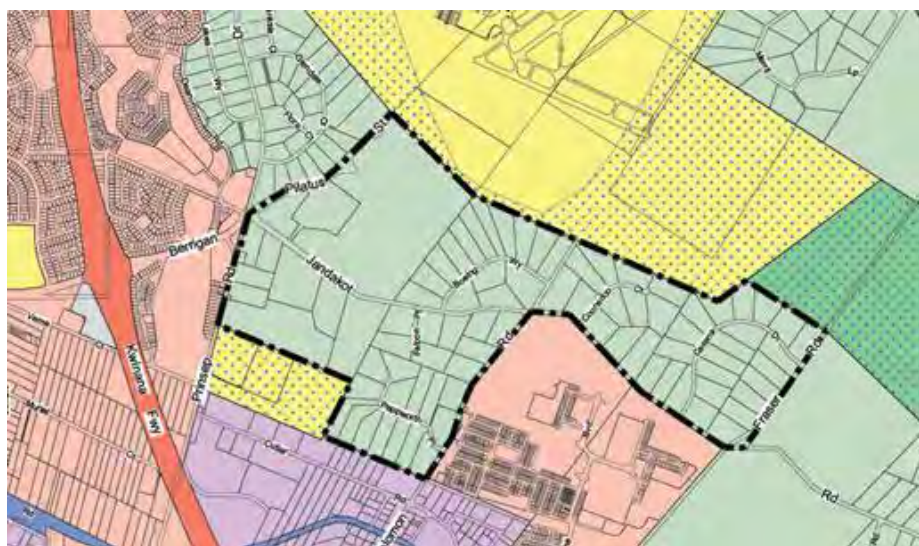
- *Stage 1:  
Jandakot Road (between Solomon and Fraser Road)  
Solomon Road (south of Jandakot Road)  
(not including the Jandakot Road and Solomon Road intersection).*
- *Stage 2:  
Jandakot Road (between Berrigan Drive and Solomon Road)  
(including the Solomon Road and Jandakot Road intersection)  
(External link)*

*After a workshop with residents in April 2017, Council's engineers and planners met with relevant State authorities and produced three modified options for the road design, the key difference being the location and form of intersection control at Jandakot and Solomon Roads and the accommodation of drainage.*

*These were presented to residents at a follow-up workshop in July 2017 for their feedback. Feedback closes at the end of August 2017, with the results to be considered as part of an item to Council in the later part of the year (likely the November meeting). Jandakot Road is adjacent to, but separate from the TDSP area.*

*Jandakot Visioning – additional input into Perth and Peel @ 3.5 million*

*This matter relates to the land outlined in the map below.*





*A workshop was held (in conjunction with the TDSP workshop) in July 2017 to launch an on-line survey for landowners to have input into a vision for this land. The City proposes to give this input to the State Government who is trying to finalise a plan called 'Perth and Peel @ 3.5 million'.*

*This will guide how our City grows for many years to come. The State Government's draft plan does not give enough certainty for this area at the moment. Since the City's submission on this draft document was originally made in 2015, there have been many attempts by the City to engage with the Department of Planning to provide clearer direction for this area. This collaboration has not been forthcoming and now results in the City seeking to provide further input into the strategic vision.*

*The survey closes at the end of August, with the results to be considered as part of an item to Council in the later part of the year (likely the October meeting). This land is also adjacent to, but separate from the TDSP area.*

These peripheral issues are not revisited as part of this report.

#### Planning Framework and how this facilitates the Treeby District Structure Plan

To realise the vision of Directions 2031 and beyond and the State Planning Strategy 2050, the Western Australian Planning Commission has created a series of proposed planning frameworks.

The Perth and Peel @ 3.5million strategic suite of documents has been developed to engage the community in open discussion on expectations of what our city should look like in the future, on how we can maintain our valued lifestyle and how we can realistically accommodate a substantially increased population over the next 35 to 40 years.

The South Metropolitan Peel Sub-Regional Planning Framework is one of three frameworks prepared for the outer sub-regions of Perth and Peel, which along with the Central Sub-Regional Planning Framework establishes a long-term and integrated framework for land use and infrastructure provision.

The framework builds upon the principles of Directions 2031 and will provide guidance for:

- the preparation of amendments to the Perth Metropolitan Region Scheme, local planning schemes, local planning strategies/scheme, and district, local and activity centre structure planning; and

- the staging and sequencing of urban development to inform public investment in regional community, social and service infrastructure.

Importantly the Planning Framework, amongst other things, endeavours to develop a consolidated urban form that limits the identification of new greenfield areas to where they provide a logical extension to the urban form, and that places a greater emphasis on urban infill and increased residential density.

The following map excerpt highlights the area of Treeby which the TDSP will apply. Noting the logical extensions of the existing urban form, in what is now close proximity to transit, jobs and major activity centres. The TDSP will provide a boundary that is comprised of land within Solomon Road, Armadale Road, Warton Road and Jandakot Road. This is unique to the area that the TDSP deals with, and why it has been advanced to reflect the regional planning undertaken by the State Government.

To ensure the City's planning framework is sufficiently advanced to reflect the future finalisation of the Southern Sub-Regional Framework, the TDSP was prepared.



### Design Principles

The TDSP responds to the WAPC's Structure Plan Framework and the key district level coordination issues the proposed development of the precinct presents. These include:

- Broad land-use arrangement, buffers and any relevant targets (e.g. density targets);
- Coordination of major infrastructure including:
  - Schools;

- District water management;
- District movement networks;
- Regional & District level Open Space / Conservation areas;
- District recreation facilities;
- Broad funding arrangements for improvements, potentially including the principles of a Development Contribution Plan (DCP).

### Skotsch Road precinct

As a result of the community forums, the need to clarify the position of Skotsch Road precinct landowners became apparent.

The current draft TDSP indicates retention of this land in the Resource zone, and no further subdivision taking place. This was chosen to reflect the State Government's recent draft Perth and Peel @ 3.5 million documents, which did not indicate this area being a future 'urban' area.

Letters were sent to all Skotsch Road precinct landowners (all those shown as 'Resource' zone within the TDSP boundary) asking them to nominate which of the scenarios they prefer:

- Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or
- Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).

There are a total of 15 of these 'Resource' zoned lots, one of which is isolated to the east of the Skotsch Road precinct. Four of the lots have no direct frontage to Skotsch Road itself and front Jandakot Road only. There are a total of 23 people and two companies which own these 'Resource' zoned lots. One of the companies owns two lots. There has been no disparity in views between owners of the same property, so with this in mind, the following is noted on a 'per lot' basis.

Area	Remain Resource	Rezone to Urban	Did not respond	Total
All Resource zoned lots	0	12	3	15

From the information collected above, it is clear the majority of landholdings in the Skotsch Road precinct would prefer the option of rezoning to urban.

Given this, it is recommended the plan be modified to reflect the Skotsch Road precinct being considered for urbanisation. An important

consideration is the ability for this land to be serviced by government agencies, including the Department of Education. Further comment and recommendation is discussed in relation to this in the Community Consultation section of this report.

#### Modifications to draft Treeby District Structure Plan

In addition to the above, as a result of customer queries during the advertising process, it is clear some other minor modifications would be needed and these are reflected in the officer recommendation.

Clarification is needed about the issue of noise and how the City expects this to be managed in line with its adopted Local Planning Policy and to ensure the same successful approach applied in Calleya is continued. A number of recommendations relate to this and will make this clear to all parties. This is particularly important where the City's expectations go further than State Planning Policy and are in the interests of our future residents.

It needs to be clarified the 'green linkage' shown on the TDSP does not impinge on the Dollier Road / Biscayne Way lots and their access arrangement are not changed. The 'green linkage' at the western end of the TDSP has been fulfilled within the Calleya development already.

An updated water management strategy is still being undertaken in liaison with the Department of Water and Environmental Regulation and this should replace the advertised version (September 2016).

There was a logical suggestion to relocate the Banjup War Memorial into Treeby's urbanised area. While specification of the exact location could be prejudicial to the consideration of matters such as Bush Forever and the best opportunities for local public open space, an annotation is included as a modification.

Also, as already mentioned, annotations within the structure plan text should also acknowledge the two key peripheral issues currently being advanced.

Given the minor nature of all these modifications, it is clear that the Draft District Structure Plan represents an effective response to the planning and structure of district issues to guide the future of the area. In its own right, the TDSP will not simply open to prospect for urbanisation to occur. Instead, it places the City's local planning framework in a way which is ready to respond once the State Government decide to undertake formal amendments to the Metropolitan Region Scheme to introduce an urban zoning over the relevant land. It is recommended that Council adopt the plan on this basis.

To ensure that development is progressed in a timely way, it is also recommended that Council seek the WAPC to progress rezonings under the MRS as such relates to the residential and potential residential areas depicted in the TDSP area.

### **Strategic Plan/Policy Implications**

#### **City Growth**

- Ensure planning facilitates a desirable living environment and meets growth targets.
- Ensure a variation in housing density and housing type is available to residents.

### **Budget/Financial Implications**

The Treeby (then known as Banjup) District Structure Plan was a City project identified within the previous Corporate Business Plan to be undertaken by the Strategic Planning Department in 2015/2016. In this regard, a major landowner sought to assist in this process by undertaking the preparation of the draft TDSP, with oversight of this by City of Cockburn officers. Upon completion of the draft, it was transferred to the City to consider it for advertising, and (in respect of this report) for final adoption post advertising.

### **Legal Implications**

Ultimately it would be proposed this plan be adopted by resolution of Council as a guiding document, but not under the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015), which refers to a 'structure plan' as:

*'Structure plan means a plan for the coordination of future subdivision and zoning of an area of land'.*

With the above in mind, it would prudent to maintain Council's practice with previous district structure plans, to only adopt them by resolution of Council and not under the relevant structure planning provisions. This acknowledges a degree of flexibility and assists with affected landowners being unlikely to consider themselves injuriously affected by the plan.

### **Community Consultation**

The proposal was advertised for a period of 60 days, ending 12 August 2017. Advertising consisted of a newspaper advertisement in the Cockburn Gazette and letters to affected government agencies, all

landowners within the TDSP area as well as a substantial area of properties surrounding. The community groups; Calleya Culture Club and Banjup Resident Group were also notified and offered individual briefings, which were not taken up. A community forum was hosted by the City which took the community through the key plan elements and allowed the opportunity to ask questions.

A total of 80 submissions were received. Detailed responses are in the Schedule of Submissions; some of the main issues are covered in brief below. Many of the submissions raised issues which are peripheral to the Treeby DSP. As explained in detail above, these peripheral issues will be addressed in future reporting to Council.

With this in mind, the relevant related issues (not relating to peripheral issues) are discussed as follows:

The Department of Education has made very clear their designation of school needs relates to the residential area as shown in the advertised plan. If this were to change, for example if Skotsch Road precinct was also allowed to be urbanised, then the schools as shown may already be at capacity. It is imperative that this be addressed as part of any potential future rezoning given it may alter matters such as school catchments. A modification within the text of the Treeby DSP is included to highlight this issue is an important matter for those landowners to address should they look to lodge an amendment to the zoning in the future. Liaison with the Department of Education will be required early to prove that the land is capable of being serviced by the Department of Education.

The District Water Management Strategy ("DWMS") requires modifications which are in the process of being undertaken. The modifications are not considered to materially affect the Treeby DSP, but it is prudent they are made. It is appropriate to condition the updated DWMS to be provided.

Issues of security due to urbanisation arose a number of times; this was primarily from landowners within the Skotsch Road precinct. Also the concerns they were being surrounded by residential development. This appears to have been a major driver in the majority response to have the option of urbanisation for their precinct also.

### **Risk Management Implications**

Adoption of the District Structure Plan is particularly critical in this area for key structural features, such as school and oval locations as well as major movement connections for both vehicles and pedestrians. To have district guidance on these matters minimises the risk these key

features (which often consume large parcels of land) end up located in sub-optimal locations.

As also discussed in the Legal Implications section of this report, this document should only be adopted by resolution of Council, not under the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015). This is particularly important in this case given the very large area of Bush Forever the site contains. As Council noted in its submission on the Green Growth Plan some time ago, the mechanisms for landowner compensation had not been resolved so Council must not inadvertently assume responsibility for this or 'lock in' landowners to the boundaries of that Bush Forever when it is known those landowners are proposing the review the boundary through the formal (State government) process.

### **Attachment(s)**

1. Draft Treeby District Structure Plan
2. Schedule of Submissions

### **Advice to Proponent(s)/Submissioners**

The Proponent(s) and those who lodged a submission on the proposal have been advised that this matter is to be considered at the 14 September 2017 Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

## **16. FINANCE AND CORPORATE SERVICES DIVISION ISSUES**

### **16.1 (OCM 14/09/2017) - LIST OF CREDITORS PAID - JULY 2017 (076/001) (N MAURICIO) (ATTACH)**

#### **RECOMMENDATION**

That Council adopt the List of Creditors Paid for July 2017, as attached to the Agenda.

#### **COUNCIL DECISION**

## **Background**

It is a requirement of the Local Government (Financial Management) Regulations 1996, that a List of Creditors be compiled each month and provided to Council.

## **Submission**

N/A

## **Report**

The list of accounts for July 2017 is attached to the Agenda for consideration. The list contains details of payments made by the City in relation to goods and services received by the City.

## **Strategic Plan/Policy Implications**

### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes.
- Listen to and engage with our residents, business community and ratepayers with greater use of social media.

## **Budget/Financial Implications**

N/A

## **Legal Implications**

N/A

## **Community Consultation**

N/A

## **Risk Management Implications**

The list of accounts for July 2017 is attached to the Agenda for consideration. The list contains details of payments made by the City in relation to goods and services received by the City.

## **Attachment(s)**

List of Creditors Paid – July 2017.



**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**16.2 (OCM 14/09/2017) - STATEMENT OF FINANCIAL ACTIVITY AND ASSOCIATED REPORTS - JULY 2017 (071/001) (N MAURICIO) (ATTACH)****RECOMMENDATION**

That Council

- (1) adopt the Statement of Financial Activity and associated reports for July 2017, as attached to the Agenda;
- (2) amend the 2017-2018 Municipal Budget in accordance with the detailed schedule in the report as follows:

Revenue Adjustments	Increase	32,971
Expenditure Adjustments	Decrease	416,617
Net change to Municipal Budget Closing Funds	Increase	449,588

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL****COUNCIL DECISION****Background**

Regulations 1996 prescribes that a local government is to prepare each month a Statement of Financial Activity.

Regulation 34(2) requires the Statement of Financial Activity to be accompanied by documents containing:–

- (a) *details of the composition of the closing net current assets (less restricted and committed assets);*

- (b) *explanation for each material variance identified between YTD budgets and actuals; and*
- (c) *any other supporting information considered relevant by the local government.*

Regulation 34(4)(a) prescribes that the Statement of Financial Activity and accompanying documents be presented to Council within 2 months after the end of the month to which the statement relates.

The regulations require the information reported in the statement to be shown either by nature and type, statutory program or business unit. The City chooses to report the information according to its organisational business structure, as well as by nature and type.

Local Government (Financial Management) Regulations - Regulation 34 (5) states:

- (5) *Each financial year, a local government is to adopt a percentage or value, calculated in accordance with the AAS, to be used in statements of financial activity for reporting material variances.*

This regulation requires Council to annually set a materiality threshold for the purpose of disclosing budget variances within monthly financial reporting. At the August 2017 meeting, Council adopted to continue with a materiality threshold of \$200,000 for the 2017/18 financial year.

Detailed analysis of budget variances is an ongoing exercise, with any required budget amendments submitted to Council each month in this report or included in the City's mid-year budget review as deemed appropriate.

## **Submission**

N/A

## **Report**

### *Opening Funds*

The City has budgeted for \$2.5M in opening funds from the previous year. But until the 2016/17 financial accounts have been finalised and audited, the final result cannot be confirmed. Once the audit process is complete, this matter will be addressed in a future report to Council, also dealing with the carried forward works and services from the previous year.

### *Closing Funds*

The City's actual closing funds position of \$96.19M was \$3.11M higher than the budget forecast for the end of July. This result reflects net favourable cash flow variances across the operating and capital programs as detailed in this report.

The 2017/18 revised budget reflects an EOFY closing position of \$0.46M, up from the \$14k included in the adopted budget. This is due to reduced insurance premiums adjusted in the budget. However, it is proposed that this saving be moved into the Insurance Reserve next month.

### *Operating Revenue*

Consolidated operating revenue of \$103.58M was ahead of the YTD budget target by \$0.11M. The majority of the City's operating revenue is recognised in July upon the issue of the annual rates notices.

The following table shows the operating revenue budget performance by nature and type:

<b>Nature or Type Classification</b>	<b>Actual Revenue \$M</b>	<b>Revised Budget YTD \$M</b>	<b>Variance to Budget \$M</b>	<b>FY Revised Budget \$M</b>
Rates	96.31	96.10	0.21	99.98
Specified Area Rates	0.37	0.33	0.04	0.33
Fees & Charges	5.16	5.49	(0.34)	26.71
Operating Grants & Subsidies	1.24	1.11	0.12	9.45
Contributions, Donations, Reimbursements	0.18	0.08	0.10	1.15
Interest Earnings	0.33	0.36	(0.03)	4.74
<b>Total</b>	<b>103.58</b>	<b>103.48</b>	<b>0.11</b>	<b>142.36</b>

The significant variances at month end were:

- Rates income was \$0.21M ahead of the YTD budget setting as a result of part year rating processed during the month.

### *Operating Expenditure*

Operating expenditure of \$9.92M (including asset depreciation) was under the YTD budget by \$2.61M.

The following table shows the operating expenditure budget variance at the nature and type level. The internal recharging credits reflect the amount of internal costs capitalised against the City's assets:

Nature or Type Classification	Actual Expenses \$M	Revised Budget YTD \$M	Variance to Budget \$M	FY Revised Budget \$M
Employee Costs - Direct	3.55	4.20	0.66	52.60
Employee Costs - Indirect	0.06	0.08	0.02	1.57
Materials and Contracts	2.09	3.71	1.62	41.11
Utilities	0.31	0.46	0.15	5.23
Interest Expenses	0.00	0.00	0.00	0.82
Insurances	0.95	1.00	0.06	1.70
Other Expenses	0.61	0.74	0.13	9.01
Depreciation (non-cash)	2.40	2.36	(0.04)	28.30
Amortisation (non-cash)	0.09	0.09	0.00	1.12
Internal Recharging-CAPEX	(0.12)	(0.11)	0.01	(1.29)
<b>Total</b>	<b>9.92</b>	<b>12.53</b>	<b>2.61</b>	<b>140.16</b>

The significant variances at month end were:

- Material and Contracts - were collectively \$1.62M under the YTD budget with the significant variances being:
  - IT & IS projects under by \$0.45M
  - Parks maintenance spending under by \$0.30M
  - Cockburn ARC under by \$0.22M
  - Waste Collection costs under by \$0.21M.
- Direct Employee Costs – were collectively \$0.66M under YTD with no individual significant variances recorded.

### *Capital Expenditure*

The City's total capital spend at the end of the month was \$89.2M, representing an under-spend of \$14.5M against the full year budget.

The following table details the budget variance by asset class:

Asset Class	YTD Actuals \$M	YTD Budget \$M	YTD Variance \$M	FY Revised Budget \$M	Commit Orders \$M
Roads Infrastructure	0.1	0.8	0.7	15.3	2.1
Drainage	0.0	0.1	0.1	1.7	0.0
Footpaths	0.1	0.1	0.0	1.3	0.0
Parks Infrastructure	0.2	0.9	0.7	12.5	1.4
Landfill Infrastructure	0.0	0.2	0.2	1.1	0.1

Asset Class	YTD Actuals \$M	YTD Budget \$M	YTD Variance \$M	FY Revised Budget \$M	Commit Orders \$M
Freehold Land	0.0	0.1	0.1	0.8	0.0
Buildings	0.3	2.6	2.3	20.4	6.6
Furniture & Equipment	0.0	0.2	0.2	0.9	0.3
Information Technology	0.1	0.2	0.1	3.0	0.5
Plant & Machinery	0.0	0.5	0.5	4.2	0.6
<b>Total</b>	<b>0.8</b>	<b>5.6</b>	<b>4.8</b>	<b>61.1</b>	<b>11.7</b>

These results included the following significant project variances:

- Roads Infrastructure under YTD budget by \$0.66M with no significant variances recorded against any individual project.
- Parks Infrastructure – the capital program was behind YTD budget by \$0.70M with Coogee Beach master plan (at \$0.22M) the only project with a significant variance.
- Buildings – collectively \$2.33M behind YTD budget with Cockburn Bowling & Recreation Facility contributing \$1.68M to the variance and Cockburn ARC \$0.30M.
- Plant & Machinery – the replacement program was \$0.45M behind YTD budget, although there are outstanding orders totalling \$0.61M.

#### *Capital Funding*

Capital funding sources are highly correlated to capital spending, the sale of assets and the rate of development within the City (developer contributions received).

Significant variances for the month included:

- Capital grants were collectively \$0.14M behind YTD budget primarily due to the final milestone payment outstanding for the ARC (\$0.5M).
- Developer Contribution Area (DCA13) contributions for community infrastructure assets were behind YTD budget by \$0.36M.

#### *Reserve Transfers*

- Transfers from Reserve were \$1.64M below the YTD budget setting because of the low capital spend for the month.

- Transfers to financial reserves were \$0.55M below the YTD budget, primarily due to the DCA13 budgeted revenue shortfall of \$0.36M.

### *Cash & Investments*

The closing cash and financial investment holding at month's end totalled \$118.03M (down from \$120.15M the previous month).

\$112.63M of this balance represents the current funds held for the City's financial reserves. The remaining balance of \$5.4M was available to meet operational liquidity needs (down from \$17.67M last month). The City's liquidity position will improve dramatically in August due to the flow of rates payments.

### *Investment Performance, Ratings and Maturity*

The City's investment portfolio made a weighted annualised return of 2.73% for the month, unchanged from 2.73% last month and 2.72% the month before. This continues to compare favourably against the UBS Bank Bill Index (1.82%) and the FIIG Term Deposit - All Maturities Index (1.94%). The cash rate was most recently reduced at the August 2016 meeting of the Reserve Bank of Australia (by 25bp to 1.50%).

The City's interest revenue from investments for July was only slightly behind the YTD budget target by \$28k.

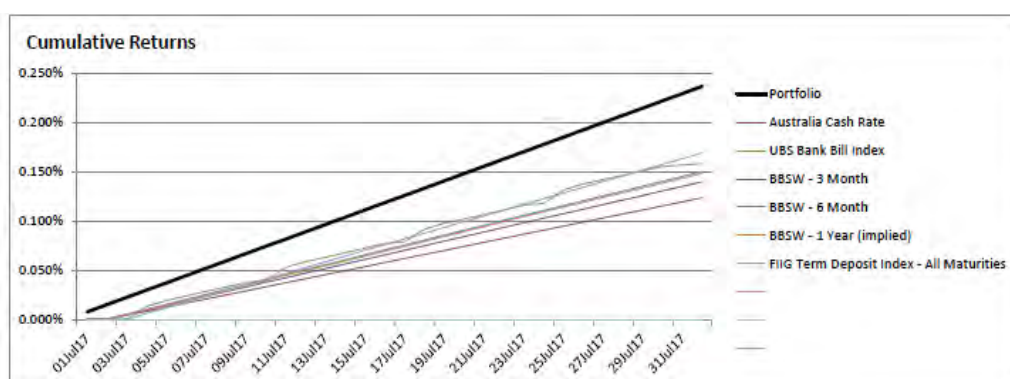
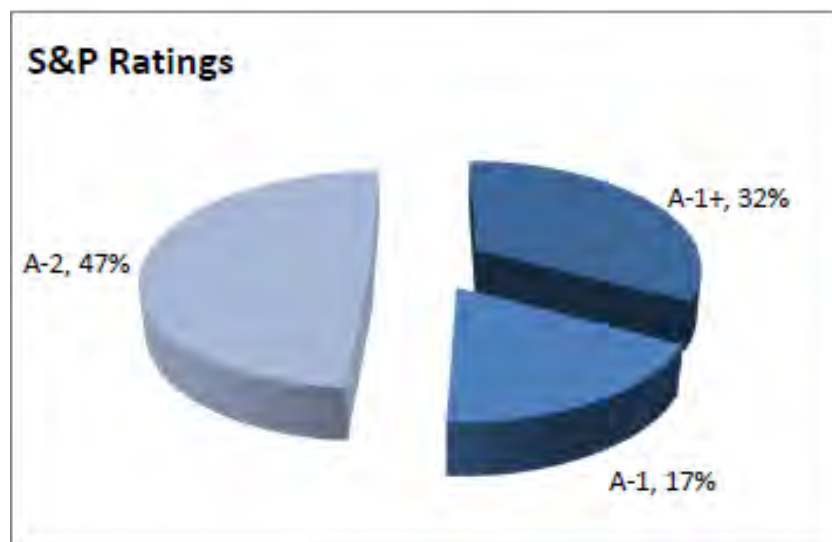


Figure 1: COC Portfolio Returns vs. Benchmarks

The majority of investments were held in term deposit (TD) products placed with highly rated APRA (Australian Prudential Regulation Authority) regulated Australian and foreign owned banks. These were invested for terms ranging from three to twelve months. All investments comply with the Council's Investment Policy other than those made under previous statutory provisions and grandfathered by the new ones.

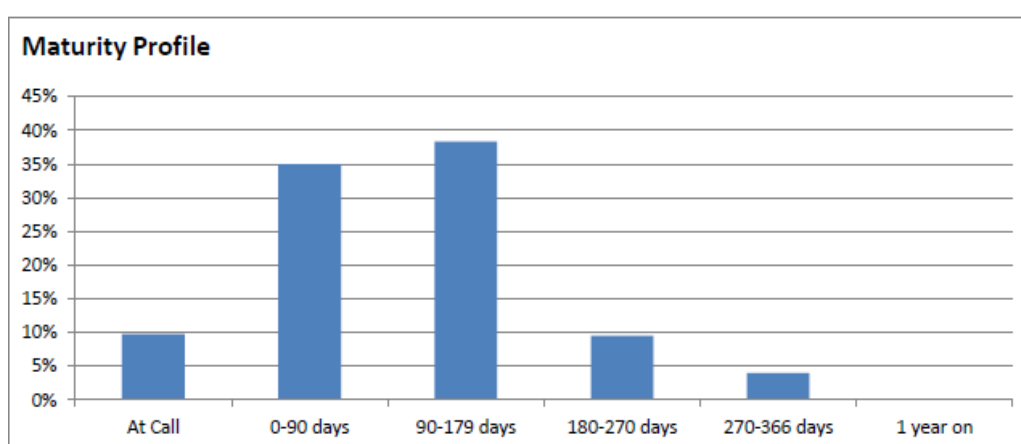
The City's TD investments fall within the following Standard and Poor's short term risk rating categories. The A-1+ investment holding increased marginally from 29% to 32% during the month, whilst the A-1 holding decreased from 19% to 17%. The amount invested with A-2 banks decreased from 48% to 47%, comfortably below the policy limit of 60%.



*Figure 2: Council Investment Ratings Mix*

The current investment strategy seeks to secure the highest possible rate on offer (up to 12 months for term deposits), subject to cash flow planning and investment policy requirements. Value is currently being provided within the 3-12 month investment range.

The City's TD investment portfolio had an average duration of 99 days at 31 July or 3.3 months (reduced from 115 days last month) with the maturity profile graphically depicted below:



*Figure 3: Council Investment Maturity Profile*

### *Investment in Fossil Fuel Free Banks*

At month end, the City held 54% (\$61.65M) of its TD investment portfolio of \$114.05M with banks deemed free from funding fossil fuel related industries. This was up from 51% the previous month.

### *Budget Revisions*

Budget amendments identified during the month and requiring Council adoption are as per the following schedule:

PROJECT/ACTIVITY LIST	USE OF FUNDING + increase (-) decrease		FUNDING SOURCES + decrease (-) increase		
	EXP \$	TF to RESERVE \$	TF FROM RESERVE \$	REVENUE \$	MUNI \$
Reduced Insurance Premiums (TF part savings to Insurance Reserve next month)	(490,416)				490,416
Corporate copy costs adjustment	(140)				140
Reduce FAGS grant budget to allocated amount				40,968	(40,968)
HACC Growth funding	73,939			(73,939)	
MCCC – end of year event	2,500				(2,500)
Budget Contingency	(2,500)				2,500
<b>Totals</b>	<b>(416,617)</b>			<b>(32,971)</b>	<b>449,588</b>

### *Description of Graphs & Charts*

There is a bar graph tracking Business Unit operating expenditure against budget. This provides a quick view of how the different units are tracking and the comparative size of their budgets.

The Capital Expenditure graph tracks the YTD capital spends against the budget. It also includes an additional trend line for the total of YTD actual expenditure and committed orders. This gives a better indication of how the capital budget is being exhausted, rather than just purely actual cost alone.

A liquidity graph shows the level of Council's net current position (adjusted for restricted assets) and trends this against previous years. This gives a good indication of Council's capacity to meet its financial commitments over the course of the year. Council's overall cash and investments position is provided in a line graph with a comparison against the YTD budget and the previous year's position at the same time.



Pie charts included show the break-up of actual operating income and expenditure by nature and type and the make-up of Council's current assets and liabilities (comprising the net current position).

### *Trust Fund*

At month end, the City held \$11.32M within its trust fund. \$5.95M was related to POS cash in lieu and another \$5.37M in various cash bonds and refundable deposits.

## **Strategic Plan/Policy Implications**

### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes.
- Listen to and engage with our residents, business community and ratepayers with greater use of social media.

### **Budget/Financial Implications**

The 2017-2018 budget surplus is showing an increase of \$449,588 in July to \$464,075, due to the budget amendments recommended in this report. This primarily reflects savings on the City's insurance premiums charged through LGIS. However, it is planned for most of this saving to be transferred into the City's Insurance Reserve, ensuring any calls under the City's performance based workers compensation scheme can be met.

### **Legal Implications**

N/A

### **Community Consultation**

N/A

### **Risk Management Implications**

Council's budget for revenue, expenditure and closing financial position will be misrepresented if the recommendation amending the City's budget is not adopted.

### **Attachment(s)**

Statement of Financial Activity and associated reports – July 2017.

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**17. ENGINEERING AND WORKS DIVISION ISSUES**

**17.1 (OCM 14/09/2017) - COOGEE BEACH ECO SHARK BARRIER (064/030) (D VICKERY) (ATTACH)**

**RECOMMENDATION**

That Council agrees to authorise the City to enter into a lease purchase agreement with Eco Shark Barriers Pty Ltd for retention of the eco shark barrier at Coogee Beach at a cost of \$90,000 (ex GST) per annum (includes maintenance) for a 5 year period, with the maximum cost over the 5 year lease period time being \$450,000 (ex GST).

**COUNCIL DECISION**

**Background**

Approved the installation and trial of the Eco Shark Barrier at Coogee Beach from September 2013 until the end of March 2014, subject to a number of conditions including placement, engineering certification, approvals and insurances.

The Eco Shark Barrier was installed on an initial trial in December 2013 and removed (with the exception of the anchor pylons and seabed components) on the 26 April 2014. The trial was deemed successful. There were no marine entrapment issues, the barrier did not fail and it proved to be very popular with beachgoers.

When the Eco Shark Barrier was initially deployed for the first trial period it was considered a prototype, with potential for further development and improvement in the future. It was untested in winter conditions and in surf and swell, thus the recommendation at that time was that Council lease the barrier for 3 years.

Given the success and popularity of the first trial, Council then approved the installation and entered into a lease agreement with Eco Shark Barriers Pty Ltd to trial the barrier for the longer trial period of three (3) years, subject to a number of conditions similar to those of the first trial.

The trial and lease agreement commenced on the 24 November 2014 and is due to expire on 24 November 2017. The fee to lease the barrier was \$85,000 inclusive of GST per annum. This included all maintenance on the barrier.

Council now needs to decide if the barrier is to remain in place or if it is to be removed at the end of this second trial period.

### **Submission**

N/A

### **Report**

The trial and lease of the Eco Shark Barrier is due to end on 24 November 2017. At this time, if a further arrangement has not been put in place, Eco Shark Barriers Pty Ltd as per the original agreement, are required to remove the barrier and all associated infrastructure including the pylons. All State Government agency licenses and approvals will also lapse.

The barrier has proven to be very popular with the local community as well as those from other Perth metropolitan areas, with schools from other regions visiting the barrier to attend swimming lessons.

Although there have not been any reported shark attacks at Coogee Beach, the barrier allows people to experience the joys of swimming in the ocean with some piece of mind.

As per the existing agreement, Eco Shark Barriers have been required to submit regular reports outlining any public issues and maintenance concerns, as well as any details relating to marine life captures. To date the only major issue was that the barrier broke apart in a period of wild weather in January 2017 due to a problem with the chain and the attachments on the bottom of the barrier. The barrier has since been modified to prevent a similar occurrence from happening again.

There have been no reports of marine life being harmed or injured by the barrier and there have only been two reports of entrapment within the confines of the barrier (not in the barrier itself). Both of the creatures were captured and released without harm. The issues with the barrier that allowed them to enter have been addressed.

The trial of the Eco Shark Barrier was initiated to determine if there were going to be any long term issues with the positioning of the barrier at Coogee Beach, the nature of the barrier itself and for the owners of the barrier (Eco Shark Barriers Pty Ltd) to address any issues that did arise. During the three year lease period of the second trial the barrier has received a number of modifications by the proprietors and is now more robust than when it was first installed. In this regard and because of its popularity the second trial is considered a success.

To determine the support for the barrier the City recently commissioned a survey via comment on Cockburn. The results of the survey demonstrated overwhelming support for the continued deployment of the barrier at Coogee Beach with 3,606 respondents in support of retention and just 43 opposed. A summary of the consultation is included in Attachment 1.

Based on the survey results a decision to remove the barrier at the end of the current term would likely not be a popular decision with the community.

The barrier at Coogee Beach compliments the Coogee Marine Trail with each being a popular attraction. Both help to support Councils vision to make Cockburn the most attractive place to live, work, visit and invest in within the Perth Metropolitan area.

#### State Government Agency Licenses and Approvals

All relevant State Government departments or agency approvals are currently in place and held in the name of the City of Cockburn. Only two are required.

1. The Department of Transport – Coastal Infrastructure Branch issue an annual jetty license for the structure. Currently the City holds Jetty License number 4332. The license is required to be renewed each year in November with an annual fee of \$87.
2. The Department of Lands have issued a Section 91 License (a licence to occupy crown land) for the Eco Shark Barrier. The licence is valid until 24 November 2017. Given the success of the barrier the Department of Lands have indicated they would continue to support the license approval. There is no annual fee on this licence.

Each license would be extended to accommodate any continued deployment of the Eco Shark Barrier.

### Pricing Options

Eco Shark Barrier Pty Ltd has provided a number of fixed pricing options for continued deployment of the barrier. There is no escalation of costs during the terms. The options are shown in Table 1.

<b>Table 1. ECO SHARK BARRIER RENEWAL OPTIONS</b>						
<b>Option</b>	<b>Proposal</b>	<b>Lease term (Yrs)</b>	<b>Cost per year ex GST (\$)</b>	<b>Maintenance ex GST (\$)</b>	<b>Extra Cost to purchase ex GST (\$)</b>	<b>Total ex GST (\$)/Annualised cost</b>
1	Lease for 3 years at the end of 3 years Cockburn will own it.	3	130,000	Included in lease terms		390,000/ 130,000
2	Lease for another 3 years. At the end of 3 years Cockburn buy it for \$160k	3	85,000	Included in lease terms	160,000	415,000/ 138,333
3	Lease for another 1 year. Then buy for \$250k	1	85,000	Included in lease terms	250,000	335,000/ 111,666
4	Continue leasing for 5 years \$90 k per year Cockburn own it at the end of 5 years	5	90,000	Included in lease terms		450,000/ 90,000
5	Buy outright (3 year minimum maintenance)	3		3 X 40,000	250,000	370,000/ 123,000

The annual leasing cost also includes the cost of maintenance which will include weekly inspections, regular cleaning and materials.

With all leasing options Eco Shark Barrier P/L will:

- a) maintain the appropriate insurances including public liability insurance to the value of \$20m during the period of the lease;

- b) maintain the Eco Shark Barrier over the term of the lease which includes required upgrades and repairs at no additional cost; and
- c) provide a report in March and September each year detailing the maintenance undertaken and any issues that have been identified and how they have been addressed.

If and when a decision is made to purchase the barrier outright there would then be a requirement for maintenance and the current quoted cost is \$40,000 (ex GST) per annum. This could be negotiated depending on when the barrier was purchased. Additionally the City would be required to pay the cost of any materials required to repair the barrier if the barrier was owned by the City.

With all the leasing options Eco Shark Barriers would continue maintenance responsibilities at no extra cost, including any reinstatement should it be damaged by storm events or vandalism.

Attachment 2 is a Net Present Value Calculation of the options over a 5 year period, including annual maintenance costs. It assumes that interest rates are 3.21% and the annual consumer price index is 1.5% per annum. The calculation shows that if it is intended to retain the barrier long term then purchasing the barrier outright at the end of the current lease period and entering into a maintenance servicing arrangement (Option 5) is the least expensive of the options available; however, the annualised cost is higher than Option 4.

Should in the alternative a lease option is selected, the barrier is expected to be in good condition after the end of any further 5 year lease period as it will undergo constant maintenance and upgrades during the lease. Attachment 3 provides some additional information in relation to the current and expected condition.

It is not envisaged that the City would incur any additional significant cost with any of the options over the (up to 5 year) time frame. There would only be some minor additional costs for administration and for the license fees. The total of these costs would not be expected to exceed \$1,000 per annum.

The costs are reflective of the pylons, anchor chains, navigation markers and management plans having already been installed and developed.

#### Additional Considerations

The Eco Shark Barrier attracts users from the metropolitan area at large and on that basis some contribution might be warranted from the State Government to support the continued retention of the barrier.

However initial enquiries to the State Government when the Eco Shark Barrier was initially deployed did not result in any State Government funding contribution and it is not expected that anything has changed since that time.

The barrier has proven to be very popular with beach goers, so much so that, any decision to remove the barrier would not be very popular with the local community.

There is a similar product, the Bionic Barrier, which has been developed primarily by copying the Eco Shark Barrier design. Our understanding is that this other product has a number of issues and has failed on a number of occasions. It has not been as thoroughly tested as the Eco Shark Barrier.

In discussions with the Proprietors of Eco Shark Barriers Pty Ltd, they have agreed to offer a number of options should the City choose to take up Option (4) of a 5 year lease purchase of the current barrier. At the end of the 4 year Council can choose from one of the following options for implementation at the end of the 5 year lease:

- a) Choose to own the barrier at the end of the 5 year lease period in its "as is" maintained condition with the City taking responsibility for the barrier's maintenance and repair cost beyond this 5 year term;
- b) The City forgoes taking ownership of the current barrier and instead Eco Shark Barriers Pty Ltd will install a completely new barrier at the end of the 5 year lease term and the City enters into a new lease of this barrier for a further 5 years at a renegotiated fee (expected to be in the vicinity of \$95k (ex GST) per annum); or
- c) The City forgoes taking ownership of the current barrier and instead continues to lease the existing barrier in its "as-is-where is" maintained condition beyond the 5 year term for a further negotiated term at a rate of \$90k (ex GST) plus CPI.

A report with recommendations would be prepared and presented to Council after the fourth year of a new lease taken out under Option 4, i.e. around November 2021.

#### Recommendation

It is recommended that the eco shark barrier remain in place, not be removed in November 2017 at the end of the current lease period.

The most cost effective option, long term, is to purchase the barrier outright. However given that the City has no experience maintaining the barrier and given that no funds have been allocated to purchase the

barrier in the 17/18 budget, a continuing lease option is seen as the most favourable path at this time.

The recommendation is to take up Option 4 and enter into a lease purchase agreement with Eco Shark Barriers Pty Ltd for a five year period at a cost of \$90,000 (excl GST) per annum inclusive of maintenance. After 4 years, a review would be made to determine as to whether to continue to lease the current or a new barrier or assume ownership of the barrier and take ongoing responsibility for maintenance after the end of the 5 year lease.

### **Strategic Plan/Policy Implications**

#### **Community, Lifestyle & Security**

- Provide for community facilities and infrastructure in a planned and sustainable manner.

#### **Economic, Social & Environmental Responsibility**

- Sustainably manage our environment by protecting, managing and enhancing our unique natural resources and minimising risks to human health.

### **Budget/Financial Implications**

There is a funding allocation of \$95,000 this financial year which would allow Council to continue to lease the barrier for a further year. No funds have been allocated in the 17/18 budget to purchase the barrier outright at a cost of \$250,000 (ex GST) as per Option 2. The unused \$5,000 will be transferred to the contingency fund at the mid-year budget review.

### **Legal Implications**

A continued Section 91 Licence with the Department of Lands plus an annual Jetty Licence with the Department of Transport will be required, under the name of the City of Cockburn, to enable the barrier to remain.

### **Community Consultation**

A community survey was undertaken, the report from which is appended at Annexure 1.

### **Risk Management Implications**

There has not been any reported shark attacks or shark encounters at Coogee Beach. There has however been sightings with a report on the shark watch website of a large unknown species of shark 20 metres



offshore of Coogee Beach on 13 February 2017 and on 27 May 2017 a 3 metre shark 700 metres offshore from the shark barrier.

The removal of the shark barrier has the potential to increase the risk of shark encounters in the area.

Consideration should be given to the potential for Council to be blamed, although unfairly, if a shark attack were to occur at Coogee Beach after the barrier is removed.

There is also the risk that the removal of the shark barrier will reduce the number of people visiting the area which may impact on the local economy.

Given the popularity of the barrier there is also a risk of community backlash if the barrier is removed.

### **Attachment(s)**

1. Survey Report
2. 5 Year Net Present Value Calculation
3. Current and Expected Condition Report

### **Advice to Proponent(s)/Submissioners**

The Proponent(s) and those who lodged a submission on the proposal have been advised that this matter is to be considered at the 14 September 2017 Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

## **17.2 (OCM 14/09/2017) - PORT COOGEE STREET TREE REMOVAL AND REPLACEMENT PROGRAM (148/003) (J REIDY) (ATTACH)**

### **RECOMMENDATION**

That Council

- (1) undertake consultation with the impacted residents in order to ascertain a suitable replacement tree, in accordance with the City of Cockburn's Street Tree Master Plan, environmental and road infrastructure constraints;
- (2) amend the Port Coogee Tree Master plan to align with the City's Street Tree Master Plan 2016;
- (3) commence a staged removal and replacement program of the

Casuarina equisetifolia; and

- (4) inform the property owners who will be affected.

## COUNCIL DECISION

### Background

In 2011 Port Catherine Developments designed a tree master plan for the entire Port Coogee development to ensure the creation an aesthetically pleasing street environment.

At the September 2015 OCM, a petition was lodged by five residents at the Ocean Edge Apartments on Socrates Parade in Port Coogee. This petition requested the removal of five (5) Casuarina equisetifolia street trees from the verge adjacent to their apartment based on health and safety concerns. The 9 June 2016 OCM, Council moved to relocate the five trees at the petitioner's expense. Following consultation with the impacted residents, there was not majority support and the trees were retained.

On 27 June 2017 a letter was received on behalf of seventeen property owners on Socrates Parade, Draper Street, Madras Link and Ceylon Turn regarding the suitability of the Casuarina equisetifolia as a street tree adjacent to the houses on Socrates parade.

A number of onsite discussions were held with the residents explaining the City's street tree policy, specifically tree removals and officers limit of authorisation outside the policy. The residents where familiar with the City's previous decision, their requirements set out in the Design Guidelines for the Port Coogee Development and the City's Removal and Pruning of Trees policy. (PSEW15)

In order to resolve the ongoing enquiries about this particular tree species a comparison of the Port Coogee Street Tree Master Plan and the City of Cockburn Street Tree Master Plan 2016 was carried out as the mechanism to determine a resolution and subsequent report to Council on the outcome.

## Submission

Copy of 27 June 2017 property owner's letter

## Report

The tree master plan developed by Port Catherine Developments and approved by the City of Cockburn, selected tree species to be used throughout the Port Coogee development to create a harmonious and consistent theme. When the tree master plan was developed, the focus was to select species of trees which would withstand the climatic and environmental conditions experienced on the coastal frontage. In addition the trees selected would provide shade to the footpath and car parking bays whilst allow permeability for residents to appreciate the coastal view, specifically for those lots directly on the coast.

In 2016, a Citywide street tree master plan was developed with a recommended species based on a selection criterion which investigated the suitability of a species to be used as a verge tree. The master plan evaluated existing street trees based on a number of criteria including their growth habits and avenue themes among others.

A comparison of the two master plans identified the citywide plan with a broader scope to include environmental as well as functional requirements to ensure a verge species would not create an undue financial and maintenance burden on the City's resources and residents. The selection criteria for the suitability of a tree species to be planted on a verge in the City of Cockburn are based on the following criteria.

### Environmental considerations:

- Climate
- Geology and soils
- Hydrology
- Hardscapes
- Atmospheric pollution
- Drought conditions
- Pests and diseases
- Wildlife habitat

### Functional requirements

- Proven performance
- Tree litter
- Limb failure
- Canopy size and structure
- Tempering of climate
- Root damage
- Crown pruning and leader removal
- Solar passive

A comparison of the Port Coogee Tree Master Plan and the City of Cockburn Street Tree Master Plan has been conducted to identify the differentials, specifically to the street tree realm. The table below compares the two master plans and indicates which species are no longer recommended to be used as a street tree in Port Coogee.

2011 Port Coogee Tree Master Plan – street tree species list	City of Cockburn Street Tree Master Plan 2016	Location in Port Coogee	Recommend removal based on selection criteria
Agonis flexuosa	Yes	Verge	No
Angophora costata	Yes	Verge	No
Delonix regia	Yes	Verge	No
Eucalyptus gomphocephala	Yes	Verge & POS	No
Erythrina indica	Yes	Verge	No
Hibiscus tiliaceus Rubra	Yes	Verge	No
Olea europaea 'Tollley's upright'	Yes	Verge	No
Araucaria columnaris 'Cook'	No	Median Island – Landmark trees	No
Eucalyptus platypus	No	Verge	Yes
Casuarina equisetifolia	No	Verge & POS	Yes
Melaleuca lanceolata	No	Verge	Yes

The chart below indicates the three species identified in the Port Coogee Tree Master Plan, which are no longer included in the City of Cockburn Street Tree Master Plan 2016 and how they respond to the selection criteria.

	Casuarina equisetifolia	Eucalyptus platypus	Melaleuca lanceolata
Climate	✓	✓	✓
Geology and soils	✓	✓	✓
Hydrology	✓	✓	✓
Hardscapes	✓	✓	✓
Atmospheric pollution	✓	✓	✓
Drought conditions	✓	✓	✓
Pests and diseases	✓	✓	✓
Wildlife habitat	X	X	X
Proven performance	X	X	X
Tree litter	X	✓	✓
Canopy size and structure	X	X	X
Tempering of climate	X	✓ *	✓ *
Root damage	X	✓	✓

Crown pruning and leader removal	X	✓	✓
Solar passive	X	X	X

\*Indicates trees which only remain an acceptable size for location with regular pruning.

The *Casuarina equisetifolia* was initially recommended in the Port Coogee Tree Master Plan as it grows to mature heights of approximately 15m and 5-6m in width. Its structural integrity facilitates the tolerance of strong winds and has needle like foliage allowing wind to pass through without damage. The *Casuarina equisetifolia* can grow in coastal environments; tolerate impoverished soil and restricted water supply. The majority of trees located within the Socrates Parade streetscape were planted seven years ago.

The *Casuarina equisetifolia* are now proving to be an extra maintenance burden within the streetscape as their fibrous root system is lifting the paving within the car bays and associated kerbing. The growth habit of the *Casuarina equisetifolia* does allow it to be successfully pruned to keep the tree at a lower height. Attempts to prune to date have resulted in unsightly shaped trees. Additionally this species has been proven to provide very little by way of food and habitat to wildlife. These functional aspects were not fully apparent when the Port Coogee Tree Master Plan was initially developed.

Currently two hundred and nine *Casuarina equisetifolia* are recorded on the street tree inventory with sixty one listed in the suburb of North Coogee, in which Port Coogee is located.

Whilst the *Eucalyptus platypus* and the *Melaleuca lanceolata* do not meet all the selection criteria of the City of Cockburn Street Tree Master Plan 2016, it is not significant enough to justify removing these species from the verges within the Port Coogee development or throughout the City. No further trees of these species will be planted in any future verges of the Port Coogee development or throughout the City. The Port Coogee Tree Master Plan will be altered to reflect this decision.

In addition to the analysis it is necessary to reflect on PSEW15 Removal and Pruning of Trees policy. This policy provides guidance to officers when requests for removal or pruning of trees throughout the City are received in order to retain the values of our tree inventory. In applying the policy to any healthy living trees at Port Coogee there would be no room for removal based on their current status.

The Policy does; however, enable the removal of trees subject to a tree replacement program which is supported by evidence that the species has bearings on the City's current and future maintenance liabilities. In

addition the policy does permit the removal of a tree based on a loss of amenity, which is the foundations of the current request, subject to the cost being borne by the resident with the City bearing the cost of a replacement tree.

### Options

A number of options have been considered in response to these findings:

1. Do not remove any trees in accordance with PSEW15 Removal and Pruning of Trees as each individual tree doesn't breach all of the criteria. Acceptance of this option would support Council's resolve to maintain its street tree network in order to meet the criteria set out on the Urban Forest Plan.
2. Resolve to remove the *Casuarina equisetifolia* trees based on the evaluation of the selection criteria in the City of Cockburn Street Tree Master Plan 2016. Commence a staged removal and replacement program for the *Casuarina equisetifolia* throughout the City with the Port Coogee development being the starting point from 2018/19. This would provide the opportunity to liaise with the impacted residents of the estate to determine a suitable replacement tree in accordance with the City of Cockburn Street Tree Master Plan and identify a provisional cost to be incorporated into future budgets for consideration.
3. Resolve to permit the removal of the *Casuarina equisetifolia* based on the loss of amenity provision in the policy with each adjacent property owner paying for the removal and the City supplying and installing a new 45Lt tree. Consultation with effected property owners will be required to establish the process for removal, number interested in progressing this resolution and determining a suitable replacement tree species in accordance with the City of Cockburn Street Tree Master Plan.
4. The Port Coogee Street Tree Master Plan should be revised to incorporate the recommended species list from the City of Cockburn Street Tree Master Plan and in the process remove the *Casuarina equisetifolia*, *Eucalyptus platypus* and *Melaleuca lanceolata* species.

### Recommendation

The continued enquiries regarding the street trees selected for the Port Coogee development has provided the impetus to evaluate it against the City's Street Tree Master Plan 2016. It is evident that the selection of trees at Port Coogee is in contradiction to the species listed in the

City of Cockburn Street Tree Master Plan 2016 and requires a realignment to ensure the City can address the issues whilst the trees are at a young age and mitigate future maintenance implications. In addition, the previous consultation on the trees along Socrates Parade demonstrated the property owner's reluctance to contribute to the costs of removal thereby limiting our options to address the situation. An evaluation of the City of Cockburn Street Tree Master Plan has identified the following four tree species that would be suitable replacements; *Agonis flexuosa* (peppermint tree), *Hibiscus tiliaceus* Rubra (hibiscus), *Olea europaea* 'swan hill' (non-fruiting olive tree) and *Callistomen* species (bottlebrush). It would be recommended that one of these species is selected through community consultation as the replacement tree.

It is recommended Council commence a staged removal and replacement program for the *Casuarina equisetifolia* throughout the Port Coogee development from 2018/19. Undertake community consultation with those residents impacted in the first stage of the program and liaise with Fraser Properties to amend the Port Coogee Tree Master plan to align with the City's Street Tree Master Plan 2016.

### **Strategic Plan/Policy Implications**

#### **Economic, Social & Environmental Responsibility**

- Improve the appearance of streetscapes, especially with trees suitable for shade.

### **Budget/Financial Implications**

To be advised following consultation with residents on appropriate tree species for consideration in 2018/2019 and future budgets. Initial estimates to remove a 3m – 6m tree, stump removal, supply and install a new 45Lt trees is approximately four hundred and eighty five dollars each.

### **Legal Implications**

N/A

### **Community Consultation**

There has been two meeting onsite with a small number of residents and Cities officers to discuss the tree issues. On the 10 April 2017 the discussion focused on the City's tree removal and pruning policy, street tree master plans, draft urban forest plan and the Port Coogee design guidelines. The meeting of the 24 May 2017 reiterated the previous meetings points and reviewed the process required to apply to have the trees removed and a potential list of replacement trees

### **Risk Management Implications**

If the recommendation is not supported the property owners will continue to submit requests for tree removal and undertake pruning of the trees without approval. In addition by requiring property owners to pay for the removal of the tree, some trees may not be removed with the City having to bear the cost for damaged infrastructure, future removals when the trees are large and lose the avenue effect of a harmonious tree canopy of the same size and form.

### **Attachment(s)**

1. Copy of 27 June 2017 property owners letter
2. Port Coogee Tree Master Plan
3. City of Cockburn Street Tree Master Plan

### **Advice to Proponent(s)/Submissioners**

The Proponent(s) and those who lodged a submission on the proposal have been advised that this matter is to be considered at the 14 September Council Meeting.

### **Implications of Section 3.18(3) Local Government Act, 1995**

N/A.

## **18. COMMUNITY SERVICES DIVISION ISSUES**

### **18.1 (OCM 14/09/2017) - FRANKLAND PARK SPORTS AND COMMUNITY FACILITIES DEVELOPMENT (162/024) (T MOORE) (ATTACH)**

#### **RECOMMENDATION**

That Council

- (1) submit an application totalling \$2.0M to the State Government's Community Sport and Recreation Facilities Fund for the construction of clubroom/community facilities and playing fields at Frankland Park, Hammond Park; and
- (2) considers allocating \$2.98M from the Municipal fund as part of the 2018/19 annual budget deliberation process for the construction of facilities outlined in (1) above should the Community Sport and Recreation Facilities Fund application be successful.



## COUNCIL DECISION

### Background

In 2016-2017, the City undertook the development of the Draft Community Sport and Recreation Facilities Plan. The Draft Plan identified a short fall of active open space and community facilities in the Hammond Park area, with one of the key recommended projects being the development of Frankland Park.

The Community Sport and Recreation Facilities Fund (CSRFF) is the primary avenue for the City to seek external funding for the development of sport and recreation facilities.

The Annual Forward Planning Grants Program provides funding of up to \$2M, with submissions closing at the end of September and funds being available the following financial year should the application be successful.

### Submission

N/A

### Report

The proposed project is to develop community sport and recreation facilities at Hammond Park. A preliminary concept design has been developed for the purposes of the funding application (*Attachment 1*).

An opportunity exists for the City of Cockburn to apply to the CSRFF, administered by the Department of Local Government, Sport and Culture (DLGSC), for funding towards the development of the Frankland Park Sports and Community Facilities. Applications close on 30th September 2017.

To ensure that an application is submitted on time, and to be compliant, a decision of Council committing to the project is required.

The project budget for a CSRFF application would estimate the capital cost of the new development at \$9.6M (ex-GST). This does not include potential environmental set-offs, which have not yet been determined.

A CSRFF application would propose the capital cost is shared by the City of Cockburn and DLGSC.

The construction of this clubroom facility, community centre, two AFL size ovals would align with the stated objectives of Draft Community Sport and Recreation Facilities Plan in increasing the level of open space and facility provision in Hammond Park.

As part of the development, the City has also been approached by the WA Football Commission (WAFC) to base their Metro South Regional Office at the site. This would involve the provision of 100-120 square metre floor space. Negotiations with the WAFC are ongoing; however, at this stage the space has been included in the preliminary concept. Should this partnership not evolve, this space may be able to be removed from the development, which would provide Council with an approximate saving of \$300k to \$400k off the total project cost. If an arrangement were successful with the WAFC, it would be expected a suitable lease fee would apply to cover the cost of the floor space (approximately \$350 per square metre plus variable outgoings). The City would also welcome a capital contribution instead of a lease fee.

### **Strategic Plan/Policy Implications**

#### **City Growth**

- Ensure planning facilitates a desirable living environment and meets growth targets.
- Ensure growing high density living is balanced with the provision of open space and social spaces.

#### **Community, Lifestyle & Security**

- Provide for community facilities and infrastructure in a planned and sustainable manner.

#### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes.
- Ensure sound long term financial management and deliver value for money.

### **Budget/Financial Implications**

Within the 2017-18 annual budget, Council included \$400,000 to complete conceptual and detailed designs, together with construction documentation for the Frankland Park development.

The proposed funding breakdown for the balance of the project is as follows:

City of Cockburn .....	\$2.98M
Developer Contribution Plan 13.....	\$4.62M
CSRFF .....	\$2.00M

<b>Total</b>	<b>\$9.60M</b>
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It is proposed the City's contribution of \$7.6M is comprised of \$4.62M from Developer Contribution Plan (DCP) 13 funds and \$2.98M from municipal funds. This funding mix will be re-examined once the CSRFF application has been determined and suitable municipal funds are sourced to co-fund the DCP 13 contributions.

### **Legal Implications**

N/A

### **Community Consultation**

Through the development of the Draft Community Sport and Recreation Facilities Plan a significant amount of consultation was undertaken to determine the needs of the broader Cockburn community including Hammond Park.

Through this process it was identified that there was a significant lack of active open space and community facilities within Hammond Park.

A Master Plan of the site has been developed for the purposes of the CSRFF application and will be further developed in liaison with the Sporting Clubs.

### **Risk Management Implications**

Should the CSRFF application not be successful, Council may be required to source an additional \$2.0M in municipal funds to allow the project to proceed. However, should this be the case, staff will investigate opportunities to value engineer the proposed design to reduce the additional funds required.

### **Attachment(s)**

Preliminary Master Plan of Frankland Reserve.

### **Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**19. EXECUTIVE DIVISION ISSUES**

**20. MOTIONS OF WHICH PREVIOUS NOTICE HAS BEEN GIVEN**

**20.1 (OCM 14/09/2017) - JUNIOR SPORTS AND PERFORMING ARTS  
HALL OF FAME (G BOWMAN) (152/009)**

**RECOMMENDATION**

That Council

- (1) initiates development of a policy for nominations for the City's Sports Hall of Fame to be presented to a future Delegated Authorities, Policies and Position Statements Committee (DAPPs) meeting;
- (2) the policy considers the expansion of the recognition criteria to allow for people of all ages to be considered for nomination; and
- (3) as part of the City's consideration to developing a future Performing Arts Centre consideration be given to establishing a similar Wall of Fame for persons that deserve recognition for their efforts in the performing arts sector. Accordingly a policy for nominations needs to be presented to a future DAPPS meeting.

**COUNCIL DECISION**

**Background**

Mayor Howlett provided the following under 'Motion of Which Previous Notice Has Been Given':

*Council:*

- (1) seeks development of a policy for nominations for the City's Sports Hall of Fame to be presented to a future DAPPs meeting;*
- (2) the policy considers the expansion of the recognition criteria to allow for people of all ages to be considered for nomination; and*
- (3) as part of the City's consideration to developing a future Performing Arts Centre consideration be given to establishing a similar Wall of Fame for persons that deserve recognition for their efforts in the performing arts sector. Accordingly a policy for nominations needs to be presented to a future DAPPS meeting.*

*Reason for Decision*

*While the City has recently established its Hall of Fame at the Cockburn ARC for residents that have achieved sporting success at State, National, and International level, there is no Council policy on this matter. As the City also has junior sports champions in its midst, any policy should look to include people of all ages. There is also no process to readily allow for future nominations outside of Council initiating this. A more simplified process should be considered for future nominations.*

*Additionally, while the ARC is an appropriate location to recognise sporting achievement, the City should seek to recognise those that achieved similar levels of success in the performing arts field. Given there is no Council policy on this matter, like the City's Sports Hall of Fame, a policy needs to be developed to allow for the recognition of persons of all ages in the performing arts. The process can commence upon Council's adoption of the policy to allow those recognitions to occur not with-standing the consideration of a Performing Arts Centre at some time in the future.*

The City of Cockburn's Sports Hall of Fame was developed in 2004 to celebrate the achievements of local athletes and sports personnel who have competed at an elite sporting level.

*Eligibility Criteria*

- Person can be deceased or living
- Be or have been a participant in sport or involved in sports administration at the highest level

- Must have been involved in senior sport (over eighteen years of age)
- Must have been a long-term resident of the City of Cockburn
- Consistent high standard of senior sports performance at a national or international level.
- Long term outstanding commitment to and achievement in a sport(s).

The Hall of Fame includes athletes and sports media personalities from a range of sports including AFL to sailing and also acknowledges the junior Cockburn Clubs in which these athletes came from. In 2004, eleven(11) athletes were inducted into the City's Sports Hall of Fame, to be the inaugural inductees. In 2011, the call for nominations went out for the second time and in 2012, six(6) additional athletes were inducted into the Sports Hall of Fame.

In December 2016, Council resolved the following:

*MOVED Clr L Sweetman SECONDED Clr C Terblanche that Council:*

- (1) supports the development of a new Sporting Wall of Fame at Cockburn ARC, inclusive of an interactive kiosk as per Option 2 outlined in Attachment 2;*
- (2) considers \$20,000 as part of the 2016/ 17 mid-year budget review process to install the plaques as part of the Sporting Hall of Fame;*
- (3) place on its 2017/18 budget for consideration \$8,500 for the installation of an interactive kiosk as part of the Sporting Hall of Fame;*
- (4) retains the existing Sports Wall of Fame currently at the City of Cockburn Administration external walkway; and*
- (5) calls for nominations for City of Cockburn Sporting Hall of Fame in January/February 2017.*

Since this time, the Sports Hall of Fame, at the new location Cockburn ARC, has been installed, with the opening scheduled for 13 September 2017.

### **Submission**

N/A

## **Report**

A review of the policy for The City's Sports Hall of Fame will enable the City to create a more defined selection criterion for nominations. The City already has the Junior Sports Travel Assistance program which provides financial assistance to our local Junior Athletes. This program also celebrates the achievement of these junior athletes through two award ceremonies each year. In the last financial year the City awarded over 100 junior athletes with funding, each one of the athletes either represented the State and/or Nation in their chosen sport. Given the number of juniors receiving travel assistance the removal of the age level will require the maintenance of strict selection criteria so that the hall of fame is not overwhelmed with eligible nominees. The policy review will be cognizant of this requirement.

Currently the City does not have any recognition of elite level performing arts individuals, e.g. Performing Arts Hall of Fame. It is proposed that a new policy with selection and eligibility criteria be prepared for consideration by Council through the DAPPS process.

## **Strategic Plan/Policy Implications**

### **Community, Lifestyle & Security**

- Provide residents with a range of high quality, accessible programs and services.

### **Budget/Financial Implications**

There is minor cost for the expansion of the Sports Hall of Fame to include Junior Sports and Performing Arts recognition. The costs can be considered as part of the annual municipal budget process.

### **Legal Implications**

N/A

### **Community Consultation**

Call for nominations would go out every three(3) years. This will be advertised in local newspapers, the City's website and direct mail outs to sporting clubs and other relevant groups.

### **Risk Management Implications**

Should Council resolve to expand the Hall of Fame to include junior sports and performing arts individuals, a clear policy needs to be developed to ensure that there is no suggestion of bias or prejudice in the selection process. There needs to be a high standard required to

be achieved by nominees to ensure that the Halls of Fame maintain a high level of prestige and the number of individuals who meet the criteria is not overwhelming.

**Attachment(s)**

N/A

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**20.2 (OCM 14/09/2017) - AUSTRALIA DAY EVENTS (G BOWMAN)  
(027/009)**

**RECOMMENDATION**

That Council

- (1) reaffirms its commitment to hold its Australia Day events on Australia Day; and
- (2) continue the Australia Day events to include citizenship ceremonies and activities that recognise the importance of Indigenous people within the community.

**COUNCIL DECISION**

**Background**

Cr Terblanche provided the following under 'Motion of Which Previous Notice Has Been Given':

*That Council:*

- (1) *reaffirms its commitment to hold its Australia Day events on Australia Day (i.e. 26 January), and*



- (2) *The Australia Day events continue to include our citizenship ceremony and activities that recognise the importance of Indigenous people within our community.'*

#### *Reason for Decision*

*There has been recent media reports that the City of Cockburn is seeking to change its Australia Day date. This is untrue and should be formally corrected to avoid speculation or discord in our community.*

*Council has, however, recognised the need to provide more acknowledgement for Indigenous people about their preferred activities on the day, which is why a consultation process has occurred with a report expected to come to Council in October 2017; as per Council's resolution of 9 March 2017.*

#### **Submission**

N/A

#### **Report**

Council previously considered a number of Australia Day recommendations from the Aboriginal Reference Group at its Ordinary Council Meeting held on 9 March 2017, and the following decision was made:

*MOVED Clr C Terblanche SECONDED Clr P Eva that Council:*

- (1) receive the Aboriginal Reference Group Consultation Report;*
- (2) allocate up to \$10,000 from the 2016/17 Grants and Donations Budget for an extended Aboriginal Reference Group and Aboriginal Community consultation process regarding the nature and type of cultural activities for future Australia Day events;*
- (3) allocate \$2,000 from the 2016/17 Grants and Donations Budget for additional Nyungar cultural activities at the Australia Day Citizenship Ceremony in 2018;*
- (4) approve the appropriate use of Nyungar language in the Acknowledgement of Country at Council Meetings and public events;*
- (5) require that the Reconciliation Action Plan (RAP) Review process consider the extended consultation findings and*

*other recommendations contained in the Aboriginal Reference Group Consultation Report.*

In accordance with the decision, the Consultant appointed to assist in reviewing the Reconciliation Action Plan has now completed the Aboriginal Reference Group and broader Aboriginal community consultation about the nature and type of cultural activities for future Australia Day activities.

The City intends to hold the Australia Day 2018 Breakfast and Citizenship Ceremony events and has contractual commitments with suppliers and performers for the events. The consultation findings of the nature and type of cultural activities in regards to the 9 March Council decision will be incorporated into the events programming.

The consultant and staff will also consider the extended consultation findings and the original recommendations from the Aboriginal Reference Group Consultation report as part of the Reconciliation Action Plan review process.

In summary, the Aboriginal Community survey results identified that:

- 77.9 percent of respondents said yes, saying they would support reconciliation themed cultural activities;
- 20 percent of respondents were not supportive of the City hosting indigenous cultural activities on Australia Day, suggesting the date should be changed as it was an unhappy day for Aboriginal people, or that local residents went to the Survival Day Concert event in the City of Perth.
- 2.1 percent of respondents did not answer these questions

In accordance with the Council decision, other Australia Day recommendations from the Aboriginal Reference Group including whether Council will consider advocating for a date change will be considered as part of the Reconciliation Action Plan Review.

The Draft Reconciliation Action Plan 2017-2022 and community consultation findings report is planned to be considered at the November 2017 Ordinary Council Meeting.

### **Strategic Plan/Policy Implications**

Policy SC2 'Community Engagement' refers.

### **Economic, Social & Environmental Responsibility**

- Continue to recognise and celebrate the significance of cultural, social and built heritage including local indigenous and multicultural groups.

**Leading & Listening**

- Listen to and engage with our residents, business community and ratepayers with greater use of social media.

**Budget/Financial Implications**

N/A

**Legal Implications**

N/A

**Community Consultation**

Council received a report regarding the Aboriginal Reference Group community consultation at the OCM in March 2017, and has required an extended Aboriginal community consultation about the nature and type of cultural activities to be held at future Australia Day events. The full community consultation results are being collated and analysed and are planned to be presented to Council for consideration as part of the Reconciliation Action Plan Review report in November 2017.

In summary, an online survey on Comment on Cockburn was part of a wider consultation by consultants Keogh Bay. It was handed out in hardcopy format at NAIDOC Week events and with a survey box in Council's foyer. A total of 216 surveys (180 community and 46 staff) were completed. A total of 99 respondents identified as Aboriginal. Not all Aboriginal people responded to the questions about Australia Day.

When asked whether they would like the City of Cockburn to host Aboriginal cultural activities on Australia Day, 77.9 percent of respondents said yes, saying they would support reconciliation themed cultural activities. Whereas 20% respondents were not supportive of the City hosting Aboriginal cultural activities on Australia Day, suggesting the date should be changed because it was an unhappy day for Aboriginal people, or that local residents went to the Survival Day Concert event in the City of Perth.

The summary and analysis of the nature and type of cultural activities is not yet available.

**Risk Management Implications**

If the recommendation is adopted without considering the related consultation findings with the Aboriginal Community, there is a risk of reputational and relationship damage with the Aboriginal Reference Group, Aboriginal Elders, and the broader Aboriginal community.

If the recommendation is not adopted there is a risk of ambiguity about whether Council will be holding its Citizenship ceremony and other events on 26 January 2018.

**Attachment(s)**

N/A

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

- 21. NOTICES OF MOTION GIVEN AT THE MEETING FOR CONSIDERATION AT NEXT MEETING**
- 22. NEW BUSINESS OF AN URGENT NATURE INTRODUCED BY MEMBERS OR OFFICERS**
- 23 (OCM 14/09/2017) - MATTERS TO BE NOTED FOR INVESTIGATION, WITHOUT DEBATE**

Mayor Howlett requested that the following items be brought to future Council Meetings.

**23.1 Advanced technology and drones in our community**

Provide a report to a future Council meeting that addresses the value adding capacity that advanced technology and drones can contribute to service delivery within our community.

**23.2 Working area of land to showcase market garden, flower garden, orchard and vineyard history of Cockburn**

Provide a report to a future Council meeting that identifies a 'working' area of land that could be purchased to enable the extensive market garden, flower garden, orchard and vineyard history of Cockburn to be showcased.

**23.3 The activation of the former South Fremantle Power Station for a museum, art gallery, café, restaurants, water playground and more**

Provide a report to a future Council meeting on how the City can influence the activation of the former South Fremantle Power Station justifying a light rail system from Fremantle into Cockburn Central.

**23.4 Establishing a working relationship with a WA Local Government or Shire**

Provide a report to a future Council meeting on the opportunity for the City to be involved in establishing a working relationship with a WA rural Local Government (Shire).

**23.5 Approving the design of local roads, road signage, line markings etc to be transferred to Local Government from Main Roads**

Provide a report to a future Council meeting on the opportunity for the responsibility for approving the design of local roads, road signage, line markings etc. to be transferred to Local Government from Main Roads WA. Consideration also to be given to recommending an 'opt in system' for Local Governments in Western Australia for the consideration of WALGA.

Councillor Allen requested that the following be brought to a future Council Meeting.

**23.6 Management and Operation of 136 Healey Road Hamilton Hill**

That a report be prepared for a future Ordinary Council Meeting on the management and operations of the lodging house at 136 Healy Road, Hamilton Hill.

**24. CONFIDENTIAL BUSINESS**

**25 (OCM 14/09/2017) - RESOLUTION OF COMPLIANCE**

**RECOMMENDATION**

That Council is satisfied that resolutions carried at this Meeting and applicable to items concerning Council provided services and facilities, are:-

- (1) integrated and co-ordinated, so far as practicable, with any provided by the Commonwealth, the State or any public body;
- (2) not duplicated, to an extent Council considers inappropriate, services or facilities as provided by the Commonwealth, the State or any other

body or person, whether public or private; and  
(3) managed efficiently and effectively.

**COUNCIL DECISION**

**26 (OCM 14/09/2017) - CLOSURE OF MEETING**

The meeting closed at

# CITY OF COCKBURN



## DELEGATED AUTHORITIES, POLICIES & POSITION STATEMENTS COMMITTEE

### MINUTES

### FOR

**THURSDAY, 24 AUGUST 2017**

These Minutes are subject to Confirmation

Presiding Member's Signature

\_\_\_\_\_

Date: \_\_\_\_\_

# CITY OF COCKBURN

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# CITY OF COCKBURN

## MINUTES OF THE DELEGATED AUTHORITIES, POLICIES AND POSITION STATEMENTS COMMITTEE MEETING HELD ON THURSDAY, 24 AUGUST 2017 AT 6:00 PM

### PRESENT:

Mrs C Reeve-Fowkes	-	Deputy Mayor (Presiding Member)
Mr L. Howlett	-	Mayor
Mrs L. Sweetman	-	Councillor
Mr S. Portelli	-	Councillor
Mr S. Pratt	-	Councillor
Mr B. Houwen	-	Councillor

### IN ATTENDANCE:

Mr S. Cain	-	Chief Executive Officer
Mr S. Downing	-	Director, Finance & Corporate Services
Mr C. Sullivan	-	Director, Engineering & Works
Ms G. Bowman	-	Acting Director, Governance & Community Services
Mrs M Tobin	-	Executive Manager, Strategy & Civic Support
Mr J Ngoroyemoto	-	Governance & Risk Management Co-ordinator
Mrs B. Pinto	-	Executive Assistant to Directors – Fin. & Corp. Serv./Gov. & Comm. Serv.

### 1. DECLARATION OF MEETING

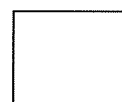
The Presiding Member declared the meeting open at 6.07 pm.

### 2. APPOINTMENT OF PRESIDING MEMBER (If required)

Nil.

### 3. ACKNOWLEDGEMENT OF RECEIPT OF WRITTEN DECLARATIONS OF FINANCIAL INTERESTS AND CONFLICT OF INTEREST (BY PRESIDING MEMBER)

Nil



**4 (DAPPS 24/08/2017) - APOLOGIES & LEAVE OF ABSENCE**

Cr Phil Eva	-	Apology
Cr Kevin Allen	-	Apology

**5. CONFIRMATION OF MINUTES**

**5.1 (MINUTE NO 416) (DAPPS 24/08/2017) - MINUTES OF THE DELEGATED AUTHORITIES, POLICIES & POSITION STATEMENTS COMMITTEE MEETING - 18/5/2017**

**RECOMMENDATION**

That Council confirms the Minutes of the Delegated Authorities, Policies and Position Statements Committee Meeting held on Thursday, 18 May 2017 as a true and accurate record.

**COMMITTEE RECOMMENDATION**

MOVED Clr S Portelli SECONDED Clr B Houwen that the recommendation be adopted.

**CARRIED 6/0**

**6. DEPUTATIONS**

Nil

**7. PETITIONS**

Nil

**8. BUSINESS LEFT OVER FROM THE PREVIOUS MEETING (IF ADJOURNED)**

Nil

**9. DECLARATION OF COUNCILLORS WHO HAVE NOT GIVEN DUE CONSIDERATION TO MATTERS IN THE BUSINESS PAPER**

Nil



**10. COUNCIL MATTERS**

AT THIS POINT IN THE MEETING, THE TIME BEING 6.08 PM THE FOLLOWING ITEMS WERE CARRIED BY 'EN BLOC' RESOLUTION OF COMMITTEE

10.2	14.2
10.3	14.3
10.4	14.4

**10.1 (MINUTE NO 417) (DAPPS 24/08/2017) - REVIEW OF COUNCIL SERVICES (CS) POLICIES, AND ASSOCIATED DELEGATED AUTHORITIES (182/001) (J NGOROYEMOTO) (ATTACH)**

**RECOMMENDATION**

That Council adopt proposed amendments to:

- (1) Policies AC1, AC2, SC2, SC4, SC7, SC13, SC14, SC15, SC21, SC22, SC24, SC25, SC30 SC34, SC44, SC52, SC53, SC55, and
- (2) Policies AC3, AC4, AC5, SC3, SC5, SC6, SC8, SC9, SC10, SC 11, SC16, SC19, SC27, SC28, SC29, SC31, SC33, SC36, SC37, SC38, SC39, SC40, SC41, SC42, SC43, SC45, SC47, SC48, SC49, SC50, SC54, SC57, SC58, SC59 and associated Delegated Authorities AC2 and AC3 in their current form.

as shown in the report and attachments to the Agenda.

**COMMITTEE RECOMMENDATION**

MOVED Deputy Mayor C Reeve-Fowkes SECONDED Mayor L Howlett that adopt the recommendation subject to:

- (1) replacing Policy AC1 with SC1; and
- (2) withdrawing Policies SC1, SC7, SC15 and SC44 to be discussed separately.

**CARRIED 6/0**

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**

## COUNCIL DECISION

### Background

Pursuant to Council Policy SC47, Council is to review its Delegated Authorities, Policies and Position Statements (DAPPS) at least every two years.

The documents subject to specific review at this Committee Meeting are the Council Services documents.

### Submission

N/A

### Report

The previous overall review of these Council Services documents was undertaken in November 2013, and adopted by Council in December 2013. Some of the Council Services documents have been reviewed at ad hoc and as needed over the last two years. The schedule for the complete review of these documents coincided with the proposed Local Government Reform, and these documents were selected for review in anticipation of a Council merger. However with the plans for Local Government Reform not proceeding, the review of these documents did not proceed and was not carried forward to Council. In the aftermath of Local Government Reform the Council Services documents were not considered as first priority for review, with Planning and Development taking priority as a result of the Planning Act legislative changes. Therefore, in accordance with Council Policy SC47, the review of these documents is now due.

Relevant City Officers have undertaken a review of the documents and where significant changes have been made to any documents, these have been considered separately in this Agenda.

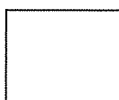
The table below identifies the documents reviewed and highlights any proposed amendments proposed. Note references to Policies are prefixed with "SC" and AC while Delegated Authorities are identified as "AC".

<b><u>DAPPS ID</u></b>	<b><u>Proposed amendments</u></b>	<b><u>Reason for amendment</u></b>
Policy AC2 'Seating Arrangements for Council Meetings'	Under heading <b>Purpose</b> in the first paragraph delete the words 'as proposed in the council's draft standing orders'	To remove reference to draft Local Laws, and align the policy with the current practices seating



<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
		arrangements for Council meetings.
Policy SC1 'Meeting Attendance Fees – Elected Members'	<p>Change the responsible service unit from 'accounting and financial control services' to accounting services</p> <p>Under heading <b>Policy</b> in clause (1) change reference to Local Government Act from section 5.99 to section 5.99 (a), and delete the words 'councillors the maximum annual fee prescribed by s30(3) of the local government 1996 WA (as amended) in lieu of fees for attending meeting' and replace with the words 'council members other than the Mayor, the maximum annual attendance fees determined by the salaries and allowances tribunal under the salaries and allowances act 1975 section 7B.</p> <p>Under heading <b>Policy</b> in clause (2) delete the words "The maximum annual fee prescribed by s30 (5) of the local government (administration) regulations 1996 (WA) (as amended) in lieu of fees for attending meetings' and replace with the words 'pursuant to section 5.99(a) of the Local Government Act 1995 (WA), pay the mayor the maximum annual attendance fees determined by the salaries and allowances tribunal under the salaries and allowances act 1975 section 7B'.</p>	<p>Service unit name changed as per PSES11 structure for administering the City of Cockburn.</p> <p>Previous wording was referring to deleted regulations and now highlights the role of the salaries and allowances tribunal in determining the maximum allowance levels</p> <p>Previous wording was referring to deleted regulations and now highlights the role of the salaries and allowances tribunal in determining the maximum allowance levels</p>
Policy SC2 'Community Engagement'	<p>Change Responsible Officer from Community Services to Community Development</p> <p>Under the heading <b>Background</b> remove the reference to the years ' 2012 to 2022, 2011 to 2014, and 2012 to 2017</p>	<p>Cosmetic change to reflect PSES11 position statement for Cockburn Organisational Structure</p> <p>This change is to remove dates references so that the Policy remains accurate in the event of Plans reviews</p>
Policy SC4 'Establishment of Issue Based Committees'	Under heading Policy in clause (7) delete the word 'bi-annually' and replace with 'biennially'	Cosmetic change to reflect the correct review timeframes for establishment of the committee, which is every

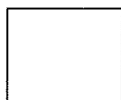
<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
		2 years in line with council election and not twice a year.
Policy SC7 'Briefing Sessions for Electoral Candidates & New Elected Members'	<p>Under heading <b>background</b> delete the entire first paragraph and the words accordingly at the beginning of paragraph 2</p> <p>Under the heading <b>Policy</b> in subheading <b>Briefing Seminar – Pre Election – Process and Facilitation</b> In the second dot point remove the words ' in Council facilities on a widespread basis, and replace with the words 'on the City of Cockburn website</p> <p>Under the heading <b>Policy</b> in subheading <b>Briefing Seminar – Pre Election – Process and Facilitation</b> remove the second dot point' and insert the words 'if appropriate' in dot point 3 after the word 'consultant'. Remove 'Tender Regulations' reference in the sixth dot point.</p>	<p>To focus on the accurate intent of this policy creation. The main driver for the policy is the need for elected members training and skills development rather than compliance.</p> <p>This change specifies the location for advertisement promotion on the City's website</p> <p>This change reflects the current practice for the Briefing Seminar and matches the facilitators and content required to covered in the seminar</p>
Policy SC12 'Response to Enquiries from the State Ombudsman'	<p>Under heading <b>Policy</b> in the first paragraph delete the words 'an acknowledgement of receipt is to be despatched on the same day that the enquiry is presented to the chief executive officer for action (noting that these queries are addressed to the mayor)'. and despatched within 10 working days and unless otherwise delegated, are to be accompanied by a covering letter signed by the Mayor'. And replace with 'handled in accordance to the customer service charter and records management policy and guidelines'.</p> <p>Under heading <b>Policy</b> in the second paragraph delete the words 'from copy of each enquiry from the state Ombudsman, the response and supporting documentation, is to be placed in the next "elected members newsletter" publication, for</p>	<p>This change is to align the responses to the Ombudsman with the City's customer service charter and records keeping policy and guidelines in order to provide consistency</p> <p>This change reflects the City's current and future practice of moving to electronic format for providing updates to Elected Members (LG Hub) and not producing an elected members</p>





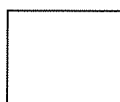
<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
	<p>information, except when, for the purposes of confidentiality or urgency, such documentation is forwarded to elected members under separate cover' and replace with 'summary of inquiries from the State Ombudsman will be placed in the "confidential section" in LG Hub.</p> <p>Under the heading <b>Policy</b>, delete subheading procedures and all text under this sub heading</p>	<p>newsletter.</p> <p>This change Removes operational matters from the policy, as the policy is a strategic document that entails council's intent, and procedures will be developed by the administration. This keeps in line with the doctrine of separation of powers, and the integrated planning framework principles.</p>
Policy SC13 'Procedural Fairness'	<p>Under heading <b>background</b> add the following words after the word processes 'and to protect legitimate expectations as well as legal rights'</p> <p>Under heading <b>Purpose</b> add the following words 'that negatively affect an existing interest of a person or corporation',</p>	<p>This change is to specify and clarify the importance of legitimacy and protection of legal rights in the city's decision making process</p> <p>This change provides clarity on the relationship between procedural fairness and interests of an affected person or corporation</p>
Policy SC14 'Mayoral and Deputy Mayoral Allowances'	<p>Change the responsible service unit from 'accounting and financial control services' to accounting services</p> <p>Under heading <b>background</b>, insert the following, after the first paragraph 'the maximum annual allowances payable are determined by the salaries and allowances tribunal under the salaries and allowances act 1975 section 7B'.</p>	<p>Service unit name changed as per PSES11 structure for administering the City of Cockburn</p> <p>This change better identifies how the salaries and allowances tribunal determines maximum allowance levels.</p>
Policy SC15 'Elected Member Information Communication Technology (ICT) Allowance'	<p>Change the responsible service unit from 'accounting and financial control services' to accounting services</p> <p>Under the heading <b>Background</b> in</p>	<p>Service unit name changed as per PSES11 structure for administering the City of Cockburn</p> <p>Amended to better clarify</p>

<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
	<p>the first paragraph remove reference to 'the local government act, 1995, (sec. 5.99a) provides for payment of an annual allowance instead of reimbursing councillors for particular types of expenses'. Replace with the words 'pursuant to section 5.99a of the local government act, 1995, a local government may decide by absolute majority that instead of reimbursing council members under section 5.98(2) for a particular type of expense'.</p> <p>Under the <b>Background</b> heading Background in paragraph one, change references to Regulations 31 and 32 to 31(1)(a) and 32(1) and remove reference to the 'payment', 'up to \$3500 p.a' and 'telephone and facsimile rental charges and any other telecommunications expense that might otherwise be reimbursed. This is known as an information and communications technology (ICT). Allowance. Replace with 'the reimbursement of expenses in respect of information technology and communications (ICT)</p> <p>Under the background heading in paragraph three, remove reference to Local Government Act Section 5.99A, and reference to telephones, fax machines and call costs, and replace with Information Technology and Communications (ICT expenses, and; the determination by the Salaries and Allowances Tribunal under the Salaries and Allowances Act 1995 section 7B, as well as to dealing with incidental conduct relating to the allowance.</p> <p>Under heading <b>Policy</b> clause 1 delete reference to 'Council' and replace with 'Elected Members' also remove reference to 'prescribed by Regulation 31 and 32 of the local Government (Administration) regulations</p>	<p>current statutory provisions and the role of the salaries and allowances tribunal in determining maximum allowance levels.</p> <p>This change reflects the current legislation provisions, and it covers and groups all the reimbursements for Information Technology and Communications together</p> <p>Amended to better clarify current statutory provisions and the role of the salaries and allowances tribunal in determining maximum allowance levels.</p> <p>Amended to better clarify current statutory provisions and the role of the salaries and allowances tribunal in determining maximum allowance levels.</p>



<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
	<p>1996(as amended), and replace with 'determined by the Salaries and Allowances Tribunal under the Salaries and Allowances Act 1975 section'</p> <p>Under heading policy clause (2) and (4) remove reference to councillors and insert Elected Members</p>	<p>This change reflects the correct reference for members of council in accordance with the local government act 1995 and our standing orders</p>
Policy SC21 'Use of Cab Charge Facilities'	Policy recommended for deletion	This Policy is now obsolete and Cab Charge Facilities will be managed with internal management procedures under the City's procurement policies and guidelines.
Policy SC22 'Authority to Attend Functions, Events & Information Forums'	<p>Under heading <b>Background</b> in the first paragraph delete the words 'currently, there is no mechanism in place which authorises members to have any associated expenses (e.g. Registration or meal costs) paid for by City' and replace with the words 'elected members require a consistent administrative process to nominate themselves to attend functions'.</p> <p>Under heading <b>Purpose</b> delete the words 'enable Elected Members to nominate themselves to attend such functions via a consistent administrative process' and replace with provide a mechanism to authorise Elected Members associated expenses to be paid by City.</p>	<p>Cosmetic change to reflect current practice, there were no mechanisms in place when the policy was created, but since then these have been implemented.</p> <p>This change reflects the current practice and the intent of the Policy</p>
Policy SC24 'Community use of City of Cockburn Corporate Logo'	<p>Under heading <b>Background</b> add the following words at the end of the first paragraph 'the logo has been updated once to be more contemporary'.</p> <p>Under heading <b>Policy</b>, clause 2, insert the following words 'and any future material must be resubmitted to the corporate communications department.'</p> <p>Under heading <b>policy</b>, clause 3</p>	<p>Cosmetic change to account for the correct reviews conducted on the policy since its creation.</p> <p>Minor change to capture requirement for re-submission to allow review to the correct department.</p> <p>To emphasize the correct approval process that</p>

<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
	insert the following words 'and material sent to the City for approval'.	matches current practises
Policy SC25 'Recognition of Elected Members on Retirement'	Under heading <b>background</b> delete the words 'recent introduction' and replace with the words 'provisions'  Under heading <b>Policy</b> , clause (3), delete words 'regional development' and replace with 'sport and cultural industries'.	Change to reflect current age of policy and legislation, as the associated legislation has been in place for a long time and is no longer recently introduced  To reflect the current and accurate department portfolio name
Policy SC30 'Appointment of Acting Chief Executive Officer'	Under heading <b>Purpose</b> , remove the words ' senior employees to'  Under heading <b>policy</b> , clause 2 remove the words 'appoint a senior employee to fill' and replace with 'endorse'	Minor change to reflect current practice of appointment to acting CEO  Minor change to reflect current practice of appointment to acting CEO
Policy SC34 'Budget Management'	Change the responsible service unit from 'accounting and financial control services' to accounting services  Under the heading <b>Policy</b> in subheading (3) <b>Form and Content of budget and Working Papers</b> , delete the entire point 2 and text in it.  Under the heading <b>Policy</b> in subheading (6) <b>Budget Management Timetable</b> , remove the following in the Table: In the January Colum 'Budget guidelines, procedures and submission templates issued to managers for next year's budget'. In the February column remove 'Salaries and wages budget due back and compiled'. Replace with 'Budget guidelines, procedures and submission templates issued to Managers for next year's budget. and compiled', and in March column remove 'Recurrent operational budgets sent to Managers for completion'.	Service unit name changed as per pses11 structure for administering the city of Cockburn  A fees & charges income objective paper has not been previously produced as part of the budget working papers and is not required.  Independent verification of rates modelling no longer considered necessary, as incorporated rates and concession model is now mature and cost of \$15k should be used on other internal audit priorities.  Minor changes made to budget timetable to reflect current practice



<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
Policy SC35 Grants, Donations & Sponsorships – Community Organisations & Individuals'	Subject to separate report	
Policy SC44 'Acknowledgement Of Traditional Owners'	Under heading <b>Policy</b> , clause 3, insert the following: "Kaya, Wanju Wadjuk Budjar" which means "Hello, Welcome to Wadjuk Land"	To capture council's resolution to include additional wording to the traditional landowners welcome to all council meetings and official functions
Policy SC46 'Installation and Use of Closed Circuit Television (CCTV) in the City of Cockburn	Subject to separate report	
Policy SC51 'Enterprise Risk Management'	Subject to separate report	
Policy SC52 'Recreation and Leisure Traders Licence – Foreshore Reserves'	<p>Under the heading <b>Background</b> in paragraph one increase number of reserves from 22 to 32.</p> <p>In the <b>application for recreation &amp; leisure traders licence form</b>, change the licence period from 24 months to 12 months, and under fees and charges section, include a 6 month fee of \$650.00.</p> <p>In the <b>application for recreation &amp; leisure traders licence form</b> Removal of City of Cockburn postal address and inclusion of email address.</p>	<p>Reflect current amount of reserves city is responsible for.</p> <p>6 month licence fee included as per council's fees and charges to provide greater flexibility for recreation traders.</p> <p>Streamline process for receiving applications</p>
Policy SC53 'Social Media'	Under heading Policy, clause 3.4 delete reference to Councillors and replace with Elected Members	This change reflects the correct reference for members of council in accordance with the Local Government Act 1995 and our standing orders
Policy SC55 'Fraud Prevention'	Under heading <b>Policy</b> , subheading <b>references</b> change city of Cockburn risk management strategy (draft) to framework, and after City of Cockburn risk register add (RMSS)	Cosmetic change to reflect current associated documents and system used for capturing risk information
Policy SC56 'Gift Declarations'	Under heading <b>Policy</b> , in clause (1) add reference to local government act, 5,83, contributions to travel and reference to multiple gifts or contributions from the same donor,	To capture legislative changes and the inclusion of travel contributions into the Gifts provision, and correct a typing error

<u>DAPPS ID</u>	<u>Proposed amendments</u>	<u>Reason for amendment</u>
	and replace excepted with exempted	
	Under heading <b>Policy</b> , clause (4) remove 'a prescribed form (as attached) and replace with 'is to be Attain integrity management system'	This reflects the current practice and format that the City records disclosures of Gifts and Travel Contributions
	Under heading <b>Policy</b> , clause (5) remove the words 'administration' and 'assessment' and replace with 'governance department' and 'advice'	This is to clarify the exact department responsibility and involvement in the Gifts Declaration process
	Under heading <b>Policy</b> , in clause (6) delete the whole clause in its entirety	This change aligns the Policy with the current practice
	Under heading <b>Policy</b> , in clause (8) insert 'travel contributions' delete the words 'as necessary by the administration', and replace with 'in accordance with section 5.89a which requires the CEO to keep a register of gifts and contributions to travel and make the register available for public inspection and to publish it on the city's official website.'	These changes aligns the Policy with the legislative requirements
	Under heading <b>Policy</b> add clause (10) as follows 'Western Australian Local Government Association (WALGA), the Local Government Managers Australia WA (LGMA) – now Local Government Professionals Australia WA – and the Australian Local Government Association (ALGA) are exempt from the disclosure requirements outlined in clause 3. This exemption however does not apply to the need to declare these gifts under section 5.82 of the local government act 1995, as outlined in clause 1.	This change reflects the legislative change which now provides exemption to these organisation, in relation to the prohibited gifts provision as detailed in clause (3)
	Remove the forms attached to the policy	These forms are now replaced by ATTAIN integrity system

The Policies and Delegations, listed below have been reviewed by staff and remain current, and are considered appropriate for Council to adopt in their present form.



Policy AC3 'Elected Member Requests'

Policy AC4 'Distribution of City of Cockburn Promotional Items & Material'

Policy AC5 Election of Members to External Boards, Panels or Committees

Policy SC3 'Council Meetings'

Policy SC5 'Corporate Strategic Planning Process'

Policy SC6 'Communication & Information Dissemination'

Policy SC8 'Review of Electoral Matters'

Policy SC9 'Representation at Council Relation Forum'

Policy SC10 'Mayor's Authority to Arrange Functions and Provide Hospitality/Gift'

Policy SC 11 'Letterheads for Elected Members'

Policy SC16 'Council Administration Centre – Designation of Areas & Access Protocols'

Policy SC19 'Raising of Staff Issues at Council Meetings'

Policy SC27 Honorary Freeman of the City of Cockburn'

Policy SC28 'Proposed Amendments by Elected Members to Recommendations for Council Meeting'

Policy SC29 Elected Members Representing Council on External Committees

Policy SC31 'Access to Information by Council & Committee Members'

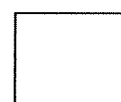
Policy SC33 'Sister City Relationships'

Policy SC36 'Recognition – City of Cockburn Pioneers'

Policy SC37 'Sustainability'

Policy SC38 'Procurement'

Policy SC39 'Asset Management'



Policy SC40 'Elected Member Training & Development'

Policy SC41 'Employee Achievement Awards'

Policy SC42 'Smoke-free Environment'

Policy SC43 'Smoke-free Council'

Policy SC45 'Flying of flags – City of Cockburn Administration Building'

Policy SC47 'Formal Introduction and Review of Council Policies, Position Statements & Delegated Authorities'

Policy SC48 'Provision of Mayoral Vehicle'

Policy SC49 'Death of Local Notable Citizen'

Policy SC50 Annual Civic Dinner – Guest List'

Policy SC54 'Street Entertainment'

Policy SC57 'Records Management'

Policy SC58 'Response to Appeals'

Policy SC59 'Public Internet Use & Wireless Access'

Delegated Authority AC2 'Seating Arrangements for Council Meeting

Delegated Authority AC3 'Election of Members to External Boards, Panels or Committees'

### **Strategic Plan/Policy Implications**

#### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes

#### **Budget/Financial Implications**

N/A

#### **Legal Implications**

N/A





**Community Consultation**

N/A

**Risk Management Implications**

Failure to adopt the recommendations from the policies review will result in a compliance risk in accordance with the Local Government Act 1995 policies review provisions, and failure to uphold principles of good governance. Ultimately this will lead to policies, and delegations, documents being outdated and misaligned with the current practices and processes.

**Attachment(s)**

Various amended Policies and Delegated Authorities - 18

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**(MINUTE NO 418) (DAPPS 24/08/2017) - PROPOSED AMENDMENT TO POLICY SC1 'MEETING ATTENDANCE FEES - ELECTED MEMBERS' AND SC15 'ELECTED MEMBER INFORMATION COMMUNICATION TECHNOLOGY (ICT) ALLOWANCE' (182/001) (G BOWMAN)**

**COMMITTEE RECOMMENDATION**

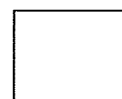
MOVED Deputy Mayor C Reeve-Fowkes SECONDED Cllr S Portelli :

- (1) adopt Policy SC12 and SC56 as outlined in the report and attached to the Agenda; and
- (2) adopt Policy SC1 and SC15 with the following amendments:
  1. Policy SC1 'Meeting Attendance Fees – Elected Members' to read as follows:
 

Clause (1) to read:

Pursuant to section 5.99 (a) of the Local Government Act 1995 (WA), Council pay:

Elected Members other than the Mayor the maximum



annual attendance fees determined by the Salaries and Allowances Tribunal under the Salaries and Allowances Act 1975 section 7B.

2. Policy SC15 'Elected Member Information Communication Technology (ICT) Allowance to read as follows:

Under Background – First paragraph amend reference to Council Members to read Elected Members.

Under Policy – Clauses (1), (2) and (4) replace Council Members with Elected Members.

**CARRIED 6/0**

### **Reason for Decision**

Policies SC1 and SC15 have been amended to provide consistency in the terminology used in reference to Elected Members rather than Council Members.

Policy SC12 and SC56 were mistakenly omitted for adoption in the original recommendation and have now been included to match the proposed amendments as detailed in the report.

### **(MINUTE NO 419) (DAPPS 24/08/2017) - PROPOSED AMENDMENT TO POLICY SC7 'BRIEFING SESSIONS FOR ELECTORAL CANDIDATES AND NEWLY ELECTED MEMBERS (182/001)**

#### **COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr S Pratt adopt Policy SC7 'Briefing Sessions for Electoral Candidates and Newly Elected Members with the following amendments:

- (1) Under Policy:

Briefing Seminar – Pre-Election – Process and Facilitation

- Fourth dot point to read:

Facilitated by the City and external training consultant(s), including representation from the Western Australian



Electoral Commission.

- Sixth dot point to include 'The role of Mayor' under Programme.

**CARRIED 6/0**

### **Reason for Decision**

Sitting Members should not be excluded from the Briefing Seminar. The Western Australian Electoral Commission has advised (in 2013 and 2017) that Sitting Members are to be invited to the Briefing Seminar. From discussions with Mayors and Shire Presidents across the State they indicate that they provide a welcome to all candidates at these sessions including Sitting Members.

The 'role of Mayor' needs to be added to provide prospective candidates with important information.

### **(MINUTE NO 420) (DAPPS 24/08/2017) - PROPOSED AMENDMENT TO POLICY SC44 'ACKNOWLEDGEMENT OF TRADITIONAL OWNERS' (182/001)**

#### **COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr L Sweetman amend Policy SC44 'Acknowledgement of Traditional Owners' as follows:

- (1) replacing the word Noongar with Nyungar in Clauses (1) and (2); and
- (2) Clause (3) to read:

This recognition shall be presented by the Mayor, or other Council official presiding at the meeting or event, in the following statement:

*I acknowledge the Nyungar (phonetic is Noongar) people who are the Traditional Custodians of this Land.*

*I pay respect to the Elders both past and present of the Nyungar (phonetic is Noongar) nation and extend that respect to other Indigenous Australians who are or may be present.*

**CARRIED 6/0**

### Reason for Decision

Correct spelling of the word 'Nyungar' and remove the words 'like to' and 'also like to' as they are not needed.

### 10.2 (MINUTE NO 421) (DAPPS 24/08/2017) - PROPOSED AMENDMENTS TO POLICY SC51 'ENTERPRISE RISK MANAGEMENT' & DELETION OF POLICY AES12 'BUSINESS CONTINUITY MANAGEMENT' (156/001) (J NGOROYEMOTO ) (ATTACH)

#### RECOMMENDATION

That Council

- (1) adopt proposed amendments to Policy SC51 'Enterprise Risk Management'; and
  - (2) delete Policy AES12 'Business Continuity Management';
- as shown in the attachment to the Agenda.

#### COMMITTEE RECOMMENDATION

MOVED Mayor L Howlett SECONDED Cllr B Houwen that the recommendation be adopted.

**CARRIED 6/0**

#### COUNCIL DECISION

### Background

The Policy SC51 'Enterprise Risk Management' is due for review pursuant to Council Policy SC47. Council is to review its Delegated Authorities, Policies and Position Statements (DAPPS) at least every two years.

This evaluation is intended to increase the understanding and improve the Policy's performance. Therefore it is an objective and considered assessment of efficiency, effectiveness and appropriateness to include review of Policy AES12 'Business Continuity Management'.



## Submission

N/A

## Report

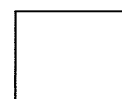
The current Policy SC51 'Enterprise Risk Management' has been reviewed and updated to ensure sustainable risk management is built into and not built on everyday tasks and duties. To ensure the Policy demonstrates strategic planning and mandate in all operational functions and services.

The amendments are:

1. Removal of the Guidelines from the Policy, the guidelines will be incorporated in the Risk Management Framework, which will be presented at the November 2017 Audit meeting.
2. Clarification of the Policy's intent to focus on the mandate and commitment of the City to risk management activities.
3. Alignment of the context with the City's structure, capacity, strategic direction, and operational planning objectives.
4. Clarification on the City's risk appetite to outline the risk exposures that, are or are not tolerated.
5. Underpinning corporate governance principles and processes that align with the Local Government Act 1995 and Risk Management Standard AS/NZS ISO 31000:2009.
6. Outlines Risk Management Responsibility to management, employees, volunteers and contractors for the successful management of risk.

Policy AES12 'Business Continuity Management' is recommended for deletion, in order to promote well-coordinated Enterprise Risk Management and Business Continuity Management integration. Business Continuity is a component of Risk Management activities, and therefore is embedded in the Enterprise Risk Management Policy. The specifics of the Business Continuity Program will be detailed within the Risk Management Framework that will be presented to the November Audit Meeting.

Risk management is concerned with minimizing the probability of and destruction caused by negative events. Operational risk management must cope with interruptions at the operational level. Recognizing that there are inherent imperfections in systems, people, facilities and general operational functions, the essence of operational risk management is to negate or reduce the probability of an incident occurring. Focusing upon incident-specific, site-specific analysis of potential causes of interruptions, risk owners seek to preclude incidents



from occurring. If elimination of the risk is not possible, the focus moves to minimizing the results of the negative event.

Tackling these risks requires an integrated and holistic framework with the capability to identify, evaluate and adequately define responses to the circumstances. Enterprise Risk Management seeks to identify all threats including that would adversely affect the City. This holistic approach gives the City a better framework for mitigating risk while advancing the City's goals and opportunities in the face of business threats. But in order to implement and continuously manage this enterprise-wide model there is a critical need for closer integration of business continuity management and risk management. Together, these two vital elements make up a robust Enterprise Risk Management plan and have a tremendous impact on the City's ability to contend with interruptions to the execution of organisational activities.

### **Strategic Plan/Policy Implications**

#### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes

### **Budget/Financial Implications**

N/A

### **Legal Implications**

Regulation 17 of the Local Government (Audit) Regulations 1996

### **Community Consultation**

N/A

### **Risk Management Implications**

Adoption of the recommendation will define the fundamental principles that will establish and maintain a robust, integrated and effective risk management system across all strategic and operational functions of the City. In achieving Council's policy objective, the Chief Executive Officer must ensure that key areas of risk activity are observed, understood and embraced in order to deliver a continuous enterprise wide system of risk management.

### **Attachment(s)**

1. Proposed amended Policy SC51 'Enterprise Risk Management'



2. Proposed deleted Policy AES12 'Business Continuity Management'

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**10.3 (MINUTE NO 422) (DAPPS 24/08/2017) - PROPOSED AMENDMENTS TO POLICY SC46 INSTALLATION AND USE OF CLOSED CIRCUIT TELEVISION (CCTV) IN THE CITY OF COCKBURN (043/004) (M EMERY) (ATTACH)**

**RECOMMENDATION**

That Council adopt proposed amendments to Policy SC46 'Installation and Use of Closed Circuit Television (CCTV) in the City of Cockburn, as attached to the Agenda.

**COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr B Houwen that the recommendation be adopted.

**CARRIED 6/0**

**COUNCIL DECISION**

**Background**

The Policy SC46 Installation and use of Closed Circuit Television (CCTV) in the City of Cockburn is due for review pursuant to Council Policy SC47. Council is to review its Delegated Authorities, Policies and Position Statements (DAPPS) at least every two years.

**Submission**

N/A



## Report

The current Policy SC46 'Installation and Use of Closed Circuit Television (CCTV) in the City of Cockburn' has been reviewed and updated to ensure it meets the contemporary needs of an adapting technology.

The review found that the current Policy (SC46) can inadvertently limit the City's CCTV expansion and expectations of the community.

Since 2012, the City has expanded from 8 CCTV cameras located at Coogee Beach to 325 fixed across a number of the City's facilities and popular public open spaces. The growth in CCTV has been possible due to emerging technologies and greater perception of safety by the public.

To ensure the Policy meets the needs of the City's continued use of CCTV and keep up with the ever-changing technology becoming available, the following salient proposed amendments to Policy SC46 are:

1. The addition of the Memorandum of Understanding with WA Police, relating to the State CCTV Strategy.
2. Clarify the requirement of CCTV being installed at City facilities, while removing references to a perception based installation strategy.
3. The addition of industry standards and professional bodies, such as the Australian New Zealand Policing Advisory Agency for minimum specifications relating to the installation of systems and CCTV network design.
4. Remove lighting requirements, due to camera advancement and use of infrared lighting.
5. Clarify the installation of CCTV signage, especially relating to the use of covert cameras to monitor breaches of Local Laws.
6. Remove references to operational monitoring stations requiring Council approval.
7. Provide the ability to negotiate use of private land to install CCTV infrastructure and cameras to meet City objectives.
8. Promote the use of exploring video analytics programs.
9. Remove the Code of Practice from the Policy and add to the Community Safety & CCTV Strategy.

The addition of accepted industry standards will allow the City to grow a reliable network based on tried and tested technology. The use of tested technology will limit the City's risk of investing in developing products that may not meet the City's expectations.





Removing elements such as the Code of Conduct will allow the City's Officers to review practices and proactively implement change as required. The Code of Conduct has been incorporated into the CCTV Standard Operating Procedures.

The amendments to SC46 will enhance the City's ability to grow the CCTV network, from static cameras into a wider solution to increase community safety and enforcement of Local Laws

### **Strategic Plan/Policy Implications**

#### **Community, Lifestyle & Security**

- Provide safe places and activities for residents and visitors to relax and socialise

### **Budget/Financial Implications**

N/A

### **Legal Implications**

Surveillance Devices Act 1998

### **Community Consultation**

N/A

### **Risk Management Implications**

Adoption of the recommendation will define the use of CCTV within the City, and ensure best practice models are considered during the design, installation and use of CCTV within the community, while limiting risk of system failure.

### **Attachment(s)**

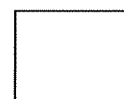
1. Proposed Amendments to Policy SC46 Installation and use of Closed Circuit Television (CCTV) in the City of Cockburn (Tracked Changes)
2. CCTV Code of Conduct

### **Advice to Proponent(s)/Submissioners**

N/A

### **Implications of Section 3.18(3) Local Government Act, 1995**

Nil.



10.4 **(MINUTE NO 423) (DAPPS 24/08/2017) - PROPOSED NEW POLICY SC60 'RELATED PARTY DISCLOSURES' (182/001; 091/001) (S DOWNING) (ATTACH)**

**RECOMMENDATION**

That Council adopt proposed new Policy SC60 'Related Party Disclosures', as attached to the Agenda.

**COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr B Houwen that the recommendation be adopted.

**CARRIED 6/0**

**COUNCIL DECISION**

**Background**

Effective for the reporting period on or after 1 July 2016, all local governments in WA including the City of Cockburn must disclose certain related party relationships and related party transactions together with information associated with those transactions in its annual financial report in order to comply with Australian Accounting Standard AASB 124 Related Party Disclosures.

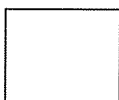
This is a requirement specified by the Australian Accounting Standards and is different from the Disclosure of Interest and Gift and Travel Disclosure requirements that are imposed under the Local Government Act 1995 and associated Regulations.

**Submission**

N/A

**Report**

The objective of the new Accounting standard is to ensure that local government financial statements contain the disclosures necessary to draw attention to the possibility that its financial position may have been affected by the existence of related parties and by the transaction and outstanding balances, including commitments, with such related parties.



The definition of an entity that is related to Council as defined in AASB 124. It is important that each Council considers how the standard will apply to itself. Attention is directed to the substance of the relationship and not merely the legal one. Some related parties the City of Cockburn can have are noted below:

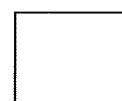
- Entities related to council (that is, an entity set up, controlled or is significantly influenced by Council such as a regional council and regional subsidiaries.
- Key Management Personnel (KMP) of Council that is the Mayor, Elected members, CEO and/or Directors
- Close family members of KMP;
- Entities that are controlled or jointly controlled by KMP or their close family members (JVs, companies sporting clubs).

Entities related to Council is an entity controlled or jointly controlled by Council or over which Council has significant influence. This is where there is power to participate in the financial and operating policy decisions of the entity but not control or joint control. It is likely that regional councils or subsidiaries will meet the definition of a related entity.

Key Management Personnel (KMP), close family members of KMP and entities that are related to KMP or their close family members are related parties. It is likely that mayors, elected members, CEO, directors are KMP. Close family members of KMP are those family members who may be expected to influence or be influenced by the KMP in their dealing with the Council.

AASB 124 contains a number of disclosure requirements to enable users of financial statements to understand the potential effect of the relationship on the financial statement. The key ones are as follows:

1. KMP Compensation in aggregate and for each of the following categories:
  - a. Short term employee benefits (pay/sitting fees/allowances)
  - b. Post term benefits (superannuation)
  - c. Other long term benefits (long service leave)
  - d. Termination benefits (separation – not normally applicable)
2. Relationships between Council and its subsidiaries, irrespective of whether there have been transactions between them.
3. Amounts incurred by Council for the provision of KMP services that are provided by a separate management entity.
4. Where related party transactions have occurred:
  - a. The nature of the related party relationship



- b. Information about the transaction, outstanding balances and commitments including terms and conditions
5. Separate disclosures for each category of related party. In respect of 4 (b) above, the types of transactions disclosed can include:
  - a. Purchase/sale and lease of goods, property and other assets
  - b. Rendering or receiving of goods, services, property and other assets
  - c. Guarantees given or received
  - d. Commitments
  - e. Loans and settlements of liabilities
  - f. Expenses recognised during the period in respect of bad debts
  - g. Provisions for doubtful debts relating outstanding balances

The financial statements are not required to provide comparisons for the first year.

Council may exclude Ordinary Citizen Transactions (OCT) on the basis that they are the same as ordinary citizens transact with Council. These include:

- Use of Council facilities eg Cockburn ARC
- Fines on normal terms and conditions
- Paying rates and council fees and charges on normal terms and conditions.

As the implementation of this Accounting Standard will apply to the preparation of the 2016-17 annual financial statements for the City a draft has been prepared for consideration of the members of the Committee. It will cover the following:

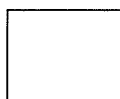
- The need to establish a system/relevant controlling mechanism. The system should identify, entities related to Council, KMPs, Close family members of KMPs and their related entities
- Need to identify ordinary citizen transactions
- Identify related party transactions
- Need to assess materiality

Make the relevant disclosure for KMPs.

### **Strategic Plan/Policy Implications**

#### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes



- Ensure sound long term financial management and deliver value for money

**Budget/Financial Implications**

N/A

**Legal Implications**

N/A

**Community Consultation**

N/A

**Risk Management Implications**

Non-adoption of the Related Party Disclosures will put Council in breach of Australian Accounting Standards and will ensure the annual financial statements are qualified by the external auditors.

**Attachment(s)**

1. Proposed new Policy SC60 'Related Party Disclosure'
2. Copy of WALGA's explanatory note – Related Party Disclosures

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**11. PLANNING & DEVELOPMENT DIVISION ISSUES**

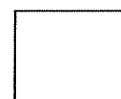
Nil

**12. FINANCE & CORPORATE SERVICES DIVISION ISSUES**

Nil

**13. ENGINEERING & WORKS DIVISION ISSUES**

Nil



#### 14. COMMUNITY SERVICES DIVISION ISSUES

##### 14.1 **(MINUTE NO 424)** (DAPPS 24/08/2017) - REVIEW OF GRANTS AND DONATIONS POLICIES AND ASSOCIATED DELEGATED AUTHORITIES (162/003) (G BOWMAN) (ATTACH)

###### **RECOMMENDATION**

That Council adopt proposed minor amendments to the following Grants and Donations Policies and associated Delegated Authorities:

- (1) Policy ACS1 'Community Welfare Funding' and associated Delegated Authority;
- (2) Policy ACS7 'Donations to Schools' and associated Delegated Authority;
- (3) Delegated Authority ACS2 'Applications for Grant and Individual Sponsorship Funded Projects';
- (4) Policy SC35 'Grants, Donations & Sponsorships – Community Organisations & Individuals'; and
- (5) Delegated Authority LGACS2 'City of Cockburn (Local Government Act) Local Laws – Grants';

as shown in the attachment to the Agenda.

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**

###### **COMMITTEE RECOMMENDATION**

MOVED Deputy Mayor C Reeve-Fowkes SECONDED Cllr S Portelli that adopt the recommendation subject to amending Clause (7) of Delegated Authority LGACS2 'City of Cockburn (Local Government Act) Local Laws – Grants as follows:

###### **Function Delegated:**

The authority to make donations as follows:

- (7) To small grants programs approved by Council from time to time.

###### **Delegate/s Authorised:**

Manager, Community Development

**CARRIED 6/0**



<p align="center"><b>TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL</b></p>
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<p><b>COUNCIL DECISION</b></p>
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### **Reason for Decision**

Clause 7 of the Delegated Authority LGACS2 City of Cockburn (Local Government Act) Local Laws- Grants was amended in error and needs to be maintained as the status quo to ensure that the current small grants programs approved by Council can continue to be administered in an efficient and effective manner.

Additionally the LGACS2 Delegate/s Authorised section needs further amendment to be consistent with changes in the organisational structure providing authority for grants, donations, and sponsorships to the Manager of Community Development position.

### **Background**

A change in organisational structure requires minor amendments to the responsibility and sub-delegation for the grants and donations policies and delegated authorities that are the subject of this report. Proposed amendments are mainly due to a change in the responsibility and sub-delegation from the Manager, Recreation and Community Safety to the Manager, Community Development position. An additional sub-delegation to the Community Development Coordinator is proposed to be added for Small Events Sponsorship (under Delegated Authority ACS2), that will enable a quicker assessment, approval and notification process for this flexible small events funding program.

### **Submission**

N/A

### **Report**

The Grants and Donations Delegated Authorities and Policies that are proposed to be amended are as follows:

- Delegated Authority ACS1 'Community Welfare Funding'
- Policy ACS1 'Community Welfare Funding'
- Delegated Authority ACS7 'Donations to Schools'
- Policy ACS7 'Donations to Schools'

- Delegated Authority ACS2 'Applications for Grant and Individual Sponsorship Funded Projects'
- Policy SC35 'Grants, Donations & Sponsorships – Community Organisations & Individuals'
- Delegated Authority LGACS2 'City of Cockburn (Local Government Act) Local Laws – Grants.'

Listed in the table below are the proposed amended delegations and policies for consideration of Council.

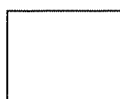
<b><u>Delegation/Policy</u></b>	<b><u>Proposed Amendment/s</u></b>	<b><u>Reason for Amendment/s</u></b>
Delegated Authority ACS1 'Community Welfare Funding'	<ul style="list-style-type: none"> <li>• Under sub-heading Delegate/s Authorised remove 'Manager, Recreation &amp; Community Safety'</li> </ul>	<ul style="list-style-type: none"> <li>• Organisational restructure requires change of responsibility and sub-delegation to the Manager, Community Development</li> </ul>
Policy ACS1 'Community Welfare Funding'	<ul style="list-style-type: none"> <li>• Under Service Unit – change to Youth Services</li> <li>• Under Responsible Officer remove '&amp; Services'</li> <li>• Under sub-heading Policy minor wording changes to add 'Youth', remove 'Services' and change to 'Development'</li> </ul>	<ul style="list-style-type: none"> <li>• Minor changes to make Service Unit and Responsible Officer consistent with Delegated Authority ACS1</li> <li>• Wording to reflect change of responsibility to the Manager, Community Development</li> </ul>
Delegated Authority ACS7 'Donations to Schools'	<ul style="list-style-type: none"> <li>• Remove '- Reimbursements' from title of Delegated Authority</li> <li>• Under Business Unit add '&amp; Services'</li> <li>• Under Service Unit remove 'Family &amp; Community Development' and change to 'Grants &amp; Research'</li> <li>• Under sub-heading Council Policy remove '- Reimbursements' in title of Policy</li> <li>• Under sub-heading Delegate/s Authorised remove 'Manager, Recreation &amp; Community Safety' and replace with 'Manager, Community Development'</li> </ul>	<ul style="list-style-type: none"> <li>• Change of title for consistency with Policy ACS7 and because not all donations are reimbursements</li> <li>• Administrative changes to Business Unit and Service Unit</li> <li>• Organisational restructure requires change of responsibility and sub-delegation to the Manager, Community Development</li> </ul>
Policy ACS7 'Donations to Schools'	<ul style="list-style-type: none"> <li>• Under Business Unit remove 'Recreation &amp; Community Safety' and replace with 'Community Development &amp; Services'</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative changes to Business Unit and Responsible Officer</li> <li>• Wording to clarify that only schools located</li> </ul>





<b><u>Delegation/Policy</u></b>	<b><u>Proposed Amendment/s</u></b>	<b><u>Reason for Amendment/s</u></b>
	<ul style="list-style-type: none"> <li>• Under Responsible Officer, remove 'Recreation &amp; Community Safety' and replace with 'Community Development'</li> <li>• Under sub-heading (2) Reimbursements add 'located within the District' and change 'Manager, Community Services' to 'Manager, Community Development'</li> </ul>	<ul style="list-style-type: none"> <li>• within the District are eligible and to reflect</li> <li>• Change of responsibility to the Manager, Community Development</li> </ul>
Delegated Authority ACS2 'Applications for Grant and Individual Sponsorship Funded Projects'	<ul style="list-style-type: none"> <li>• Under Business Unit remove 'Recreation &amp; Community Safety' and replace with 'Community Development &amp; Services'</li> <li>• Under Responsible Officer remove 'Manager, Recreation &amp; Community Safety' and replace with 'Manager, Community Development'</li> <li>• Under sub-heading (1) Community Grants, minor formatting changes, and (1)5(b)(iii) insert: '(N.B. Residents associations can access funds under LGACS7 for these purposes, so these grants are intended for community groups that are not residents associations)</li> <li>• Under point 6 of all categories remove reference to the Elected Members Newsletter</li> <li>• Under sub-heading Delegate/s Authorised remove 'Manager, Recreation &amp; Community Safety' and replace with 'Manager, Community Development', and add 'Community Development Coordinator (Item 4 – Small Events Sponsorship only)'</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative changes to Business Unit and Responsible Officer</li> <li>• Minor formatting</li> <li>• Addition of explanation to clarify that residents associations can access \$1,000 for incorporation and other costs through policy ACS7 and that policy ACS2 community grants of \$1,000 for incorporation are intended for community groups that are not residents associations</li> <li>• The Elected Members newsletter is soon to be replaced with LG Hub</li> <li>• Change of responsibility and sub-delegation to the Manager, Community Development for all programs, and the addition of the Community Development Coordinator for Small Events Sponsorship to allow for a quicker assessment, approval and notification process for this flexible funding program</li> </ul>
Policy SC35 'Grants, Donations & Sponsorships – Community	<ul style="list-style-type: none"> <li>• Under Business Unit remove 'Recreation &amp; Community Safety' and replace with 'Community Development &amp; Services'</li> </ul>	<ul style="list-style-type: none"> <li>• Administrative changes to Business Unit and Responsible Officer, and Delegated Authority Ref. and consistency with</li> </ul>

<b><u>Delegation/Policy</u></b>	<b><u>Proposed Amendment/s</u></b>	<b><u>Reason for Amendment/s</u></b>
Organisations & Individuals'	<ul style="list-style-type: none"> <li>• Under Responsible Officer remove 'Manager, Recreation &amp; Community Safety' and replace with 'Manager, Community Development'</li> <li>• Under Delegated Authority Ref. remove 'N/A' and replace with 'ACS2'</li> <li>• Under sub-heading 'Background' add 'up to' prior to '2% of the Council's rates income'</li> <li>• Under sub-heading (1) Community Grants, point 5(b)(iii) insert: '(N.B. Residents associations can access funds under LGACS7 for these purposes, so these grants are intended for community groups that are not residents associations).'</li> <li>• Under point 6 of all categories remove reference to the Elected Members Newsletter.</li> <li>• Under sub-heading (5) Sponsorships point 1(b) minor change to referencing, and inserting 'or' between point (i) and (ii)</li> </ul>	<p>Delegated Authority ACS2</p> <ul style="list-style-type: none"> <li>• Clarification that only 'up to 2%' (and not 2% exactly) of Council's rates income is used for these funding programs</li> <li>• Addition of explanation to clarify that residents associations can access \$1,000 for incorporation and other costs through policy ACS7 and that policy ACS2 community grants of \$1,000 for incorporation are intended for community groups that are not residents associations</li> <li>• The Elected Members newsletter is soon to be replaced with LG Hub</li> <li>• Minor clarification in Sponsorship eligibility that applicants will fulfil either (i) or (ii)</li> </ul>
Delegated Authority LGACS2 'City of Cockburn (Local Government Act) Local Laws – Grants'	<ul style="list-style-type: none"> <li>• Under Business Unit remove 'Governance &amp; Community Safety' and replace with 'Community Development &amp; Services'</li> <li>• Under Service Unit remove 'Recreation and Community Safety', and replace with 'Grants &amp; Research'</li> <li>• Under Responsible Officer remove 'Manager, Recreation &amp; Community Safety' and replace with 'Manager, Community Development'</li> </ul>	Organisational restructure requires change of responsibility and sub-delegation to the Manager, Community Development



## Strategic Plan/Policy Implications

### Community, Lifestyle & Security

- Provide residents with a range of high quality, accessible programs and services

### Economic, Social & Environmental Responsibility

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development

### Leading & Listening

- Deliver sustainable governance through transparent and robust policy and processes

## Budget/Financial Implications

In 2017-2018 there is \$1,322,750 in the Grants and Donations budget for distribution to community groups, organisations and individuals through a wide range of grants, donations, sponsorship and subsidies. The delegations under review currently support the following funding allocations and subsidies.

Relevant Sponsorships & Grants	Delegated Authority
Individual Sponsorships	ACS2
Sustainability Grants Program	ACS2
Len Packham Hall Subsidy (Burdiya)	LGACS2
Community Grants Program	ACS2
Provide Bins Sporting Events	LGACS2
Cultural Grants Program	ACS2
Bus Hire Subsidy	LGACS2
Grants General Welfare	LGACS2
Small Events Sponsorship Program	ACS2
U Fund	LGACS2
Alcoa Cockburn Community Projects Fund	LGACS2
Environmental Education Initiatives Program	LGACS2
Council Match Staff Donation	LGACS2
Cockburn ARC Subsidy for Emergency Services Volunteers	LGACS2
Safety House/Walk to School Program	LGACS2
Security Subsidy for Seniors	LGACS2

## Legal Implications

N/A

### Community Consultation

N/A

### Risk Management Implications

If recommendations to the delegated authorities and policies are not adopted there would be inefficiencies and inconsistencies in reporting and delegations arrangements, therefore these need to be formalised for consistency and reliability.

### Attachment(s)

Proposed amendments to the following Grants and Donations Delegated Authorities and Policies:

1. Proposed amended Policy ACS1 'Community Welfare Funding' and associated Delegated Authority
2. Proposed amended Policy ACS7 'Donations to Schools' and associated Delegated Authority
3. Delegated Authority ACS2 'Applications for Grant and Individual Sponsorship Funded Projects'
4. Policy SC35 'Grants, Donations & Sponsorships – Community Organisations & Individuals'
5. Proposed amended Delegated Authority LGACS2 'City of Cockburn (Local Government Act) Local Laws – Grants'.

### Advice to Proponent(s)/Submissioners

N/A

### Implications of Section 3.18(3) Local Government Act, 1995

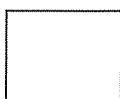
Nil.

#### 14.2 **(MINUTE NO 425)** (DAPPS 24/08/2017) - PROPOSED NEW POLICY ACS16 'COMMUNITY INNOVATION AND PARTICIPATORY BUDGETING, AND ASSOCIATED DELEGATED AUTHORITY, AND GUIDELINES (162/003) (G BOWMAN) (ATTACH)

#### **RECOMMENDATION**

That Council

- (1) adopt the Proposed new Policy ACS16 'Community Innovation and Participatory Budgeting' and associated new Delegated Authority ACS15, 'Community Innovation and Participatory Budgeting'; and



- (2) receive the proposed guidelines for Community Innovation and Participatory Budgeting’;

as shown in the report and attachment to the Agenda.

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**

**COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr B Houwen that the recommendation be adopted.

**CARRIED 6/0**

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**

**COUNCIL DECISION**

**Background**

Each year, Council allocates up to 2% of the rates income to a range of grants, donations, sponsorships and subsidies. Council established the Grants and Donations Committee to recommend on the level and nature of grants, donations and sponsorships provided to individuals, groups and organisations. To ensure that these funds are distributed in a rational way, eligibility, selection and evaluation criteria are required for the assessment and prioritisation of applications to be funded.

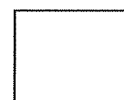
At its meeting of 19 April 2017, the Grants and Donations Committee considered the proposed Community Innovation, Participatory Budgeting and Crowdmatching model, and made the following recommendation:

*“That Council supports the development of a policy and guidelines for a Community Innovation and Participatory Budgeting model to be presented to the DAPPS Committee for consideration.”*

which was duly adopted by Council on 11 May 2017.

**Submission**

N/A



## Report

Participatory budgeting (PB) is a different way to manage public money, and to engage people in government. It is a democratic process in which community members directly decide how to spend part of a public budget. The percentage of the public budget allocated to the PB process is at the discretion of each organisation that uses this process.

It enables taxpayers / ratepayers to work with government and to have a direct influence on the budgetary decisions that affect their lives. It is designed to build trust between the organisation and the community.

There are ranges of ways in which a local government can deliver a PB program, although most follow a similar basic process outlined below:

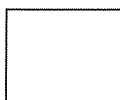
- residents brainstorm spending ideas through a collaborative decision-making process (public meeting, citizen parliament, online portal, hackathon workshop etc.)
- community delegates then develop proposals based on these ideas
- residents vote on proposals up to the budget allocation amount;
- the local government funds or implements the projects which receive most community support.

While the City already has policy (ACS2) and procedures pertaining to grants, donations and sponsorships; the PB process is designed around a different, and more community-led way of allocating funds, and therefore requires a more flexible approach to its eligibility, selection and evaluation criteria to ensure that the articulated community engagement and innovation outcomes are captured.

The funds allocated to recipients are to assist with the activities they provide to the community, and are specifically allocated to activities which innovate to address local social, environmental and economic issues.

The purpose of the new Delegated Authority, Policy and Guidelines are to establish eligibility, selection and evaluation criteria for the allocation of PB grants to community groups and non-government organisations for funds included on Council's budget.

Only projects that meet the eligibility, selection and evaluation criteria throughout the PB process (Guidelines) may receive funding.



## **Strategic Plan/Policy Implications**

### **Community, Lifestyle & Security**

- Provide residents with a range of high quality, accessible programs and services

### **Economic, Social & Environmental Responsibility**

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development

### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes

## **Budget/Financial Implications**

For 2017-2018, the Grants and Donations budget is \$1,322,750, and an allocation of up to \$100,000 for community projects and \$20,000 for funding workshop costs, promotion costs, program administration costs, and evaluation costs is proposed for this program. If the Policy and Delegated Authority are adopted by Council, the Grants and Donations Committee will need to review the adopted grants, donations & sponsorship budget allocation for 2017-2018 and then make a recommendation to Council to amend the allocation and allocate up to \$120,000 for the Community Innovation and Participatory Budgeting program. There are \$118,450 of uncommitted funds available in the grants and donations general account, or funds that are yet to be allocated for the 2017-2018 financial year.

## **Legal Implications**

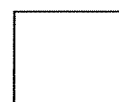
N/A

## **Community Consultation**

The proposed program will provide increased community engagement through community participation and consultation in the ideas generation, voting, and project delivery stages.

## **Risk Management Implications**

The Council allocates a significant amount of money to support individuals, groups and organisations through a range of funding programs. There are clear guidelines and criteria established to ensure that Council's intent for the allocation of funds are met.



The reputation of the City of Cockburn could be seriously compromised should funds allocated to individuals, groups or organisations not meet the criteria and guidelines; or if the funds were not used for the purposes they were provided. Adherence to these requirements is essential.

The City will work in partnership with the community members to identify each proposal's eligibility, details and requirements. The City will also provide advice on technical requirements, how risks could be managed, identify operational costs, and any legal issues with the proposed projects.

In accordance with the proposed policy and guidelines, only projects that demonstrate benefit to the community, are deemed safe, sustainable, and are lawful will be approved to proceed to voting stages.

As the program is developed, risks and mitigation strategies will be incorporated into the design of the projects, in particular, in relation to Intellectual Property and ownership of ideas.

A thorough evaluation is proposed after the first round of projects. This will minimise risks to the City's reputation and relationship with the community should the program or projects be unsuccessful.

Evaluation of projects will consider equity of access to funds by diverse groups and a spread across the City.

**Attachment(s)**

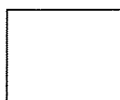
1. Proposed new Policy ACS16 'Community Innovation and Participatory Budgeting'.
2. Proposed new Delegated Authority ACS15 'Community Innovation and Participatory Budgeting'
3. Proposed new Guidelines 'Community Innovation and Participatory Budgeting'.

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.





**14.3 (MINUTE NO 426) (DAPPS 24/08/2017) - REVIEW OF POSITION STATEMENT PSCS18 'ESTABLISHING MARKETS ON LAND OWNED OR CONTROLLED BY THE CITY OF COCKBURN' (182/002; 152/009) (T MOORE) (ATTACH)**

**RECOMMENDATION**

That Council adopt proposed amendments to Position Statement PSCS18 'Establishing Markets on Land Owned or Controlled by the City of Cockburn', as shown in the attachment to the Agenda.

**COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr B Houwen that the recommendation be adopted.

**CARRIED 6/0**

**COUNCIL DECISION**

**Background**

There has been a growth across metropolitan Perth in demand for growers markets and other short term pop up style markets.

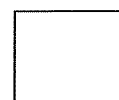
In March 2016, Council adopted the Position Statement, Establishing Markets on Land Owned or Controlled by the City of Cockburn (PSCS18).

Following the first 12 months of implementing the Position Statement, Staff have recently completed a review of the policy and made recommended changes to the criteria.

As such, the revised Establishing Markets on Land Owned by the City of Cockburn (PSCS18) is now presented for consideration.

**Submission**

N/A



## Report

Markets can play an important role in keeping our local community vibrant and active as well as providing a small business the opportunity to sell directly to their local community.

The intent of the Establishing Markets on Land Owned or Controlled by the City is to provide a clear and formal approval process for operators to follow the City.

The review has considered a number of changes to the policy to better accommodate both short and long term markets and how and when the City consults with local residents.

In particular, the new amended Position Statement has delineated bookings for 5 and under and bookings of 6 or more, with separate approval processes for each.

A summary of key changes are outlined below:

### *Passive or Active Reserves*

For bookings of five or less operators now have the choice of using an active or passive reserve. For bookings of six or more operators will still be required to hire a passive reserve.

The primary purpose of the City's Active Reserves is for use by sporting clubs and other physical activity pursuits. A weekly or fortnightly market on an active reserve is unsustainable due to the availability of the reserves and wear and tear on the playing surface. However, the intent of this change is to provide the City with the flexibility to permit a short term market on City's active reserves should it not impede on sporting club usage.

### *Community Consultation – Notification or Survey*

For bookings of five or less operators will be required to notify local residents within 100m as well as those bricks and mortar businesses within 1km which provide similar goods/services to the markets.

For bookings of six or more, local residents and similar businesses to the markets will be surveyed to allow them the opportunity to advise the City if they support the Markets.



**Strategic Plan/Policy Implications****Community, Lifestyle & Security**

- Provide residents with a range of high quality, accessible programs and services

**Economic, Social & Environmental Responsibility**

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development

**Leading & Listening**

- Listen to and engage with our residents, business community and ratepayers with greater use of social media

**Budget/Financial Implications**

N/A

**Legal Implications**

N/A

**Community Consultation**

Community consultation will be required when a hirer seeks to establish a market on a passive reserve on 6 (six) or more occasions within a 12 month period

**Risk Management Implications**

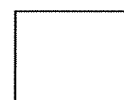
The Position Statement provides a clear, practical process for a potential operator to follow to ensure all Council procedures are followed in order for a market to be approved. The process acknowledges that residents and businesses which could be potentially impacted by a regular market are either made aware of them or given the opportunity to provide feedback.

**Attachment(s)**

Proposed amended Position Statement PSCS18 'Establishing Markets on Land Owned or Controlled by the City of Cockburn'.

**Advice to Proponent(s)/Submissioners**

N/A



**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

- 14.4 (MINUTE NO 427) (DAPPS 24/08/2017) - PROPOSED AMENDMENTS TO POLICY ACS12 'SPORT & RECREATION CHAMPION CLUB GRANTS AND ASSOCIATED DELEGATED AUTHORITY ACS12 'SPORT AND RECREATION CHAMPION CLUB GRANT - SPORT & RECREATION AND DELETION OF POSITION STATEMENT PSCS7 'FINANCIAL ASSISTANCE TO LOCAL ORGANISATIONS (182/001; 182/002; 086/003; 162/012) (T MOORE) (ATTACH)**

**RECOMMENDATION**

That Council

- (1) adopt proposed amendments to Policy ACS12 'Sport and Recreation Champion Club Grants' and associated Delegated Authority ACS12 'Sport and Recreation Champion Club Grant – Sport and Recreation;
- (2) delete Position Statement PSCS7 'Financial Assistance to Local Organisations'; and
- (3) receive the Sport and Recreation Champion Club Grants (SRCCG) Guidelines for Applicants;

as shown in the attachment to the Agenda.

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**

**COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr B Houwen that the recommendation be adopted.

**CARRIED 6/0**

**COUNCIL DECISION**



## Background

The City currently administers the following sport and recreation grant programs:

- Junior Sports Travel Assistance \$400
- Sports Equipment Program - \$1,000
- Minor Capital Works - \$4,000
- Major Capital Works – Over \$25,000

To govern the administration of these programs, Council currently has the following position statements and policies in place:

- Position Statement Financial Assistance to Local Organisations – PSCS7
- Policy Sport and Recreation Club Grants – ACS12

Staff have recently completed a review of both of these documents and made recommended changes to the current funding provision for the City's sporting Clubs.

As such, the revised sport and recreation grants policy (ASC12) is now presented for consideration.

## Submission

N/A

## Report

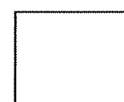
Sport and Recreation plays an important role in keeping our local community vibrant and active. The City of Cockburn is fortunate to have a number of local sporting clubs that provide a variety of sporting opportunities to the wider community.

The review has considered both the Financial Assistance to Local Organisations Position Statement (PSCS7) and the Sport and Recreation Club Grants Policy (ASC12). In particular, the review recommends a consolidation of these two documents into the one policy document.

A summary of the key changes is outlined below:

### *Major Capital Works Grant (MCWG) – up to \$50,000*

The revised Major Capital Works Grant is designed to plan and implement projects to develop, modify, upgrade, or extend sporting, recreation and sport and recreation facilities.



Currently, the Minor Capital Works Grant only provides funding up to \$4,000 and the Major Capital Works Grant is for funding over \$25,000. This funding structure has left a gap between the two funding programs for applications seeking \$4,001 to \$24,999.

The minimum grant available will be \$4,001 and the maximum grant available MCWG is proposed to be \$50,000.

Council's contribution towards projects will not exceed 50% of the total project cost.

Two grant rounds will be offered per year and these will be in line with the timeframes of the Department of Local Government, Sport and Cultural Industries' Community Sport and Recreation Facilities Fund.

Any funding requests for over \$50,000 will need to be considered as part of the Council's long term financial planning process and annual budget deliberations.

#### *Healthy Canteens Initiative*

The new Healthy Canteens Incentive (HCI) has been developed to assist the City's sporting clubs in providing healthy menu options within their club canteens and facilities. The overall aim of the program is to further promote a healthier environment for our community.

#### *Branding*

In addition to the two new funding programs, it is recommended that the Sport & Recreation grants are more closely aligned to the City's Club Development Program "Champion Clubs". This will provide the opportunity for the City to further demonstrate its commitment to local sport and recreation clubs.

#### *Guidelines*

The intent of the Sport and Recreation Grant Guidelines is to provide a greater level of detail on the conditions and criteria which is relevant to each of the funding programs.

#### *Delegated Authority*

The associated Grants Delegated Authority has also been amended to reflect the above changes, together with the addition of a further delegated position, the Manager Community Development has been included due to an organisational restructure to move the responsibility



for the Grants and Donations functions to the Community Development and Services Business Unit.

### **Strategic Plan/Policy Implications**

#### **Community, Lifestyle & Security**

- Provide residents with a range of high quality, accessible programs and services
- Create and maintain recreational, social and sports facilities and regional open space

#### **Economic, Social & Environmental Responsibility**

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development

#### **Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes

### **Budget/Financial Implications**

As part of the 2017/18 budget, Council included budgets for both of the proposed new funding programs as per the below:

- Major Capital Works Grant - \$100,000
- Healthy Canteens Initiative - \$5,000

Should the draft policy not be supported, these funds will not be able to be spent.

### **Legal Implications**

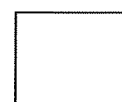
N/A

### **Community Consultation**

N/A

### **Risk Management Implications**

In order to ensure an open and transparent process for sport and recreation clubs to seek City support for funding, a clear set of application guidelines is required. Should the draft Sport and Recreation Grants Policy not be supported then this will not be the case.



**Attachment(s)**

1. Proposed amended Policy ACS12 'Sport and Recreation Champion Club Grants'.
2. Proposed amended Delegated Authority ACS12 'Sport and Recreation Champion Club Grant – Sport and Recreation'.
3. Proposed deleted Position Statement PSCS7 'Financial Assistance to Local Organisations'.
4. Sport and Recreation Champion Club Grants (SRCCG) Guidelines for Applicants.

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**14.5 (MINUTE NO 428) (DAPPS 24/08/2017) - PROPOSED AMENDMENTS TO DELEGATED AUTHORITY LGACS7 'LOCAL GOVERNMENT ACT 1995 - FUNDING ASSISTANCE - COMMUNITY ASSOCIATIONS - PUBLICATION & DISTRIBUTION OF NEWSLETTERS (162/002) (G BOWMAN) (ATTACH)**

**RECOMMENDATION**

That Council adopt the proposed amendments to Delegated Authority LGACS7 'Local Government Act 1995 - Funding Assistance - Community Associations – Publication & Distribution of Newsletters' as shown in the report and attachments to the Agenda.

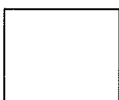
**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**

**COMMITTEE RECOMMENDATION**

MOVED Mayor L Howlett SECONDED Cllr L Sweetman that amend Delegated Authority LGACS7 'Local Government Act 1995 – Funding Assistance – Community Associations – Publication and Distribution of Newsletters by replacing the word Councillor with Elected Member in Clause (3) under Conditions and Guidelines.

**CARRIED 6/0**

**TO BE CARRIED BY AN ABSOLUTE MAJORITY OF COUNCIL**





<b>COUNCIL DECISION</b>
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**Reason for Decision**

To provide consistency in terminology.

**Background**

Each year, Council allocates up to 2% of the rates income to a range of grants, donations, sponsorships and subsidies for the Grants and Donations area (Cockburn Community Fund). Council established the Grants and Donations Committee to recommend on the level and nature of grants, donations and sponsorships provided to individuals, groups and organisations. To ensure that these funds are distributed in a rational way, eligibility, selection and evaluation criteria are required for the assessment and prioritisation of applications to be funded.

**Submission**

N/A

**Report**

Community Associations have been receiving funding through the Grants and Donations area (Cockburn Community Funding program) to assist in the costs of publication of newsletters, subsidy of Insurance and Hire of Community Centres for meetings.

The purpose of the proposed amendments to the Delegated Authority, Policy and Guidelines are to capture all subsidies available to Community Associations under the one Delegated Authority.

The Grants and Donations Delegated Authority proposed amendments are as follows:

Newsletter subsidy:

- Removal of provision of quotes for cost of printing and distribution
- Removal of 'subsidy of a maximum amount of \$600' to be replaced with 'an agreed amount proportionate to their distribution area'



Cockburn Community Insurance program.

- Inclusion of Cockburn Community Insurance program eligibility requirements, disclosure requirements and Public Liability and Volunteer Accident cover in line with current procedure

Hire of Council Community Centres & Halls

- Inclusion of Council facility hire costs for residents associations meetings, in line with current procedure.
- Inclusion of costs for storage in halls, if required
- Inclusion of cost of facility hire when running events, up to a maximum of 3 events per financial year

Residents Associations Support Program

- Inclusion of proposed Residents Associations support program in line with feedback from Residents Association consultation. The existing donation of up to \$1000 for Incorporation and establishment costs is proposed to be available throughout the year; and the provision of annual donation for small sized po box hire is proposed to be added.

**Strategic Plan/Policy Implications**

**Community, Lifestyle & Security**

- Provide residents with a range of high quality, accessible programs and services

**Economic, Social & Environmental Responsibility**

- Create opportunities for community, business and industry to establish and thrive through planning, policy and community development

**Leading & Listening**

- Deliver sustainable governance through transparent and robust policy and processes

**Budget/Financial Implications**

For the 2017-2018, the Grants and Donations budget is \$1,322,750, with an allocation of up to \$10,000 for the insurance program, \$8,000 for the newsletter subsidy, and \$3,000 for room hire subsidy. An additional \$2,000 to be allocated for the initial set up costs for associations and \$650 towards the provision of a small-sized PO Box hire to come out of the Grants and Donations general accounts budget. If the proposed amendments to the Delegated Authority are adopted by Council, the Grants and Donations Committee will need to review the



adopted grants, donations & sponsorship budget allocation for 2017/18 and then make a recommendation to Council to amend the allocation and include a budget of up to an additional \$2,650 for po box hire and Initial set up costs for associations. The Insurance Program, the newsletter subsidy, and the room hire subsidy are within the existing budget. There are \$67,250 of uncommitted funds available in the grants and donations general account, for the 2017-2018 financial year which could be utilised for this purpose.

Delegated Authority LGACS7 'Local Government Act 1995 – Funding Assistance – Community Associations – Publication and Distribution of Newsletters' currently supports the following funding allocations and subsidies:

- Community Associations Hall Hire Subsidy
- Community Group Newsletter Subsidy
- Cockburn Community Group Volunteer Insurance

### **Legal Implications**

N/A

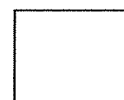
### **Community Consultation**

Staff sought feedback from the Cockburn Community Development Group regarding support from the City of Cockburn, at their May 2017 meeting. Clarity was sought around funding opportunities for Community Associations to be located under one document, with additional funds being requested for PO Box hire, storage costs for halls, hire costs for up to three community events per annum, and more flexible timing of funding for existing funding for incorporation and establishment costs.

### **Risk Management Implications**

The Council allocates a significant amount of money to support individuals, groups and organisations through a range of funding programs. There are clear guidelines and criteria established to ensure that Council's intent for the allocation of funds are met.

The reputation of the City of Cockburn could be seriously compromised should funds allocated to groups or organisations not meet the criteria and guidelines; or if the funds were not used for the purposes they were provided. Adherence to these requirements is essential.



**Attachment(s)**

Proposed amended Delegated Authority LGACS7 'Local Government Act 1995 – Funding Assistance – Community Associations – Publication and Distribution of Newsletters'.

**Advice to Proponent(s)/Submissioners**

N/A

**Implications of Section 3.18(3) Local Government Act, 1995**

Nil.

**15. EXECUTIVE DIVISION ISSUES**

Nil

**16. MOTIONS OF WHICH PREVIOUS NOTICE HAS BEEN GIVEN**

Nil

**17. NOTICES OF MOTION GIVEN AT THE MEETING FOR CONSIDERATION AT NEXT MEETING**

Nil

**18. NEW BUSINESS OF AN URGENT NATURE INTRODUCED BY DECISION OF MEETING BY MEMBERS OR OFFICERS**

Nil

**19. MATTERS TO BE NOTED FOR INVESTIGATION, WITHOUT DEBATE**

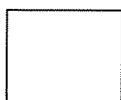
Nil

**20. CONFIDENTIAL BUSINESS**

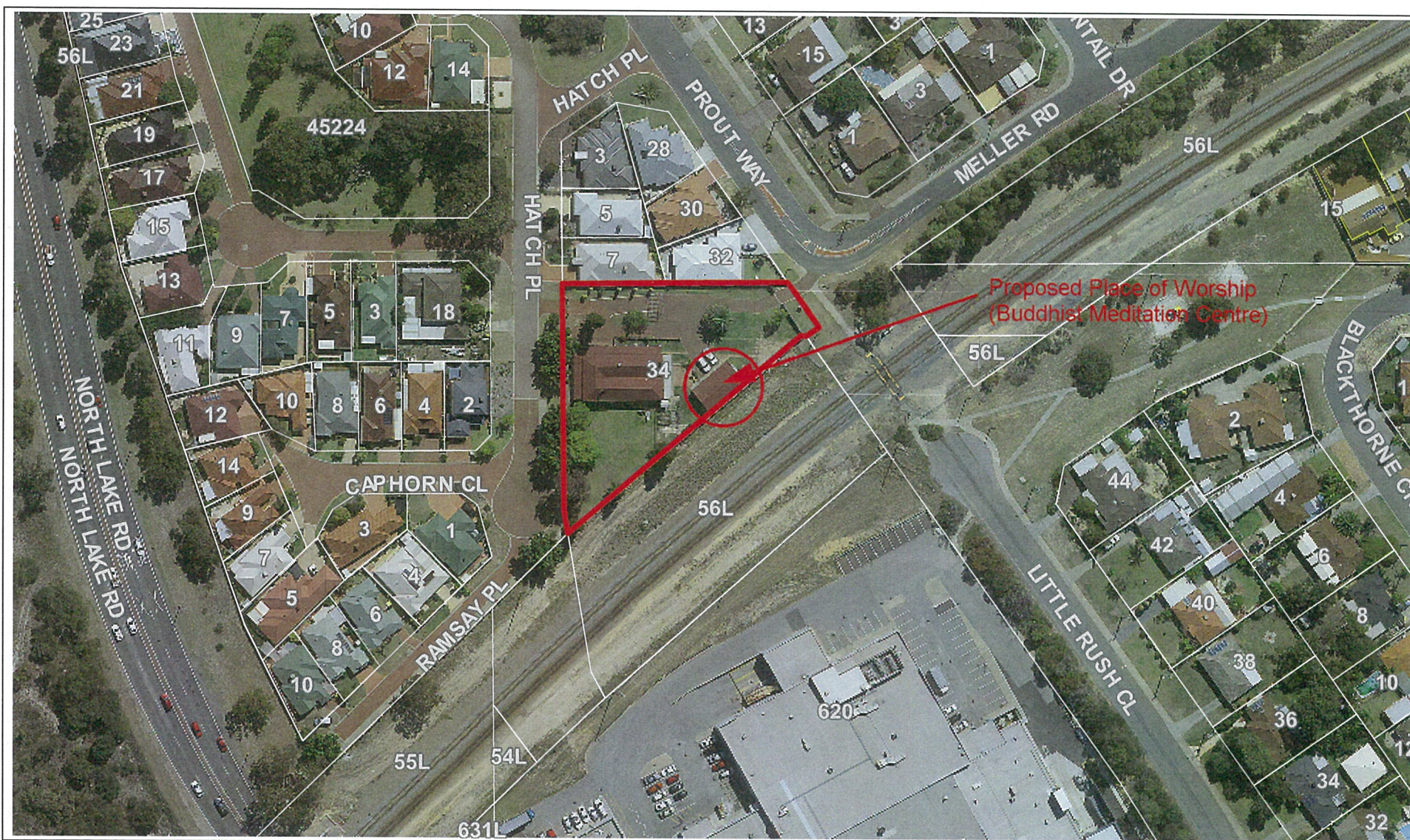
Nil



**21 (DAPPS 24/08/2017) - CLOSURE OF MEETING**

6:21 pm







 <p><b>City of Cockburn</b> G.I.S Services Department</p>	<p>Locality Plan - 34 Prout Way BIBRA LAKE WA 6163</p>	<p>PRINTED ON: 25/08/2017</p> <p>DISCLAIMER - The City of Cockburn provides the information contained herein and bears no responsibility or liability whatsoever for any errors, faults, defects or omissions of information contained in this document.</p>	<p>SCALE = 1:1500</p>	 <p>NORTH</p>
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This car parking space is to be removed as does not comply with Australian Standards AS2890.

Proposed Place of Worship (Buddhist Meditation Centre)

Single House

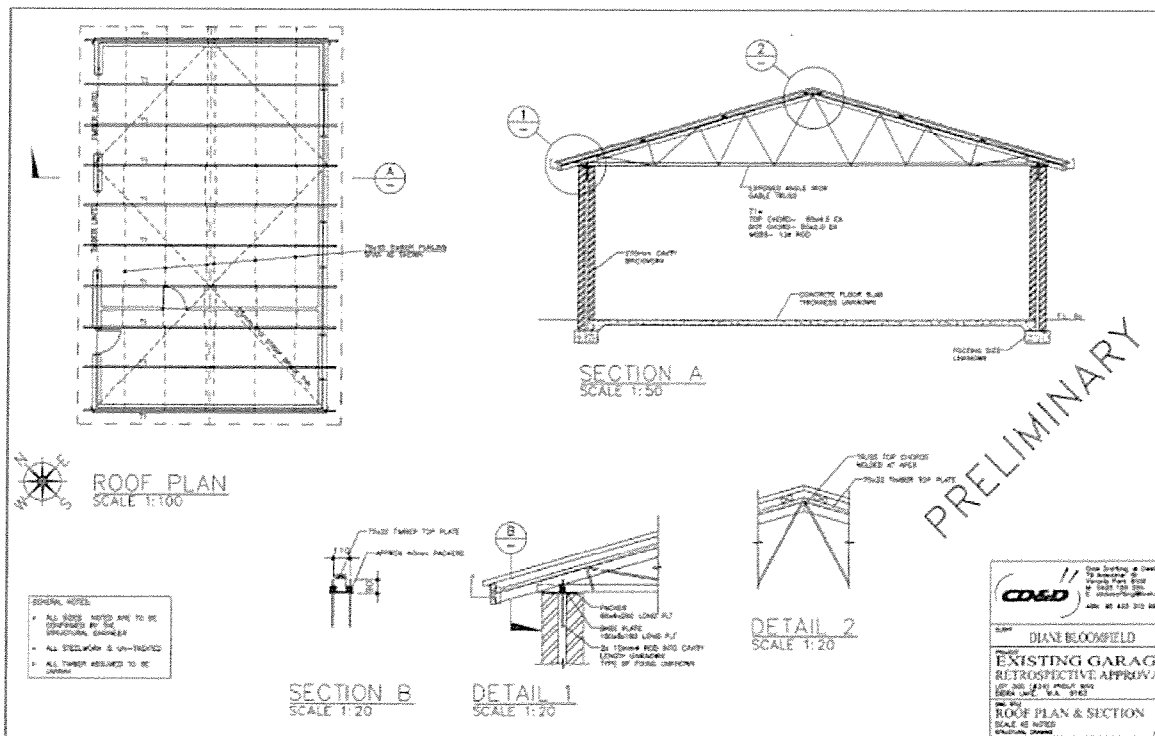
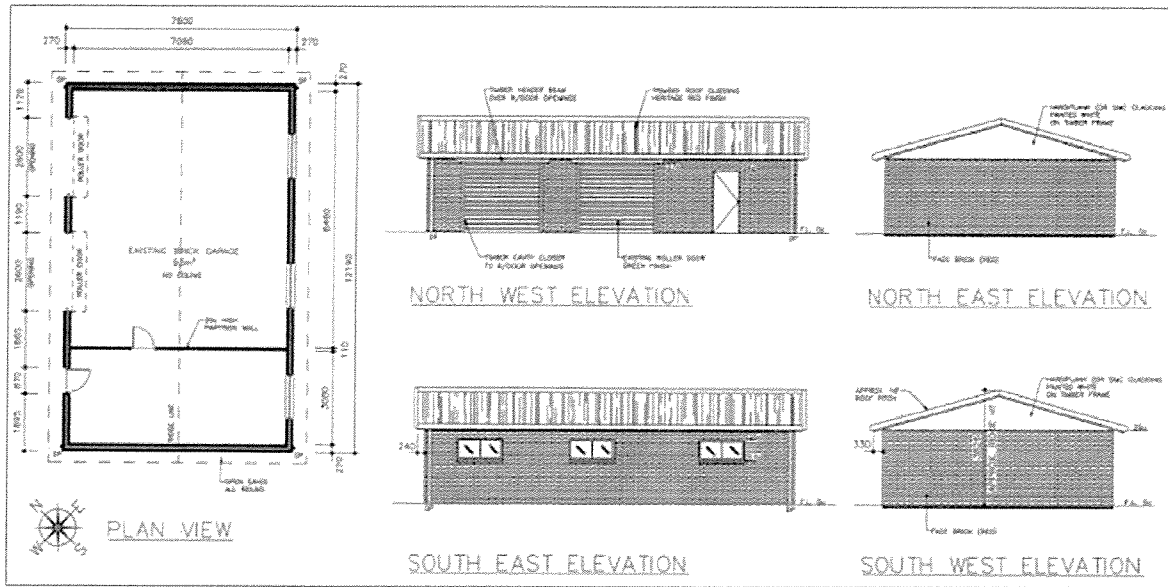


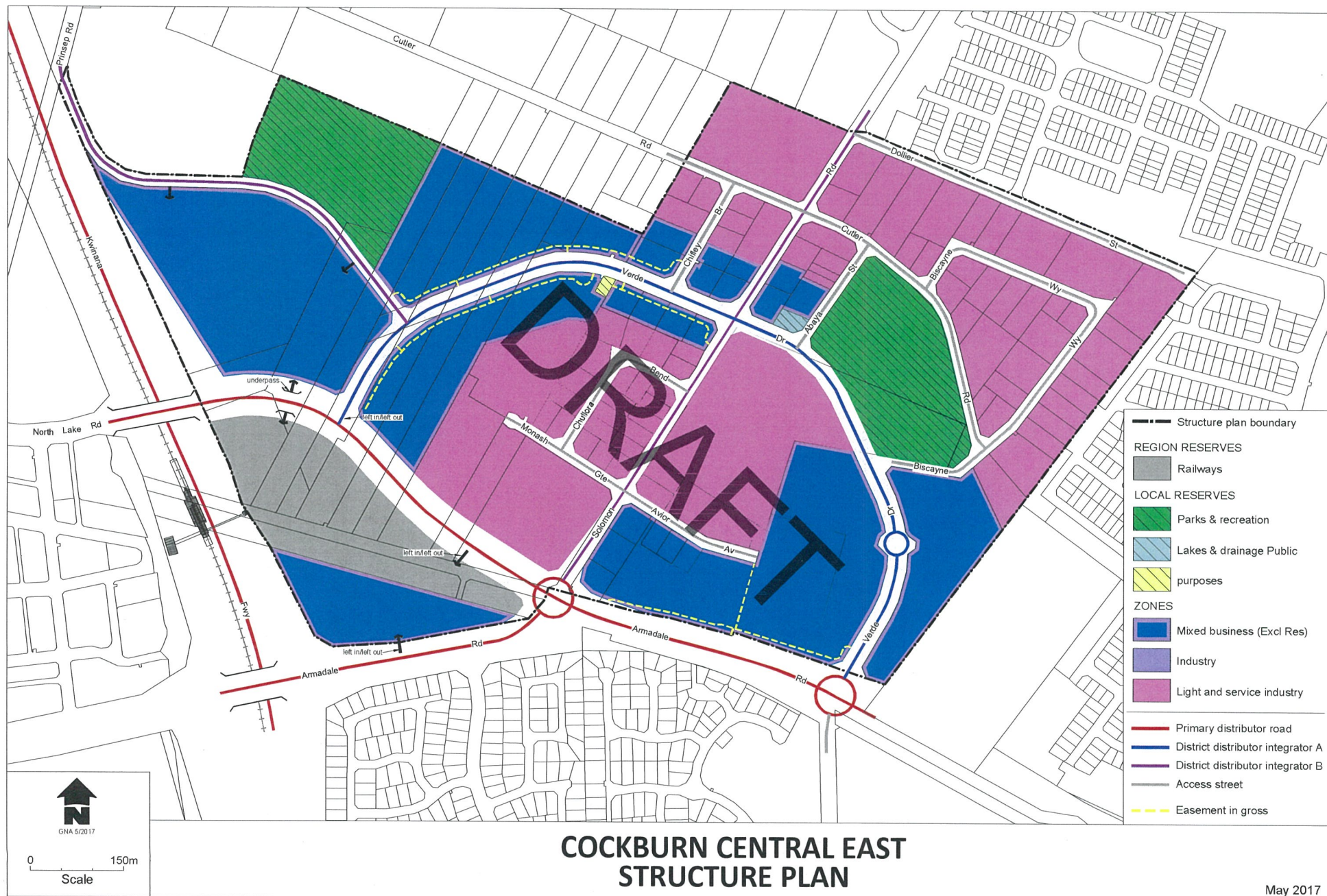
HATCH PLACE

A: 24/05/2017 - ISSUED FOR PROPOSED CHANGE OF USE APPLICATION  
 REVISION/DATE DESCRIPTION



CLIENT <b>DIAMOND WAY BUDDHIST ASSOCIATION OF WA</b>			
PROJECT <b>PROPOSED CHANGE OF USE</b>			
LOI 300 (#20) PROUT WAY BIRRA LAKE, WA 6163			
DWS TITLE <b>PARKING PLAN</b>			
SCALE 1:200 ARCHITECTURAL DRAWING			
DRAWN P.M.	DATE 24/05/2017	DWS No. <b>P01</b>	A1 ORIGINAL
CHECKED	CHK NAME Prout Way		REV <b>A</b>







**SCHEDULE OF SUBMISSIONS**  
**PROPOSED STRUCTURE PLAN – COCKBURN CENTRAL EAST**

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
1	J & M Smash Repairs Pty Ltd 287 Victoria Road MALAGA WA 6090	<b>SUPPORT</b> Need to free roads, badly congested	<b>Noted</b>
2	Bruce Cairns 53 Esplanade ROCKINGHAM WA 6168	<b>SUPPORT</b> The roads need urgent attention if Cockburn Central is to reach its potential.	<b>Noted</b>
3	Water Corporation PO Box 100 LEEDERVILLE WA 6902	<p>The Water Corporation has adopted water, and wastewater infrastructure planning covering the Structure Plan area. In general terms, the development yield assumptions underlying this infrastructure planning has been based on the land use classifications/zonings and density codes in the City's current local planning scheme, adopted local structure plans and related planning instruments. As these assumptions change, the Corporation will undertake periodic reviews of its planning to address the changes.</p> <p>The structure plan area is covered by the Corporation's wastewater conveyance planning. Wastewater generated in the area is collected and conveyed to the Woodman Point VVWTP for treatment and disposal. The structure plan area is covered by Corporation's Jandakot Sewer District.</p> <p>The road pattern of this Structure varies from the Water Corporation wastewater planning (Plan attached) therefore the Water Corporation will review the long-term wastewater infrastructure planning for the Jandakot sewer district as the City implements the structure plan over time through incremental amendments to, or a review of, the City's local planning scheme.</p> <p>The entire structure plan area falls within the Corporation's Thompson's Gravity Water Supply Zone, which is supplied with water from the Thompson's Lake Reservoir. The Corporation will consider incorporating water demand changes into its water planning when a full review of the Thompsons Gravity Scheme is conducted in 2016/17.</p>	<p><b>Noted</b></p> <p>Recommend this advice be included within Part 2 of the structure plan - section 6.8.</p>

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		The 'Future Town Centre Expansion East' and 'Future Town Centre Expansion West' are likely to necessitate reviews of the Corporation's planning to determine if any parts of the existing water and wastewater networks in or adjoining these areas need to be upgraded. Any headworks upgrades required will be funded through the Corporation's capital program. Any upgrades required to the smaller, reticulation sized pipes (generally <300mm diameter) will need to be met by developers	
4	WA Gas Networks (ATCO Australia) PO Box 3006 SUCCESS WA 6964	<p>ATCO Gas has existing High Pressure (DN300ST HP 1900kPa) and (DN100ST HP1900kPa) gas mains and infrastructure within the area of the draft Structure Plan and the immediate vicinity. Please see attached document for ATCO Gas requirements when third party works are planned within 15 metres of our High Pressure Gas Mains.</p> <p>ATCO Gas also has medium pressure network available to supply industry with gas services. This gas infrastructure will require extending from either Cutler Road or Solomon Road to support further development demands. ATCO Gas requests early consultation with developers and their representatives to discuss gas availability and possible options where common trenching with other service providers can be beneficial.</p> <p>ATCO Gas does not have any objection to lodge with the City of Cockburn after considering the Advertising Copy_Draft_V1_ City of Cockburn_Cockburn Central East Structure Plan. The information included in that document (6.8 Infrastructure Coordination, Servicing and Staging) is consistent with the ATCO Gas current infrastructure in the vicinity, along Armadale Road, Solomon Drive and Cutler Road through to Prinsep Road.</p>	<b>Noted.</b> Recommend this advice be included within Part 2 of the structure plan - section 6.8.
5	Landowner	<p><b>SUPPORT</b></p> <p>Leap Start Early Learning Child Care is located at 12 Solomon Road, Jandakot. This proposal would be supported under the following circumstances:</p> <ol style="list-style-type: none"> <li>1. Parents need to be able to access Leap Start Early Learning Child Care with ease and these changes cannot have a detrimental affect on our ability to offer our service to the community...throughout the construction phase or after completion.</li> <li>2. No land impact to Leap Start Early Learning Child Care</li> <li>3. No change of use of that land</li> <li>4. No change in streetscape to Leap Start Early Learning Child Care</li> </ol>	<p><b>Noted.</b></p> <p>The Structure Plan proposes no change to the site entry at 12 Solomon Road. Rather the Structure Plan makes provision for the MRWA Armadale Road and North Lake Road Bridge Interchange project to accommodate a roundabout at the corner of Armadale Road and Solomon Road of which is in the immediate vicinity and is expected to improve traffic flows in this location. Any further change to the road environment may or may not be proposed by</p>

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>We believe improvement of the Solomon Road/Armadale Road intersection is well overdue and consider it currently unsafe. Traffic lights or a roundabout will assist with making it safer for parents and motorists alike</p>	<p>MRWA within their final design phase at which point MRWA will be consulting directly with landowners. This schedule of submissions will also be forward to MRWA to inform their final design phase.</p> <p>The Structure Plan does not propose a zone change to 12 Solomon Road.</p>
6	<p>Telstra, Forecasting &amp; Area Planning Locked Bag 2525 PERTH 6001</p>	<p>At present, Telstra Corporation Limited has no objection. I have recorded this in our Development database and look forward to further correspondence in the future.</p> <p>Should you require any more information regarding Telstra's new infrastructure policy, please read below or contact me.</p> <p>Latest Telecommunications Policy</p> <p>The Federal Government has deemed developers are now responsible for telecommunications infrastructure on all developments, i.e. conduits, pits and the cost of the cable installation by Telstra or other carrier. Telstra can provide a quote for the pit and pipe and/or cable. This is explained on the Telstra Smart Community website below. The owner/developer will have to submit an application before construction is due to start to Telstra (less than 100 lots or living units) or nbn™ network (for greater than 100 lots or living units in a 3 year period).</p> <p>Applications to Telstra can be made on the Telstra Smart Community website: <a href="http://www.telstra.com.au/smart-community">http://www.telstra.com.au/smart-community</a></p> <p>More information regarding nbn™ network can be found on their website <a href="http://www.nbnco.com.au/develop-or-plan-with-the-nbn.html">http://www.nbnco.com.au/develop-or-plan-with-the-nbn.html</a></p> <p>Please dial 1100 (Dial before You Dig) for location of existing services.</p> <p>Federal Government Telecommunications Infrastructure in New Developments Policy May 2015 <a href="https://www.communications.gov.au/policy/policy-listing/telecommunications-new-developments">https://www.communications.gov.au/policy/policy-listing/telecommunications-new-developments</a></p>	<p><b>Noted</b></p>

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		<p>STATE PLANNING POLICY 5.2 Telecommunications Infrastructure August 2015  <a href="http://www.planning.wa.gov.au/dop_pub_pdf/Telecommunications_Infrastructure.pdf">http://www.planning.wa.gov.au/dop_pub_pdf/Telecommunications_Infrastructure.pdf</a></p> <p>Communications Alliance - G645:2011 Fibre Ready Pit and Pipe Specification for Real Estate Development Projects  <a href="http://www.commsalliance.com.au/Documents/all/guidelines/g645">http://www.commsalliance.com.au/Documents/all/guidelines/g645</a></p>	
7	<p>Janis Kondarovskis</p> <p>6 Chifley Brace  JANDAKOT WA  6164</p>	<p><b>OBJECT</b></p> <p>This plan will severely impact our property. We rely on ease of access for containers to be unloaded and picked up. I believe there will be extra parking in the street limiting the access of semi-trailers and our own trucks. Please find an alternative route. This will be a nightmare.</p>	<p><b>Not supported</b></p> <p>The Armadale Road and North Lake Road Bridge Interchange project is expected to significantly improve accessibility into and out of the Solomon Road precinct.</p> <p>The road upgrades will not reduce the level of access already provided for all types of vehicles.</p> <p>There is no proposal to increase on street car parking along Chifley Brace within this proposal.</p>
8	<p>IJJ Investments T/A  Jandakot Unit Trust  3/9 Abaya Street  JANDAKOT WA  6164</p>	<p><b>OBJECT</b></p> <p>This plan will severely impact our property and our business. We must have ease of access for containers from Australia and overseas. Semi- trailers must be able to load and unload containers.</p> <p>If there is increased parking in the street they will not be able to access our property.</p>	<p><b>Not supported</b></p> <p>The Armadale Road and North Lake Road Bridge Interchange project is expected to significantly improve accessibility into and out of the Solomon Road precinct.</p> <p>The road upgrades will not reduce the level of access already provided for all types of vehicles.</p> <p>There is no proposal to increase on street car parking along Abaya Street within this proposal.</p>
9	<p>DBNGP (WA)  Nominees Pty Ltd  PO BoxZ5267  St Georges Tce  PERTH WA 6831</p>	<p>DBNGP (WA) Nominees Pty Ltd as owners of the property at 83 Prinsep Road, Jandakot, which is located within vicinity of the land subject to the proposed Structure Plan, have no objection to the proposed Structure Plan proposal</p>	<p><b>Noted</b></p>

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10	Cutler Road Property Holdings Pty Ltd 2/93 Cutler Road JANDAKOT WA 6164	SUPPORT The Cutler/Solomon Road intersection is a major problem/blackspot that needs to be resolved during this work. It is a danger to the public and cannot be just forgotten about by the City of Cockburn as it has in the past. This area is like a drag strip. A major/large truck friendly roundabout needs to be installed to make it safe.	<b>Noted</b>
11	Western Power GPO Box L921 PERTH WA 6842	<p>Following a review of the draft Cockburn Central East Structure Plan we provide the following comments for consideration prior to adoption:</p> <p>i. Structure Plan Provisions:</p> <ul style="list-style-type: none"> <li>All future development shall be designed and constructed to protect Western Power infrastructure from potential land use conflict.</li> <li>All transmission lines shall be protected by a Western Power easement established at the time of subdivision/development.</li> <li>Subdivision and/or development (including fill, fencing, storage or parking) will not be permitted within Western Power line easements or restriction zones without the prior written approval of Western Power. Note: Further information on easement and restriction zone standard conditions are available from Western Power: <a href="http://www.westernpower.com.au/networkprojects/Easements.html">http://www.westernpower.com.au/networkprojects/Easements.html</a>. Western Power will need to review, assess and provide prior written consent to any subdivision or development proposal within the registered easement, in accordance with standard easement conditions, including: <ul style="list-style-type: none"> <li>Landscaping plans (including mature heights and location of species);</li> <li>Ground level changes;</li> <li>Permanent structures;</li> <li>Drainage plans;</li> <li>Conservation controls.</li> </ul> </li> <li>New subdivision and development proposals shall be designed to a standard that mitigates perceived amenity issues associated with Western Power infrastructure and include consideration of, inter alia: <ul style="list-style-type: none"> <li>The orientation of buildings and windows to minimise visual impact;</li> <li>Hard and soft landscaping designs within the development that provide an effective visual buffer.</li> <li>Where development applications adjoin or affect Western Power</li> </ul> </li> </ul>	<p><b>Noted</b></p> <p><b>Complementary</b></p>

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		<p>interests they should be referred to this organisation for comment prior to approval by the City of Cockburn.</p> <p>ii. Advice Notes:</p> <ul style="list-style-type: none"> <li>A Danger Zone, Registered Easement, Restriction Zone or Minimum approach distance represent areas of high risk when building or working near the Western Power network. Before commencing any work it is essential that you complete a Dial Before You Dig enquiry to obtain the location and voltage of the Western Power network.</li> <li>Areas of high risk include: <ul style="list-style-type: none"> <li>Danger Zone – Defined by regulation 3.64 of the Occupational Safety and Health Regulations 1996.</li> <li>Registered Easement - Western Power easements are registered on the Certificate of Title for the property. Easements and associated conditions are available from Landgate (<a href="http://www.landgate.wa.gov.au">www.landgate.wa.gov.au</a>).</li> <li>Restriction Zone –Are applied in the absence of a registered easement and are calculated in line with the Australian Standard for overhead line design (AS/NZS 7000:2010).</li> <li>Minimum approach distance.</li> </ul> </li> </ul> <p>It is recommended that persons planning to build or undertake works in high risk areas near transmission or communication assets (including those listed above) act in a safe manner at all times and in accordance with all applicable legal and safety requirements (including the 'duty of care' under the laws of negligence, Worksafe requirements and guidelines, Australian Standards and Western Power policies and procedures).</p> <p>Western Power provides services that may assist persons planning to build or work within high risk areas near transmission or communication assets (refer to your Dial Before You Dig enquiry for location and voltage). These services can be found by visiting the Transmission and communication assets section of the Western Power website (<a href="https://www.westernpower.com.au/safety-access/working-near-our-network/">https://www.westernpower.com.au/safety-access/working-near-our-network/</a>).</p>	
12	landowner	<p><b>OBJECT</b></p> <p>I am very concerned about how the proposed roundabouts will effect our suburb. It has become increasingly difficult to get in and out of Atwell, what</p>	<p><b>Access into and out of Atwell</b></p>

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		<p>with all the horrible take-away places someone approved (let's not bring up all the rubbish we have been inundated with). As Atwell is low-set all noise from Armadale Rd comes down to us. At present the intersection at Tapper Rd, which was definitely needed but has substantially increased the traffic noise from sirens and screeching cars for those living in the Northern section of Atwell. I can only imagine that the two new raised roundabouts will increase noise levels exponentially and possibly encourage hoons. Would love to know whether this has been a consideration and if so what remediation has been proposed. In addition, while I realise something needs to be done, we don't want to have the two main exits to Atwell turned in to major headaches for residents, decreasing our property values. I do not agree with the Northlake Rd extension coming out at Tapper Rd. I would have thought it would be better to come out after Treeby and allow this area to have a reprieve from all that traffic. Thanks for your consideration.</p>	<p>Currently access to the north of Atwell onto Armadale Road is provided for by two intersections; the Tapper Road intersection is planned to be a full turning round about and is expected to improve traffic flow. The second is the intersection of Freshwater Drive of which will significantly improve access for Atwell residents as a result of the Armadale Road and North Lake Bridge Interchange project – this project is expected to remove up to 70% of vehicles travelling between the current Armadale Road west of Solomon and into the activity centre. This, in addition to the introduction of a roundabout at Solomon and Armadale Road will provide considerable breaks in traffic and therefore improve access for Atwell residents.</p> <p><b>Noise resulting from the upgrade to the Armadale Road and North Lake Bridge Interchange project</b></p> <p>Main Roads WA is required to identify noise mitigation measures resulting from the road upgrades and the impacts on adjoining properties as they progress their design. This is likely to include noise walls along the edge of Armadale Road.</p>
13	RJ & PJ Collinge 1/30 Biscayne Way JANDAKOT WA 6164	<p><b>SUPPORT</b></p> <p>This plan offers to open up the area and make access for all business in the area much easier.</p>	<b>Noted</b>
14	FFI Holdings Ltd PO Box 3029 JANDAKOT WA 6164	<p>We object to the Plan to the extent that it fails to adequately provide for sufficient land zoned light and service industry to meet the current and longer term needs in the area. It is noted that the Plan proposes to zone all the light and service industry land that is not yet developed as mixed business, effectively ending all expansion plans of the existing light and service industry in the area. There exists a clear and present need for more light and service industry in the area that will deliver significant long term economic and social benefits for the City of Cockburn.</p> <p>The lack of land for light and service industry is a result of the area of proposed mixed business being substantial extended past a reasonable</p>	<p><b>Request for retention of Light and Service Industry zoned land</b></p> <p>The Mixed-Business zone provides a considerable level of flexibility in terms of land use options and will support the strategic objectives for the structure plan area by ensuring the 400-800m catchment of the Cockburn Central Train station does not further detract from the potential of high density mixed use development by attracting more industrial type uses that are incompatible with residential</p>

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		<p>buffer from the main traffic areas.</p> <p>More specifically we refer to the area of land adjoining and facing the proposed Verde Drive between Solomon Road and the realigned North Lake Road ["Verde Drive West"]. An area of 50 meters in depth from Verde Drive West would be adequate in meeting the Plan's long term objectives while still satisfying current needs of existing owners and operators.</p> <p>FFI Holding Ltd - Proposed development  FFI Holdings Ltd ("FFI") is a food manufacturing and distribution Company that has been successfully operating from its current location for over 30 years. During that time FFI has steadily expanded to become a significant supplier in the Australian food industry and a major employer in the Cockburn area. FFI directly employs over 120 workers and indirectly many hundreds more in properties developed and leased in the Plan's area. The Company's successful development is a result of a 30 year, carefully developed and executed business plan in the City of Cockburn.</p> <p>FFI has a direct interest in 81,991 square meters of land (with a building foot print of approximately 14,000 Square meters), that is affected by the new proposed Plan zonings.(FFI properties include - Lots 61, 62, 63, 64, 65 and 49).</p> <p>FFI has immediate plans to further develop Lot 62 Verde and 63 Monash Gate. The proposed development will meet the business requirements of the existing operator while meeting the long term planning objectives of the City of Cockburn. The proposed development is dependent on some minor changes to the proposed zonings. FFI intends to re-subdivide Lots 63 and 62 to provide for the light and service industry zoning on Lot 63 to be increased by approximately 5,250 square meters while still maintaining a 50 meter buffer of mixed business from Verde Drive being Lot 62 (see plan attached). In addition FFI intends to redevelop Lot 49 Cutler Road. This property is currently zone light and service industry and is fully utilized for that purpose. The Plan proposed zoning on this site will affect the existing factories and operations. Again, if a buffer is required for mixed business from Verde Drive it should be limited to a depth of 50 meters.</p> <p><b>Conclusion</b>  We understand the long term view and objectives of the Plan is to create</p>	<p>development.</p> <p>While the City recognises the majority of landowners within proximity to the train station support the Mixed-Business zone and the longer term objectives, it is also recognised that FFI Holdings seek to ensure Viola Waste can expand their business in the near future on Lot 63. It is understood from a meeting held with FFI Holdings in May 2017, this submission, and plans sent through to further support this submission that FFI intend to subdivide Lots 62 and 63 to expand Lot 63 to the north. As a result FFI have requested the Light and Service Industry zone be expanded to include all of the newly proposed Lot 62, leaving a 50m setback from Verde Drive as a mixed-business zone for Lot 63. It is understood this is required as a result of the Transport Depot use and truck wash area approval over lot 62 being an 'X' use within the Mixed-business Zone and 'P' use within the Light and Service Industry zone.</p> <p>The City supports this request as it is recognised that this will facilitate both the City's strategic plans (by encouraging commercial type development along the Verde Drive frontage), and accommodate Viola wastes expansion – ensuring the company can continue to operate.</p> <p>The request for a Light and Service Industry zone on Lot 49 is not supported as a result of the current zone on lot 49 already being Mixed-Business within the Solomon Road structure plan (fronting Verde Drive). Recognising the strategic objectives already stated above.</p>



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		<p>more mixed business and long term residential buffer areas, however light and service industry is the largest employer in the areas of the Plan west of Solomon Road and there exists a clear and present need for new development. This development will deliver significant immediate and long term social and economic benefits for the City of Cockburn and its residents.</p> <p>We therefore respectfully request that the Plan be amended as follows –</p> <p>The area of undeveloped land both north and south of Verde Drive west of Solomon Road be zoned mixed business to a depth of 50 meters with the balance zoned light and service industry, or –</p> <p>The area of undeveloped land south of Verde Drive west of Solomon Road be zoned mixed business to a depth of 50 meters with the balance of the southern lots zoned light and service industry, or –</p> <p>The area of land fronting Verde Drive of Lots 62, 61 and 49 Cutler Road be zoned mixed business to a depth of 50 meters with the balance of lots zoned light and service industry.</p>	
15	Aaron Moles 46 Prinsep Rd JANDAKOT WA 6164	<p><b>OBJECT</b></p> <p>My family are in favor of the proposal for the North Lake Rd extension over the Kwinana freeway, however as residents of Prinsep Rd, we object to the current proposal plan as it stands because Prinsep Rd is to be extended to Verde Drive. We currently have a large volume of semi-trailers and other industrial trucks using Prinsep Rd as a thoroughfare to reach Solomon Rd and the mixed business/industrial region. As the north eastern section of Prinsep Rd is a residential area, we understand that these types of industrial vehicles should be excluded from using this road for general transportation and a few times a year, the transport authority will "police" the road giving out fines to truck drivers for driving heavy vehicles in a residential area. We are concerned that the extended linkage of the industrial area to Prinsep Rd will only further increase its use for heavy vehicles wanting to reach or leave the industrial park as it is the shortest route to reach the Kwinana freeway and Roe highway networks.</p>	<p><b>Noted with comments</b></p> <p>The Prinsep road alignment is identified within the existing Solomon Road Structure Plan and is further identified as being required within the Cockburn Central East Structure Plan Transport Impact Assessment (TIA). The TIA importantly recognises the necessity to upgrade Prinsep Road so as to reduce the concentration of traffic along Verde Drive and Solomon Road. Without an upgrade to Prinsep Road, daily vehicle trips along Verde Drive and Solomon Road will reach unacceptable levels.</p> <p>Furthermore an agreement has been in place for Landcorp to construct the southern extension of Prinsep Road since 2004. The need to upgrade the road was a requirement of subdivision relating to the surrounding lots several years ago. The City has not yet requested the upgrade from Landcorp as a result of the Verde Drive alignment not yet being in place.</p>

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			<p>However the City does recognise the expected increased vehicle trips per day along Prinsep Road (North) and is aware of the noise complaints currently received from residents fronting Prinsep Road and in proximity to the Glenn Iris Golf course. Complaints relate to noise from trucks accessing the Solomon Road Industrial Area. In response the City recognises that while vehicle trips per day will increase, these numbers relate to an increase in cars associated with the PTA commuter car park. Nonetheless the Structure Plan recommends the Prinsep Road upgrade design phase should consider a range of options including the benefits associated with a road realignment, a slip lane and/or appropriate levels of landscaping to act as an edge to the residential area, for example.</p>
16	Antonino Mangano 8 Cyprus Court COOGEE WA 6166	<p><b>OBJECT</b></p> <p>I do not believe that enough consultation has been offered to the affected land owners and my questions raised were not properly addressed and left many questions unanswered.</p> <p>I voiced my objection at the meeting and still object to the portion of our land being earmarked for PTA, Railways and carpark either for temporary or permanent use. The Council allowed vacant land fronting Armadale road to develop commercial outlets without contributing to the possible need for PTA or railway car parking.</p> <p>It appears that this portion of land in question possibly has the opportunity to be rezoned as residential which was our intention from the beginning.</p> <p>I object to the cost implications being placed on the land owners for the provision of land and funding for the future roads and services.</p>	<p><b>Not supported</b></p> <p><u>Insufficient advertising</u></p> <p>The City over the last 2 years has sought to keep landowners directly affected by the Armadale Road and North Lake Road Bridge Interchange project informed about the design and has sought to understand landowner's desires for their land. The City undertook one-on-one discussions with landowners in August 2015 to discuss the Community Connect South project of which launched during August 2015 and included potential changes to the North Lake Road extension alignment. While the finer details were unknown at this time the City sought to meet with landowners as early as possible to discuss why the now superseded alignment was stalled and a new alignment was needed.</p> <p>The City also met with landowners in May 2017 to provide an early briefing on the draft structure plan to allow landowners sufficient time to consider the proposal and inform submissions.</p>

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			<p>The background and informing documents including the Traffic Impact Assessment, the Market Feasibility Assessment and the Level 1 Flora and a Fauna study for example were made available to landowners a month prior to formal advertising of which was advertised for 28 days.</p> <p>The City sought to reduce the impact on private landowners and collaborated with the State Government to ensure the Verde Drive realignment would be provided within State owned land with the remainder of land located to the north of Armadale Road realignment being zoned with a good amount of flexibility within the proposed Mixed-business zone.</p> <p><u>Land proposed for PTA Car Park</u></p> <p>Several elements informed the decision to locate the PTA carpark south of the Armadale Road alignment:</p> <ul style="list-style-type: none"> <li>- The location makes use of land severed to the south by the Armadale Road and North Lake Road Bridge Interchange alignment.</li> <li>- The Market Feasibility Assessment supports the view that this location is unlikely to support high density mixed-use development including both residential and commercial uses in the short to medium term.</li> <li>- The PTA car park strategy suggests a transitional approach that will see a PTA carpark in the short to medium term that will transition over time.</li> <li>- While the land amalgamation and acquisition process is not a component of this Structure Plan, the City advises that in certain cases outlined within the Land and Administration Act, the holding authority (in this case likely to be the State Government) must grant the former land owner or the legal representative of the former land owner's deceased estate (qualified person) an option to purchase the freehold land that was taken for a public work. Landowners affected by this proposal are encouraged to investigate their options further with</li> </ul>

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			<p>regard to rights and processes under the Land Administration Act.</p> <p>With regard to <i>“Council allowed vacant land fronting Armadale road to develop commercial outlets without contributing to the possible need for PTA or railway car parking”</i> – The developments on Lot 500 were proposed and approved prior to the Armadale Road and North Lake Road Bridge Interchange project being identified and before the Planning Control Area was in place. The proposed uses are consistent with the Mixed-Business zone currently in place for the subject land and as a result left the City with limited opportunity to encourage mixed use development in this location. However it is noted that the approved development application holds a certain level of flexibility into the future as a result of flexibility being considered in the commercial component towards the west of the site, encouraging opportunity for mixed-use development into the future.</p> <p><u>Funding of land and services</u></p> <p>The abovementioned short term road upgrades will be required to be delivered concurrently with the Armadale Road and North Lake Road Bridge Interchange project of which has an estimated construction commencement date of 2019.</p> <p>With regard to Verde Drive and the deeds of agreements currently in place – the City acknowledges the current deeds of agreement that are in place between the City and landowners and that the City’s Town Planning Scheme 3 (TPS3) requires landowners affected by the Other Regional Road reservation (Verde Drive) to cede the land free of cost, and contribute towards its construction. The City recognises the need to undertake further discussions with affected landowners, given the need to deliver this road infrastructure with the MRWA major project.</p>

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17	Landowner	<p>We write to you on a "Without Prejudice" basis and confirm we are generally supportive of the proposed new Cockburn Central East Structure Plan subject to clarification and confirmation of the Council's position with respect to the following items:</p> <p>We estimate that 35 Knock Place will have approximately 8,777m2 (subject to survey) of land resumed for the new Armadale Road reserve (2,622m2) and PTA carpark (6,155m2) to the south of our Knock Place land holding. We further note that Verde Drive extending in a northerly direction from Armadale Road will be constructed on land currently owned by the State Government (39 Knock Place). To this end, we propose that any surplus lands from 39 Knock Place not required for the Verde Drive road reserve extending along the eastern boundary, be annexed to the western boundary of our land north of Armadale Road to consolidate the frontage of our lot to Verde drive. The extent of such surplus lands owned by the State would be offset by virtue of a land swap with the lands being resumed from us as outlined above.</p> <p>We note the outcomes of the previous Structure Plan whereby we have had to install Transformer Units at our cost to both the Knock Place and Cutler Road frontages as part of the subdivision agreement associated with the Transfer of Lot 904 to the Council for road reserve purposes. In this respect, as the transformer unit fronting Knock Place will no longer be required by virtue of its new use status as a carpark, we expect that the installation costs of the Transformer will be reimbursed to us (inclusive of the time value of money) and the 25m2 road widening reserve required for its operation fronting Knock Place - will be reinstated to our existing land holding.</p> <p>We also note the previous Deeds of Agreement / Covenants between Council and ourselves associated with Lot 904 with respect to contributions to constructions costs for Verde Drive &amp; suggest that these be extinguished &amp; ownership of Lot 904 be transferred back to us. The land subsequently required for the newly realigned Verde drive would then be the subject of a separate Deed to be agreed between the respective parties with the cost of the road construction and provision of all services going forward to be at the Shire's expense.</p> <p>We further note the Easement in Gross depicted on the new Structure Plan extending along the eastern side of Verde Drive and understand the intent is</p>	<p><b>In part supported</b></p> <p><u>Land assembly and amalgamation</u></p> <p>The land assembly and amalgamation process including the option to investigate land swap opportunities is a process that will be undertaken by the State Government. Landowners will have an opportunity to discuss options directly with the WAPC regarding preferred options.</p> <p><u>Compensation for infrastructure</u></p> <p>The land amalgamation process will be guided by the Land Administration Act 1997. Evaluations at such time regarding land values will consider the value of land inclusive of the infrastructure located within subject land parcels.</p> <p><u>Current deeds of agreement with the City and the costs associated with the construction of Verde Drive</u></p> <p>With regard to Verde Drive and the deeds of agreements currently in place – the City acknowledges the current deeds of agreement that are in place between the City and landowners and that the City's Town Planning Scheme 3 (TPS3) requires landowners affected by the Other Regional Road reservation (Verde Drive) to cede the land free of cost, and contribute towards its construction. The City recognises the need to undertake further discussions with affected landowners, given the need to deliver this road infrastructure with the MRWA major project.</p> <p><u>The need for the easement along Verde Drive</u></p> <p>The traffic impact assessment informing the Structure Plan supports the need for protecting Verde Drive with an</p>

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		<p>to minimise vehicle crossovers. We understand this Easement in Gross forms part of the prevailing conditions associated with Verde Drive in the Solomon Road Structure Plan whereby it is depicted as a 4 lane thoroughfare and designated as a Primary Regional Road.</p> <p>As Verde Drive will now be downgraded under the new Structure Plan to a local distributor road (that will still be 4 lanes in size but carry a substantially reduced volume of traffic), we contend that the requirement for a 14.5 metre wide Easement in Gross over our lands is unnecessary and puts an unjust impost on the potential uses for this portion of our lands. Consequently, we propose removing the Easement in Gross altogether (along both sides of Verde Drive) as the proposed 4 lanes should more than adequately accommodate ingress and egress to the limited number of lots (8 to the south and 6 to the north) fronting this section of Verde Drive. Alternatively, if for whatever reason the Easement in Gross is deemed absolutely necessary, we propose that the portion of our land south of the first crossover as depicted on the new Structure plan, be removed on the understanding that it could be re-instated - should further subdivision of our lot occur in conjunction with the adjoining lots to the east that results in additional lots with an east / west orientation having frontage to Verde Drive.</p> <p>We acknowledge the land being resumed south of the Armadale road reserve is designated for use as a PTA carpark. Should this intended use change at some point in the future, then we expect that we would have the first right of refusal to re-purchase the property on the same basis as it is now proposed to be resumed - whilst again being cognisant of the time value of money.</p> <p>We confirm that we are self-funded retirees with limited monthly disposable income and have had to endure a holding pattern with respect to divestment / development options for our parcels of land over the past few years due to the uncertainty associated within the precinct. In this respect, we have incurred significant costs over this time frame to keep us informed of our position and the prevailing status of our land holdings including surveyors, town planners, property advisory consultants and Western Power – all of which are expenses that we would not have otherwise incurred.</p> <p>In this respect, we respectfully request re-imbursement of our costs incurred to date in a timely manner - together with an undertaking from Council to pay all agreed consultants fees going forward (monthly in arrears) so that we do not have to fund these costs from our monthly income stream - on the</p>	<p>adequate road reserve width in order to maintain flexibility as traffic volumes grow. While a dual carriageway will be unlikely, there are design options especially in order to prioritise through movements through the addition of central mediums, turning pockets and the like. There is no consideration to adjust the requirement for access easements on private allotments, as these will remain important to controlling access rather than a suggestion of repurposing parts of the road reservation for this.</p> <p>The City as stated within the Structure Plan intends on embellishing this road with a considerable amount of landscaping including street trees through the centre line of the road in order to create a separating edge between industrial uses and the mixed-business zone therefore the need for the 32m road reserve is further warranted.</p> <p>It is recognised that landowners fronting Verde Drive may seek to work together and amalgamate lots to improve the lot layouts in this location and that as a result there may be alternative solutions to the intent of the easement in gross. In response the City recognises the WAPCs position on structure plans in that “due regard” is given to them. As a result “due regard” will be given to the intent of the easement in gross when and if a further solution is presented as a subsequent subdivision or development application stage. At such a time the City will work with landowners and address the necessary changes to the associated North Lake Road Local Planning Policy (noting also this policy requires updating post structure plan approval).</p> <p>The City will consult with landowners when modifications are made to the North Lake Road Local Planning Policy following the structure plan adoption.</p> <p>The City will consult with landowners when modifications are made to the North Lake Road Local Planning Policy</p>

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		<p>assumption or expectation that such expenses may be reimbursed as part of a compensation package to be agreed at some point in time in the future. We propose that these costs would be agreed with council in advance of engagement of the consultants on the basis of agreed hourly rates of remuneration and will potentially include the following disciplines - solicitor, surveyor, town planner, real estate advisor / valuer together with all costs associated with re-issuing of titles.</p> <p>We trust the above conveys our position and general support on this proposal and look forward to clarification and confirmation of the Councils position on the above items in due course.</p>	<p>following the structure plan adoption.</p> <p><u>PTA commuter car park</u></p> <p>As per the Land and Administration Act 1997 landowners will be given the first right to refuse should the commuter car park no longer be required.</p> <p><u>Compensation of costs incurred</u></p> <p>The land acquisition and amalgamation process will be coordinated by the WAPC and will be guided by the provisions of the Land Administration Act. This process will guide compensation.</p>
18	BWP Trust GPO Box M978 PERTH WA 6843	<p>We have reviewed the proposed Cockburn Central East Structure Plan and are generally supportive.</p> <p>Bunnings Warehouse has been an occupier of the above premises since 2009 and as far as we are aware intend to occupy the site for the longer term.</p> <p>The success of the Bunnings Warehouse is related to its location and its convenient access to arterial roads. The Bunnings Warehouse currently enjoys left in left out access to Armadale Rd via Knock Place, all movements access from the Verde Drive roundabout and left in left out to Verde Drive near the Armadale Rd intersection.</p> <p>We have reviewed the information available including the attached "Proposed Cockburn Central East Structure Plan", the existing "Solomon Road Structure Plan" and the proposed "North Lake Road Realignment Kwinana Freeway to Fraser Road Plan and Profile Concept Plan". On the basis that no change is made to the three existing access arrangements (other than by incorporating grade separated roads and intersections), Bunnings support the significant road network the area and can see with wider community benefits that it will ultimately provide.</p>	<p><b>Noted and supported</b></p> <p>The City will send a copy of all submissions to MRWA to inform their final design. However it is noted that the 85% design currently provides for the retention of the current access arrangements for Bunnings. The City has also identified within the Structure Plan the need for MRWA to integrate the public access easement along Armadale Road with the Armadale Road and North Lake Road Bridge Interchange project – see Item 1 within Table 2 of Part 1 of the Structure Plan report.</p>
19	Bunnings Group Limited	On behalf of Bunnings Group Limited we submit that we are generally in support of the proposed Cockburn Central East Structure Plan.	<b>Noted and supported</b>

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	PO Box 2277 MANSFIELD BC QLD 4122	<p>Bunnings Warehouse has been an occupier of the above premises since 2009 with the intention of being a long-term occupier and integral part of the local community for years to come.</p> <p>The success of the Bunnings Warehouse is related to its location and its convenient access to arterial roads. The Bunnings Warehouse currently enjoys left in left out access to Armadale Rd via Knock Place, all movements access from the Verde Drive roundabout and left in left out to Verde Drive near the Armadale Rd intersection.</p> <p>Bunnings has reviewed the information available including the attached "Proposed Cockburn Central East Structure Plan", the existing "Solomon Road Structure Plan" and the proposed "North Lake Road Realignment Kwinana Freeway to Fraser Road Plan and Profile Concept Plan". On the basis that no change is made to the three existing access arrangements (other than by incorporating grade separated roads and intersections), Bunnings support the significant road network improvements to the area and can see with wider community benefits that it will ultimately provide.</p> <p>We trust that this submission will be considered during the evaluation process and Bunnings would like the opportunity to be heard in support of this submission.</p>	See response to submission 18.
20	Swire Cold Storage c/o Urbis Level 14, The Quadrant, 1 William Street PERTH WA 6000	<p>On behalf of our Client, Swire Cold Storage, we are pleased to provide the following submission on the City's Cockburn Central East Structure Plan (CCESP). We previously provided a submission to the City dated 19th October 2015 on the Draft Cockburn Central Activity Centre Structure Plan (attached) which included the current Structure Plan area, and consider many of the comments and issues we raised to be still current.</p> <p>Our Client owns and operates a large cold storage facility at Lot 11 (No.40) Solomon Road, Jandakot. Swire has invested heavily in the Cockburn Central East Precinct (formerly Solomon Road Structure Plan Area) and therefore maintains a strong interest in the Structure Plan's recommendations.</p> <p>As noted previously:</p> <p>The key requirement for Swire Cold Storage is ensuring that its operation can</p>	<p><u>Traffic management - Intersection of Solomon Road and Verde Drive</u></p> <p>Agree - The City, separate and prior to the Cockburn Central East Structure Plan process has identified the need to upgrade the Solomon Road and Verde Drive intersection to a roundabout. The City has communicated this intent to Swires previously and still intends on implementing the upgrade.</p> <p>It is recommended the roundabout be shown on the Structure Plan map.</p> <p><u>Residential uses not supported in the Mixed-Business zone</u></p>



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		<p>continue in its current capacity, unhindered by Structure Plan recommendations, road construction, future road design or land use change.</p> <p>In preparing this submission, we have reviewed the CCESP in detail, along with the relevant associated technical documents, particularly the GTA Traffic Impact Assessment (TIA).</p> <p>This submission is prepared in the context of current discussions between the City of Cockburn and Swire, represented by Rowley Legal, in regard to the construction of Verde Drive where it severs the site, and the provision and maintenance of access to and from the site. Comment on the Structure Plan and its associated supporting technical documents are also provided in this submission by Transcore.</p> <p>Structure Plan proposals relating to Swire land The CCESP proposes to classify the western portion of the Swire land light and service industry, with the previously proposed extension of Verde Drive severing the site from the eastern portion, which is proposed to be reserved Parks and Recreation under the Structure Plan. Verde Drive is identified as a District Distributor Integrator A road. To the north, west and east of the site, along Verde Drive is Mixed Business land – excluding Residential zoning in the short-medium term (with easements in gross in the main), and other industrial land.</p> <p>No traffic management is shown at the intersection of Verde Drive and Solomon Road, however, controlled intersections are proposed at the intersections of Solomon Road/Armadale Road, and Verde Drive/Armadale Road (not notated within legend). Access to the Swire site will be via either the North Lake Road extension and Verde Drive, or Armadale Road via Solomon Road.</p> <p><b>Comments on CCESP</b> Our comments on the CCESP are detailed as follows:</p> <p>The subject site is located within Precinct 1 – Central and Eastern Area. Swire supports the continued purpose of this land for light and service industrial purposes.</p>	<p>Agree. Residential development east of the freeway is not desirable in the short to medium term as a result of the presence of industrial uses within the locality.</p> <p><u>400-800m catchment not shown on the structure plan map</u></p> <p>Not supported – This element is not required on the structure plan map. If the applicant would like to see a map with the 400 to 800m shown then one is available on page 12 of the Market feasibility Assessment supporting the structure plan or the distance can be measured through the City's online mapping system.</p> <p>With regard to where residential development will be located in the long term – this will be something that requires extended discussion and analysis with landowners in this area and the state government. This “future stage” will be as per the structure plan states – when a comprehensive Metropolitan Region Scheme amendment is undertaken to guide the future of Cockburn Central East.</p> <p><u>Site access</u></p> <p>The City can provide assurance for site access in respect of the projects it has responsibility for – that being for the upgrade of the Solomon Road and Verde Drive intersection and Verde Drive and a portion of Solomon Road is likely. The City will pass on all transport related comments on to MRWA to inform the final design drawings for the Armadale Road and North Lake Road Interchange project.</p> <p>This matter has been discussed and addressed with the legal representative of Swires. B double access will be:</p> <ul style="list-style-type: none"> <li>- a right in and left out of the site, from the new driveway positioned off Verde Drive;</li> </ul>

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		<p>We note that Residential uses are not supported within the Mixed Business designation, other than on Lot 500 Armadale Road, in the short to medium term, though the use may be allowed in the longer term. We support this position as it will assist in managing domestic traffic on these roads, and avert complaints relating to the operation of established and emerging businesses operating within their respective zonings within the locality. Swire intends to operate from the site for the long term and therefore is not supportive of any residential development occurring within proximity to its site and the surrounding industrial land uses.</p> <p>We note that the Structure Plan itself does not identify a 400-800m eastern catchment to the Cockburn Central Train Station where high density development is expected within the long term (though it is referred to in text) so it is not possible to assess the implications for the subject site or immediate surrounds. We consider this radius should be shown on the appropriate plan(s). Swire reiterates its position that it does not support any residential development in proximity to its site due to the risk it poses to Swire's operations.</p> <p>We note in Table 2 that the construction of Verde Drive between new Armadale Road alignment and Solomon Road is required to be undertaken prior to completion of the Armadale Road and North Lake Road Bridge Interchange project, and funded by landowners within the alignment by the provision of land within the easement and the City of Cockburn in relation to the cost of construction.</p> <p>Firstly, our Client requires the City's assurance that at all times during construction of Verde Drive and the construction of North Lake Road and associated infrastructure, that it will be able to maintain its regular operations. This includes movement on the local and immediate road network; and access to the regional road network, including to the freeway north and south.</p> <p>A review of the relevant documentation does not provide us with sufficient certainty that accessibility will be maintained. It is unacceptable to Swire to impact on its operations in any way during the construction phase(s) and we reiterate our previous comments that it is essential Swire's operations can continue unimpeded during this period.</p>	<p>- a new roundabout at Verde and Solomon will improve accessibility</p> <p>The City has provided a detailed explanation in respect of the new access arrangements, and it is understood these meet the needs of Swires.</p> <p><u>Traffic Management plan</u></p> <p>The City will prepare a traffic management plan to inform the road construction plans. Noting that this is not part of the structure plan process.</p> <p><u>Verde Drive – Other Regional Road – MRS amendment</u></p> <p>The City is not proposing an amendment to the MRS to reclassify Verde Drive as part of the structure plan process. The road classification may be reviewed once the regional and local road network upgrades have been undertaken.</p> <p><u>Road infrastructure to accommodate B-double trucks</u></p> <p>The City recognises the need to accommodate trucks within the precinct and subject to existing constraints will undertake upgrades where required. MRWA have also considered all transport needs within the Armadale Road and North Lake Road Bridge Interchange project.</p> <p><u>Cost contributions to road upgrades and land for Parks and Recreation</u></p> <p>The cost contribution is currently a separate process being undertaken between the City and Swires.</p> <p><u>Acquisition of land for Verde Drive</u></p> <p>The City currently has no plans to acquire further land for Verde Drive into the future.</p>

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		<p>In this regard, a Management Plan enabling construction and operation of Swire Cold Storage and other businesses in the area to operate as usual during this transition period, will be essential.</p> <p>Swire is very concerned that the proposed relocation of its access from Solomon Road to Verde Drive will impact its accessibility to the site, given the apparent increased traffic volumes along Verde Drive and Solomon Road, potentially inhibiting access for larger vehicles (including B-doubles) into the site, and competing with increased flow of 'non industrial' car traffic.</p> <p>As noted in our submission on MRS 1297/57 – South East and South West Districts Omnibus 2 (attached), Verde Drive is an Other Regional Road. In our view, the significant changes to the road network in this area warrant Verde Drive being downgraded to a local road, and not provide a regional function. In our discussions previously with Council Officers, the City advised that in due course, the MRS reservation would be lifted. We note that the MRS Amendment has yet to be finalised and we reiterate our request that the City pursue the downgrading of this road.</p> <p>Although the GTA Traffic Impact Assessment (TIA) report identifies a roundabout intersection at Verde Drive/Solomon Drive (as previously identified in the Solomon Road Structure Plan, there is no indication of this on the Structure Plan. We are concerned that that detailed intersection modelling has not occurred, and we are of the view that this should be done to more accurately evaluate the impacts on individual sites. We also believe this roundabout should be shown to clearly and appropriately articulate the management of this intersection.</p> <p>The design of road infrastructure (controlled intersections, kerbing etc.) must accommodate heavy vehicles (including B-doubles).</p> <p>Swire would be very concerned if the intensification of development within the area led to the City in any way limiting or precluding heavy vehicles from entering or exiting the road network to its site. Similarly, Swire Cold Storage would be concerned if any operational restrictions were established for existing and future industrial activities as a result of land use change.</p> <p>Swire is not prepared to pay for, or contribute to the subdivisional costs to create Verde Drive or cede the eastern portion of the land for Parks &amp;</p>	<p><u>SPP3.6 – Development contributions</u></p> <p>This Structure Plan does not propose further development contributions under the provisions of SPP3.6</p> <p><u>Transport modelling and the TIA</u></p> <p>The TIA considered the information available at that point in time, including the information available to the City and GTA from MRWA. Should further information become available post finalisation of the Armadale Road and North Lake Road Bridge Interchange project then it may be appropriate to update the TIA. The City will likely work with MRWA to identify relevant intersection upgrades as the project progresses. Noting that the Verde Drive and Solomon Road intersection is part of a separate upgrade and the upgrade requirements have been identified. The Armadale Road intersections are a MRWA responsibility. The PTA commuter car park requirements will be a PTA and MRWA requirement.</p> <p><u>Solomon Road and Verde Drive Intersection</u></p> <p>Swires should contact the City's engineering team to discuss the Solomon Road and Verde Drive Intersection and Swires site access. This intersection design has already been undertaken under a separate process to the structure plan.</p> <p><u>Communication of road and traffic related updates.</u></p> <p>The City as information becomes available from MRWA will inform affected landowners however it is noted the City has been discussing road upgrade requirements extensively as part of legal proceedings over the last 12 months.</p> <p>The City will work closely with landowners to ensure disruption is kept to a minimum for landowners through the delivery of a significant piece of infrastructure of which is</p>

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		<p>Recreation, and we expect the City will pay these costs.</p> <p>There is insufficient land available for a dual carriageway along Verde Drive in the longer term. Swire is concerned about the possibility for additional land to be acquired from its site as it is likely to compromise the efficiency of its operations if this is the case. Swire requires reassurance on this point.</p> <p>Swire requires assurance that it will not be required to contribute towards the upgrading of Verde Road or Solomon Road for either dual carriageway treatment or for any other reason, by way of developer contribution.</p> <p>Swire notes the provisions of 6.9.2. Given that Swire has at this point in time an adequate access point from its site and permeability to the surrounding road network, Swire requires assurance that the City will be scrupulous in identifying a defensible nexus between any future development and a demand for contributions to infrastructure in accordance with the requirements of SPP3.6.</p> <p>Comments specific to GTA TIA methodology and outcomes</p> <p>The transport modelling analysis undertaken in the TIA report is based on simple desktop modelling. The trip distribution and assignment of the proposed CCESP would be affected by the practical capacity of the surrounding roads (i.e. available road reserves) and intersection treatments along Armadale Road deviation (i.e. left in, left out intersections along the Armadale Road deviation). The shortest path assignment (distance against time) which is assumed in the TIA report would not be realistic considering the practical capacity of the road network and the proposed intersection restrictions within the modelling study area.</p> <p>The trip generation of Zone 7 (which reflects Lot 500 Armadale Road ) in the GTA TIA report should be updated by the approved Development Application and Transcore TIA report for Lot 500 Armadale Road.</p> <p>The TIA report does not provide intersection analysis for the internal intersections. The report also does not show what would be the proposed layout of the major internal intersections (i.e. intersection of Verde Drive with Cutler Road, Prinsep Road and Solomon Road). The operation of these intersections should be assessed for the future scenarios in accordance with</p>	<p>viewed as holding a substantial benefit for business within the precinct.</p>

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		<p>the requirements of the Transport Impact Assessment Guidelines (WAPC, August 2016). It is essential that Swire be provided with specific detail on the intersection of Solomon Road and Verde Drive and Solomon Road and Armadale Road in particular.</p> <p>The feasibility of the proposed upgrades (i.e. duplication of Solomon Road and Verde Drive) should be investigated and the projected traffic volumes should be adjusted if not feasible.</p> <p>In short, inadequate information (ie.traffic flow modelling and intersection design) has been provided within the TIA to enable more meaningful comment to be made. We reserve the right to provide further comment in respect to the TIA in due course upon provision of this information.</p> <p><b>Conclusion</b> The key requirement for Swire Cold Storage is ensuring that its operation can continue in its current capacity, unhindered by Structure Plan recommendations, road construction, future road design or land use change.</p>	
21	<p>Kim Jeffrey 40B Prinsep Road  JANDAKOT WA 6164</p>	<p><b>SUPPORT</b> Although I support the proposal, I believe the aim should be to encourage large trucks away from the residential area of Prinsep Road. Large Western Power Trucks and Container Semi's currently use the northern exit from Prinsep Rd onto Berigan as their main route. It is dangerous and is also a noise issue to the Residents. By keeping the part of Prinsep Rd from Western Power to Berigan as a through road for passenger vehicles only by use of chicanes may minimise heavy truck usage. The project to create a cul-de-sac at the end of The Lakes / Imlah Crt will create extra traffic to use Prinsep Rd. This is acceptable if there were to be less heavy hauling vehicles diverted away from the Residential area. Progress Road in Bibra Lake was successfully modified to divert large trucks away from residential area's and the model could be used in this Plan. The Plan should also include beautification to improve the section from Berigan Drive along Prinsep Rd to the Western Power Gates. Lighting is poor and rubbish vandals often use the dark area near Prinsep Park to dump all types of Rubbish. Extra Parking for Prinsep Park could also be looked at. This is a beautiful park underutilised because there is nowhere to park</p>	<p><b>Noted</b>  See response to submission number 15 for recommendations regarding the upgrade of the northern section of Prinsep Road.</p>
22	<p>West Coast Skin &amp; Hide Co Pty Ltd PO Box 370</p>	<p>Colliers Market Feasibility Study: Misha White's study was supplied by Colliers who are currently marketing Landcorp land parcels in Cockburn</p>	<p><u>Colliers report</u></p>

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	HAMILTON HILL WA 6963	<p>central west .This may be problematic as the independency and integrity of the document is compromised due to conflict. Colliers provide no warranty in relation to accuracy of Information, figures and or projections .Reliance upon this document by the Cockburn City Council the public and local landowners will need to be used with caution in a decision making capacity. Greater detail and accuracy may be provided by more extensive research provided by alternate sources that are less reliant on the authors value judgements.</p> <p>What affected landowners need to know prior to agreeing to the proposed adoption of the structure plan is an accurate assessment for compensation from the acquiring body responsible for the acquisition of the proposed PTA car park land south of the NLR extension. The acceptance of the structure plan will be reliant upon the compensation available. If compensation is inadequate on resumption then decision making outcomes may change from acceptance to rejection of the proposal. Alternative strategies available to acquisition need to be identified that are available to landowners. Leasing of the proposed PTA carpark area by the PTA on a medium to long term basis. Land swaps on a like for like basis with landcorp owned PTA car parks west of the freeway made available to affected landowners on the east of the freeway within the CCE structure plan are two examples of alternates to a compulsory acquisition. The island land identified in the Ubursol study may provide significant medium higher density mixed use development opportunities if forecast growth rates for the area eventuate and the labour parties Metrohubs planning revolution is aggressively pursued by the now elected government represented locally by Fran Logan and Yaz Mubarakai.</p> <p>Alternate research from Colliers found commercial space available to lease in the Cockburn Central precinct was the lowest of all metropolitan activity centres in 2016.One government office relocation will add significantly to the opportunities in the area in combination with organic growth and change due to preference of employment choices away from the CBD, encouraging natural decentralization. Industry analysts such as KPMG's Bernard Salt push for an alternate to the centralization of services and promote the movements of amenities to a decentralized zone to help cultivate employment opportunities, aid urban regeneration and promote denser living environments creating activity centres that match quality infill with amenity by creating a village style mix of open space, housing ,workplaces and entertainment venues. Helping abate the freeway gridlock that is so common amongst prior years state planning framework designed CBD centres</p>	<p>The City requested a response from Colliers regarding their research approach and how they ensure accuracy and integrity within their report preparation. The response received from Colliers is as follows -</p> <p>The advice provided by Colliers International in regards to Cockburn Central East (CCE) for the City of Cockburn is wholly independent of the marketing and sales services provided to LandCorp in regards to Cockburn Central West (CCW). The Colliers International report represents professional advice afforded to the City of Cockburn specific to the CCE structure plan. The City of Cockburn will be solely responsible for all decisions regarding the final CCE structure plan. Although the respective sites are proximate, the advice supplied does not represent a conflict of interest nor offers any direct benefit to LandCorp. Colliers International are responsible to conduct their business activities in accordance with the principles and standards of the formal Company Code of Conduct and Ethics; along with corporate policies regarding conflict of interest between parties. In addition, our employees are bound by the professional standards of their relevant occupational peak bodies. Colliers International must also comply with all applicable laws, rules and regulations in the areas in which we operate.</p> <p>Furthermore, Colliers international's most important asset is our relationship and reputation with our clients, and we take all steps necessary to ensure that the best service is provided on the basis of each client's individual needs, without bias or preference (16 August 2017).</p> <p><u>Accommodating high density mixed-use development within CCE</u></p> <p>The Cockburn Central East Structure Plan is informed by a process that considered the relevant planning opportunities and constraints and was heavily influenced by the existing constraints including industrial uses incompatible with</p>

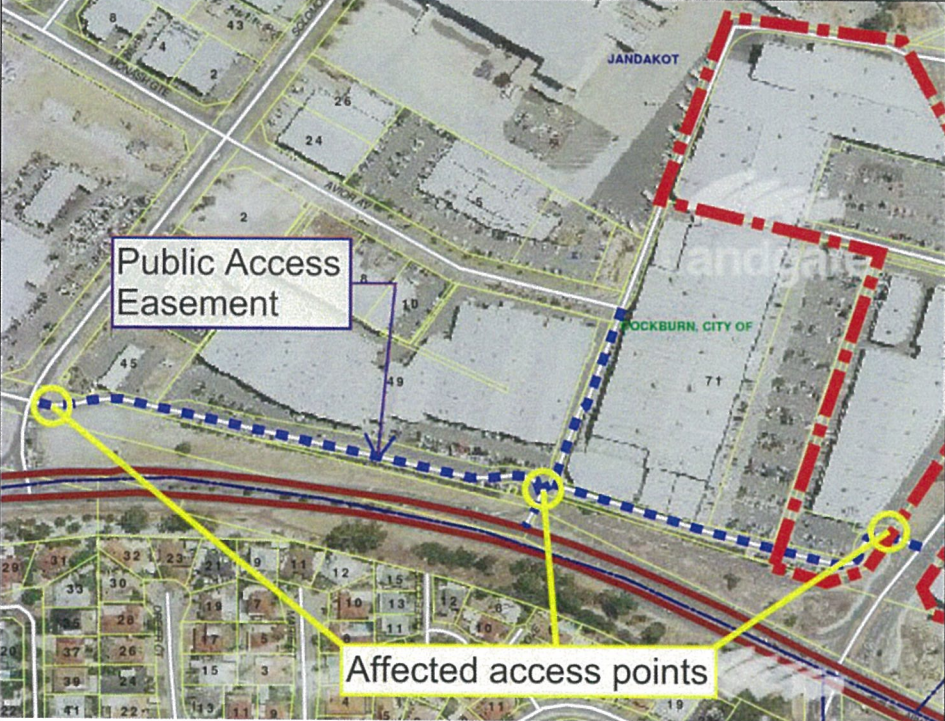
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		<p>common to interstate and international industrialized societies. Commuters to and from CBD employment precincts are faced with increased congestion and costs of parking vehicles in expensive undercover car parks on a daily basis increasing costs and consuming vast amounts of time and energy commuting to and from employment opportunities north of their local urban environments .Rates of medium and higher density uptake are escalating with a greater number of early adopters increasingly opting for the apartment living lock and leave environments close to a greater mix of built environment and employment diversity that evolves with higher densities with quality built environs preferably within 800 m co-ordinated and integrated transport network.</p> <p>The growth of these areas is assumed by Colliers to be only a long term possibility upon the market maturing with diminished supply. Supply has diminished within CCE as most lots are developed with only the blocks adjacent to the train station available to develop. Opinions can differ from that of Colliers in regards to the retail and commercial sectors vacancy and Revenue turnover struggling to keep pace with rentals and reduced disposable incomes present in past years while suburban shopping centres are attracting constant patronage from the renewal of dining and leisure related investment, such as Gateways locally.</p> <p>Corporate landowners within the structure plan need to assess whether the goal of the MRD outcomes based planning are aligned and beneficial to their companies .If not ,the directors of a corporation are obliged to decline to accept a proposal on grounds that a benefit does not accrue or the available information does not satisfy the due diligence required to assess whether shareholders interest have been appropriately held in regard to Corporations Act legislation and the duty of directors .Disgruntled shareholders may hold directors responsible for the actions or inactions regarding the proposal. Unknown complexities may arise that are beyond the current investment horizon that may act either beneficially or to the detriment of the proposal .Items such as the expense of constructing Verde Drive prior to the overpass and the land reserve allocated according to conditions of previous DC Areas 8,13 &amp; 20,cost blow outs and inadequate compensation from acquiring authorities are just some situations that may arise.</p> <p>Industrial land development has increased significantly in surrounding areas, latitude 32, Flinders square, Henderson, Cockburn Central, Ranford road and</p>	<p>residential uses. The City sought to provide a flexible zone in the application of the Mixed-Business zone that would contribute to both the short term and long term needs of landowners and precinct strategic objectives.</p> <p>It is considered a sub-optimal planning outcome to prioritise further residential or mixed use development opportunities within Cockburn Central East, when the key ingredient to further grow the activity centre remains one of ensuring adequate business and employment growth. On the west side of the freeway, there is in excess of 15 years plus of readily developable land to accommodate residential and mixed use development. This west side is characterised by high levels of residential amenity, greater degrees of accessibility and co-location with civic facilities. It is important therefore to emphasise the west side for this purpose, and protect the east side for its intended long term planning objective for business and employment growth generation to mature the activity centre.</p> <p>Notwithstanding this, over the long term (20 plus year time horizon) the City has made provisions to facilitate and promote the transitioning of the precinct over time. This has been achieved through such elements as the designation of the Mixed-business zone, minimising the further fragmentation of land by prescribing minimum lot sizes. The PTA commuter car park will also ensure land in close proximity to the train station is retained so that it can transition over the long term to mixed-use high density residential development.</p> <p>Regardless of whether different parties agree on what the market will or will not deliver in the short to medium term, the existing constraints, including the underlying Industrial zone in the Metropolitan Scheme currently prevent residential development. The Department of Planning have been very clear in their views/advice that – “Any amendment to the Structure Plan that contemplates amending land use permissibility for residential uses is</p>

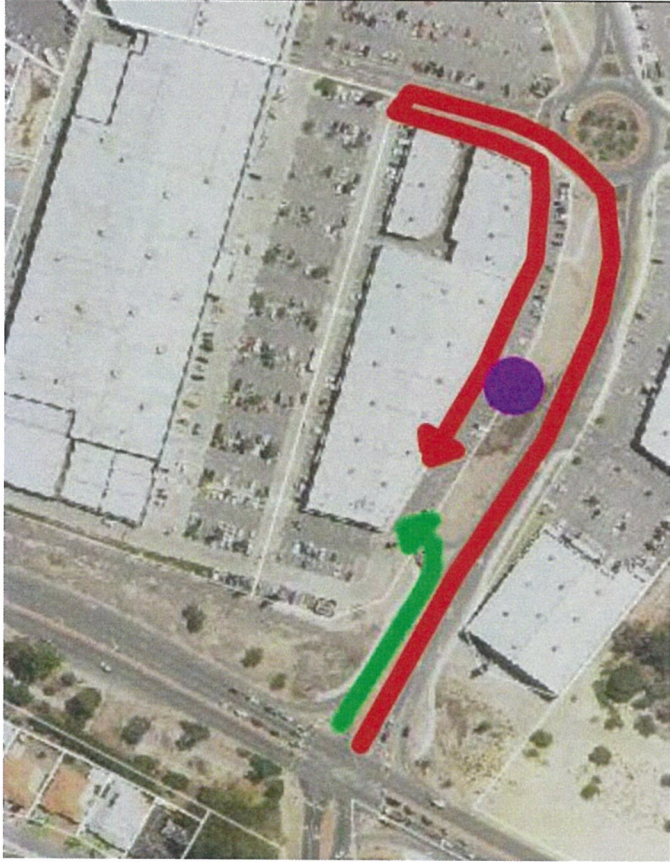


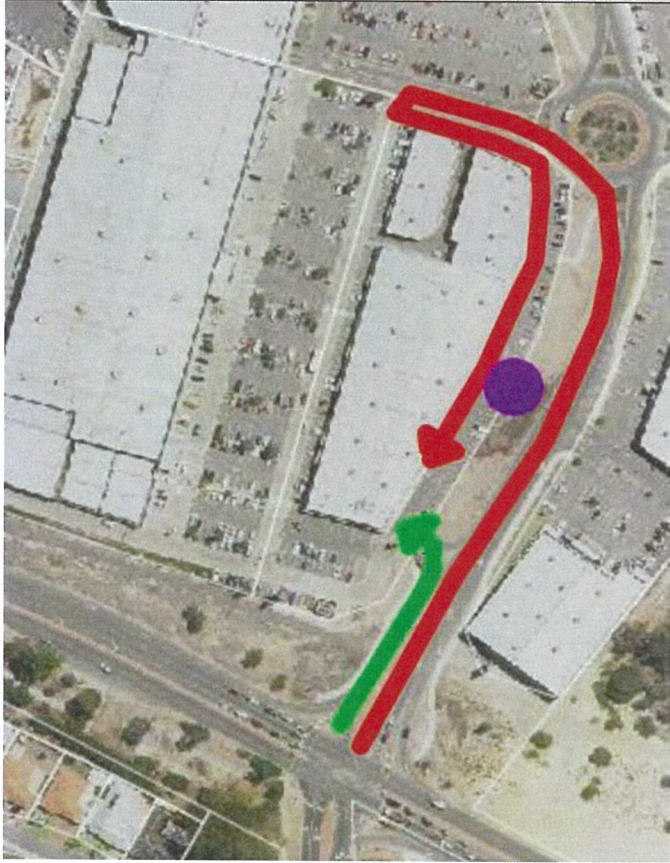
NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>Forestdale business park have added much supply. This is reason enough to consider rare adjacent land parcels so close to Transport nodes for greater density development rather than mixed business and PTA car park on lands that can be used for example to create vertical universities that make use of the land, satisfying Metrohub objectives of employment creation, knowledge based education and student accommodation in an area similar to Monash University in Caulfield, Victoria that can provide diversity and focus for the area. Local residents can actively participant in the public submission stage of the development .You can be responsible to shape the precinct for the long term future not only of the local amenity but also the states future. Think of local youth and their future prospects .For example, does a car park and major arterial road that consumes 35 000 m2 of rare land answer their needs!</p> <p>Finally decisions need to be made at present providing certainty, uniformity and consistency for local government, business, residents and landowners responsible for our future.</p> <p><b>COLLIERS REPORT</b> Caution when using information that does not warrant its accuracy.</p> <p>Metrohubs promised by the elected labour government will be aggressively pursued and underpinned by a revolution in planning.</p>	<p>contingent upon the Metropolitan Region Scheme (MRS) first being amended to Urban (currently zoned Industrial except for Lot 500 Armadale Road and Knock Place). The MRS amendment will need to consider the form and function of the Cockburn Central Activity Centre at that point in time and address the provision of adequate employment land for the South West region and the locality, recognising the objectives of the strategic planning framework.”</p> <p>Such a proposal would need to address the transitioning of industrial uses out of the centre and at this point in time the City does not support this approach, instead recognising the need to also accommodate existing businesses operating in the precinct.</p> <p>Noted in the submission is a reference to the State Governments Metronet hubs – it may indeed be that this process could include Cockburn Central East however again noting that this would have to be a comprehensive process that considered the wider locality and addressed planning at both a metropolitan and local level.</p> <p>Land compensation process</p> <p>With regard to the land assembly and compensation process – this will be undertaken by the WAPC under the scope of the Land and Administration Act.</p>
23	Planning Solutions GPO Box 2709 CLOISTERS SQUARE PO WA 6850	<p>Planning Solutions acts on behalf of Primewest Group, the centre managers of the ‘South Central’ commercial centre on Lot 403 (87) Armadale Road, Jandakot (subject site).</p> <p>We welcome the opportunity to make a submission on the City’s draft Cockburn Central East Structure Plan (CCESP) released for public comment until 31 July 2017.</p>	<p><u>Supported - Access to the south central site</u></p> <p>The Structure Plan and the MRWA road design retains access points into the South central site by –</p> <p>The MRWA design retains the current left-in-left out for the south central site at Verde Drive and for the left-in left-out along Armadale Road. The City will work with MRWA and</p>



NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>We note the draft CCESP is a high level strategic document, providing an overarching vision for the Solomon Road precinct, and intended to replace the current Solomon Road Structure Plan. Our client broadly supports the draft CCESP's vision for the future land use direction of the area, and the City's intent to consolidate future zoning of the subject site. However, the draft CCESP is being prepared at the same time as Main Roads WA (MRWA) is finalising its plans for the grade separation of Armadale Road, and creation of a 'duck and dive' bypass of the Solomon and Verde Drive intersections. The draft CCESP does not adequately address the implication of MRWA's plans. As such, we consider the CCESP should also consider the following:</p> <ol style="list-style-type: none"> <li>1. The need to protect and ensure convenient access to the subject site and overall precinct.</li> <li>2. The preparation of a precinct level wayfinding/branding signage strategy.</li> </ol> <p><b>Access</b></p> <p>The draft CCESP depicts the existing access points, which include:</p> <ul style="list-style-type: none"> <li>• Left in/left out access to the western portion of the subject site.</li> <li>• Left in/left out access to Armadale Road.</li> <li>• Left in/left out access to the Puma Service Station site (at the Solomon Road/Armadale Road intersection).</li> </ul> <p>These access points form part of a wider easement, providing rights of carriageway and access between the subject site and neighbouring showroom fronting Armadale Road (west of the subject site). <b>Figure 1</b> below illustrates the public access easement and affected access points.</p>	<p>will address within the structure plan accordingly.</p> <p>It is recognised that the Solomon Road access point to the public access easement has not yet been resolved by MRWA. Therefore the City has included within part 1 (table 2) of the structure plan the following - <i>Public access easement along the northern frontage of Armadale Road between Solomon Road and Verde Drive to integrate with newly alignment Armadale Road and intersections.</i></p> <p>It is also recommended the left-in-left out directional arrows be added to the structure plan map at both the midpoint between Verde Drive/Armadale Road intersection and the existing Verde Drive roundabout. In addition to the entrance mid-block along Armadale Road.</p> <p>It is further noted that within the 8 June OCM report of which commented on MRWA route definition report a recommendation was made to MRWA to undertake an education program with local business owners regarding the new access arrangements including access and using the two new roundabouts.</p> <p><u>Signage strategy</u></p> <p>The City agrees that directional signage should be provided to signal to passing trade the entrance locations for the businesses in the Solomon Road structure plan precinct. The City recognises the role MRWA can provide in integrating signage into their design with other directional sign needs and therefore alongside all relevant submission comments relating to transport and access needs will forward this request to MRWA. It is however noted that this request was also passed on to MRWA when the submissions were finalised for the wider Cockburn Central Activity Centre Strategy. Once the MRWA signage provisions are understood the City will investigate further signage opportunities if so required.</p>

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		 <p> <b>Figure 1: Public access easement and access points</b>  MRWA is finalising plans for the Armadale Road deviation and new North Lake Road Bridge / Freeway Interchange project and has prepared a route definition study (RDS). The RDS recommends removal of the left in/left out access to the western portion of the subject site and relocation of the left in/left out access point to the Puma site.   At the 8 June 2017 Ordinary Council Meeting, the City presented a report seeking Council support for MRWA's RDS. The City's officers identified concerns with the recommended changes to current access arrangements. As a potential solution, the City proposed the relocation of the existing access point of the subject site to midway between the Verde Drive/Armadale Road intersection and the existing Verde Drive roundabout (refer to Figure 2 below). We concur with the City's concerns and support further negotiations between the City, MRWA and Planning Solutions on behalf of our client. </p>	

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		 <p><b>Figure 2: City's</b></p> <p><b>proposed access point relocation.</b></p> <p>The potential removal/modification of the Verde Drive access point will not only inconvenience customers of businesses on the subject site, but all showrooms relying on passing trade along Armadale Road. The CCESP provides an opportunity to ensure the easements and access to the showrooms along Armadale Road (including the subject site) are planned for in a coordinated manner, with direct consultation between the City, MRWA, and affected businesses and landowners.</p>	



**Figure 2: City's**

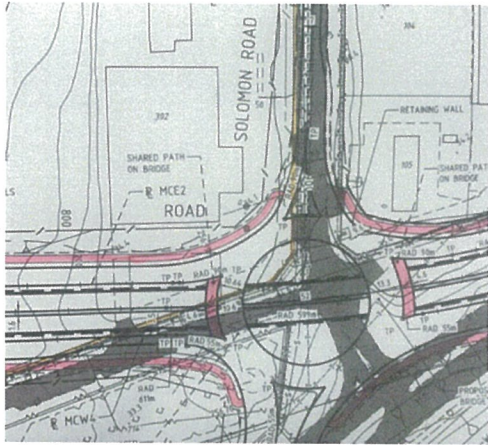
**proposed access point relocation.**

The potential removal/modification of the Verde Drive access point will not only inconvenience customers of businesses on the subject site, but all showrooms relying on passing trade along Armadale Road. The CCESP provides an opportunity to ensure the easements and access to the showrooms along Armadale Road (including the subject site) are planned for in a coordinated manner, with direct consultation between the City, MRWA, and affected businesses and landowners.



NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p><b>Recommendations – Access</b></p> <ul style="list-style-type: none"> <li>• Depict a relocated (midpoint) left-in/left-out access point to the Verde Drive in the CCESP.</li> <li>• Work with affected businesses and landowners to reconfigure the public access easement.</li> </ul> <p><b>Signage Strategy</b></p> <p>There is a significant misalignment between the land uses proposed by the City and the road network planning for the precinct. These businesses rely on exposure to passing trade along Armadale Road, together with a legible road network for safe and convenient access. Customers will need to understand how to access the subject site well in advance of the Verde Drive/Armadale Road intersection.</p> <p>To access the subject site from the east, customers will need to exit Armadale Road via the off-ramp entrance approximately 480m before the subject site. Customers approaching from the north west, via the Kwinana Freeway and/or North Lake Road will need to exit North Lake Road via the off-ramp entrance approximately 820m before the subject site.</p> <p>In February 2016, the City's officers presented a report to Council on the outcomes of submissions on the draft Cockburn Central Activity Centre Plan. The City noted concerns on the resulting impacts on Verde Drive because of the revised Armadale Road deviation / North Lake Road Bridge and extension and stated:</p> <p><i>...it is also recognised that the removal of through traffic can reduce the potential for passing trade. In response it is proposed the issue of advertising and visibility can be addressed through an overarching signage strategy for the precinct. This strategy should be undertaken alongside the review of the Solomon Road LSP. This may include significant gateway signage along Armadale Road identifying the precinct and its businesses. [emphasis added]</i></p> <p>There is a clear need for an overarching precinct level signage strategy, which brands the precinct and provides significant way-finding and educational signage. The strategy should not only identify the precinct and its businesses, but inform visitors on how to access/traverse the precinct, including before the approach to the Armadale Road and North Lake Road off-ramps.</p>	

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p><b>Recommendations – Access</b></p> <ul style="list-style-type: none"> <li>Prepare a precinct wide, signage/promotion strategy in collaboration with businesses and landowners, for incorporation into the CCESP.</li> </ul> <p><b>CONCLUSION</b></p> <p>We thank the City for the opportunity to provide comments in relation to its proposed CCESP.</p> <p>We look forward to your confirmation of receipt of this submission and request the following:</p> <ol style="list-style-type: none"> <li>To be informed about the progress of the City's Cockburn Central East Structure Plan.</li> <li>Depict a relocated (midpoint) left-in/left-out access point to the Verde Drive in the CCESP.</li> <li>Work with affected businesses and landowners to reconfigure the public access easement.</li> <li>Prepare a precinct wide, signage/promotion strategy in collaboration with businesses and landowners for incorporation into the CCESP.\</li> <li>The opportunity to present at any Committee/Council meeting, at which the matter is considered.</li> </ol>	
24	Jandakot Capital Pty Ltd & Cockburn Central Motors Pty Ltd 46 Money Street PERTH WA 6000	<p><b>Structure Plan Proposal - Cockburn Central East</b></p> <ol style="list-style-type: none"> <li>We refer to your letter dated 28 June 2017 regarding the proposed Cockburn Central East Structure Plan (Structure Plan).</li> <li>We act for Jandakot Capital Pty Ltd and Cockburn Central Motors Pty Ltd (CCM), the owner and occupier of 1 Knock Place, Jandakot (Land).</li> <li>On behalf of our clients, we make the following submissions on the Structure Plan.</li> </ol> <p><b>Summary</b></p> <ol style="list-style-type: none"> <li>Our clients object to the Structure Plan for the following reasons: <ol style="list-style-type: none"> <li>a significant portion of the Land will be required to provide for the North Lake Road Bridge and freeway interchange (Road Works);</li> </ol> </li> </ol>	<p><b>Not supported</b></p> <p><u>Alternative road design – Armadale Road</u></p> <p>The associated route definition study, prepared by MRWA, has thoroughly considered all the design options before arriving at a preferred concept. This considers all the relevant design issues, and how the constructability and operability of the project can be optimised. There is no opportunity for further changes to the road design, given the extensive research and analysis which underpinned arriving at the route provided within the route definition study. A traffic light option was also not capable of being implemented, given the modelled traffic volumes and the</p>

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		<p>b) the loss of Land will cause significant business disruption;</p> <p>c) the Road Works are achievable under an alternative design options which will result in a lesser impact on the business conducted on the Land; and</p> <p>d) the Structure Plans places significant emphasis on regional traffic at the expense of local business.</p> <p><b>Loss of Land</b></p> <p>5. The Structure Plan impacts a significant portion of the Land, which will be required for the Road Works.</p> <p>6. The loss of this portion of the Land is of great concern to our clients. It significantly alters both the existing and the intended future use of the Land.</p> <p>7. Jandakot Capital planned to develop the entirety of the Land for the proposed use of 'Motor Vehicle Sale and Motor Vehicle Repairs'. Development applications dated 25 June 2015 (Original DA) and 16 December 2016 (Subsequent DA) provide evidence of this intention. These applications were refused because they conflicted with the Road Works.</p> <p>8. CCM leased the Land for the purpose of developing its car sales and repair business, however, the refusals of the Original DA and Subsequent DA have precluded CCM from using the Land as it intended. To allow for some continuation of its business operations, it has become necessary for CCM to lease space for a car showroom at the nearby Cockburn Central Shopping Centre. CCM originally envisaged the showroom to be located on the Land.</p> <p><b>Resultant business disruptions</b></p> <p>9. To accommodate the impact of the Road Works on the Land, the owner submitted the Subsequent DA to ensure the Road Works did not affect the application area as was the case in the Original DA. However, the WAPC resolved to refuse the Subsequent DA due to the Road Works.</p> <p>10. On 8 June 2017, the owner submitted a further amended development application that is currently under consideration by the City and the WAPC (Current DA).</p>	<p>need to achieve grade separation.</p> <p><u>Consideration of business operations</u></p> <p>The City has attempted to work with Hyundai to seek an outcome that can facilitate development and the Armadale Road realignment. The City has provided the tenant and owner of 1 Knock Place with MRWA latest plans (shown below and sent on 1.06.17) that demonstrate a 5-10m setback from the new regional road alignment including the provision of a footpath shown in pink. Access will be provided toward the rear of the site. The illustration clearly illustrates the considerably increased level of passing trade that will occur for the Hyundai business.</p>  <p>With regard to the development approvals, this timeline is noted. The City has sought to work with the applicant where possible. With regard to the recent WAPC refusal was as a result of signage and associated services being located within the PCA122 area – not for the proposed buildings.</p>

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		<p>11. Approval of the Current DA would enable the owner and CCM to realise some use of the Land. However, the extent of the use will be significantly diminished in comparison to that contemplated in the Original DA.</p> <p>12. It is likely that the Road Works will result in:</p> <ul style="list-style-type: none"> <li>a) a significant reduction in visibility for passing trade;</li> <li>b) inadequate access to the Land</li> <li>c) relocation of the entrance to the Land;</li> <li>d) alteration of existing buildings on the Land to meet minimum setback requirements; and</li> <li>e) an inability to maintain functionality of the existing building, due to the removal of a service lane.</li> </ul> <p><b>Alternative design</b></p> <p>13. Our clients traffic expert has advised that there are a number of options available to reduce the overall impact of the Road Works on the Land.</p> <p>14. These options are as follows:</p> <ul style="list-style-type: none"> <li>a) relocating the Armadale Road, Solomon Road and Beeliar Drive elevated roundabout interchange;</li> <li>b) providing a roundabout at the intersection of Armadale Road and Verde Drive; or</li> <li>c) providing of a Single Point Urban Interchange (traffic signals) at the intersection for Armadale Road, Solomon Road, Beeliar drive, Armadale Road and Tapper Road.</li> </ul> <p>15. The Report confirms that the above options can be achieved without adversely affecting residential properties and without increasing the current impact on commercial properties.</p> <p>16. It is noted that although some of the options impact the Public Transport Authority's parking areas, these impacts can be addressed through a number of mitigating measures, which include the use of retaining walls, reconfiguration of the car park and additional car parking areas closer to the Cockburn Rail Station. Additionally, there</p>	

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		<p>has been a noticeable decrease in visitors to these parking areas since the opening of the Aubin Grove Station.</p> <p><b>Emphasis on regional roads</b></p> <p>17. The Structure Plan concerns the distribution of regional traffic through the implementation of the Road Works.</p> <p>18. The effective distribution of regional traffic should not come at the expense of local landowners and businesses. Rather, priority should be given to maintaining effective access and exposure to local industry rather than emphasising regional traffic at the detriment of local business</p> <p>19. Further detail can be provided on any of the above submissions.</p> <p><b>Compensation implications</b></p> <p>20. The effects of the Structure Plan in its current form will inevitably result in claims for compensation. That is an outcome which clearly would be minimised by employing the alternative approaches recommended in this letter</p>	
25	Landowner	<p><b>OBJECT</b></p> <p>Whilst we are generally in support of the proposal, the proposed MRWA resumption of a portion of 45 Armadale Road lot 105, DP 50958) and the construction of a solid median on Solomon Road will restrict access to left in left out on via the Solomon Road crossover. The resulting reduction in customer numbers and restricted access for fuel tankers will make the business unviable. We can see a possible remedy and would like to engage in discussion with MRWA and City of Cockburn</p>	<p><b>Support</b></p> <p>The City discussed with the landowner the intent of this conversation. Site access options require discussion in this location with MRWA given the immediate impact from the Armadale Road and North Lake Road Bridge Interchange project. The City recommends MRWA meeting with the owner of 45 Armadale as soon as possible.</p> <p>The City will write to MRWA supporting consultation with landowners affected by the road upgrades.</p>
26	Landowner	<b>SUPPORT</b>	<b>Noted</b>
27	Department of Water and Environmental Regulation Locked Bag 33, Cloisters Square	<p>The Department of Water and Environmental Regulation (DWER) has reviewed the proposal and wishes to provide the following advice.</p> <p><b>Better Urban Water Management</b></p> <p>Consistent with <i>Better Urban Water Management</i> (BUWM) (WAPC, 2008) and policy measures outlined in <i>State Planning Policy 2.9: Water Resources</i>, the proposed Local Structure Plan (LSP) should be supported by an</p>	<p><b>Noted and actioned</b></p> <p>The City following this advice has received in writing approval of the LWMS. A copy of the approved LWMS will be forward to the WAPC with the Structure Plan seeking</p>



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	PERTH WA 6850	<p>approved Local Water Management Strategy (LWMS) prior to finalising and supporting the LSP.</p> <p>The Department has reviewed the <i>Cockburn Central East Local Water Management Strategy</i> (Cardno, 2017) and amendments are required. It is recommended that the LSP should not be finalised in the absence of a LWMS approved by the City of Cockburn and the Department, in accordance with BUWM. The Department is yet to receive an amended LWMS and the LSP does not contain a revised strategy.</p>	support for approval.
28	Department of Education 151 Royal Street EAST PERTH WA 6004	<p>The Department has reviewed the document and whilst the Cockburn Central East Structure Plan shows no residential development, your comment that mixed-use development may include residential in the long term is acknowledged.</p> <p>In the future any residential development on the eastern side of the freeway is anticipated to be within the catchment area for the future Banjup West (Calleya Estate) primary school.</p> <p>As planning progresses within the Cockburn Central East area the Department would welcome further detail on the dwelling type and yield to assist with its student analysis for the proposed school catchment</p>	<b>Noted</b>
29	Department for Planning, Lands and Heritage Locked Bag 2506 PERTH WA 6001	<p>A review of the Register of Places and Objects as well as the AHD's Aboriginal heritage database concludes that Aboriginal heritage place ID 3300 (Readymix Sandpit 2) will be impacted by the proposal.</p> <p>The proponent is advised to submit a statutory application (section 18) under the Aboriginal Heritage Act 1972 (AHA) in order to disturb 10 3300 (Readymix Sandpit 2).</p> <p>It is recommended that the proponent contact the South West Aboriginal Land and Sea Council (SWALSC), who represent the Whadjuk Native Title Claim group, to provide them with a copy of the proposal and seek their comments.</p> <p>For any proposed future works DPLH suggests that proponent refer to the State's Aboriginal Heritage Due Diligence Guidelines (Guidelines). The Guidelines can be found on the DPLH website at the following link:</p>	<p><b>Noted</b></p> <p>The Readymix Sandpit site 2 is located at the intersection of Armadale Road, Tapper Road and Verde Drive. The structure plan proposes no changes within this area, rather MRWA will be required to address this site as part of the construction approval process for the Armadale Road and North lake Road Bridge Interchange project – of which runs through this site.</p>

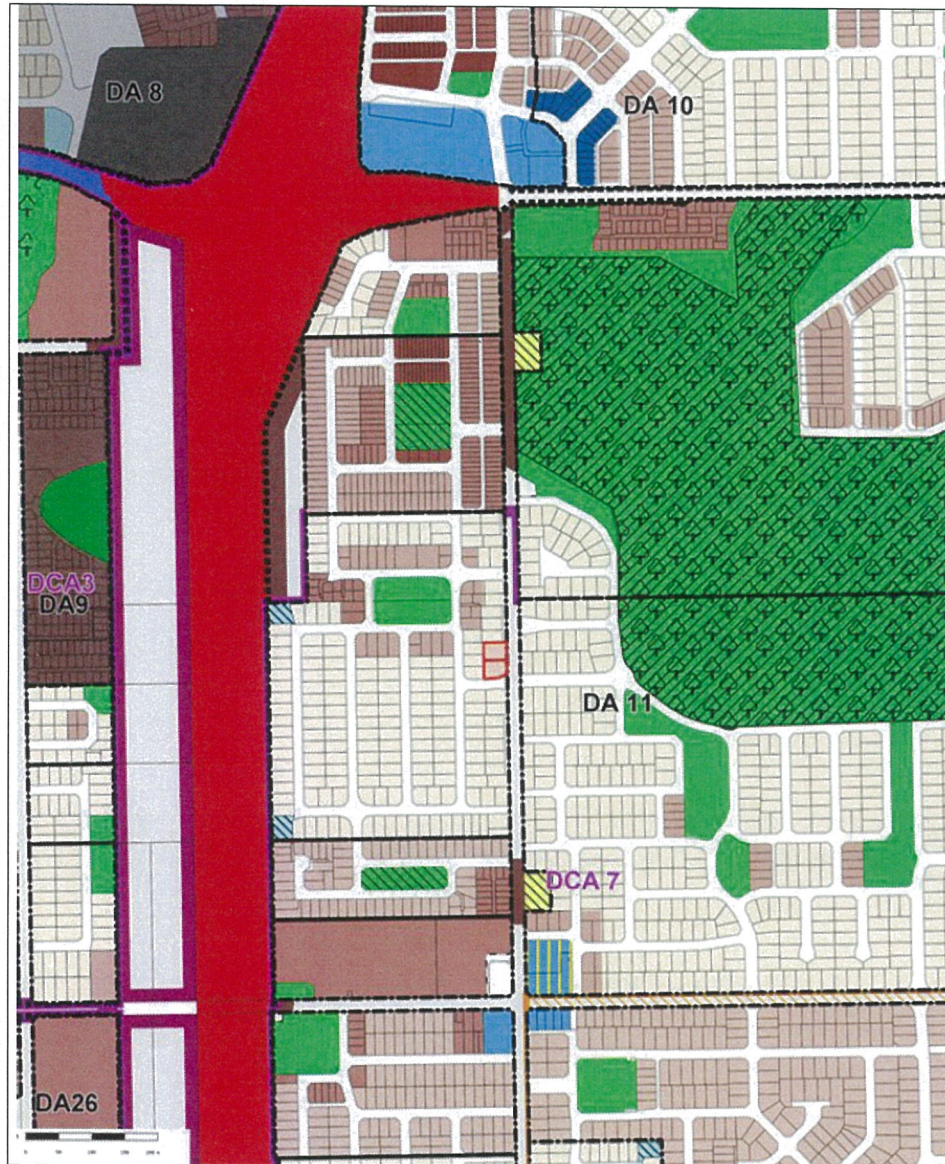
NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p><a href="http://www.daa.wa.gov.au/heritage/land-use/">http://www.daa.wa.gov.au/heritage/land-use/</a></p> <p>The Guidelines allow proponents to undertake their own risk assessment regarding any proposal's potential to impact Aboriginal heritage.</p>	
30	<p>Department of Biodiversity, Conservation and Attractions</p> <p>Locked Bag 104 Bentley Delivery Centre WA 6983</p>	<p>The Department of Biodiversity and Conservation's Parks and Wildlife Service has reviewed the proposal and provides the following advice.</p> <p><b>Threatened Flora</b></p> <p>The department has reviewed the Level 1 Flora and Fauna Assessment provided to support this structure plan and considers it adequate in identifying vegetation communities, vegetation condition and potential fauna habitat within the subject area. Parks and Wildlife however supports the report's recommendation to conduct further targeted flora assessments for <i>Caladenia huegelii</i> and other threatened flora likely to exist on site in the appropriate season for identification of the targeted plant species. Conduct of a follow-up survey would adequately confirm the presence or absence of threatened flora on site and should be completed prior to further statutory planning stages and vegetation clearing.</p> <p><b>Wetlands</b></p> <p>It is noted that a portion of Lots 802 and 800 are mapped as a Multiple Use category dampland. Parks and Wildlife considers the current wetland values (vegetation type and condition) suggest that the area of dampland within Lot 800 and 802 may align with a higher management category. Parks and Wildlife recommends that an appropriate wetland assessment is conducted to determine the extent and management category of the wetland on site to inform future planning and future management of the wetland on site. Any assessment should be conducted in accordance with the 'Protocol for proposing modifications to the 'Geomorphic Wetlands Swan Coastal Plain' dataset (2007).</p> <p>The LSP map shows that the vegetated portion of the wetland within Lot 802 is proposed as a local reserve for the purpose of 'Parks and Recreation'. Provided this reserve purpose does not allow modification of the vegetation or adversely impact the hydrology of this wetland the department supports the land use proposed over Lot 802. Parks and Wildlife recommends that a wetland management plan be prepared prior to further planning stages to guide the management and protection of the wetland within the local reserve.</p>	<p><u>Conduct further targeted flora assessments for <i>Caladenia huegelii</i></u></p> <p>Supported – the City has engaged Focused Vision to undertake the September 2017 survey as recommended within the Flora and Fauna study. Noting the City is not a landowner and will not be the party to clear land this information will be consolidated into the structure plan as it is being assessed by WAPC and/or will be made available alongside the structure plan documentation for landowners and MRWA and the WAPC.</p> <p>The City is undertaking the assessment given the crucial time constraints relating to when the study needs to be conducted – in September.</p> <p><u>Wetland management plan</u></p> <p>The City supports the preparation of a wetland management plan as a condition of subdivision and/or development</p> <p><u>Matters of National Environmental Significance</u></p> <p>The City confirms the inclusion of clause 4.2.4 within Part 1 of the structure plan of which alerts future development stages to the presence of Banksia Woodland within the structure plan area and the likelihood of obligations under the EPBC Act.</p>

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		<p><b>Matters of National Environmental Significance</b></p> <p>It is noted that advice sought by the City of Cockburn has indicated that referral of this proposal to the Commonwealth Department of Environment and Energy is not required at the local structure planning stage. Due however to the native vegetation clearing required to facilitate specific stages of this development, Parks and Wildlife considers there may be an impact to foraging habitat of threatened species listed under State and Federal legislation such as Carnaby's Black Cockatoo (<i>Calyptorhynchus latirostris</i>), Forest Red- tailed Black Cockatoo (<i>Calyptorhynchus banksii naso</i>) and Baudin's cockatoo (<i>Calyptorhynchus baudinii</i>). In addition, the subject area also contains vegetation commensurate with the recently federally listed Threatened Ecological Community (TEC) "Banksia Woodlands of the Swan Coastal Plain". Consideration should be given by individual proponents of each development stage to their obligations for assessment of the development in accordance the Wildlife Conservation Act 1950 and the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act).</p>	
31	Department of Planning, Lands and heritage	The Department of Planning, Lands and heritage (DoPLH) provided comment on Part 1 and 2 of the structure plan within a marked up version of a PDF document making it too difficult to replicate here. The comments relate to administrative type changes only and as a result the City supports the suggestions.	<b>Support</b> – The City will undertake these changes when the DoPLH have confirmed all final required modifications.
32	Department of Water and Environmental Regulation (Environmental Planning Branch) Locked Bag 33, Cloisters Square PERTH WA 6850	<p>The OEPA has recently merged with the Department of Water and Department of Environment Regulation to create the new agency Department of Water and Environmental Regulation (DWER). The former agencies are in the process of amalgamating their functions. Until this fully occurs, please note that the advice in this correspondence relates to the services of the Environmental Protection Authority (EPA).</p> <p>The proposed structure plan has been prepared to provide direction for future land use planning and it is acknowledged that a number of environmental studies have been conducted. Banksia Woodland is mapped as occurring across the structure plan and the condition of the vegetation is mapped as 'very good' in Lots 802 and 800 Prinsep Road and Lot 14 Knock Place.</p>	<p><b>In part supported</b></p> <p>The Structure Plan proposes the protection of the wetland and vegetation within Lot 802 Prinsep Road and Lot 300 Abaya street. However retention over lots zoned Mixed-Business is unlikely given the location within the 400m catchment of the train station and the opportunities this holds for strategic infill development opportunities. Noted is the retention of the 2 wetlands in addition to the need for landowners to address obligations at the subdivision stage with regard to the Environment Protection and Biodiversity Conservation Act 1999.</p>

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		<p>The retention of vegetation on Lots 802 and 800 Prinsep Road in the structure plan, dated July 2017, is supported. It is recommended that vegetation in Lot 14 Knock Place also be retained.</p> <p>It is noted that the City of Cockburn has received advice from the Commonwealth Department of Environment and Energy, concerning any proposal, where the clearing of vegetation may have the potential to impact on matters protected under the Environment Protection and Biodiversity Conservation Act 1999.</p>	



# Location Plan



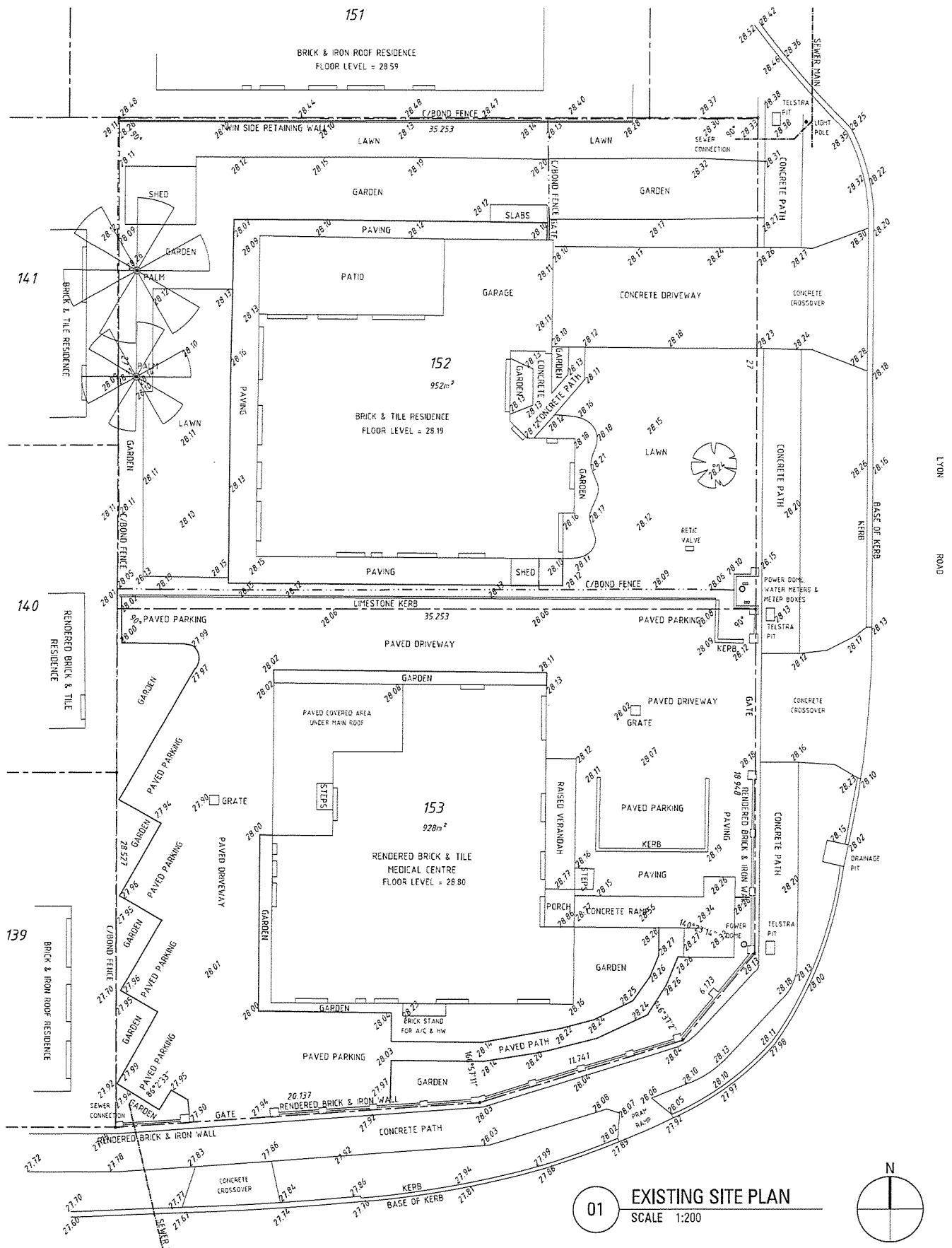
Local Planning Scheme No. 3 - Structure Plans



Aerial Photo (June 2016)

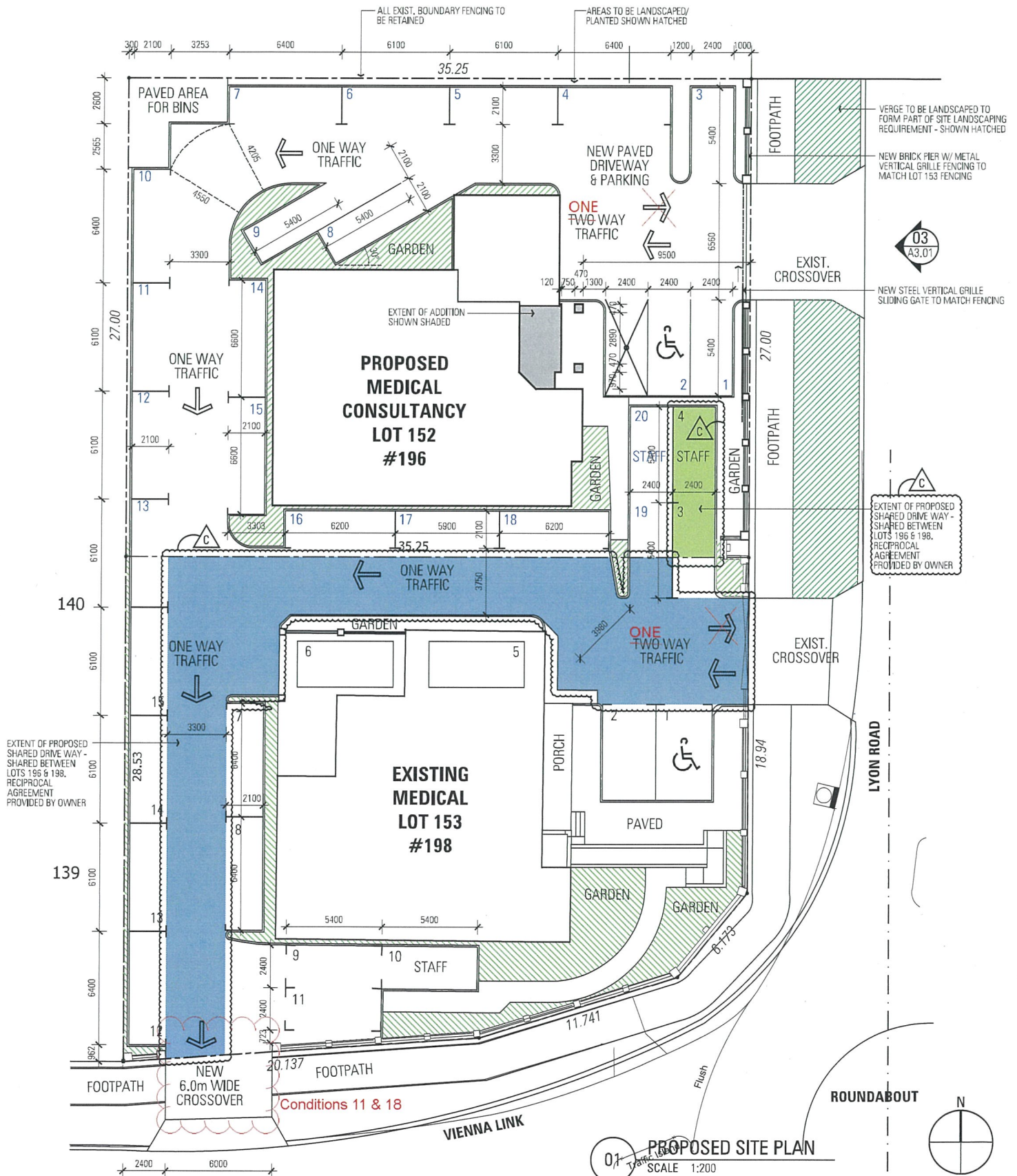


GENERAL NOTES		LEGEND	REV	DATE	DESCRIPTION	DWN
1. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON SITE PRIOR TO CONSTRUCTION/FABRICATION. DO NOT SCALE FROM DRAWING.			A	08/05/2017	SUBMISSION FOR PLANNING APPROVAL	YH
2. THE ARCHITECT IS TO BE NOTIFIED OF ANY DISCREPANCIES, ERRORS OR OMISSIONS BEFORE WORK COMMENCES.						



01 EXISTING SITE PLAN  
SCALE 1:200

GENERAL NOTES	LEGEND	REV	DATE	DESCRIPTION	WN
1. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON SITE PRIOR TO CONSTRUCTION/FABRICATION. DO NOT SCALE FROM DRAWING. 2. THE ARCHITECT IS TO BE NOTIFIED OF ANY DISCREPANCIES, ERRORS OR OMISSIONS BEFORE WORK COMMENCES.		A	08.06.2017	ISSUED FOR COMMENTS	YH
		B	09.06.2017	SUBMISSION FOR PLANNING APPROVAL	YH
		C	23.06.2017	SUBMISSION FOR PLANNING APPROVAL - UPDATED FOR CLARITY	YH



**YONG HUR ARCHITECT**  
2A Ashburton Tce, Fremantle WA 6160 e yong.hur@inet.net.au

**PROJECT TITLE / CLIENT**  
MEDICAL CONSULTANCY  
LOTS 152 & 153 LYON RD AUBIN GROVE

**DRAWING TITLE**  
PROPOSED SITE PLAN

**DRAWN**  
CHECKED

**YH**  
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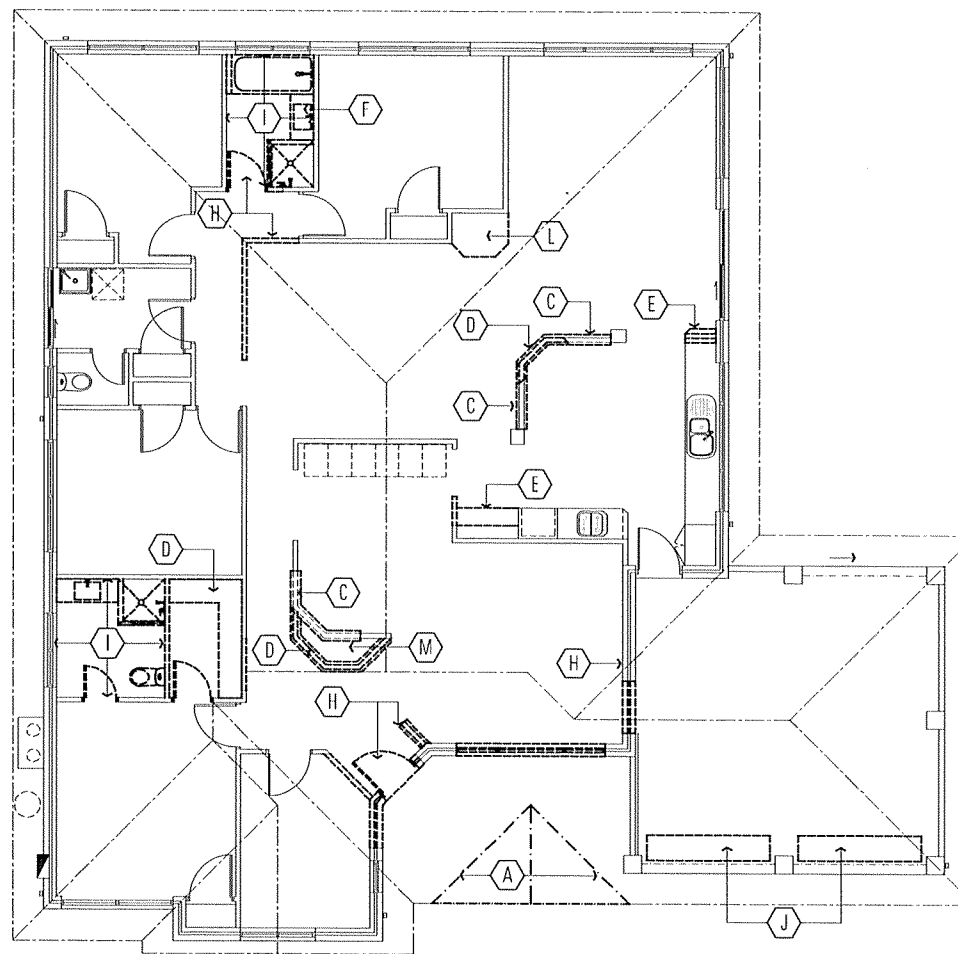
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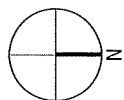
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- L** REMOVE EXIST. HEARTH. MAKE GOOD/ PATCH EXPOSED SURFACES & COORD. W/ NEW WORKS
- M** REMOVE EXIST. PLANTER. MAKE GOOD/ PATCH EXPOSED SURFACES & COORD. W/ NEW WORKS



01  
A1.04

**01 FLOOR PLAN DEMOLITION**  
SCALE 1:100



Attach 4

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PROJECT TITLE / CLIENT  
**MEDICAL CONSULTANCY**  
LOTS 152 & 153 LYON RD AUBIN GROVE

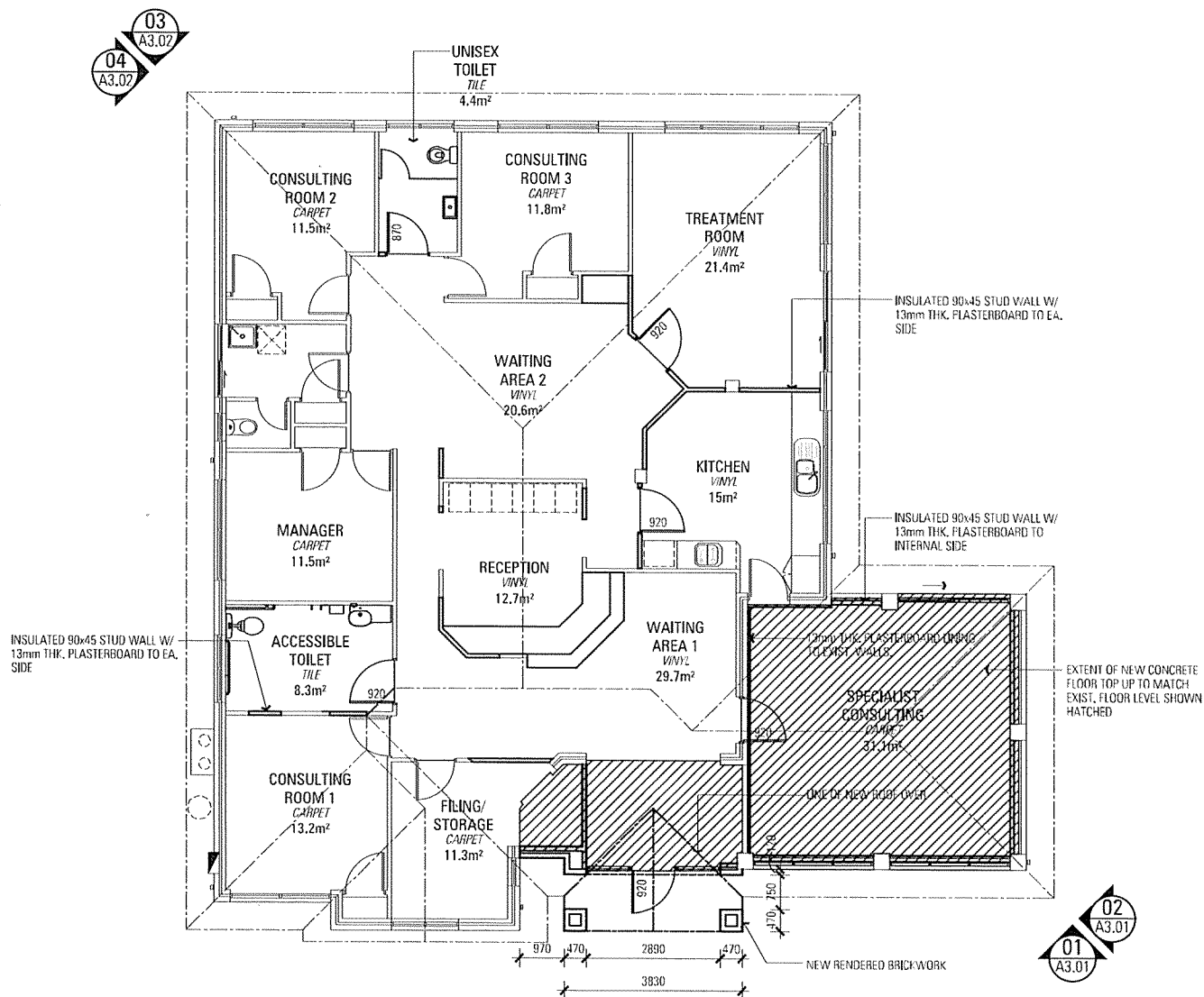
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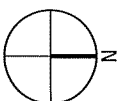
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## 01 FLOOR PLAN

SCALE 1:100



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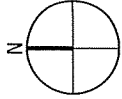
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LOTS 152 & 153 LYON RD, AUBIN GROVE

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FLOOR PLAN

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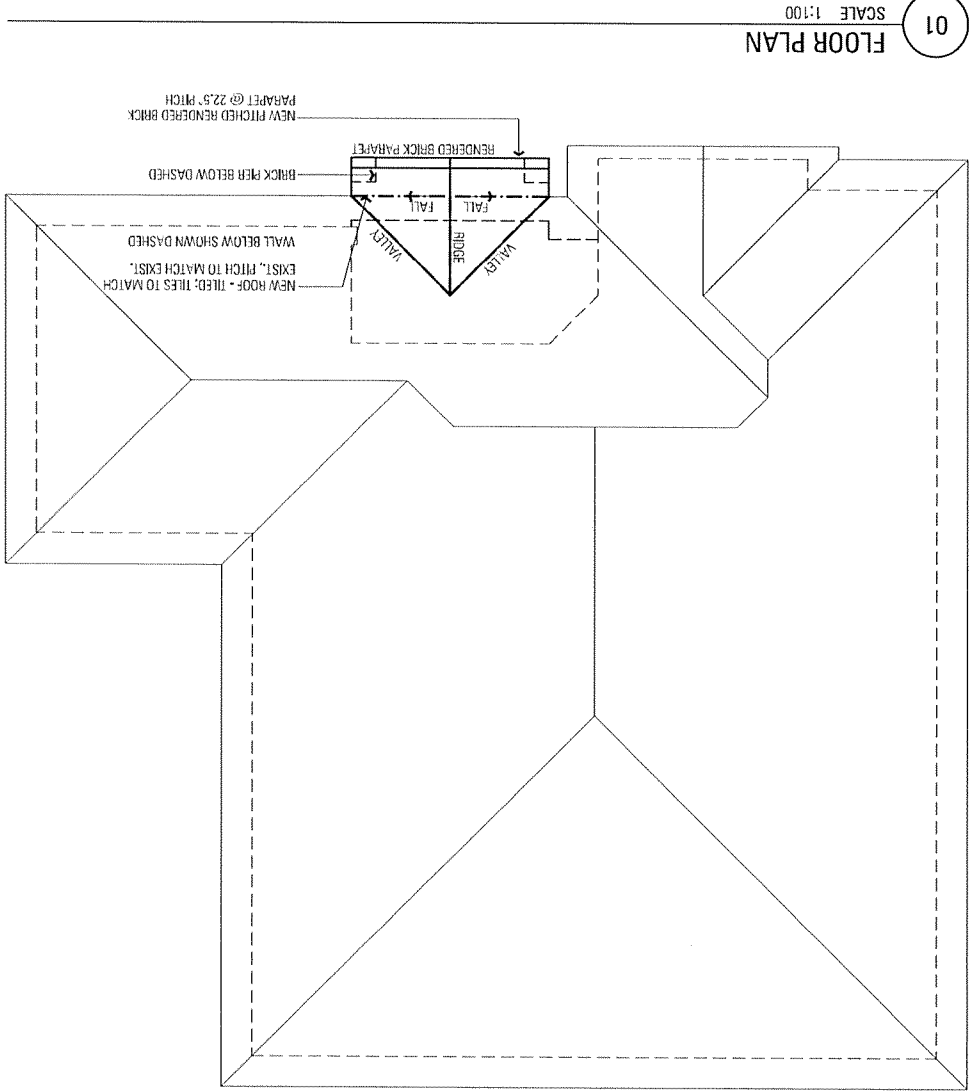
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LOTS 152 & 153 LYON RD, AUBURN GROVE

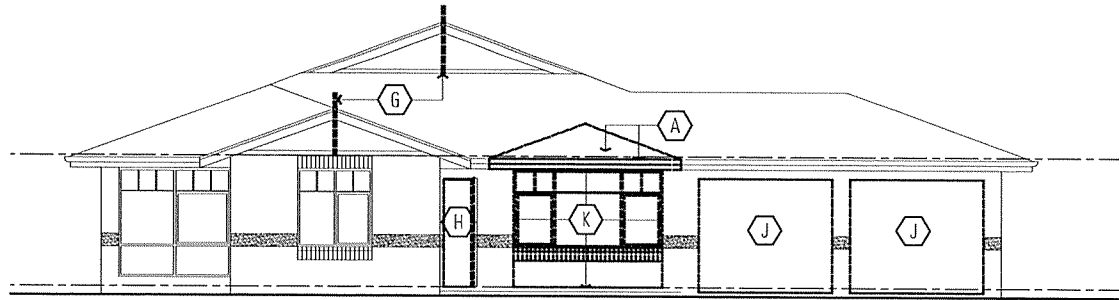
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**FLOOR PLAN**  
SCALE 1:100

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01 EAST ELEVATION  
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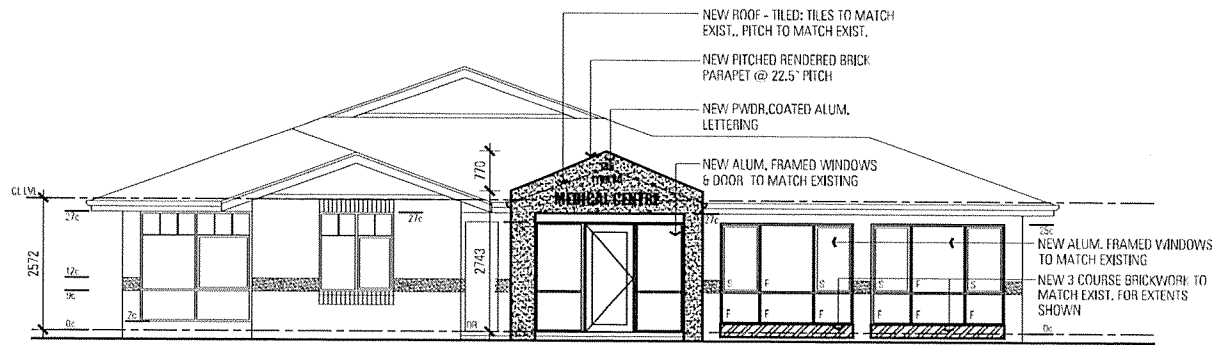
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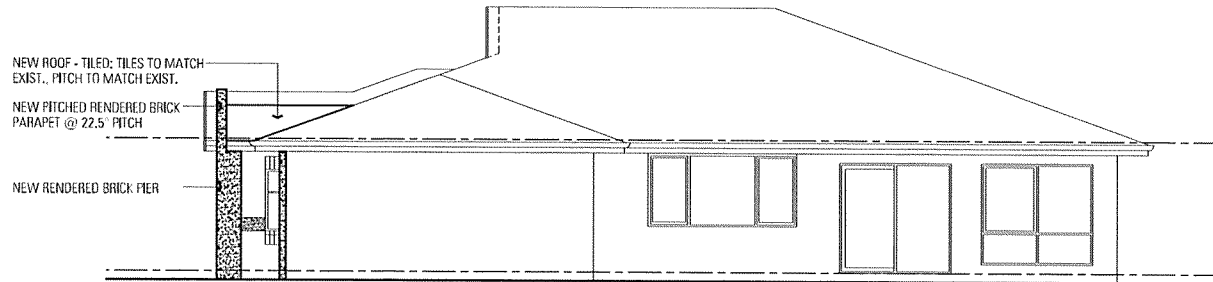
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MEDICAL CONSULTANCY  
LOTS 152 & 153 LYON RD AUBIN GROVE

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DEMOLITION ELEVATIONS

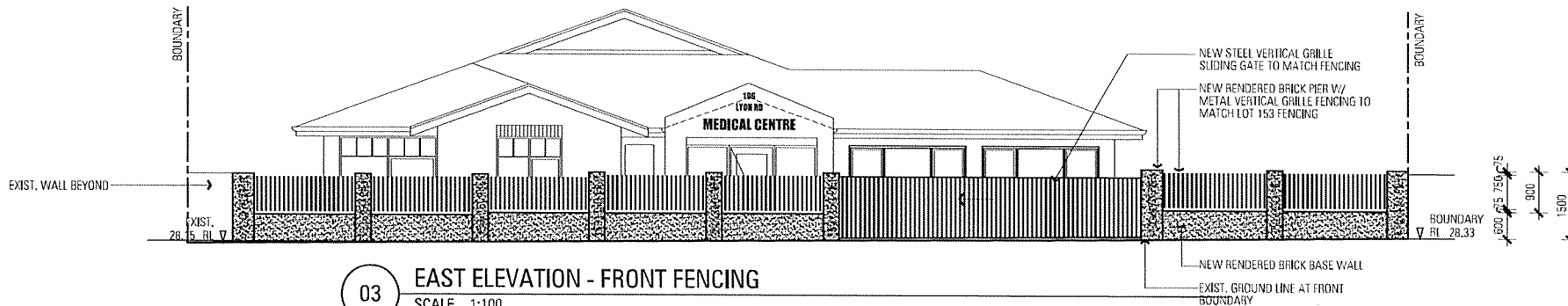
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01 EAST ELEVATION  
SCALE 1:100



02 NORTH ELEVATION  
SCALE 1:100



03 EAST ELEVATION - FRONT FENCING  
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LOTS 152 & 153 LYON RD, AUBIN GROVE

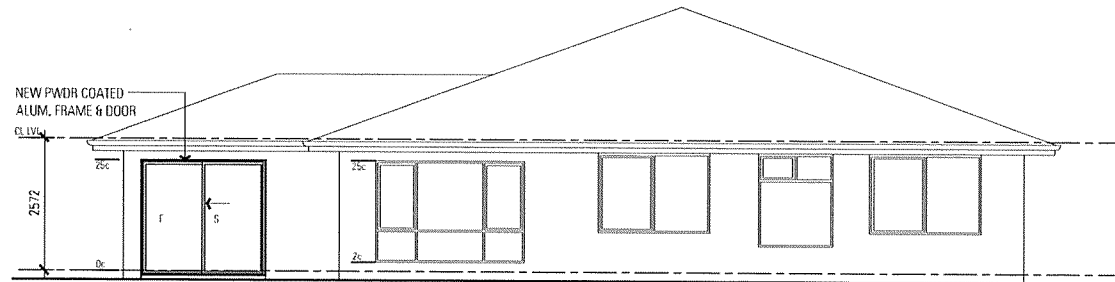
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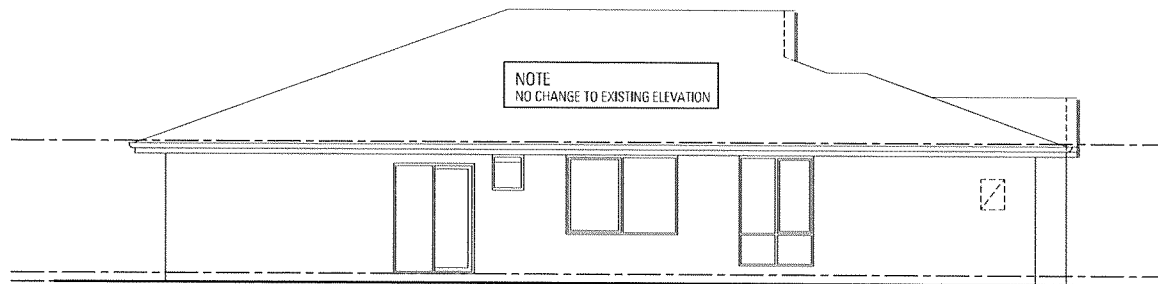
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03

### WEST ELEVATION

SCALE 1:100



04

### SOUTH ELEVATION

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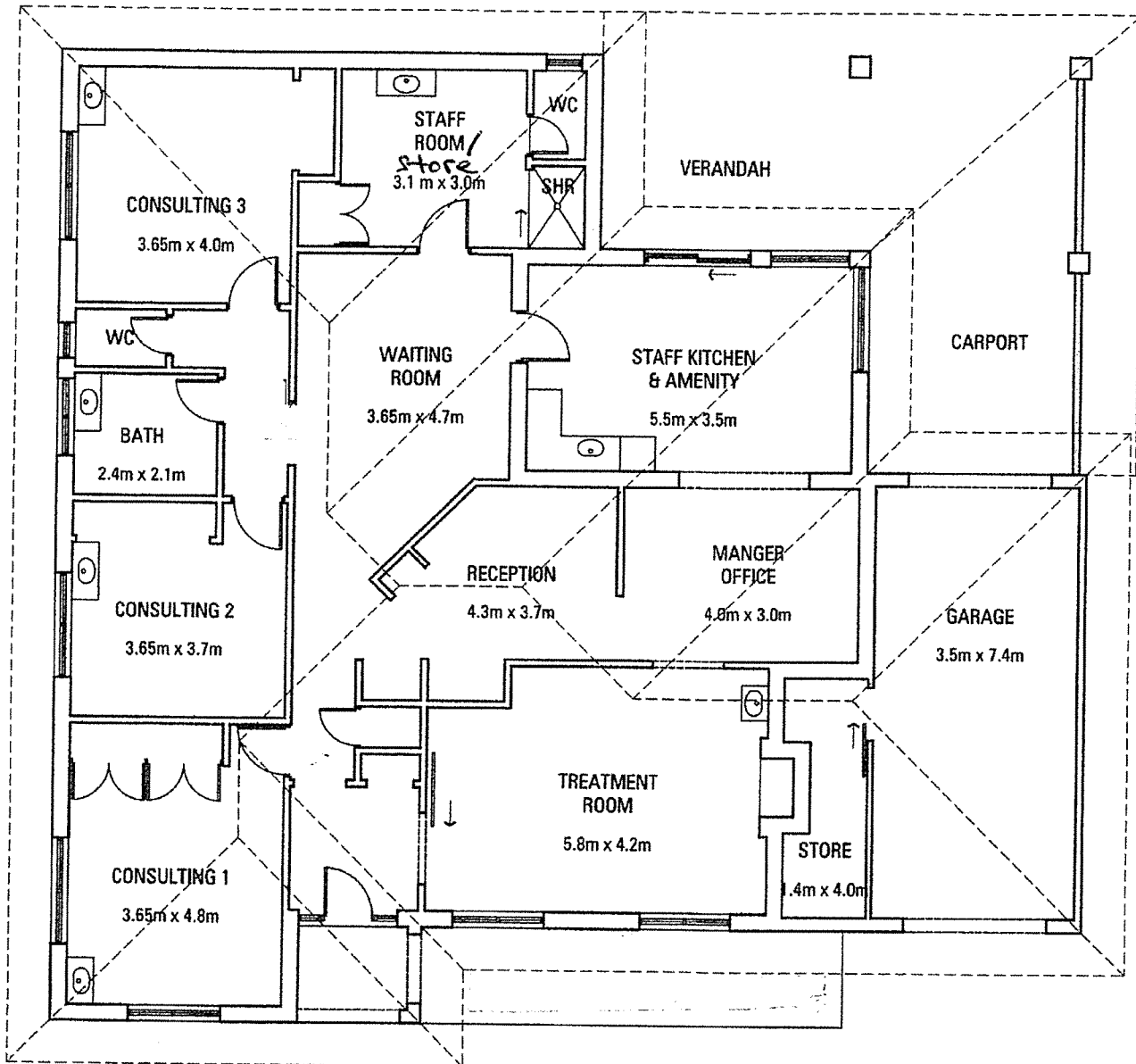
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PROJECT TITLE / CLIENT  
MEDICAL CONSULTANCY  
LOTS 152 & 153 LYON RD, AUBIN GROVE

DRAWING TITLE  
ELEVATIONS

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**Floor Plan: 198 Lyon Road**



**196 & 198 Lyon Road, Aubin Grove**  
**for**  
**Patrick Wee**

**TRANSPORT IMPACT STATEMENT**

- Revision 2
- 27/06/17

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## Document history and status

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1	26/06/17	R Ding	Added updated plans and minor edits
2	27/06/17		Minor changes and edits

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Author:	Rodney Ding
Name of client:	Patrick Wee
Client project manager:	Yong Hur
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# **1. Introduction**

## **1.1 Purpose of This Report**

This report was commissioned by Patrick Wee, as 196 and 198 Lyon Road in Aubin Grove, to document a Transport Impact Statement for a development application for change in use of 196 Lyon Road to allow a medical consultancy and specialist use, similar to that operating on the adjacent site at 198 Lyon Road.

As part of the approval processes a Transport Impact Statement format was considered appropriate to address the transport impacts of the development as traffic flows of the current development in the peak period would be significantly less than 100 trips per hour.

## 2. Proposed Development

Lot 153 (198) Lyon Road in Aubin Grove currently houses the operations of a skin cancer clinic.

Lot 152 (196) Lyon Road is proposed to be converted into specialists consulting rooms under the same ownership across the two adjacent sites.

Access to Lot 153 is currently via an existing 6m wide crossover on Lyon Road allowing two-way access into a front paved area of the site. From this point onwards there is a one-way traffic lane around the house which exits onto Vienna Link, west of a roundabout at Lyon Road. The current site provides for 12 parking bays for cars.

The proposed development of Lot 152 to the north of this site will include new consulting rooms for four specialists in a refurbished existing residential building. Access to this site will be via the current 6m wide crossover on Lyon Road with exit via a reciprocal right of carriageway across Lot 153 to exit at a modified 6m wide crossover on Vienna Link. Access to bays located on the south side of the building will be via a right of carriageway from Lyon Road.

The parking arrangement of Lot 153 will be modified to provide 13 bays wholly on Lot 153 with a further 2 bays shared across Lot 152, for a total of 15 bays for Lot 153.

Lot 152 will have 18 bays wholly on it with a further 2 bays shared across Lot 153 for a total of 20 bays.

Thus, across the entire two sites 35 parking bays will be provided.

Refer to the proposed development plans in **Appendix A**.

The development surrounding this proposed development is typically residential type development.

Refer to the locality plan in **Appendix B**.

### 3. Vehicle Access & Parking

#### 3.1 Access to Site

As discussed in **Section 1.2**, access to the proposed development is proposed via a two 6m wide crossovers on Lyon Road, one currently servicing Lot 152 and the other Lot 153. These crossovers allow all vehicular movements in all directions and are two-way. The two-way movement is to provide for easy access and egress for 6 bays on Lot 153 and 3 bays on Lot 152. The remainder of the parking across the sites can be accessed via these two crossovers.

Exit for the majority of the parking within the sites is via a 6m wide crossover on Vienna Link. This crossover is a one-way exit from Lot 153. Access to this crossover by Lot 152 is via a reciprocal right of carriageway across Lot 153.

Due to the movement of almost all private motor vehicles to and from the site, the Standards Australia publication *AS/NZS 2890.1:2002 Parking facilities Part 1: Off-street car parking* is the appropriate standard. Under this measure, the sight distances at the crossovers exceed the required minimum standards and are therefore satisfactory.

#### 3.2 Parking Supply & Demand

Across the entire two sites the development propose 35 sealed parking bays throughout the site, consisting of:

- 13 bays entirely on Lot 153 nominally for Lot 153;
- 18 bays entirely on Lot 152 nominally for Lot 152;
- 2 bays across the Lot 152/153 boundary nominally for Lot 152;
- 1 bay across the Lot 152/153 boundary nominally for Lot 152; and,
- 1 bay on Lot 152 nominally for Lot 153.

Under the City of Cockburn's Local Planning Scheme No. 3, parking should be provided at a rate of 5 bay per Consulting Room for 'Consulting Rooms'. Based on the 3 consulting rooms in the building on Lot 153 and 4 consulting rooms in Lot 152 there should be 35 parking bays provided which has been in this instance.

Another measure is survey data commonly used. One such publication is Parking Generation, published by the Institute of Transportation Engineers in the USA. Although not an Australian sourced publication this publication is commonly used in Australia. For the type of activity occurring on the site, this being medical consulting, this publication suggests that a peak parking demand of the order of 4.94 parked cars per 1,000 square feet (sq. ft.) with an 85<sup>th</sup> percentile rate of 4.96 vehicles per 1,000 sq. ft.

The conversion of the above rates to metric equate to:

- Average rate 5.32 cars per 100m<sup>2</sup>
- 85<sup>th</sup> %ile rate 5.34 cars per 100m<sup>2</sup>

Utilising the higher 85<sup>th</sup> percentile rate of approximately 5.34 parked cars per 100m<sup>2</sup> for the entire site a peak parking demand of approximately 24 cars typically around the middle of the day.

The proposed total number of 35 sealed car bays on site appears to satisfy the expected peak parking demand of the proposed medical centre expansion with a peak demand of 24 cars expected to park.

## 4. Hours of Operation

The clinic is proposed to operate with similar hours to the current operation, of weekdays from 8am to 6pm and Saturdays from 8am to 1pm for the operation of 198 Lyon Road. The hours of operation of the proposed development of 196 Lyon Road are:

- Monday – Friday: 8:00am to 8:00pm;
- Saturday: 8:00am to 5:00pm; and,
- Closed on Sundays and Public Holidays.

## 5. Daily traffic volumes and vehicle types

### 5.1 Current Traffic Flows

Traffic volumes on the adjacent road network of Lyon Road and Vienna Link were assessed based on the current typical development along Vienna Link and areas to the west and current traffic counts from the City of Cockburn for Lyon Road.

Lyon Road north of site:	9,900 vpd with 4.5% heavy vehicles AM Peak: 440 northbound, 210 southbound PM Peak: 340 northbound, 650 southbound
Vienna Link west of site	900 vpd with 1% heavy vehicles AM Peak: 48 eastbound, 16 westbound PM Peak: 30 eastbound, 60 westbound

### 5.2 Expected Traffic Flows

With the surrounding residential development not yet being firmly established and stable, the current traffic volumes are expected to grow into the future at approximately 3% pa for Lyon Road.

### 5.3 Current Vehicle Types

The types of vehicles accessing the site will be entirely private motor vehicles with no traffic to and from the site is expected to be truck type traffic.

### 5.4 Trip Generation of Development

The traffic generation of the proposed development is approximately 4.43 trips per consulting room in the PM peak (for a total of 31 trips in the PM peak split 50% entering and 50% exiting) and 33.85 trips per 100m<sup>2</sup> for an entire day (for a total of 150 trips in the PM peak split 50% entering and 50% exiting). The new consulting rooms will make up approximately 18 additional new trips in the PM peak and approximately 83 additional new trips for the entire day.

### 5.5 Trip Distribution

With the development fronting two roads with access all from Lyon Road and exit typically onto Vienna Link. Patients are expected to approach the clinic from both directions of Lyon Road with none favoured over the other.

### 5.6 Traffic Impact of Development

All roads near the proposed site are expected to have traffic volumes typically less than the maximum traffic flows for similar roads of their type. The mid-block comparisons to maximum flows that these roads should carry are shown in **Table 6.1** on the following page.

■ **Table 6.1 – Current & Expected Mid-Block Daily Flows**

Road	Indicative Maximum Daily Flow (two-way)	Current Daily Flow (two-way)	Expected Daily Flow in 10 years (two-way)
Lyon Road	15,000	9,900	13,380
Vienna Link	1,000	900	940

The flows shown in the right most column in the above table include 40 vehicular trips per day due to the additional on the clinic on Lot 152. Thus, the additional trips should make up about 5% of the traffic on Vienna Link and approximately 0.3% of the traffic on Lyon Road. At this level of increase, the daily variation in traffic flows on these roads would mask these small changes, and would not be noticeable to motorists.

With regards to intersections and the crossovers, Table 2.4 from the Austroads publication, *Guide to Traffic Management Part 6 – Intersections, Interchanges and Crossings* provides advice as to intersection and crossover performance in peak flow conditions about possible further analysis. This is summarised in **Table 6.2**. If the calculated expected traffic flows for this development exceed those shown in **Table 6.1** further assessment is typically required.

■ **Table 6.2 – Austroads Guidelines**

Major Road Type	Major Road Flow (vph, two-way)	Minor Road Flow (vph, two-way)
Two-lane	400	250
	500	200
	650	100
Four-lane	1,000	100
	1,500	50
	2,000	25

Examining the expected traffic flows at the crossovers for the proposed development referring to **Sections 6.4 and 6.5**, **Table 6.3** is derived.



■ **Table 6.3 – Comparison to Austroads Guidelines**

Intersection	Major Road Flow (vph, two-way)	Minor Road Flow (vph, two-way)
Lyon Road Lot 152 Crossover	1,300	8
Lyon Road Lot 153 Crossover	1,300	7
Vienna Link Crossover	90	15

From the above it can be seen that the crossovers are expected to have traffic volumes significantly less than shown in **Table 6.2**. Thus, there is no need for these crossovers to be examined in further detail using such analysis software like Sidra Intersection. Under these flow conditions, the crossovers are expected to operate at a level of service A with minimal delays and queues.

## 5.7 Level of Service Concepts

The level of service concept describes the quality of traffic service in terms of six levels, designated A to F, with level of service A (LOS A) representing the best operating condition (i.e. at or close to free flow), and level of service F (LOS F) the worst (i.e. forced flow). More specifically:

- *LOS A*: Primarily free flow operations at average travel speeds, usually about 90% of the FFS (free flow speed) for the given street class. Vehicles are completely unimpeded in their ability to manoeuvre within the traffic stream. Control delay at signalised intersections is less than 10 seconds. At non-signalised movements at intersections the average control delay is less than 10 seconds;
- *LOS B*: Reasonably unimpeded operations at average travel speeds, usually about 70% of the FFS for the street class. The ability to manoeuvre within the traffic stream is only slightly restricted, and control delays at signalised intersections are between 10 and 20 seconds. At non-signalised movements at intersections the average control delay is between 10 and 15 seconds;
- *LOS C*: Stable operations; however, ability to manoeuvre and change lanes in mid-block locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50% of the FFS for the street class. Signalised intersection delays are between 20 and 35 seconds. At non-signalised movements at intersections the average control delay is between 15 and 25 seconds;
- *LOS D*: A range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors. Average travel speeds are about 40% of FFS. Signalised intersection delays are between 35 and 55 seconds. At non-signalised movements at intersections the average control delay is between 25 and 35 seconds;

- *LOS E*: Characterised by significant delays and average travel speeds of 33% of the FFS or less. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections (between 55 and 80 seconds), and inappropriate signal timing. At non-signalised movements at intersections the average control delay is between 35 and 50 seconds; and,
- *LOS F*: Characterised by urban street flow at extremely low speeds, typically 25% to 33% of the FFS. Intersection congestion is likely at critical signalised locations, with high delays (in excess of 80 seconds), high volumes, and extensive queuing. At non-signalised movements at intersections the average control delay is greater than 50 seconds.

In addition to the above:

- Average Delay: is the average of all travel time delays for vehicles through the intersection; and,
- Queue: is the queue length below which 95% of all observed queue lengths fall.

## **5.8 Traffic Impact of Development on Local Area**

Based on the above assessment it is concluded that the development will have an acceptable impact on the surrounding roads and intersections with no changes required to either the road network or geometry of intersections.

## **6. Traffic management on the frontage streets**

### **6.1 Lyon Road**

Lyon Road is a single carriageway road (approximately 7.2m wide between kerbs with 3.6m wide lanes in each direction of traffic flow). It is not classified under the Metropolitan Region Scheme but is classified as a Local Distributor under the Functional Road Hierarchy and subject to posted speed limit of 60km/h. Based on traffic counts from the City of Cockburn, it is estimated approximately 9,900 vehicles per day use Lyon Road near the development site with this expected to increase as development continue in the vicinity.

There have been no recorded crashes in the five-year period ending 31/12/2016 on the section of Lyon Road between Deakin Entrance and Humboldt Entrance, except for its intersection with Vienna Link.

### **6.2 Vienna Link**

Vienna Link is a single carriageway road (approximately 6m wide between kerbs with 3.0m wide lanes in each direction of traffic flow) on 70m length connection Lyon Road to Princeton Circuit. It is not classified under the Metropolitan Region Scheme but is classified as an Access Road under the Functional Road Hierarchy and subject to the general urban speed limit of 50km/h. Based on an assessment of development along the road, it is estimated approximately 900 vehicles per day use Vienna Link near the development site with this expected to remain unchanged into the future.

There have been no recorded crashes in the five-year period ending 31/12/2016 on the section of Vienna Link.

### **6.3 Intersection of Lyon Road and Vienna Link**

The intersection of Lyon Road and Vienna Link is controlled by a single lane roundabout. There are splitter islands on all approaches with pedestrian gaps in the traffic islands on the western and eastern approaches. In the five year period up to 31/12/2016 there has been one recorded crash, this being a rear end crash.

## **7. Public Transport Access**

The development is catered for vehicular travel to and from the site and as such public transport access is not considered a major mode of transport to and from the site. Never the less, access to public transport is available with bus stops located on Lyon Road immediately in front of the site and within 100m of the site. Access to these stops would be by walking on footpath either side of Lyon Road.

## **8. Pedestrian Access**

There are footpaths on Lyon Road for its entire length. This is generally the case for the road network in the Aubin Grove area with footpaths provided to at least one side of each road. The site is within 100m of bus stops on Lyon Road, so there is a possibility of workers and patients catching a bus to and from the site.

## 9. Cycle Access

The local road network generally has low traffic volumes and traffic speeds which make it generally acceptable for on-road cycling. Lyon Road has higher traffic volumes and speeds, but there is a shared path on the western side of the road suitable for cycle use to and from the site.

## **10. Site Specific Issues**

Apart from issues previously identified (such as modification of the parking area and the crossover exit onto Vienna Link), no site-specific issues have been identified and part of this development requiring attention and possible remedial attention.

## 11. Safety Issues

As noted in **Section 4**, the current crash rates of roads bounding the are considered within acceptable limits as there were no recorded crashes on Lyon Road nor Vienna Link.



## 12. Findings, Conclusions & Recommendations

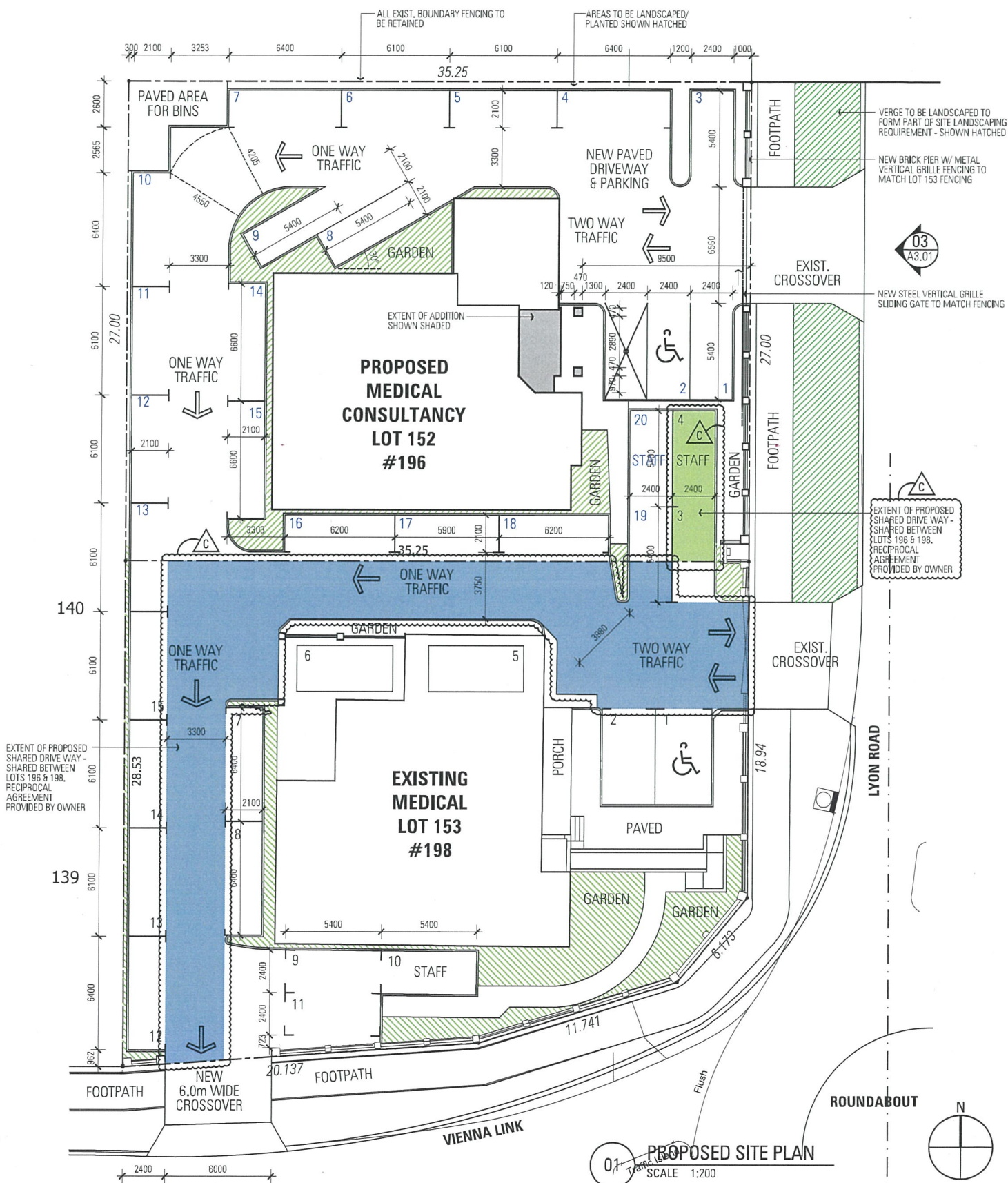
As a result of the traffic analysis undertaken for the current development at 196 and 198 Lyon Road in Aubin Grove:

- The development should generate in the order of 150 vehicular trips per day with 31 of these in the PM peak;
- The parking area layout is suitable with an appropriate number of parking bays provided;
- The impacts of the traffic volumes associated with the development on the road network are considered acceptable;
- There is no requirement for Lyon Road or Vienna Link nor any of the approach roads to be modified as a result of this development; and,
- Delays and queues at the crossover are expected to be minimal with very good levels of service now and into the future.

The WAPC checklist is included in **Appendix C**.

## **Appendix A Current Development Plans**

GENERAL NOTES		LEGEND	REV	DATE	DESCRIPTION	DWN
1. ALL DIMENSIONS TO BE CHECKED AND VERIFIED ON SITE PRIOR TO CONSTRUCTION/FABRICATION. DO NOT SCALE FROM DRAWING. 2. THE ARCHITECT IS TO BE NOTIFIED OF ANY DISCREPANCIES, ERRORS OR OMISSIONS BEFORE WORK COMMENCES.			A	08.06.2017	ISSUED FOR COMMENTS	YH
			B	09.06.2017	SUBMISSION FOR PLANNING APPROVAL	YH
			C	23.06.2017	SUBMISSION FOR PLANNING APPROVAL - UPDATED FOR CLARITY	YH



**YONG HUR ARCHITECT**  
2A Ashburton Tce, Fremantle WA 6160 e.yong.hur@inet.net.au

**PROJECT TITLE / CLIENT**  
**MEDICAL CONSULTANCY**  
LOTS 152 & 153 LYON RD AUBIN GROVE

**DRAWING TITLE**  
**PROPOSED SITE PLAN**

**DRAWN**  
**CHECKED**

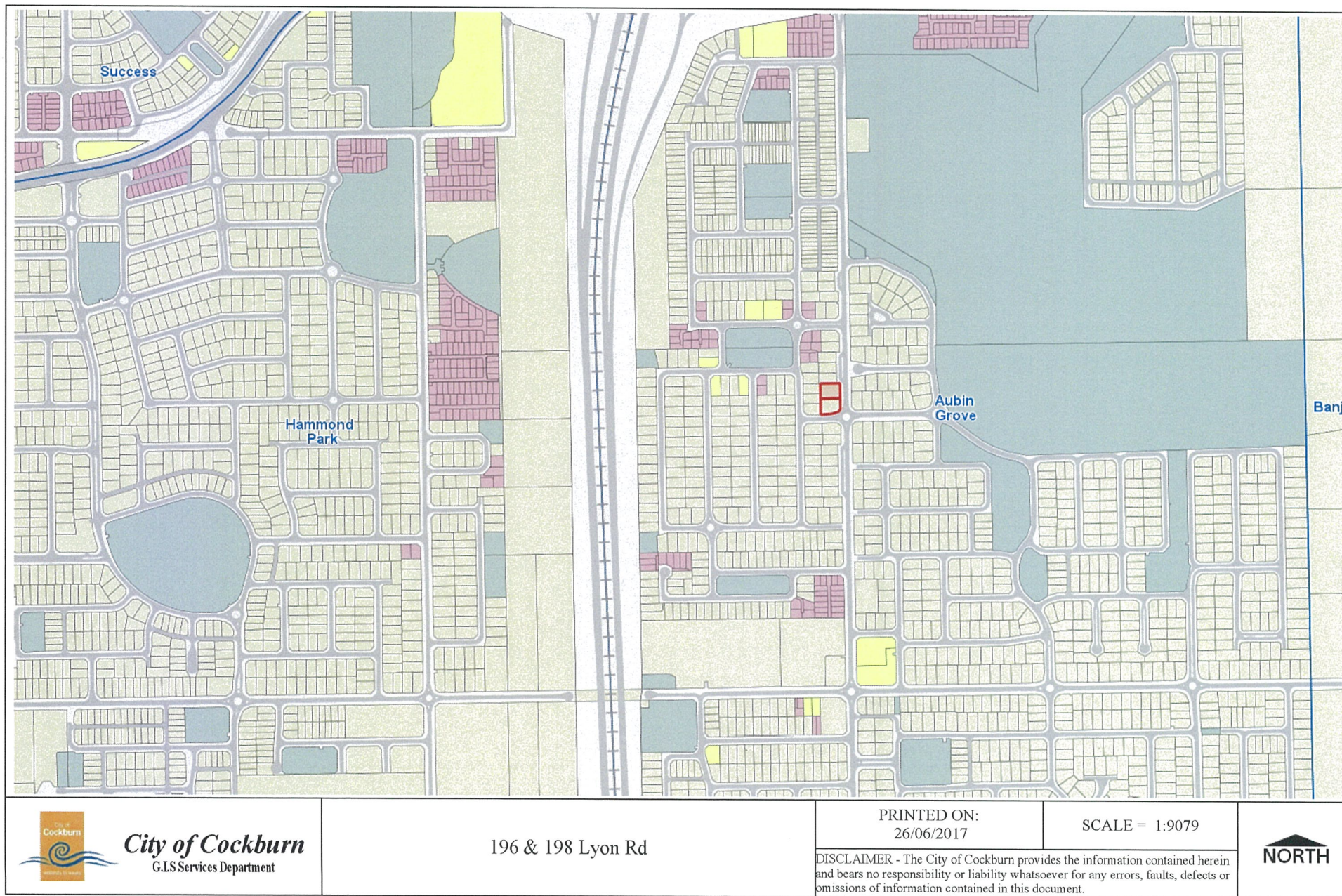
**YH**  
**YH**

**DATE** 24.06.2017  
**SCALE** 1:200  
**CAD FILE** a102 proposed.dwg

**DWG No.**  
**A1.02 c**

## Appendix B Locality Plan





## Appendix C WAPC Checklist



# Checklist for a TIA for an Individual Development

## **196 & 198 Lyon Rd, Aubin Grove**

Item	Provided	Comments/Proposals
<b>Proposed development</b>		
existing land uses	✓	Section 2
proposed land uses	✓	Section 2
context with surrounds	✓	Section 2
<b>Vehicular access and parking</b>		
access arrangements	✓	Section 3.1
public, private, disabled parking set down / pick up	✓	Section 3.1
<b>Service vehicles (non-residential)</b>		
access arrangements	✓	Section 3
on/off-site loading facilities	✓	Section 3
<b>Service vehicles (residential)</b>		
rubbish collection and emergency vehicle access	NA	NA
<b>Hours of operation (non-residential only)</b>	✓	Section 4
<b>Traffic volumes</b>		
daily or peak traffic volumes	✓	Section 5
type of vehicles (eg cars, trucks)	✓	Section 5.3
<b>Traffic management on frontage streets</b>	✓	Sections 6
<b>Public transport access</b>		
nearest bus/train routes	✓	Section 7
nearest bus stops/train stations	✓	Section 7
pedestrian/cycle links to bus stops/train station	✓	Section 7
<b>Pedestrian access/facilities</b>		
existing pedestrian facilities within the development (if any)	✓	Section 8
proposed pedestrian facilities within development	✓	Section 8
existing pedestrian facilities on surrounding roads	✓	Section 8
proposals to improve pedestrian access	✓	Section 8
<b>Cycle access/facilities</b>		
existing cycle facilities within the development (if any)	✓	Section 9
proposed cycle facilities within development	✓	Section 9
existing cycle facilities on surrounding roads	✓	Section 9
proposals to improve cycle access	✓	Section 9

# Checklist for a TIA for an Individual Development

## ***196 & 198 Lyon Rd, Aubin Grove***

Item	Provided	Comments/Proposals
Site specific issues	✓	Section 10
Safety issues		
identify issues	✓	Section 11
remedial measures	✓	Section 11

**Proponent's name**

**Company**

**Date**

Rodney Ding

TARSC Pty Ltd

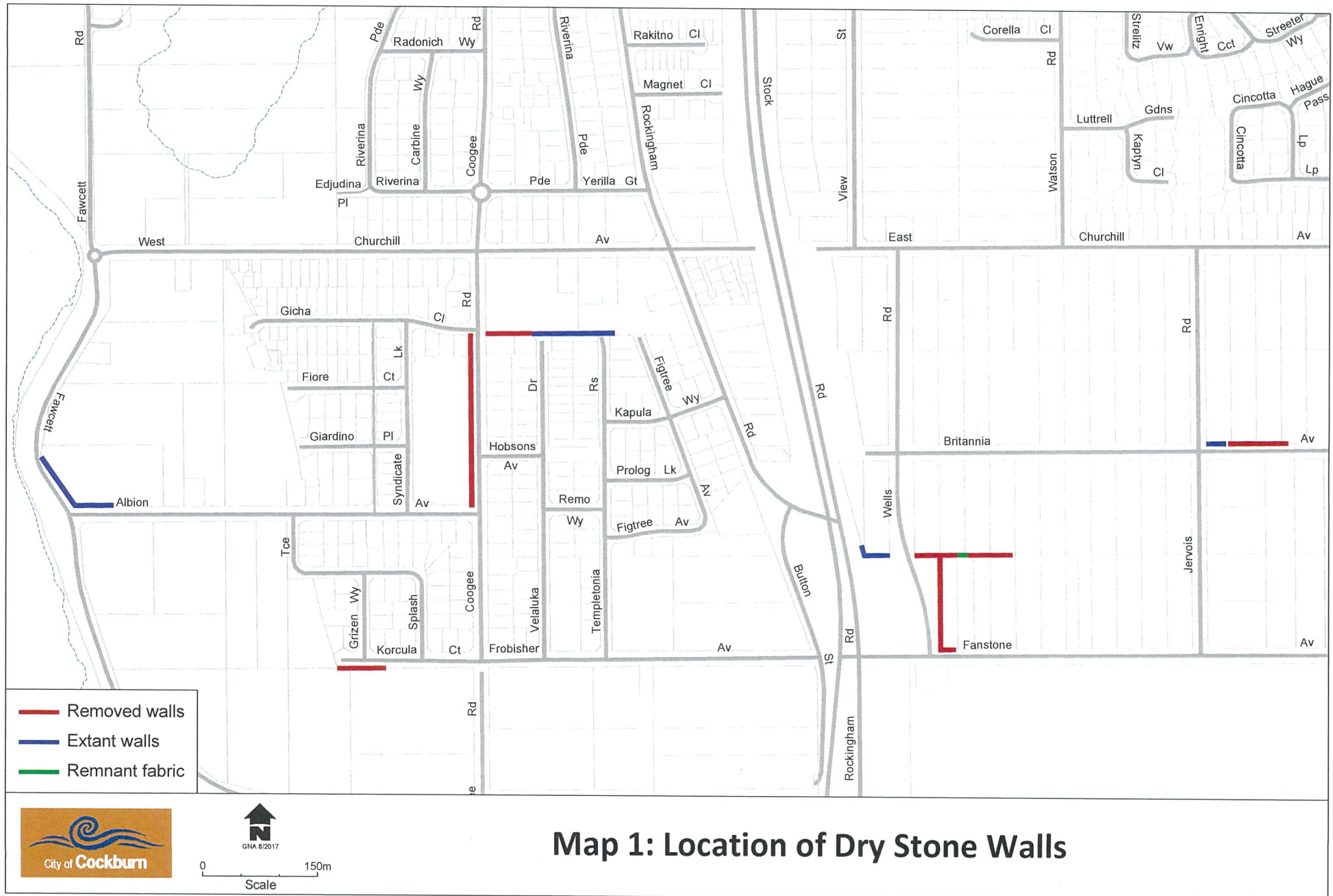
26/06/2017

**Transport assessor's  
name**

**Company**

**Date**









# **City of Cockburn**

## Stone Wall and Ruins Heritage Study



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## 1.0 Introduction

The *Heritage of Western Australia Act 1990* requires each local government to identify buildings of cultural heritage significance in its district through a Local Government Inventory ("LGI").

In 2014 a dry limestone wall in Munster built in approximately 1946 was included on the City of Cockburn's LGI as a 'Management Category B' place, having 'Considerable Significance'. It was also included on the Heritage List pursuant to City of Cockburn Town Planning Scheme No. 3 ("the Scheme").

Since that time a number of other similar stone walls and other stone ruins have been identified in the City of Cockburn, primarily in the area formerly referred to as 'South Coogee'. Council resolved at the 10 August 2017 Ordinary Meeting to undertake a 'Stone Wall Heritage Study' to identify and assess these structures to determine whether they have cultural heritage significance.

## 2.0 Objectives

The purpose of this study is to:

1. Identify stone walls and ruins in the City of Cockburn that may have cultural heritage significance.
2. Undertake an assessment of the heritage values of those structures.
3. Identify safety, maintenance, stabilisation, management responsibility and other practical issues associated with these structures.
4. Make recommendations for future management and heritage listing of these structures.

## 3.0 Background

### 3.1 History of Dry Stone Walls

Dry wall construction is a building method by which structures are built from stones without any mortar to bind them together. Dry stone walls are seen throughout the world across a variety of eras, and have been traditionally used as arable land and pasture boundaries across Europe.

Of particular note the Croatian coast is known for its dry walls (suhozidi or gromace). Due to the karst landscape, many of dry walls along the Croatian coast and on islands were built out of agricultural necessity. It was very hard work for local farmers; they had to move rocks and stones to clear space if they wanted to grow olive trees and grapevines<sup>1</sup>. Then they used those rocks to construct walls that sometimes stretched for kilometres. On the steep slopes, those walls were built as retaining walls or terraces that also protected against the strong winter winds.

In Croatia the dry wall technique is centuries old and so are most of the walls. In 2016 the Croatian Ministry of Culture proclaimed the art of dry wall construction the permanent intangible cultural heritage and put it in the Register of Cultural Goods of the Republic of Croatia.

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<sup>1</sup> Pervon, I. 'A dying art that has left its mark all over Croatia', The Dubrovnik Times





Figure 1. Dry Stone Wall, Hvar (Source: <http://www.hvar-island-croatia.com/hvar-island-treasure>)

In Ireland and the United Kingdom these were sometimes known as 'consumption' walls because they were built to 'consume' the cleared stones when the field was brought into cultivation.



Figure 2. 'Consumption Wall' Ireland (Source: <http://wallsandhedges.blogspot.com.au/>)

Dry stone walling in Australia emerged in the mid 1800's in areas where a proliferation of stone in the geological landscape necessitated a clearing of the land.

They are predominately seen in South Australia, Victoria and Tasmania.

Most of the country's prominent walls were built by skilled wallers from England, Ireland and Scotland that landholders paid to come to Australia during the 1850s and 1860<sup>2</sup>. In Victoria they were an important form of fencing, and was considered the best solution where stone was abundant, timber scarce, transport of fencing material expensive,

<sup>2</sup>Munday, B, Those Dry-stone Walls. Stories from South Australia's Stone Age

skilled labour available, and where cheaper alternatives were unavailable<sup>3</sup>. The key reason for the preference for dry stone walls on Melbourne's western plains by selectors was the need to clear stony land to enable cropping and grazing (dairying)<sup>4</sup>.

Although built as the most economic form of fencing, specific historical associations can also be made with particular landowners as so often the style of wall also reflects the status of its builder. Constructed by both Anglo Celtic and European Migrants the walls are historically and culturally significant, standing as testimony to a time when artisan skills portrayed the patterns of our early settlement. Their aesthetic qualities and strong sculptural forms create visual definitions and picturesque qualities that allude to romantic traces of ruins to the landscape.

South Australia has hundreds of kilometres of stone walls that were put up for different purposes in different styles and of different materials. This includes Camel Hump wall, 65 km long through the Mid-North. Western Victoria has the most expansive network of dry stone walls in Australia.



Figure 3. City of Melton Dry stone wall (Victoria)

<sup>3</sup> Vines, G, 'Comparative Analysis of Dry Stone Walls in Victoria, Australia and Overseas', in Corangamite Arts Council, 1995, *op cit*, p.56

<sup>4</sup> Melton Dry Stone Wall Study, Volume 1 – The Report

Many of the dry stone walls dating from the 1800s in Victoria and South Australia are afforded heritage protection. In Victoria dry stone walls constructed prior to 1940 are automatically protected and planning approval is required prior to their demolition.

In Western Australia dry stone walls from this era are generally not seen, and the Dry Wall Association of Australia does not recognise any such walls in Western Australia. In The Commonage near Beverley there are a number of solid stone structures thought to have been built by convicts during the mid-19th Century, with around 50 of these structures scattered around the hills of The Commonage. Many more were removed during WWII to line drainage ditches at the nearby Beverley RAAF aerodrome<sup>5</sup>. The purpose of these walls is not known as they appear to form no useful purpose. It is assumed that convicts stationed at nearby barracks were responsible, and that they were used for training or practice for convicts to build rock walls.

These walls are recognised in the Shire of Beverley Municipal Heritage Inventory.



Figure 4. Commonage Walls, Shire of Beverley (Source: [www.transplan.com.au](http://www.transplan.com.au))

### 3.2 History of South Coogee

Development in the South Coogee area began between 1890 and 1903 on the site of the abandoned village of the pensioner guard near Lake Coogee. The settlement thrived with vines, orchards and vegetable gardens established. Establishing a property at South Coogee was harder work than at Jandakot and progress was usually slow. One of the reasons for this was that the land held a lot of stone.

While this growth was slower than Jandakot it was also more certain, and it was to become the nursery of market gardening skills in the Cockburn District for half a century.

Post war South Coogee led the way towards larger landholdings and specialised crops. Production grew too great for the domestic market and turned towards export markets in South East Asia. Some of the descendants of the original market gardeners in South Coogee, such as the Anderson family, pioneered a moved south to the Baldivis area where there were larger landholdings, and others followed<sup>6</sup>.

It was after 1945 that saw Croatian and Italian market gardeners move into the South Coogee area, after earlier settling predominately in Spearwood from 1911 onwards.

The City's oldest aerial photograph of this area is from 1953, and the majority of remnant stone walls are not visible in the landscape at this time. The stone walls appear later in the 1963 aerial photograph. This timing coincides with the Croatian and Italian market gardeners settling in the area, suggesting a possible connection.

<sup>5</sup> Shire of Beverley Municipal Inventory

<sup>6</sup> Berson, M. 'Cockburn The Making of a Community', 1978



### 3.3 Place No. 114 'Limestone Wall and Ruins, Munster'

Place No. 114 'Limestone Wall and Ruins, Munster' comprises a substantial limestone wall and stone ruins located on Lot 103 West Churchill Avenue, Munster. The limestone wall comprises a section of dry stone wall located on the southern boundary of Lot 103 West Churchill Avenue, Munster, directly adjacent to the end of Velaluka Drive. It runs east west along part of the length of the southern boundary of the lot, and is up to 2m in height. The northern side of the wall is concealed by a row of shrubs.



Figure 5. Dry stone wall Lot 103 West Churchill Avenue, Munster

The ruins are located approximately 12m to the north of the wall. They are approximately 0.5m high and form a rectangle. They are set amongst a small Olive grove. One remnant storage shed is easy to read on site, although there appear to be the remains of various other walls and structures in the immediate area. A couple of remnant buildings, including a cement-fibre shed, appear to have been associated with the market gardening business previously carried out on the site.



Figure 6. Ruins at Lot 103 West Churchill Avenue, Munster

Both the stone wall and the stone ruins are constructed as double skin walls, with smaller rubble infill. This technique does not appear to be common in Western Australia, and may have been introduced from Croatia.

This place was determined to have cultural heritage significance for the following reasons:

- *Limestone Wall and Ruins, Munster, is significant for its association with the market garden industry, which was the predominant source of employment in the area for most of the 20th century.*
- *Limestone Wall and Ruins, Munster, has high archaeological potential to reveal aspects of the market gardening industry from the mid-20th century.*
- *Limestone Wall and Ruins, Munster, has scientific value as representing a method of dry stone walling uncommon in Western Australia.*
- *Limestone Wall and Ruins, Munster, is associated with Jakov and Jakubina Vidovich, Croatian (Slavic) market gardeners who arrived in Western Australia in 1939, and who settled in Munster in 1946.*
- *Limestone Wall and Ruins, Munster, if appropriately interpreted, has the potential to be an educational/ recreational resource for the community, demonstrating the market gardening industry in the City of Cockburn.*

## 4.0 Heritage Assessment of Stone Walls and Ruins

### 4.1 Identifying stone walls

Historical aerial photographs have been examined, and site visits undertaken to identify the possible location of stone walls in the City of Cockburn.

Through this process a number of stone walls have been identified that are no longer extant, and these have been recorded in Appendix A.

The dry stone walls, both extant and removed, have been mapped and are shown in Map 1. This information provides an understanding of the prevalence and distribution of stone walls in the area both currently and historically. This information suggests that use of stone walls was scattered through the area, and was not typical of market gardening in the area.

### 4.2 Assessing Heritage Significance

The stone structures that are still intact have each been recorded and assessed in this section.

The Office of Heritage recommends that all assessments of local heritage places be carried out in accordance with the procedures set out in 'Criteria for the Assessment of Local Heritage Places'. This ensures that assessments are:

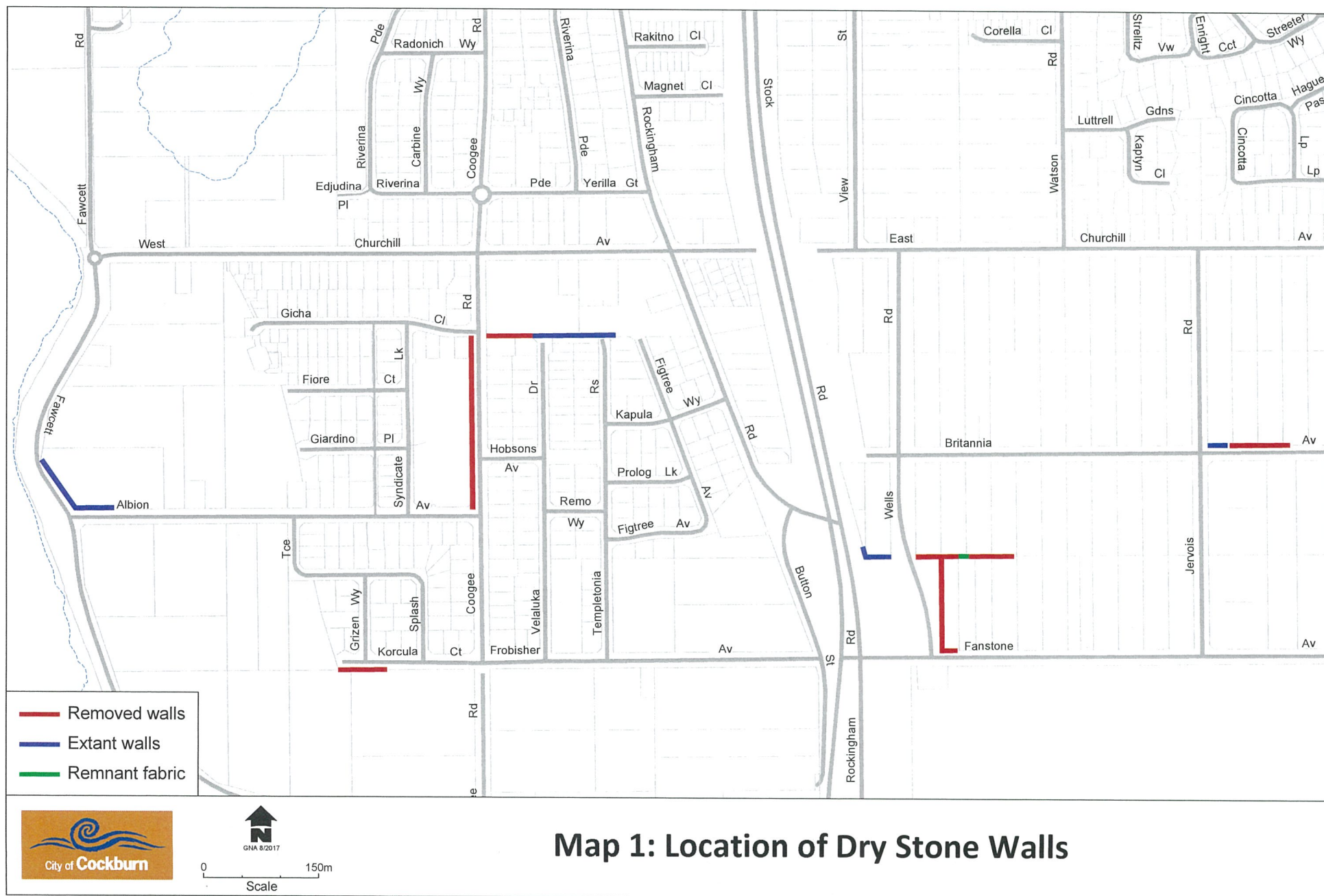
- accountable and can be tested
- comparable
- consistent.

These criteria adhere to well-established 'best practice' in the identification and assessment of heritage places in WA and throughout Australia, both at the State and local levels.

A place or area will be of significance to the locality if it meets one or more of the criteria under the headings of Aesthetic, Historic, Research or Social value.

TABLE 1: CRITERIA FOR ASSESSMENT OF LOCAL HERITAGE PLACES - OFFICE OF HERITAGE	
<b>NATURE OF SIGNIFICANCE</b>	
<b>2.1 Aesthetic Value</b>	Criterion 1: It is significant in exhibiting particular aesthetic characteristics.
<b>2.2 Historic Value</b>	Criterion 2: It is significant in the evolution or pattern of the history of the local district.
<b>2.3 Research Value</b>	Criterion 3A: It has demonstrable potential to yield information that will contribute to an understanding of the natural or cultural history of the local district. Criterion 3B: It is significant in demonstrating a high degree of technical innovation or achievement.
<b>2.4 Social Value</b>	Criterion 4: It is significant through association with a community or cultural group in the local district for social, cultural, educational or spiritual reasons.
<b>DEGREE/LEVEL OF SIGNIFICANCE</b>	
<b>2.5 Rarity</b>	Criterion 5: It demonstrates rare, uncommon or endangered aspects of the cultural heritage of the local district.
<b>2.6 Representativeness</b>	Criterion 6: It is significant in demonstrating the characteristics of a class of cultural places or environments in the local district.
<b>2.7 Condition, Integrity and Authenticity</b>	Poor; Medium; Good





## PRELIMINARY ASSESSMENT – CITY OF COCKBURN STONE WALLS AND RUINS

STONE RUINS: 96 COOGEE ROAD, MUNSTER	
LANDOWNER	Landcorp
ZONING	Development Area 6; Special Use 9 (within AMC precinct)
CURRENT LAND USE	Vacant land



Figure 7. Ruins at 96 Coogee Road, Munster



Figure 8. 2017 Aerial Photograph of ruins

### DESCRIPTION

Dilapidated stone ruins located on 96 Coogee Road, Munster in the south eastern corner of the site. The ruin site appears visible as a footprint on the 1953 aerial, and it is unclear what the structure was.

### HISTORY

The subject land was originally part of William Ledyard's 200 acre land grant, however there is no evidence that that he constructed anything on the land. Evidence suggests that he did not make any improvements to the land.

William Ledyard was granted 200 acres north of Lake Coogee but by August 1831 he had decided to try his luck elsewhere (Berson 1978). He wrote to the Lieutenant Governor seeking permission to join the settlers who were going over the mountains to form a settlement. He gave the reasons for wishing to leave the Cockburn District as being that all of Peel's people had left for Rockingham and that his land was not sufficiently good to spend much money on, not having either cattle or sheep on it. The subject land was subsequently passed on to W.J Bateman.

Land title searches reveal that in 1928 the land was owned by Frederick John Allen Early, a hairdresser, and Charles Early, a Tailor, both from Mandurah. After their death in 1939 the land was transferred to John Cooke, of South Fremantle probate of their will and then to Charlotte Brown, Mary Anne Thomas and Elizabeth Franklin Williams in the same year.

Not long after in 1940 the land was transferred to Joze Matijas, a gardener from South Coogee. Joze Matijas was from Marina, Yugoslavia, and was naturalised in 1930<sup>7</sup>. The land was in his ownership until he died on 11 November 1989.

It is noted that the land has been subject to extensive clearing and earthworks over the years which makes it difficult to determine what the structures were, or when they were built.

Given the quick change in ownership between 1939 and 1940 when the land was transferred to Joze Matijas it is likely that structures on the site were either constructed prior to 1939, during the period ownership of Frederick John Allen Early and Charles Early (1928-1939), or later during the ownership of Joze Matijas (1940-1989).

---

<sup>7</sup> 'Westralian Worker' Fri 21 Mar 1930

<b>CULTURAL HERITAGE ASSESSMENT: STONE RUINS 96 COOGEE ROAD, MUNSTER</b>	
<b>NATURE OF SIGNIFICANCE</b>	
<b>2.1 Aesthetic Value</b>	<b>Criterion 1: It is significant in exhibiting particular aesthetic characteristics.</b>
The stone ruins have some aesthetic value, however they are in very poor condition, and are dilapidated.	
<b>2.2 Historic Value</b>	<b>Criterion 2: It is significant in the evolution or pattern of the history of the local district.</b>
Historic value is not known given there is no historical information regarding ruins.	
<b>2.3 Research Value</b>	<b>Criterion 3A: It has demonstrable potential to yield information that will contribute to an understanding of the natural or cultural history of the local district.</b>
<b>Criterion 3B: It is significant in demonstrating a high degree of technical innovation or achievement.</b>	
May have some possible scientific value and/or archaeological potential.	
<b>2.4 Social Value</b>	<b>Criterion 4: It is significant through association with a community or cultural group in the local district for social, cultural, educational or spiritual reasons.</b>
Possible social value not known given limited information available.	
<b>DEGREE/LEVEL OF SIGNIFICANCE</b>	
<b>2.5 Rarity</b>	<b>Criterion 5: It demonstrates rare, uncommon or endangered aspects of the cultural heritage of the local district.</b>
Not known.	
<b>2.6 Representativeness</b>	<b>Criterion 6: It is significant in demonstrating the characteristics of a class of cultural places or environments in the local district.</b>
Not known.	
<b>2.7 Condition, Integrity and Authenticity</b>	
Condition: Poor Integrity: Poor Authenticity: Poor	
<b>RECOMMENDATION:</b> Level of significance is considered low and is considered to be 'below threshold' for inclusion on the LGI because of the poor condition of the ruins, and the lack of information regarding the history of the ruins and builder. It is recommended however that Landcorp, the landowner, be encouraged to undertake further investigation into the ruins as part of any proposal for development or subdivision.	



## PRELIMINARY ASSESSMENT – CITY OF COCKBURN STONE WALLS AND RUINS

STONE WALL: 39 & 41 BRITANNIA AVENUE, BEELIAR	
ZONING	Primary Regional Road Reservation
CURRENT LAND USE	Residential/lifestyle - Dwelling and outbuildings



Figure 9. Dry stone wall viewed from Stock Road

### DESCRIPTION

A low dry stone wall located on the south west corner of 39 and 41 Britannia Avenue, Beeliar, approximately 31m long for the full length of the southern boundary, and a small section (approximately 13m) on the western edge of 41 Britannia Avenue.

It is estimated that it was constructed between 1954 and 1965, given that it is not visible on the 1953 aerial, and is then visible on the 1965 aerial.

The subject land (and the area adjacent to the wall) is currently reserved 'Primary Regional Roads'.



Figure 10. 2017 Aerial Photograph showing the stone wall



Figure 11. 1965 Aerial Photograph showing the stone wall

### **HISTORY**

The subject land was resumed in 1955, and land title searches reveal that just prior to that it was owned by Mate Bavcevic, a farm labourer from Spearwood. Given this timing of ownership, it is assumed the dry stone wall on the property was constructed at the time Mate Bavcevic owned the land. At this time no further information regarding the wall is known.

Preliminary Assessment

<b>CULTURAL HERITAGE ASSESSMENT: STONE WALL: 39 &amp; 41 BRITANNIA AVENUE, BEELIAR</b>
<b>NATURE OF SIGNIFICANCE</b>
<b>2.1 Aesthetic Value</b> <b>Criterion 1: It is significant in exhibiting particular aesthetic characteristics.</b> The wall has some aesthetic value as an attractive landmark landscape feature, visible from Stock Road, although it in poor condition.
<b>2.2 Historic Value</b> <b>Criterion 2: It is significant in the evolution or pattern of the history of the local district.</b> Has some possible significance for its likely association with the market garden industry, which was the predominant source of employment in the area for most of the 20th century.
<b>2.3 Research Value</b> <b>Criterion 3A: It has demonstrable potential to yield information that will contribute to an understanding of the natural or cultural history of the local district.</b> <b>Criterion 3B: It is significant in demonstrating a high degree of technical innovation or achievement.</b> Has some possible scientific value as representing a method of dry stone walling uncommon in Western Australia, although the wall is in poor condition.
<b>2.4 Social Value</b> <b>Criterion 4: It is significant through association with a community or cultural group in the local district for social, cultural, educational or spiritual reasons.</b> Has some significance for its possible association with European market gardeners in the City of Cockburn, particularly the South Coogee area.
<b>DEGREE/LEVEL OF SIGNIFICANCE</b>
<b>2.5 Rarity</b> <b>Criterion 5: It demonstrates rare, uncommon or endangered aspects of the cultural heritage of the local district.</b> Has some possible significance for its association with market gardening which has become less common as urban development has occurred in the area.
<b>2.6 Representativeness</b> <b>Criterion 6: It is significant in demonstrating the characteristics of a class of cultural places or environments in the local district.</b> The dry stone walls were not considered extensive enough to represent a typical characteristic of market gardening generally in the area.
<b>2.7 Condition, Integrity and Authenticity</b> Condition: Poor Integrity: Medium Authenticity: Medium
<b>RECOMMENDATION:</b> Level of significance is considered low and is considered to be 'below threshold' for inclusion on the LGI because of the poor condition of the wall, and the lack of information regarding the history of the wall and the builder.



## PRELIMINARY ASSESSMENT – CITY OF COCKBURN STONE WALLS AND RUINS

STONE WALL: 50 ALBION AVENUE, MUNSTER	
ZONING	'Development'; 'DA 5' (MRS Zoning: 'Urban Deferred')
CURRENT LAND USE	Residential/lifestyle – Dwelling and outbuildings



Figure 12. Dry stone wall viewed from Fawcett Road



Figure 13. Stone wall behind vegetation on Albion Avenue





Figure 14. Intact section to the left, and collapsed section to the right

### DESCRIPTION

A low dry stone wall in dilapidated condition with some small sections intact, located on the south western corner of the lot, on the corner of Albion Avenue and Fawcett Road.

The wall is not visible on the 1953 aerial, and the site was heavily vegetated at that time. It is then visible on the 1965 aerial when the site has been cleared, appearing to be under construction. On the 1974 aerial it is more clearly defined and has total length of approximately 76m, which is the approximate length in 2017.



Figure 15. 1965 Aerial Photograph showing the stone wall

### HISTORY

The subject land was owned by Vincenzo Salpietro between 1950 to 1982, the time during which the dry stone wall on the property was constructed and market gardening was established.

Vincenzo Salpietro was an Italian quarryman from Shallcross Street, Spearwood who purchased the property in 1950.

At this stage no other information regarding the construction of the wall is known.

<b>CULTURAL HERITAGE ASSESSMENT – STONE WALL AT 50 ALBION AVENUE, MUNSTER</b>
<b>NATURE OF SIGNIFICANCE</b>
<p><b>2.1 Aesthetic Value</b>  <b>Criterion 1: It is significant in exhibiting particular aesthetic characteristics.</b>                      The wall has some aesthetic value as an attractive landmark landscape feature, with some prominence due to its location on the corner of Fawcett Road and Albion Avenue, however this is diminished by the dilapidated condition of sections of the wall.</p>
<p><b>2.2 Historic Value</b>  <b>Criterion 2: It is significant in the evolution or pattern of the history of the local district.</b>                      Has some significance for its possible association with the market garden industry, which was the predominant source of employment in the area for most of the 20th century.</p>
<p><b>2.3 Research Value</b>  <b>Criterion 3A: It has demonstrable potential to yield information that will contribute to an understanding of the natural or cultural history of the local district.</b>  <b>Criterion 3B: It is significant in demonstrating a high degree of technical innovation or achievement.</b>                      Has some possible scientific value as representing a method of dry stone walling uncommon in Western Australia, although it is dilapidated condition and only sections of the wall are intact.</p>
<p><b>2.4 Social Value</b>  <b>Criterion 4: It is significant through association with a community or cultural group in the local district for social, cultural, educational or spiritual reasons.</b>                      Has some significance for its association with European market gardeners in the City of Cockburn, particularly the South Coogee area.</p>
<b>DEGREE/LEVEL OF SIGNIFICANCE</b>
<p><b>2.5 Rarity</b>  <b>Criterion 5: It demonstrates rare, uncommon or endangered aspects of the cultural heritage of the local district.</b>                      Has some likely significance for its association with market gardening which has become less common as urban development has occurred in the area.</p>
<p><b>2.6 Representativeness</b>  <b>Criterion 6: It is significant in demonstrating the characteristics of a class of cultural places or environments in the local district.</b>                      The dry stone walls were not considered extensive enough to represent a typical characteristic of market gardening generally in the area.</p>
<p><b>2.7 Condition, Integrity and Authenticity</b>                      Condition: Poor                      Integrity: Poor                      Authenticity: Good  <b>RECOMMENDATION:</b> Level of significance is considered low and is considered to be 'below threshold' for inclusion on the LGI because of the poor condition of the wall, and the lack of information regarding the history of the wall and the builder.</p>

STONE WALL: 22 JERVOIS STREET, BEELIAR	
ZONING	Rural Living (MRS: 'Rural')
CURRENT LAND USE	Rural living/lifestyle



Figure 17. Dry Stone wall adjacent to Britannia Avenue

### DESCRIPTION

A 30m section of intact dry stone wall located on the southern boundary of 22 Jervois Street, Beeliar, adjacent to Britannia Avenue.

This once formed part of a much longer section of wall that in 1953 was approximately 100m in length. In 2005 a portion of the wall to the east was removed as land was developed for a rural lifestyle lot. In 2007 a further section to the east was removed as another dwelling was built. The remaining section is approximately 30m in length adjacent to 22 Jervois Street.



Figure 18. Aerial Photograph (1953) showing the full length of the stone wall (approximately 100m)

### HISTORY

The subject land has been the same ownership since 1951, and no information regarding the dry stone wall is known at this time.



<b>CULTURAL HERITAGE ASSESSMENT – 22 JERVOIS STREET, BEELIAR</b>
<b>NATURE OF SIGNIFICANCE</b>
<p><b>2.1 Aesthetic Value</b>  <b>Criterion 1: It is significant in exhibiting particular aesthetic characteristics.</b></p> <p>The wall has some aesthetic value as an attractive landmark landscape feature visible on Britannia Avenue.</p>
<p><b>2.2 Historic Value</b>  <b>Criterion 2: It is significant in the evolution or pattern of the history of the local district.</b></p> <p>Has some significance for its possible association with the market garden industry, which was the predominant source of employment in the area for most of the 20th century.</p>
<p><b>2.3 Research Value</b>  <b>Criterion 3A: It has demonstrable potential to yield information that will contribute to an understanding of the natural or cultural history of the local district.</b></p> <p><b>Criterion 3B: It is significant in demonstrating a high degree of technical innovation or achievement.</b></p> <p>Has some scientific value as representing a method of dry stone walling uncommon in Western Australia. Has some archaeological potential to reveal aspects of the market gardening industry from the mid-20th century.</p>
<p><b>2.4 Social Value</b>  <b>Criterion 4: It is significant through association with a community or cultural group in the local district for social, cultural, educational or spiritual reasons.</b></p> <p>Has some significance for its association with European market gardeners in the City of Cockburn, particularly the South Coogee area.</p>
<b>DEGREE/LEVEL OF SIGNIFICANCE</b>
<p><b>2.5 Rarity</b>  <b>Criterion 5: It demonstrates rare, uncommon or endangered aspects of the cultural heritage of the local district.</b></p> <p>Has some significance for its possible association with market gardening which has become less common as urban development has occurred in the area.</p>
<p><b>2.6 Representativeness</b>  <b>Criterion 6: It is significant in demonstrating the characteristics of a class of cultural places or environments in the local district.</b></p> <p>The dry stone walls were not considered extensive enough to represent a typical characteristic of market gardening generally in the area.</p>
<p><b>2.7 Condition, Integrity and Authenticity</b></p> <p>Condition: Good  Integrity Fair  Authenticity: Good</p>
<p><b>RECOMMENDATION:</b> Level of significance is considered low and is considered to be 'below threshold' for inclusion on the LGI because of the lack of information regarding the history of the wall and the builder.</p>

## PRELIMINARY ASSESSMENT – CITY OF COCKBURN STONE WALLS AND RUINS

STONE WALL: NAVAL BASE HOLIDAY PARK	
LANDOWNER	
ZONING	Parks and Recreation Reserve
CURRENT LAND USE	Holiday Park

### DESCRIPTION

A low stone wall with mortar located within the Naval Base Holiday Park, adjacent to Shack No. 239. This wall is not visible in the 1953 aerial photograph, but is visible in the 1965 aerial photograph, shown below.

The wall is thought to be associated with the railway line that once ran north south through the site.



Figure 19. 1965 Aerial showing wall at Naval Base Holiday Park

### RECOMMENDATION

The 'Naval Base Holiday Park' is included on the City of Cockburn LGI, and is also a designated 'Heritage Area' pursuant to the Scheme. Therefore the stone wall is protected as part of the requirement for planning approval prior to any works within a Heritage Area.

It is recommended that the place record for 'Naval Base Holiday Park' be modified to acknowledge the stone wall.

**TABLE 2: STONE WALLS AND RUINS – OVERVIEW OF RECOMMENDATIONS**

<b>Address</b>	<b>Type</b>	<b>Condition</b>	<b>Heritage Listing Recommendation</b>
Lot 103 West Churchill Avenue, Munster.	Dry stone wall & ruins	Good	Currently included on LGI and Heritage List (protected under TPS3)
39 & 41 Britannia Ave, Beeliar	Dry stone wall	Poor	No formal heritage listing recommended - record in a new section of LGI for historical purposes
50 Albion Avenue, Munster	Dry stone wall	Poor	No formal heritage listing recommended - record in a new section of LGI for historical purposes
22 Jervois Street, Beeliar	Dry stone wall	Fair	No formal heritage listing recommended - record in a new section of LGI for historical purposes
Naval Base Holiday Park	Stone wall	Good	Currently protected as part of the Naval Base Holiday Park Heritage Area – modify the place record to acknowledge the stone wall.
Coogee Road	Stone wall	Removed 2004	Include map of location of extant and removed walls in new section of LGI for historical purposes
Korcula Court	Stone wall	Removed 2008	Include map of location of extant and removed walls in new section of LGI for historical purposes
Britannia Avenue, Beeliar	Stone wall	Removed 2009	Include map of location of extant and removed walls in new section of LGI for historical purposes

### 4.3 Outcome of Heritage Assessment - Dry Stone Walls

Historical aerial photographs indicate that the dry stone walls in Beeliar and Munster (former South Coogee area) were generally constructed between 1953 and 1965, and are commonly associated with the Croatian and Italian market gardeners of that time.

It is likely that the dry stone walls in this area had a dual purpose:

- To clear stone from the site to allow market gardening activities;
- Delineate property boundaries.

These dry stone walls are considered to have some cultural heritage significance, specifically:

- Aesthetic significance as landmark features;
- Historical interest for their association with market gardening; and
- Scientific interest because of the dry stone construction method.

This is discussed in further detail below.

#### *Aesthetic Value*

In areas where dry stone walls are prevalent they can be intrinsically part of the landscape. A number of Victorian local government areas, such as the City of Wyndham and City of Melton have landscapes that are a 'chequerboard network' of extensive walls, kilometres in length, and they have become an important part of the landscape visually, and a cultural connection to the past.

A review of historical aerial photographs provides an indication of the extent of stone walls in the former South Coogee area, depicted in Map 1. This demonstrates that they were not prevalent in the area.

Therefore while these walls have some landmark character and aesthetic value individually, they are not considered to be extensive enough to contribute significantly to the landscape character of the area.

The extant dry stone walls that were examined were generally in poor condition with evidence of significant deterioration. This is also considered to reduce their aesthetic value because in a deteriorated state are not a good representation of the original appearance.

The visual presence, strength and cohesion of the walls relate to the height, length and state of preservation of the wall is relevant to the aesthetic value of the wall.

Place No. 114 'Limestone Wall and Ruins, Munster' is considered to be the best, most intact example of a dry stone wall constructed by market gardeners in the former South Coogee area. This is because of its substantial height and length, and relatively good condition. The associated limestone ruins also enhance its aesthetic value because the wall and ruins can be read together as a 'precinct'.

#### *Historical and Social Value*

Given that dry stone walls were not prevalent in the former South Coogee area (as shown in Map 1), this suggests that their construction was not common practice, and that they do not have a strong association with the activity of market gardening generally in the former South Coogee area and are not indicative of rural settlement patterns.

Their limited association with market gardening is best reflected in 'Place No. 'Limestone Wall and Ruins, Munster' where the story of the wall, and the builder is known, adding to its historic value.

### *Scientific and Archaeological Value*

In terms of meeting the criteria for inclusion on the LGI, 'Place No. 114 'Limestone Wall and Ruins, Munster' is the most intact, and one of the most well-made examples and therefore provides the best scientific and archaeological potential. Its association with ruins on the site also enhances its archaeological potential, and interpretation opportunities.

### 4.4 Heritage Listing Recommendations

#### *Dry Stone Walls*

The three dry stone walls that were assessed through this study are considered to be 'below threshold' and do not meet the criteria for inclusion on the LGI.

Place No. 114 'Limestone Wall and Ruins, Munster', which is already included on the LGI and protected pursuant to the town planning scheme, is considered to be the best example to demonstrate the heritage values of these walls, and it itself has been assessed and demonstrated to meet the criteria for inclusion on the LGI.

However, it is acknowledged that these structures do have some cultural heritage value, and they are of interest as part of the history of the area. For this reason it is considered appropriate that they are recorded and their retention is encouraged.

Including these structures on the LGI (but not the Heritage List) would still trigger the requirement for planning approval prior to demolition or removal of these structures pursuant to the local planning scheme.

Where there is fabric remaining the purpose of including a place on the LGI 'Management Category D' (the lowest category) is to ensure that an archival record can be obtained prior to demolition. This is achieved through the requirement for planning approval prior to

demolition of a 'Management Category D' place, which is then conditioned with a requirement for an archival record (photographs and scaled drawings). In this circumstance a record of the dry stone walls has been made by the City and there is not seen to be any benefit from requiring the landowner to seek planning approval prior to demolition of the wall which would incur additional costs and time delays.

It is therefore recommended that a new section be included within the LGI document where information about historical sites can be recorded as follows:

#### *Record of Sites/Structures for Historical Information Only (below threshold)*

This section would include:

- Sites/structures that are of historical interest as part of the story of the district but are not considered to have the cultural significance to warrant inclusion on the LGI (ie. do not meet the criteria for inclusion on the LGI).
- Sites/structures where statutory protection is not considered necessary or appropriate.
- Where it is considered undesirable and unnecessary to trigger any additional requirements for planning approval for the landowners, including demolition.
- A record of the site and relevant information for historical purposes and to facilitate possible interpretation opportunities.
- Encourage retention and recognition of the dry stone walls where possible.



### *Naval Base Holiday Park Wall*

The Naval Base Holiday Park site is included on the LGI and is also a designated 'Heritage Area' pursuant to the Scheme. Therefore the stone wall located on the site is protected through the requirement for planning approval prior to any works.

However, it is recommended that the place record be modified to include a reference to the wall to ensure it is recognised.

## 5.0 Future Management

### 5.1 Stabilisation and Retention Issues

If well-made and undisturbed, dry stone walls can stand for centuries; however they can also be prone to deterioration and collapse. This is because they are characterised by very shallow footings, usually only a few inches deep, and they are susceptible to ground movement on soft land, as well as root damage from nearby trees. The natural processes of weathering and decay of the stone, particularly soft stone such as limestone, will also cause a loss of strength when the stone becomes brittle and decays, resulting in a reduction in stability. Removal of sections of the wall, which often occurs as land use changes over time, also undermines their structural stability.

It is anticipated that there would be high costs and a lack of local expertise in retaining and maintaining dry stone walls on private property. It is also noted that there are no recognised dry stone wallers listed with the Dry Wall Association of Australia, reflective of the lack of local expertise.

However, it is acknowledged that these structures do have some cultural heritage value, and they are of interest as part of the

history of the area. For this reason it is considered appropriate that they are recorded and their retention is encouraged.

### 5.2 Retention on Public Land

The dry stone walls located elsewhere in Australia are generally located on private rural land where they remain relatively undisturbed.

Dry stone walls in the public realm raise issues regarding safety and ongoing maintenance, particularly where the area may be subject to high levels of use by the public, such as parks. Leaving the dry stone walls as they are is considered to be problematic because they are designed to stand where they remain undisturbed.

In the public realm, such as within road reservations or public open space, dry stone structures will be subject to greater levels of interference that could undermine their stability.

In the first instance they will be subject to disturbance from earthworks as part of any subdivisional works, including land re-contouring, fill, compaction, and vegetation removal/modifications.

The use of the area by the public, which could include climbing of the walls, creates the risk that the stability of the wall/structure would be undermined. For this reason any dry stone walls on public land will need to be appropriately stabilised to ensure their safety. The method of stabilisation must take into consideration the heritage values of the wall, and should not detract from the aesthetic values of the wall/structure.



wall but that it reflects a re-interpretation, and may be incorporated into landscaping elements in public open space.

- Street naming opportunities.

The complete rebuilding of a dry stone wall is generally considered cost prohibitive as it would not retain its heritage values unless it was re-constructed using traditional dry stone wall techniques.

### 5.3 Interpretation Opportunities

Heritage supports urban and rural amenity by providing familiarity and the presence of landmarks, by underpinning our 'sense of place', and by enhancing the quality of our built environment generally.

Whilst not representative of rural settlement of the area more broadly, the dry stone walls and structures do provide a unique insight into the predominate former use of the area for market gardening. They are also a unique landscape element in themselves. In this regard they provide great interpretation opportunities.

Where a structure plan is prepared for a landholding containing a dry stone wall the Structure Plan should consider:

- Retention of the wall, or sections of the wall where they can be stabilised, with the method of stabilisation specified both during earthworks and construction, and in the future.
- Interpretative artwork that recognises the history of the site and the dry stone wall.
- Interpretation that re-uses the stones from the dry walls, for example in gabion artworks, street furniture, fencing, retaining and landscaping.
- Where reused as gabion fencing the intent is not that it mimics the old







### Percent for Artwork Policy

Where the City's Percent for Artwork Local Planning Policy applies to development that is located on land where a stone wall is located the following is encouraged:

- Incorporation of the stones themselves in interpretive artwork, such as gabion structures, street furniture and landscaping elements;
- Artworks that reflect the dry stone walls and the market gardening history of the area.

This provides the opportunity for artworks to reflect the area's character and to create a unique sense of place for the future.

### 5.4 Place No. 114: Limestone Wall and Ruins, Munster

Place No. 114 'Limestone Wall and Ruins, Munster' is included on the City of Cockburn LGI and Heritage List. Pursuant to City of Cockburn Local Planning Policy No. 4.4 'Heritage Conservation Design Guidelines' and State Planning Policy 3.5 Historic Heritage there is a presumption against demolition of places on the Heritage List.

Therefore there is a presumption against demolition of the wall and ruins, and any modifications would require planning approval so that the impact on the heritage values of the structures could be assessed.

Retention of these wall and ruins will require an innovative approach to the design of public open space that incorporates the wall and ruins whilst also providing a recreational function for the community.

Any structure plan that affects Place No. 114 'Limestone Wall and Ruins, Munster' should demonstrate:

- Retention of the wall and ruins within public land to secure its future retention and management.
- Public open space being designed to appropriately incorporate the ruins and wall in a manner that facilitates interpretation while providing a recreational function for the community.
- Methods of stabilising and protecting the wall and ruins during earthworks and subdivisional works.
- Methods of stabilising the stone wall and ruins in a way that does not detract from the heritage significance, particularly the aesthetic values of the structures.

The wall and ruins provide this structure plan area with a point of difference and with careful planning and design will create a very distinctive park that contributes to a unique sense of place for the area.

## APPENDIX A - IDENTIFICATION OF STONE WALLS AND STRUCTURES – REMOVED STRUCTURES

Historical aerial photographs have been examined to identify the possible location of stone walls in the City of Cockburn that are longer extant. The following have been identified:

### Coogee Road, north of Albion Avenue

**Construction date:** Constructed between 1954 and 1965 when the land was cleared and market garden established.

**Size:** Approximately 245m in length. Height unknown.

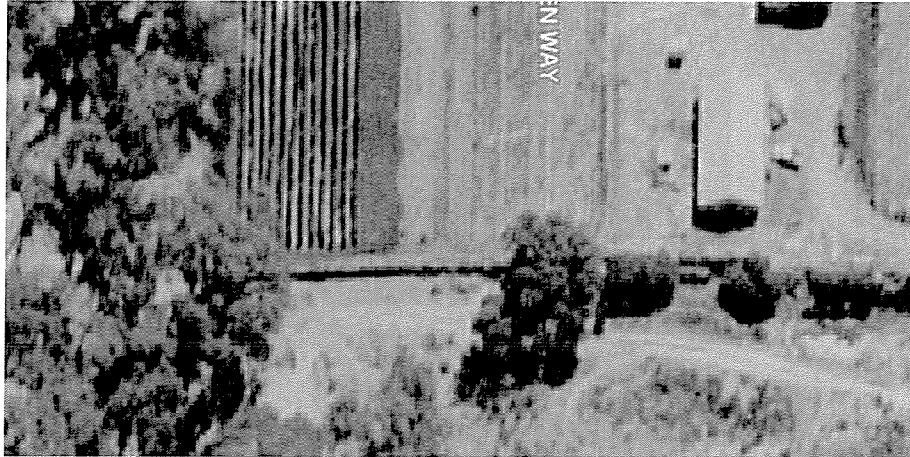
**Demolition:** Removed in 2004 as part of subdivisional works and creation of public open space.



**Southern side Korcula Court (western end)**

**Construction date:** Constructed between 1954 and 1965 when the land was cleared and market garden established

**Demolition:** Removed in 2008 as part of subdivisional works.



2005 Aerial



**Britannia Avenue (Western end), Beeliar (rear boundaries)**

**Construction date:** Constructed between 1954 and 1965 when the land was cleared and market garden established.

**Demolition:** By 2005 the wall appears dilapidated, and development in 2009 on Wells Road resulted in removal of a section.

Possible remnants located at rear (northern) boundary of 56 Fanstone Avenue, Beeliar



2005 Aerial Photograph







**City of Cockburn**  
G.I.S Services Department

**Attachment 1 – Location Plan (subject land outlined in red)**

PRINTED ON:  
15/08/2017

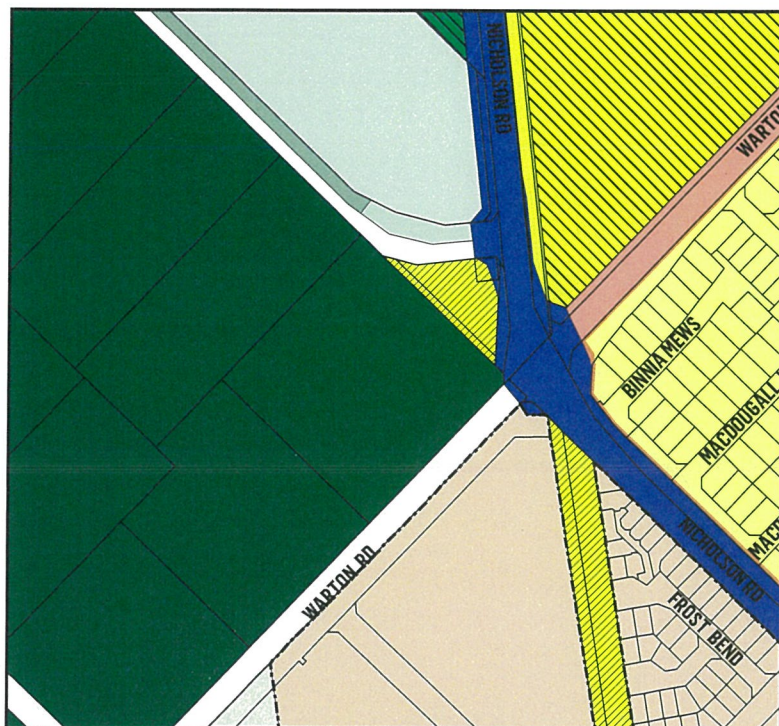
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# CITY OF COCKBURN TOWN PLANNING SCHEME NO.3 AMENDMENT NO. 122



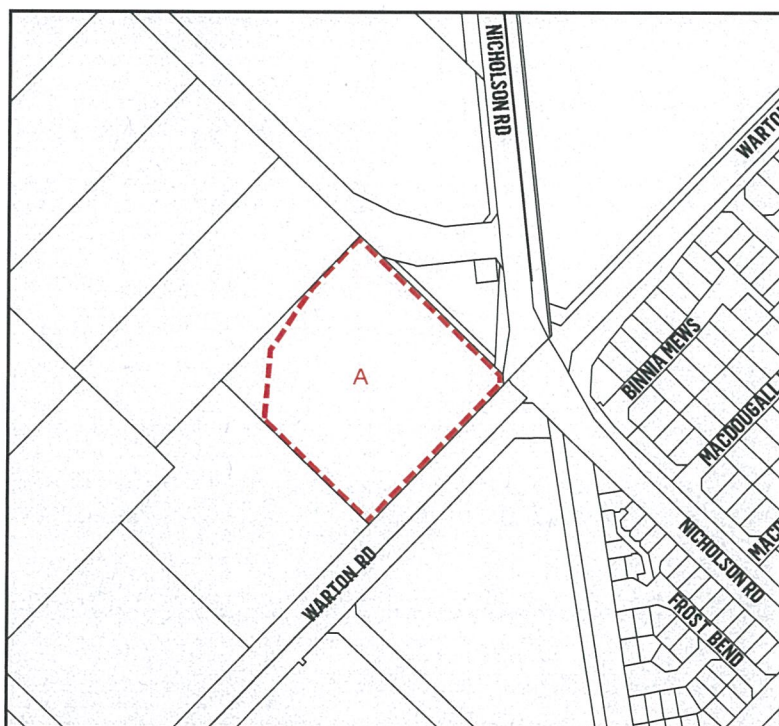
EXISTING ZONING

## MRS - ZONES AND RESERVES

- Other regional road
- Parks and recreation
- Public purposes - prison
- Rural
- Rural - water protection
- Urban
- Bush forever

## LPS - ZONES AND RESERVES

- General rural
- Local road
- Public purposes
- Residential
- Resource
- Urban development
- Additional Use



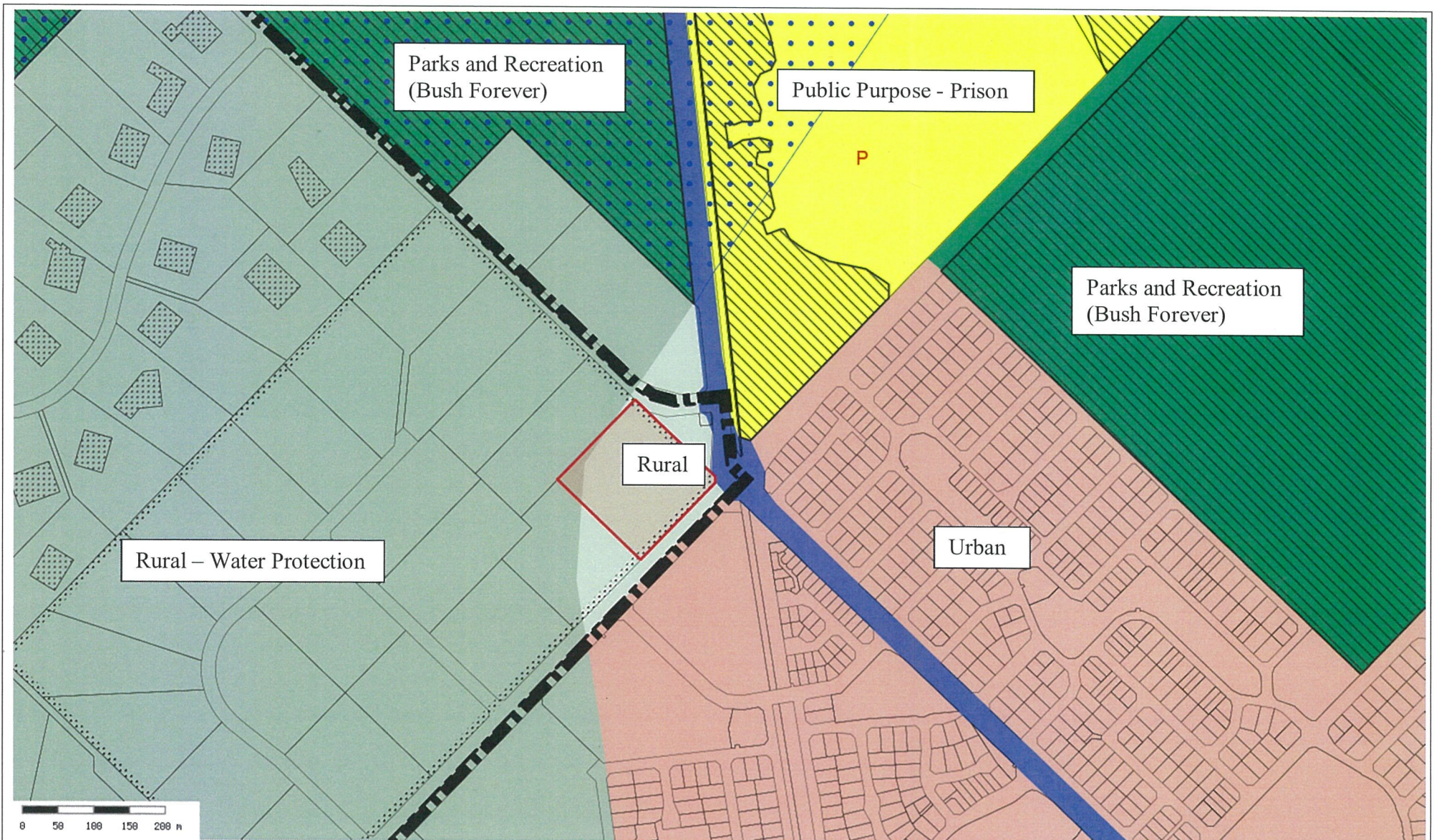
PROPOSED ZONING CHANGES



## SCHEME AMENDMENT MAP LOT 25 ACOURT ROAD - BANJUP

DATE: 01.02.2017  
JOB NO: PA1279  
DWG NO: FIG5  
REV: A

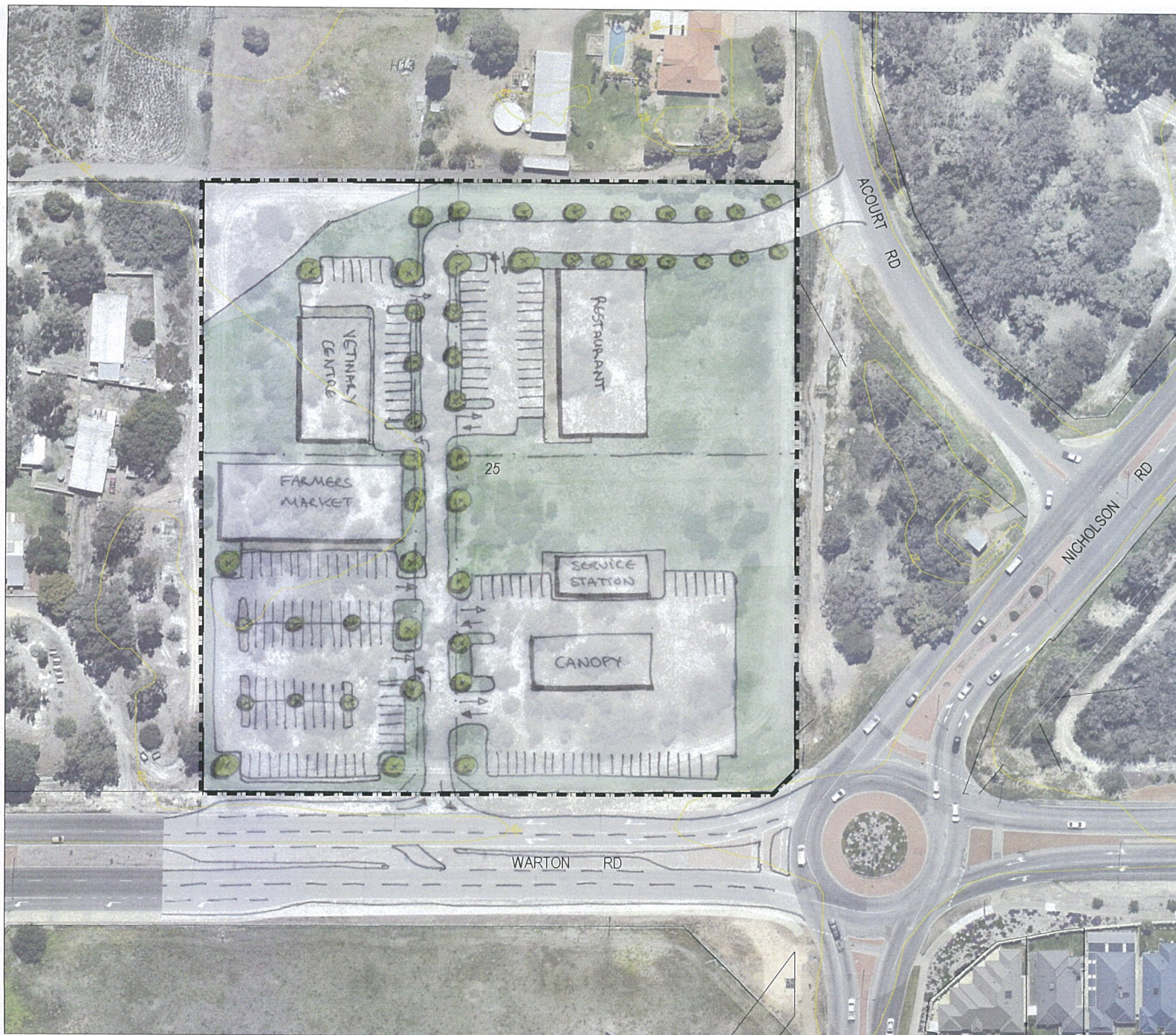




 <p><b>City of Cockburn</b> G.I.S Services Department</p>	<p>Attachment 3 – MRS Zoning (Lot 25 outlined in red)</p>	<p>PRINTED ON: 16/08/2017</p>	<p>SCALE = 1:7500</p>	 <p>NORTH</p>
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- COMMERCIAL LAND USE
- RESIDENTIAL LAND USE

LOCATION PLAN SCALE 1: 5000



**URBIS**  
 Level 14, The Quadrant  
 1 William Street, PERTH, WA 6000  
 +61 8 9346 0500  
 www.urbis.com.au  
 Urbis Pty Ltd ABN 50 105 256 228

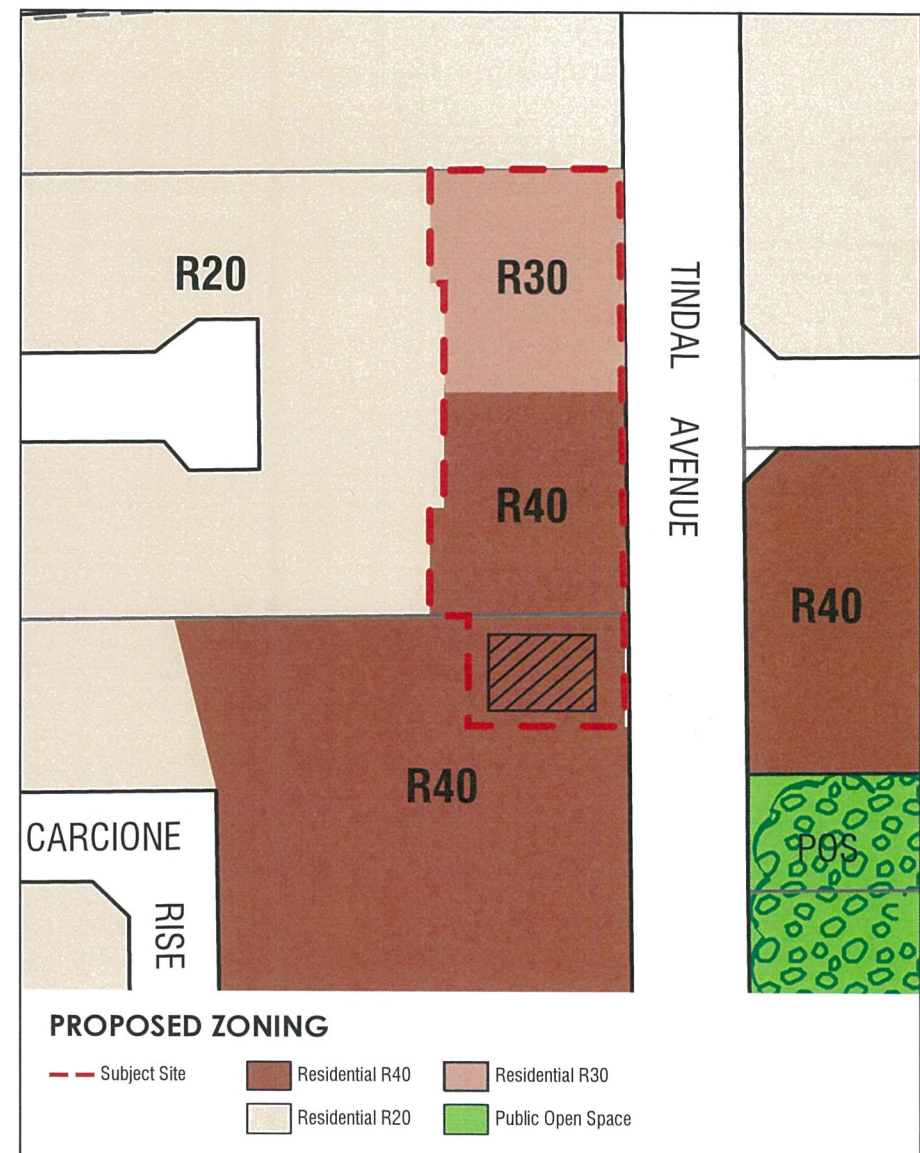
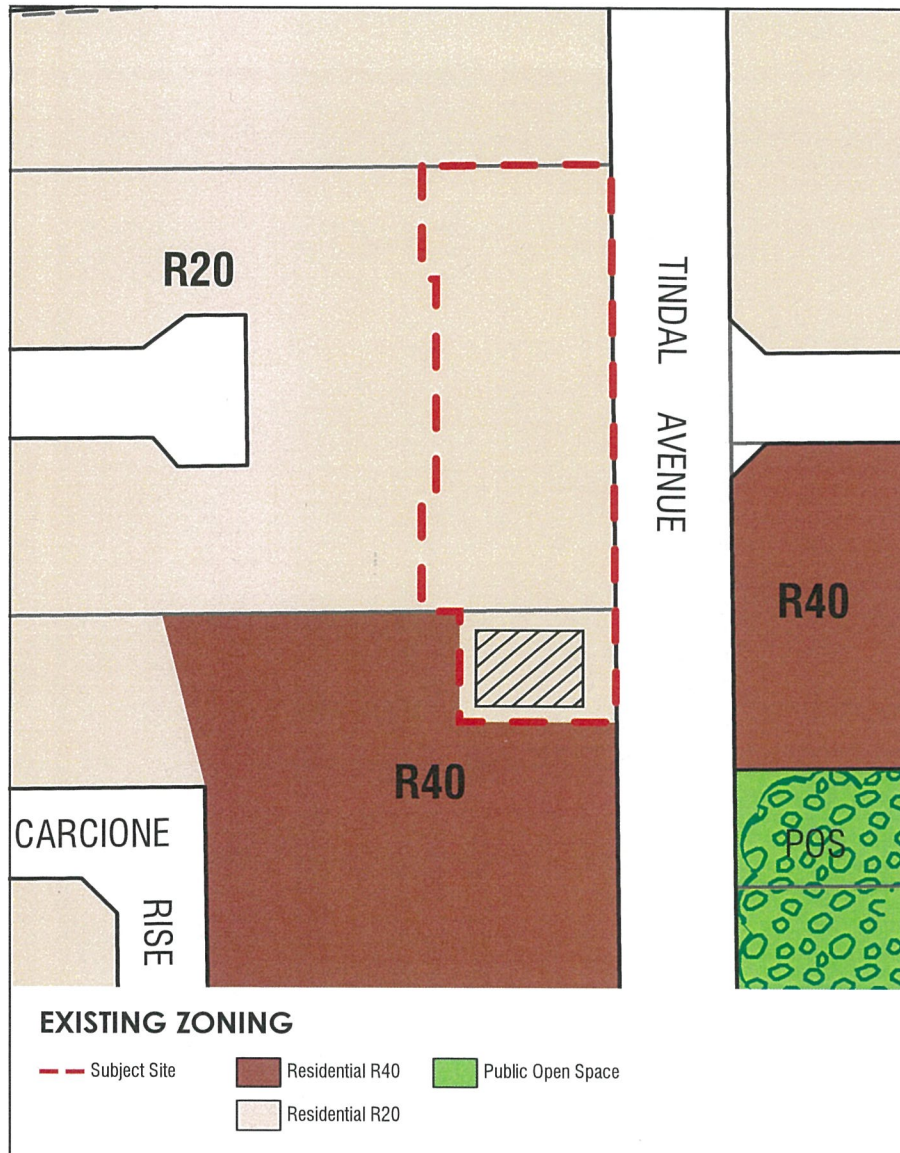
**Concept Plan**  
 Lot 25 Acourt Road, Banjup  
 City of Cockburn

Scale 1:1,000 @ A3  
 0 10 20 50m

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 This plan is conceptual only and is for discussion purposes only. Subject to further detail study. Council approval, engineering input, and all other dimensions are approximate only. Figured dimensions shall take precedence to scaled dimensions. The substance should be placed on the plan to any financial drawings of the land.

**PROJECT No:** PA1279  
**DRAWING No:** 02  
**REV:** e  
**DATE:** 17.07.17





## STRUCTURE PLAN AMENDMENT MAP

Lots 10, 11, 12, 13 and 101 (No's 34 - 46) Tindal Avenue  
Yangebup.



PLAN: CGC-1 003A  
DATE: 170615  
PROJECT: LOTS 34-46 Tindal Avenue  
DESIGNED: AM

SCALE: 1:1250 @A4







**City of Cockburn**  
G.I.S Services Department

Attachment 2 – Location Plan (subject land outlined in red)

PRINTED ON:  
22/08/2017

SCALE = 1:6000

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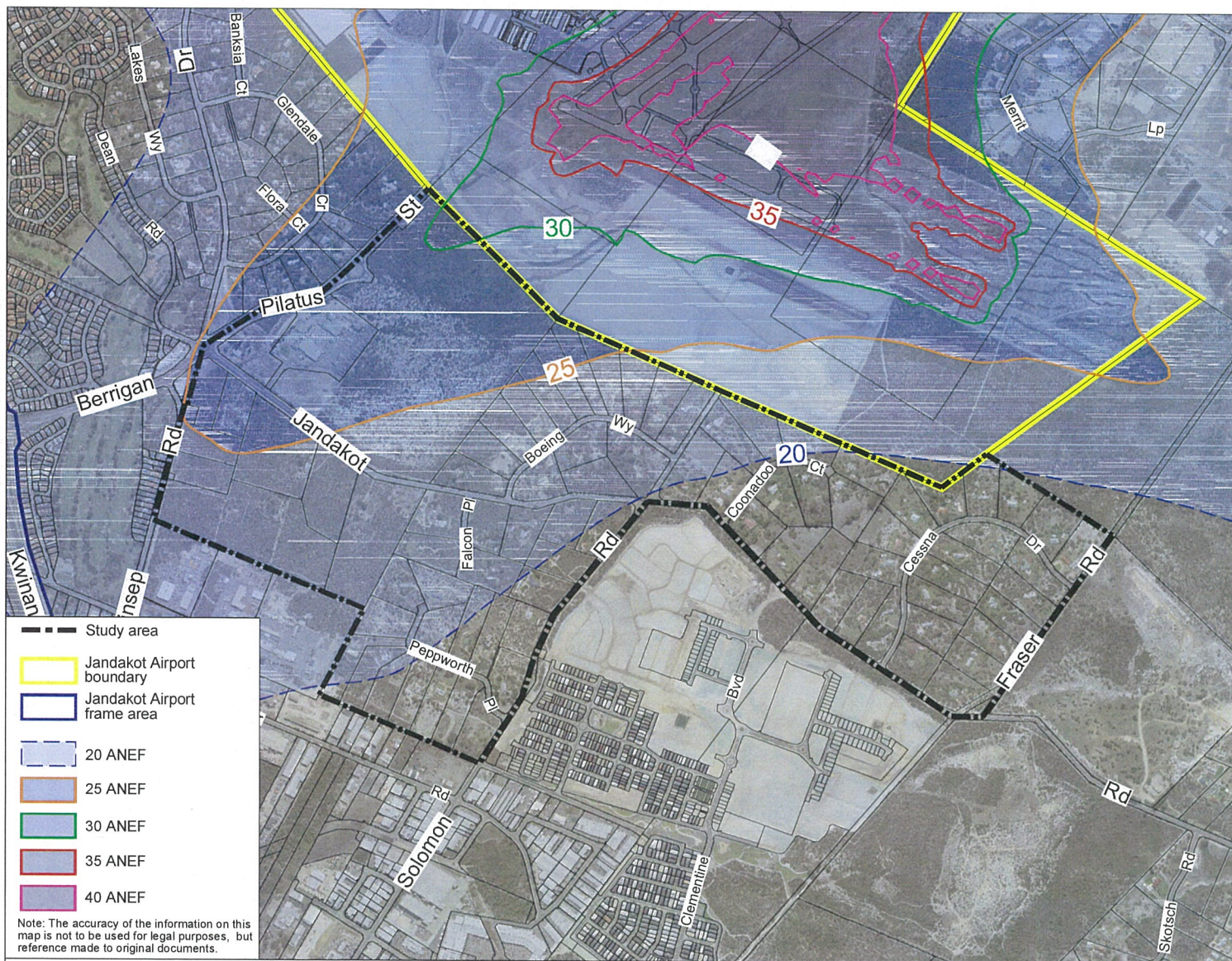
**SCHEDULE OF SUBMISSIONS**  
**PROPOSED AMENDMENT TO STRUCTURE PLAN - LOTS 10, 11, 12, 13, & 101 TINDAL AVE YANGEBUP**

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
1	Western Power GPO Box L921 PERTH WA 6842	<p>Thank you for submitting your due diligence request to Western Power in relation to your proposed work. Your proposal is being reviewed, and we will contact you directly for more information if required.</p> <p>This email should not be considered to be an approval or non-objection to your works.</p>	Noted. As no further correspondence was received, it is assumed there is no object to the proposal.
2	Telstra, Forecasting & Area Planning Locked Bag 2525 PERTH 6001	<p>Thank you for the above advice. At present, Telstra Corporation Limited has no objection.</p> <p>Should you require any more information regarding Telstra's new infrastructure policy, please read below or contact me.</p> <p><b>Latest Telecommunications Policy</b>  The Federal Government has deemed developers are now responsible for telecommunications infrastructure on all developments, i.e. conduits, pits and the cost of the cable installation by Telstra or other carrier. Telstra can provide a quote for the pit and pipe and/or cable. This is explained on the Telstra Smart Community website below. The owner/developer will have to submit an application before construction is due to start to Telstra (less than 100 lots or living units) or nbn™ network (for greater than 100 lots or living units in a 3 year period).</p> <p>Applications to Telstra can be made on the Telstra Smart Community website:  <a href="http://www.telstra.com.au/smart-community">http://www.telstra.com.au/smart-community</a></p> <p>More information regarding nbn™ network can be found on their website  <a href="http://www.nbnco.com.au/develop-or-plan-with-the-nbn.html">http://www.nbnco.com.au/develop-or-plan-with-the-nbn.html</a></p> <p>Please dial 1100 (Dial before You Dig) for location of existing services.</p> <p>Federal Government Telecommunications Infrastructure in New Developments Policy May 2015  <a href="https://www.communications.gov.au/policy/policy-listing/telecommunications-new-developments">https://www.communications.gov.au/policy/policy-listing/telecommunications-new-developments</a></p> <p>STATE PLANNING POLICY 5.2 Telecommunications Infrastructure August 2015  <a href="http://www.planning.wa.gov.au/dop_pub_pdf/Telecommunications_Infrastructure.pdf">http://www.planning.wa.gov.au/dop_pub_pdf/Telecommunications_Infrastructure.pdf</a></p> <p>Communications Alliance - G645:2011 Fibre Ready Pit and Pipe Specification for</p>	Noted. The applicant has been made aware of this information via this attachment to the Council report.

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		Real Estate Development Projects <a href="http://www.commsalliance.com.au/Documents/all/guidelines/g645">http://www.commsalliance.com.au/Documents/all/guidelines/g645</a>	
3	Water Corporation PO Box 100 LEEDERVILLE WA 6902	<p>The Water Corporation offers the following comments in regard to this proposal.</p> <p><b>Water and Wastewater</b> Reticulated water and sewerage services are currently available to the subject Lots. The proposed changes to the Structure Plan does not appear to affect Water Corporation ability to service these lots.</p> <p><b>General Comments</b> The principle followed by the Water Corporation for the funding of subdivision or development is one of user pays. The developer is expected to provide all water and sewerage reticulation if required. A contribution for Water, Sewerage and Drainage headworks may also be required. In addition the developer may be required to fund new works or the upgrading of existing works and protection of all works. Any temporary works needed are required to be fully funded by the developer. The Water Corporation may also require land being ceded free of cost for works.</p> <p>Please provide the above comments to the land owner, developer and/or their representative. (map included)</p>	Noted. The applicant has been made aware of this information via this attachment to the Council report.
4	Eduardo Mendes 37 Spinnaker Heights YANGEBUP WA 6164	<b>SUPPORT</b>	Noted.
5	Landowner	<p><b>OBJECT</b> In reference to the above proposal, we object to rezoning of the said properties, on the grounds that we feel it would de value the area. As we are the adjoining property, we do not wish to have smaller dwellings next door. We purchased our property based on the adjoining properties being the original size and zoning of R20.</p> <p>We feel it would be too congested for the area.</p>	<p>Not supported. There is no evidence that the recoding would devalue property values, particularly as the proposal has the potential to increase the number of dwellings at the subject land by only 5 dwellings. Current lot sizes are much larger than the minimum allowed for R20 subdivision under the R-Codes and the proposed recoding would facilitate the subdivision of lots that are only marginally smaller than the R20 minimum. The proposed recoding is sensitive of existing development and lots adjoining R20 coded development to the north are only proposed to increase to R30.</p> <p>The City's engineers have reviewed the proposal and are satisfied that the increased traffic as a result of an increased number of dwellings is minor and can easily be accommodated within the existing road network. Much of the land within Cell 9, Yangebup and Cell 10, Beeliar</p>

NO.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
			Structure Plan area has been underdeveloped as lot sizes are much larger than the minimum allowed under the R-Codes. Thus, traffic numbers are far less than what would have been allowed had lots been subdivided at the minimum lot size allowed.





**Western Australian Planning Commission  
State Planning Policy 5.3 - Land Use  
Planning in the Vicinity of Jandakot  
Airport**

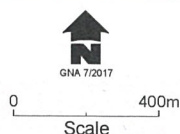
1. The strategic importance of Jandakot Airport supports the need for it to be recognised in the planning of the region.
2. The objective of this policy includes the protection of Jandakot Airport from encroachment by incompatible land use and development so as to provide for its ongoing, safe, and efficient operation.

**Western Australian Planning Commission  
State Planning Policy 2.5 - Rural Planning  
Policy December 2016**

1. The purpose of this policy is to protect and preserve Western Australia's rural land assets due to the importance of their economic, natural resource, food production, environmental and landscape values. Ensuring broad compatibility between land uses is essential to delivering this outcome.

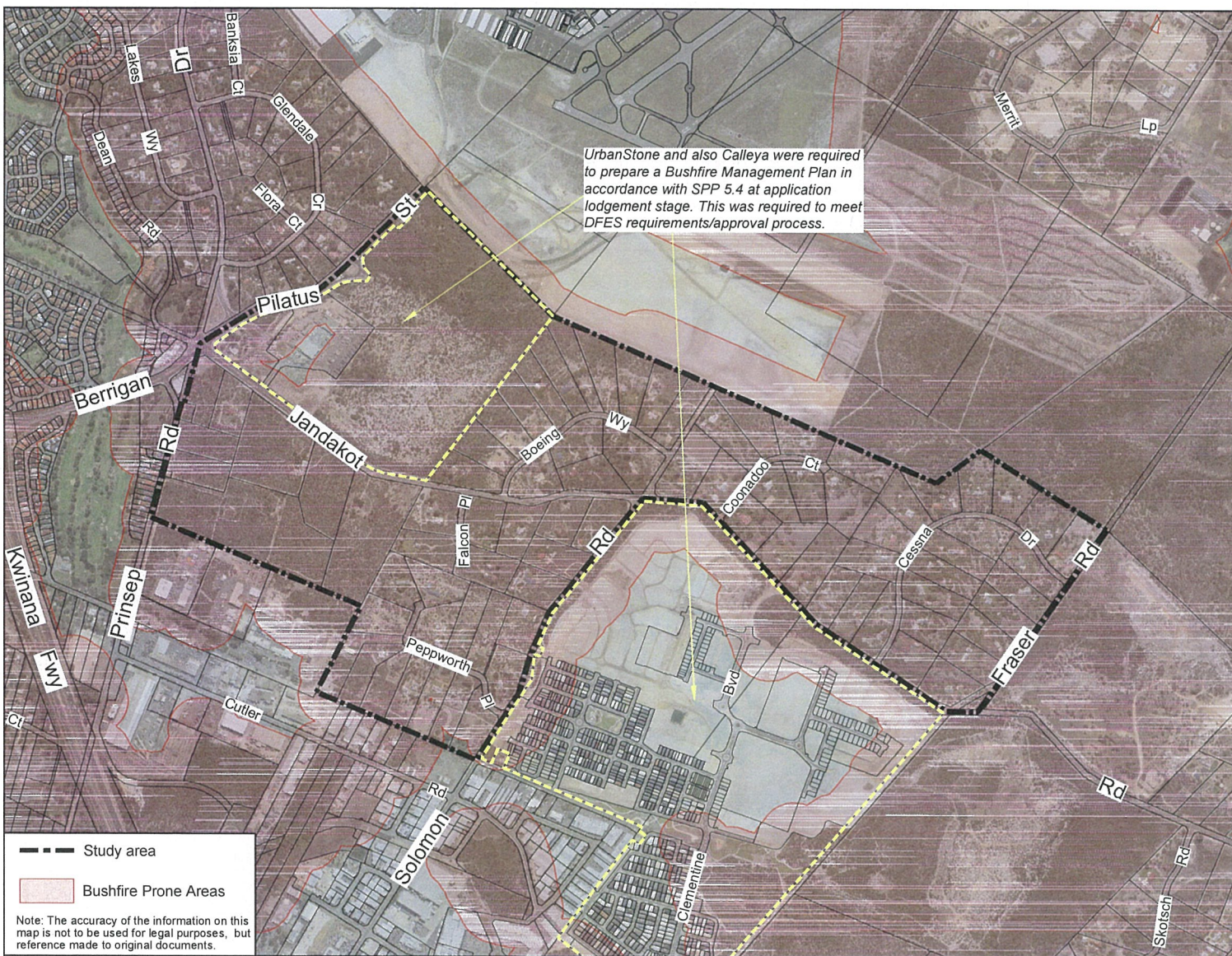
**Western Australian Planning Commission  
State Planning Policy 2.3 - Jandakot  
Groundwater Protection**

1. This policy aims to protect the Jandakot Groundwater Protection area ("the policy area") (See Figure 1) from development and land uses that may have a detrimental impact on the water resource.
2. Land use planning is guided by priority areas and the principles of risk avoidance, risk minimisation and risk management.



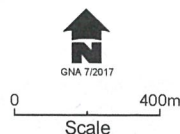
**ANEF - ULTIMATE CAPACITY**  
**JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS**  
**PLAN 1 OF 10**





#### Western Australian Planning Commission State Planning Policy 3.7 - Planning in Bushfire Prone Areas December 2015

1. An objective is to avoid any increase of the threat of bushfire to people, property and infrastructure.
2. Reduce vulnerability to bushfire through the identification and consideration of bushfire risks in decision-making.
3. Achieve an appropriate balance between bushfire risk management measures and, biodiversity conservation values, environmental protection and biodiversity management and landscape amenity. This is an important point to note particularly with respect to Map 8 requirements. These requirements are to be addressed simultaneously in some instances.

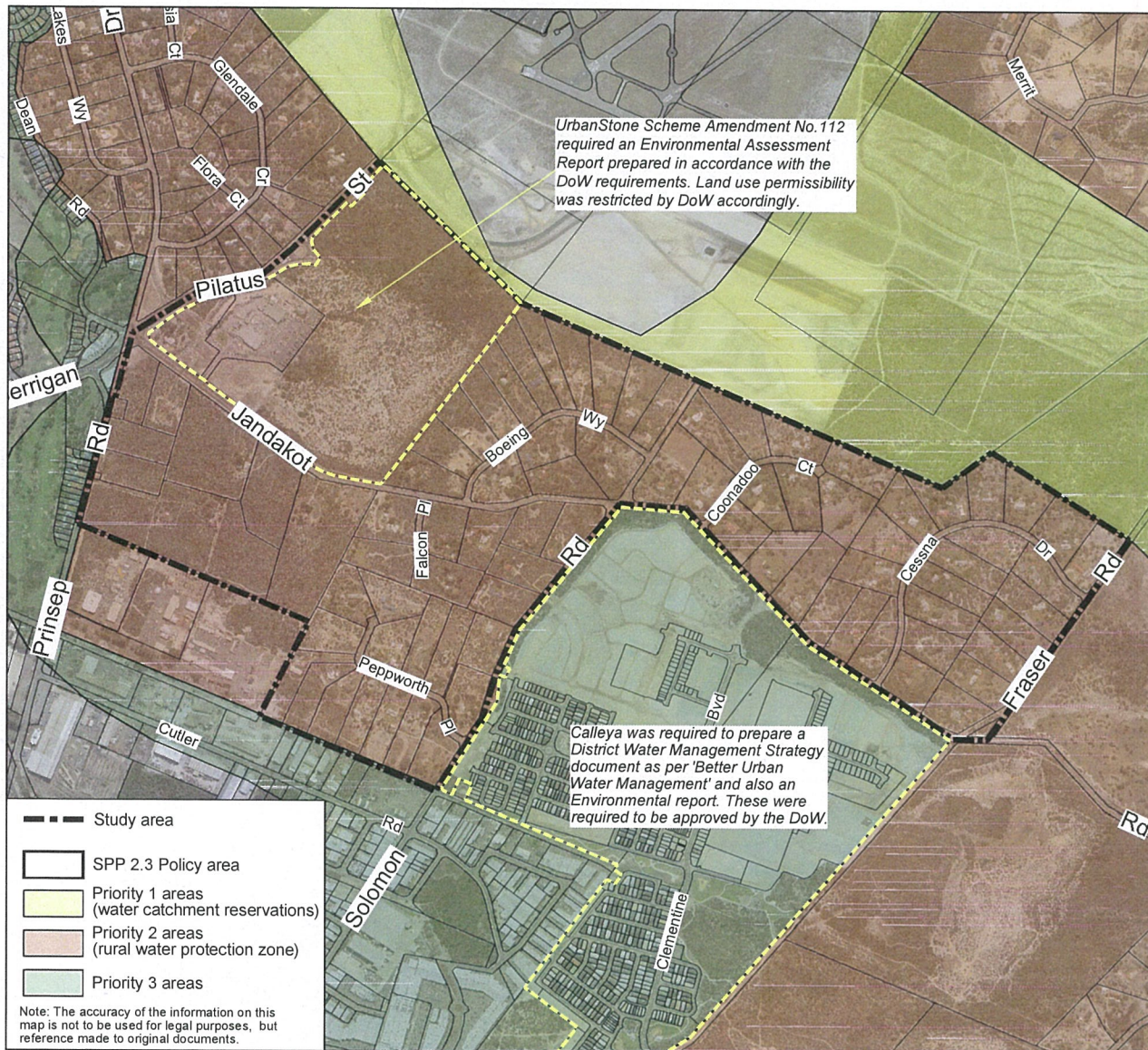


## BUSHFIRE PRONE AREAS

### JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS

PLAN 2 OF 10





#### Department of Environment Public Drinking Water Resource Policy - Protecting Public Drinking Water Source Areas in Western Australia 2005.

1. The objective is to deliver 'safe, good quality drinking water' to consumers, now and in the future by protecting water quality in this area.

#### Department of Water- Water Quality Protection Note Number 93, September 2009.

1. WQPN No. 93 specifies P2 areas are to be managed in accordance with the principle of risk minimisation and so restricted intensity development (with conditions) and activity with a low contamination risk is accepted.

#### Department of Water - Water Quality Protection Note 65 - Toxic and hazardous substances

1. WQPN No. 65 specifies Toxic and hazardous substances (THS) are materials that are widely used to fuel machinery, clean equipment, control pests and support our lifestyle. If mismanaged, they can poison living things, disrupt reproductive processes and habitats, and may generate fires or explosions. The Department of Water is responsible to ensure WQPN 65 is considered at the planning stage.

#### Western Australian Planning Commission

##### State Planning Policy 2.7 - Public Drinking Water Source Policy 2003

1. The importance of protecting public water supplies is recognised in the State Water Quality Management Strategy for Western Australia (2001), which is a State-level strategy for implementation of the National Water Quality Management Strategy (1994) in Western Australia.
2. P2 areas are defined to ensure that there is no increased risk of pollution to water source. P2 areas are declared over land where low-risk development already exists.
3. Protection of public water supply sources is a high priority in these areas.
4. P2 areas are managed in accordance with the principle of risk minimisation.
5. The policy aims to ensure that land use and development within P2 areas are compatible with the protection and long-term management of water resources for public water supply.

#### Western Australian Planning Commission State Planning Policy 2.3 - Jandakot Groundwater Protection January 2017

1. To ensure that all development and changes to land use within the policy area are compatible with maximising the long-term protection and management of groundwater, in particular for public drinking water supply.

#### Western Australian Planning Commission State Planning Policy 2.9 - Water Resources

1. Protect, conserve and enhance water resources that are identified as having significant economic, social, cultural and/or environmental values.



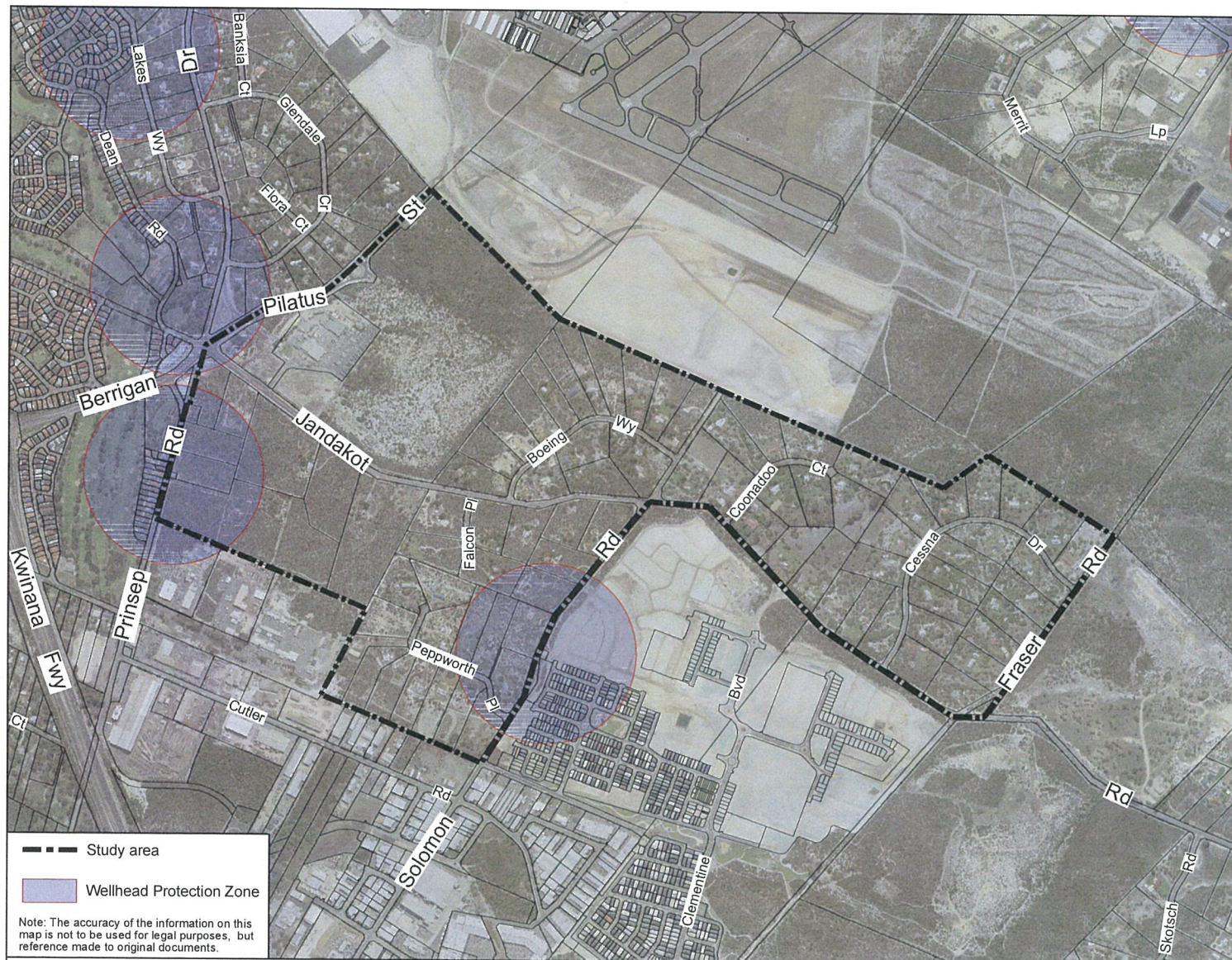
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Scale

## JANDAKOT GROUNDWATER PROTECTION AREAS

### JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS

PLAN 3 OF 10





**Department of Water (Environment)  
Water Quality Protection Note - Land use  
compatibility in Public Drinking Water  
Source Areas**

1. This document specifies Priority 2 areas (which includes the subject site) are to be managed to ensure that there is no increased risk of water source contamination/ pollution. For P2 areas, the guiding principle is risk minimisation.
2. Special conditions, such as restrictions on storage and use of chemicals will apply within 'wellhead protection zones'.

**Western Australian Planning Commission  
State Planning Policy 2.7 - Public  
Drinking Water Source Policy 2003**

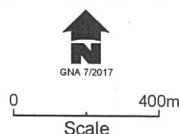
1. Special conditions, such as restrictions on storage and use of potential contaminants, may apply within P1, P2 and P3 areas.

**Western Australian Planning Commission  
State Planning Policy 2.3 - Jandakot  
Groundwater Protection January 2017**

1. Wellhead protection zones are based on the objective of providing maximum practical protection of groundwater. These zones surround water abstraction bores and are particularly vulnerable to water quality contamination risks. Any development proposal in these zones is to have regard to the Metropolitan Water Supply, Sewerage and Drainage By-laws 1981 and Water quality protection note 25: Land use compatibility tables for public drinking water source.

**Western Australian Planning Commission  
State Planning Policy 2.9 - Water  
Resources**

1. Protect, conserve and enhance water resources that are identified as having significant economic, social, cultural and/or environmental values.

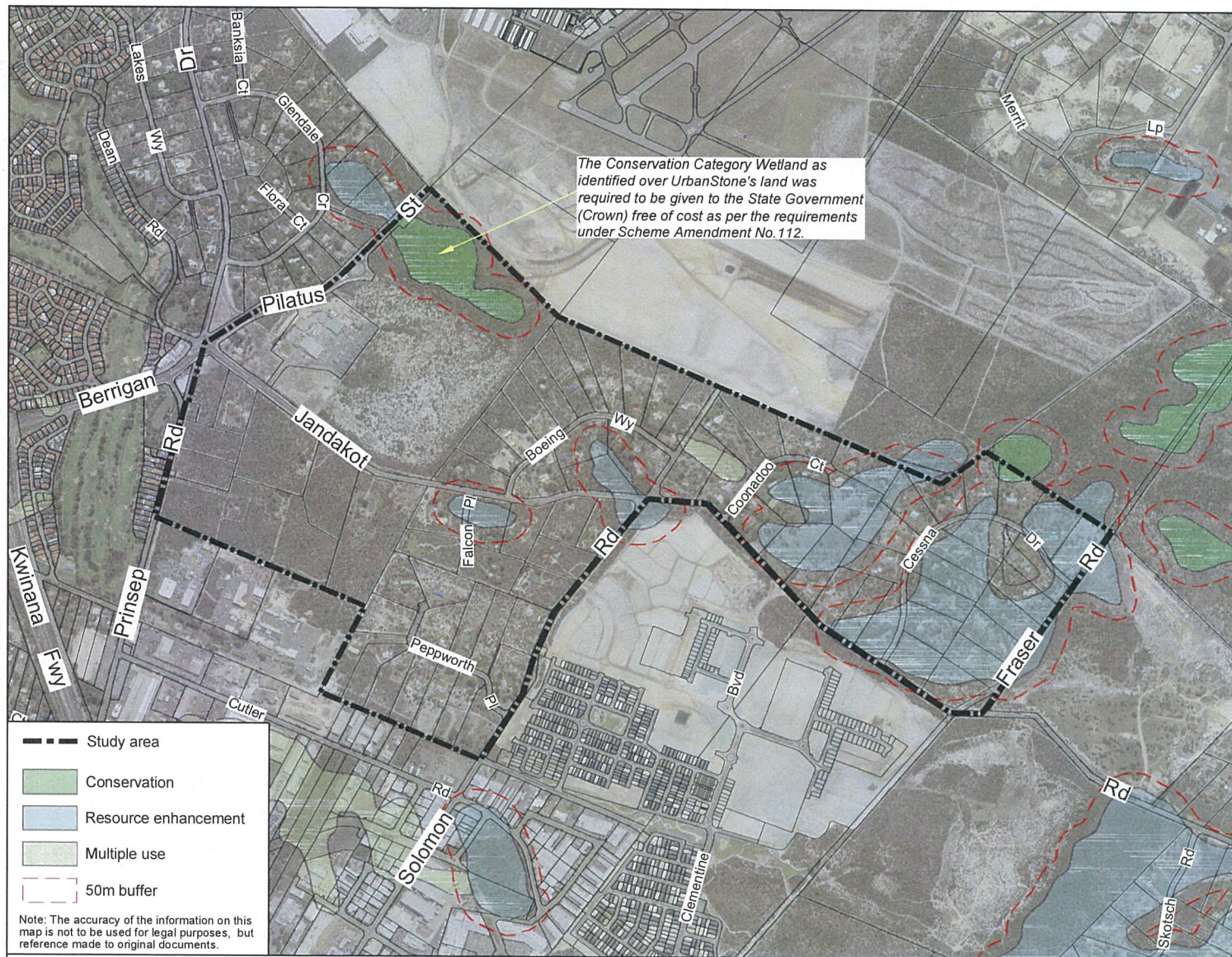


## WELLHEAD PROTECTION ZONES

### JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS

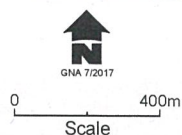
PLAN 4 OF 10





#### Liveable Neighbourhoods - Western Australian Planning Commission operational policy

1. The boundary and extent of a wetland and its buffer must be determined in accordance with State Planning Policy 2.9 - Water Resources which includes discussions with the Department of Parks and Wildlife.

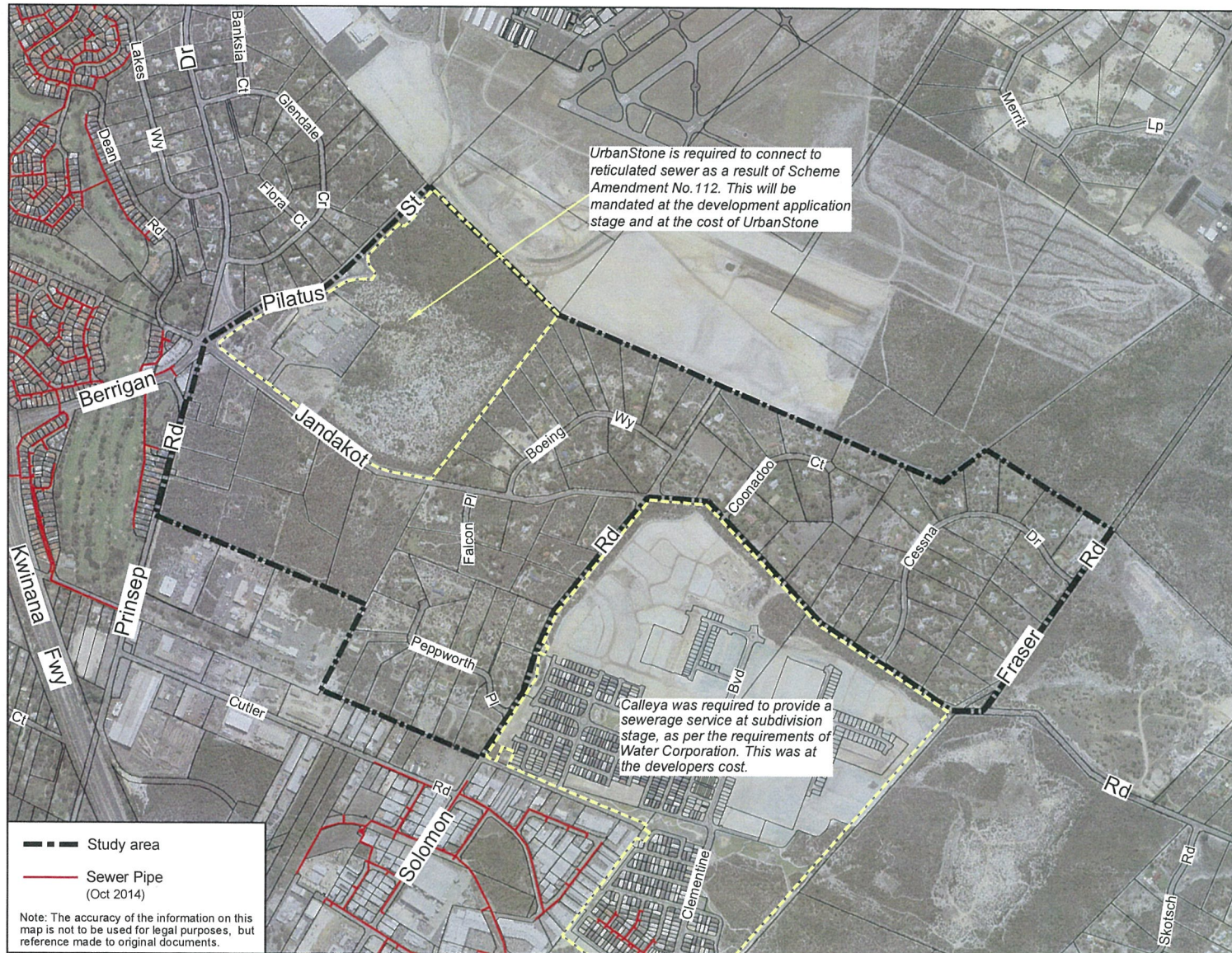


## GEOMORPHIC WETLANDS

### JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS

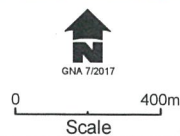
PLAN 5 OF 10





#### Government Sewerage Policy - Department of Health, Planning and Water

1. Policy purpose includes to require the provision of reticulated sewerage to all new subdivision and development in Western Australia unless the exemptions of this policy apply.
2. The provisions of sewerage are not to impact ground water quality. This is to be considered in light of the requirements as specified by Maps 3 and 4.

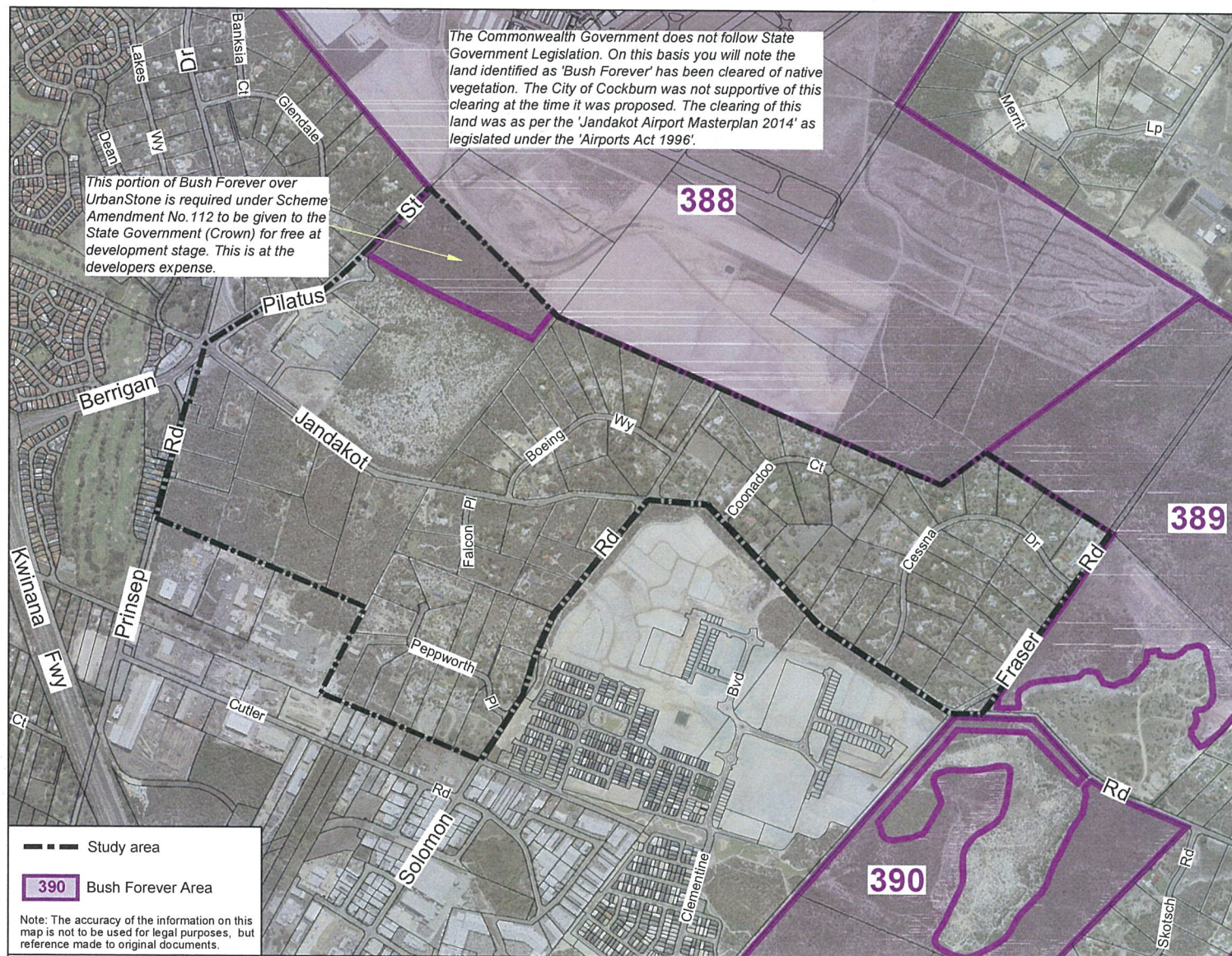


## SEWER UTILITIES

### JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS

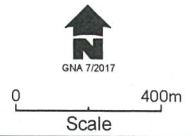
PLAN 6 OF 10





**Bush Forever Document - the Government of Western Australia**

1. To achieve the protection of Bush Forever Sites through a collection and shared responsibilities.



# BUSH FOREVER AREAS

## JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS

PLAN 7 OF 10

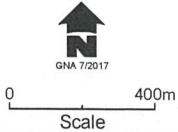
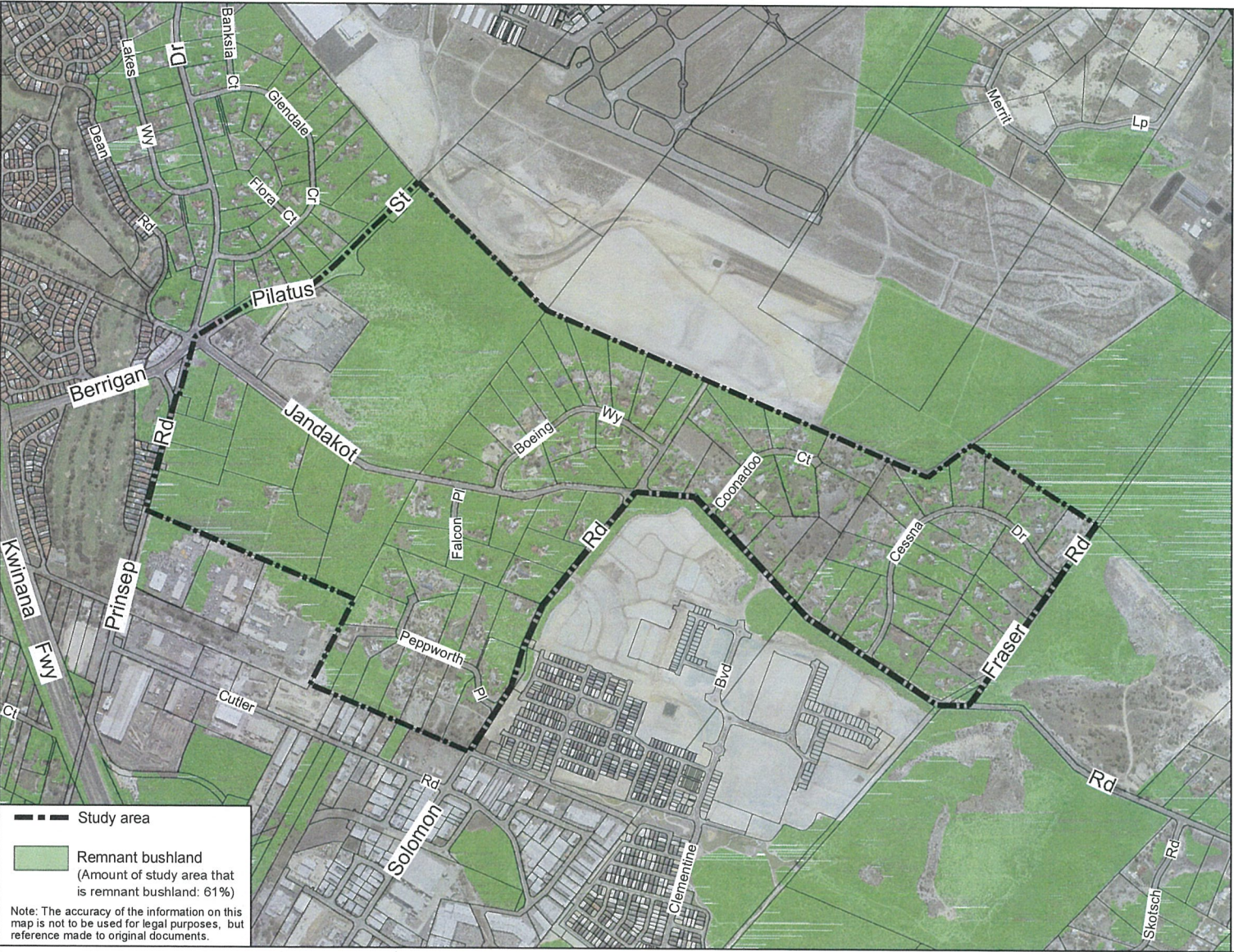


**The Environment Protection and  
Biodiversity Conservation Act 1999  
(EPBC Act)**

1. The EPBC Act sets out the process and  
timing requirements for each type of  
assessment.

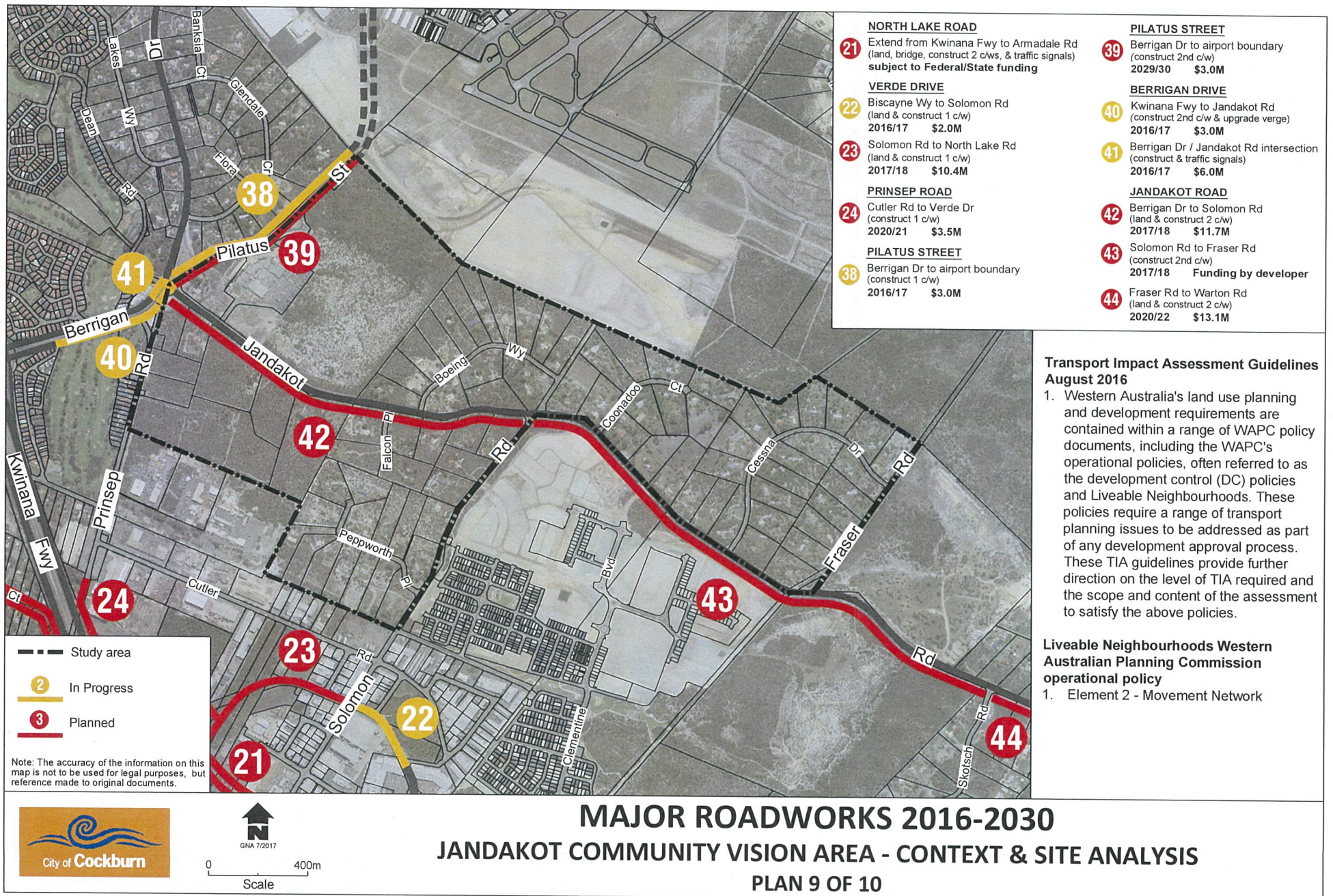
**Statement of Planning Policy No 2 -  
Environmental and Natural Resource  
Policy**

2. Planning decisions can have an impact  
on the environment and other natural  
resources. As such development that  
may result in unacceptable environmental  
damage are to be avoided.

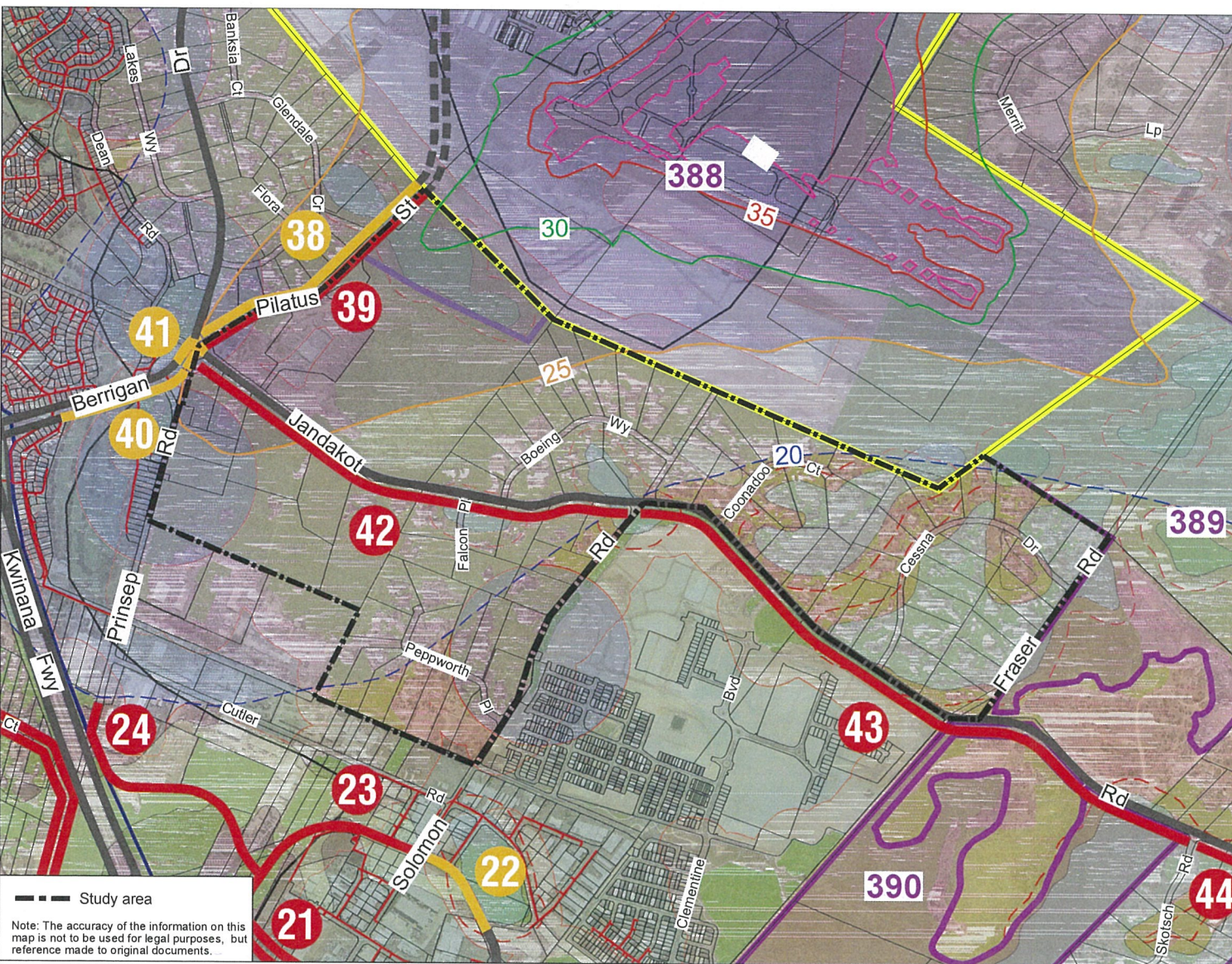


**REMNANT BUSHLAND**  
**JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS**  
**PLAN 8 OF 10**









\* This plan includes all the information from plans 1-9 and therefore may be difficult to interpret. This plan provides a consolidated 'planning policy snapshot' of the area. For more clarity please refer to the specific details on each of the respective plans from 1-9. Should you have any questions please do not hesitate to contact Strategic Planning.

## JANDAKOT COMMUNITY VISION AREA - CONTEXT & SITE ANALYSIS

### PLAN 10 OF 10



## COMMUNITY CONNECTED PLAN AND VISION FOR JANDAKOT – COMMENT ON COCKBURN

The City of Cockburn seeks your input into the Jandakot community plan and vision to help inform the State Government in its future regional planning affecting the City of Cockburn. This plan is known as the Perth and Peel @3.5 million plan, and seeks to regionally set out how Perth and Peel can grow to accommodate 3.5 million people by 2050. The Jandakot community plan and vision is intended to assist the State Government in its decision making for the Perth and Peel plan.

This survey provides your opportunity for input in to the Jandakot plan. It asks a series of questions, related to maps which you can find on this page. We would like your views as a landowner, in order to help shape what we ultimately advise the State Government.

1. In relation to Map 1, do you think the strategic importance of Jandakot Airport should be supported in the need for it to be recognised in the planning of the region?

Unsure	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
--------	-------------------	----------	---------	-------	----------------

2. Please explain your views with attention to the details referred to in Map 1. For example, if you consider Jandakot airport to be strategically important, how do you consider surrounding land should be planned to protect such?

3. Do you consider that the State Government's 'Rural Planning Policy' has been successfully implemented in the study area?

Unsure	Yes	No
--------	-----	----

4. Please explain your view with attention to the details referred to in Map 1.

5. In relation to Map 2, do you think the State Government's 'Planning in Bushfire Prone Areas policy' has been successful in achieving an appropriate balance between bushfire risk management measures, biodiversity conservation values, environmental protection, biodiversity management and landscape amenity?

Unsure	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
--------	-------------------	----------	---------	-------	----------------

6. Please explain your view with attention to the details referred to in Map 2.

--

7. In relation to Map 3, do you consider the broad list of State Government documents is adequately working to protect public groundwater drinking sources?

Unsure	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
--------	-------------------	----------	---------	-------	----------------

8. Please explain your view with attention to the details on Map 3.

--

9. In relation to Map 4, do you consider there should be strict controls on the storage and use of potential contaminants in priority public drinking water areas like Jandakot?

Unsure	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
--------	-------------------	----------	---------	-------	----------------

10. Please explain your view, with close attention to the details on Map 4

--

11. Do you consider the State Government's emphasis on protecting wetlands and requiring a '50 metre buffer' around wetlands in an appropriate requirement?

Unsure	Yes	No
--------	-----	----

12. Please explain your view with close attention to the details on Map 5

--

13. In consideration of the details on and referred to by Map 8, do you consider that State Government planning requirements should protect the existing native vegetation in Jandakot, especially as a mechanism to protect groundwater quality?

Unsure	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
--------	-------------------	----------	---------	-------	----------------

14. Please explain your view.

15. In consideration of the details on and referred to by Map 10, do you consider the current land uses in the study area to be appropriate?

Unsure	Yes	No
--------	-----	----

16. If you responded to question 8 with 'Yes', why do you consider such to be appropriate?

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17. If you responded to question 15 with 'No', in consideration of the overall planning issues needing to be balanced as shown on Map 10, what different land use would you consider to be appropriate?

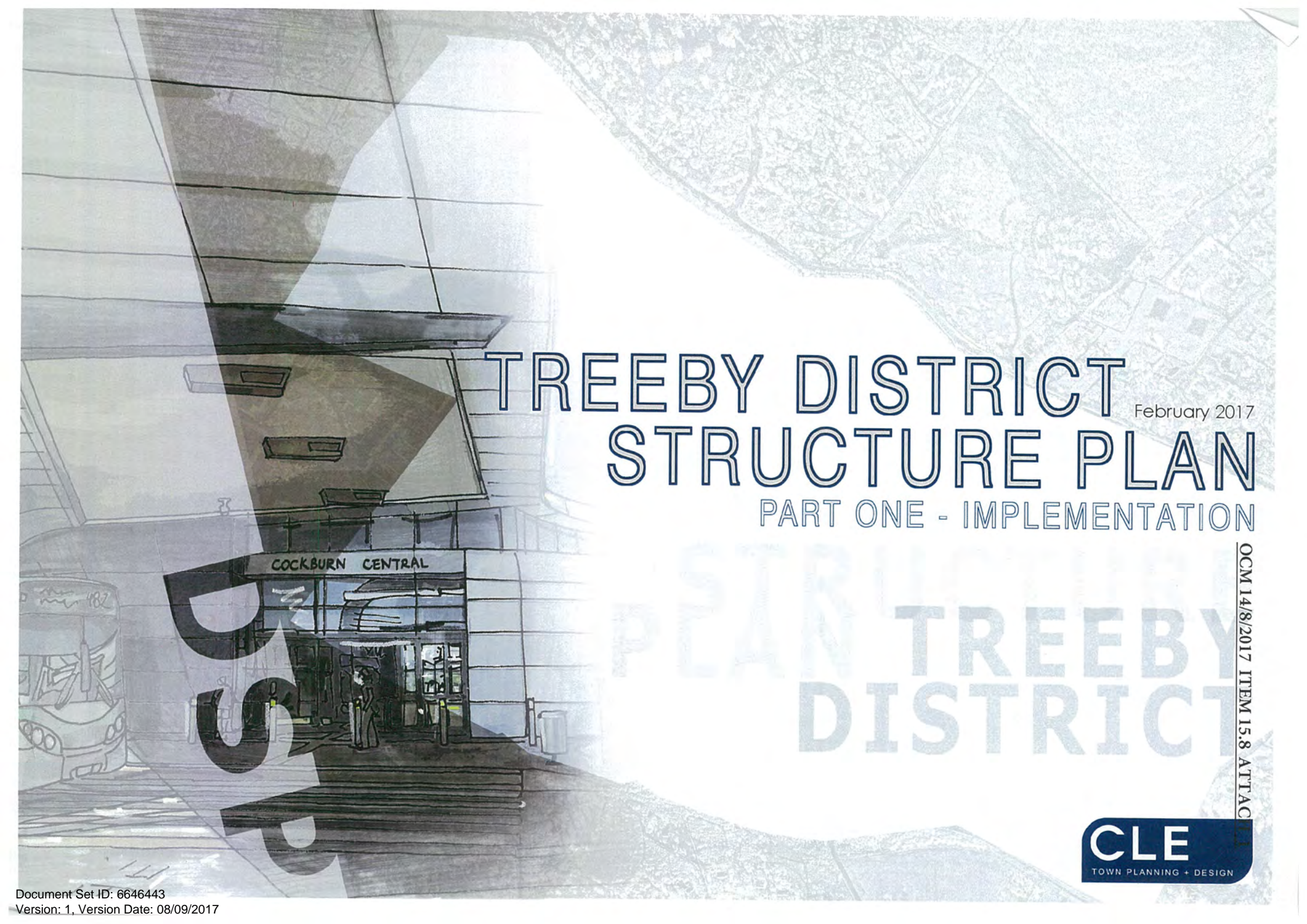
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18. Please provide any comments

--

19. Please upload any documents





# TREEBY DISTRICT STRUCTURE PLAN

February 2017

## PART ONE - IMPLEMENTATION

OCM 14/8/2017 ITEM 15.8 ATTACHMENT 1



## TREEBY DISTRICT STRUCTURE PLAN

### PART ONE - IMPLEMENTATION

Prepared by:



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Subiaco WA 6904  
t: 9382 1233  
f: 9382 1127  
[www.cleplan.com.au](http://www.cleplan.com.au)

2310Rep137C  
February 2017

### 1.0 STRUCTURE PLAN AREA

This District Structure Plan applies to the area shown within the boundary on Plan A – Treeby (Banjup) District Structure Plan.

### 2.0 STRUCTURE PLAN CONTENT

This structure plan comprises:

- Part One – Implementation Section
- Part Two – Explanatory Section
- Appendices – Technical Reports.

Part One of the District Structure Plan comprises the structure plan map and planning provisions. Part Two of the District Structure Plan is the Explanatory Section which can be used to interpret and implement the requirements of Part One.

### 3.0 OPERATION

The District Structure Plan is a strategic planning document intended to guide and coordinate more detailed planning (including preparation of Local Structure Plans) for individual sites within the District Structure Plan area. The structure plan comes into effect on the date Council resolves it will become a guiding document for more detailed structure planning. Endorsement by the Western Australian Planning Commission (WAPC) under the provisions of the *Planning and Development (Local Planning Schemes) 2015 Schedule 2 – Deemed provisions* is not proposed although the District Structure Plan has been prepared with reference to WAPC policies and consultation with the Department of Planning.

### 4.0 REZONING, LOCAL STRUCTURE PLAN, SUBDIVISION AND DEVELOPMENT REQUIREMENTS

The land use arrangements, district level infrastructure and movement network illustrated in the District Structure Planning will inform the City's response to requests for rezoning and more detailed Local Structure Plans within the structure plan area. The layout illustrated within Plan A represents a high level structural response to key issues which may be subject to refinement at more detailed stages of planning.

Local Structure Plans prepared within the District Structure Plan area should:

- Generally conform with the layout illustrated within the District Structure Plan;
- Be accompanied by:
  - A Local Water Management Strategy consistent with any approved District Water Management Strategy;
  - An Environmental Assessment Report;
  - A Bushfire Hazard Assessment;
  - A Transport Noise Assessment; and
  - Other submission requirements consistent with the *Planning and Development (Local Planning Schemes) 2015 Schedule 2 – Deemed provisions*.

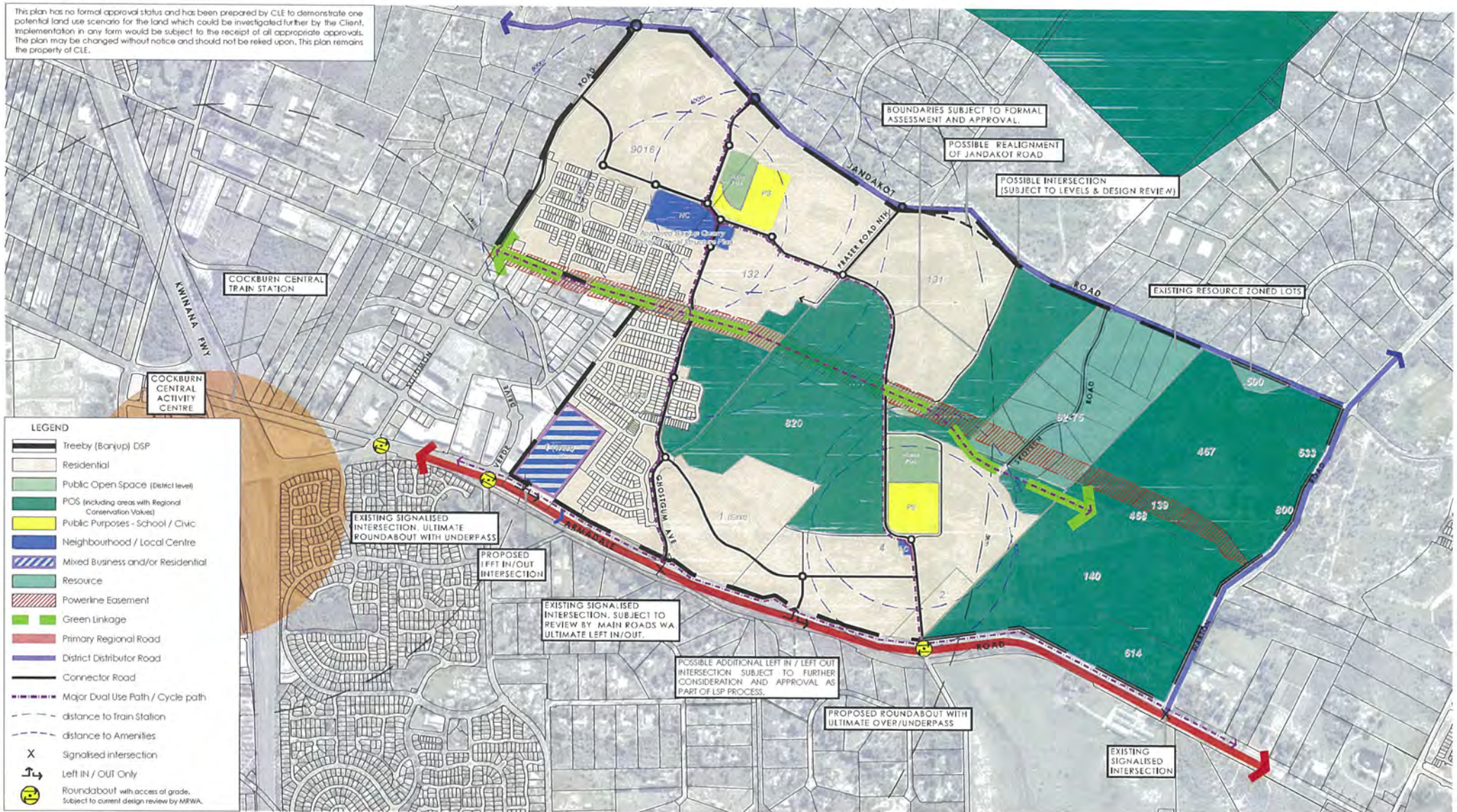
Subdivision and development will be determined in accordance with the applicable zoning, planning scheme provisions and, where applicable, approved Local Structure Plans and Local Development Plans.

## 5.0 ADDITIONAL INFORMATION

All urban development within the District Structure Plan area is subject to Development Contribution Plan No. 13.

In addition, urban development sites abutting Jandakot Road shall be required to provide for the widening and upgrade of any directly abutting portion of Jandakot Road to a 2 lane divided urban standard road, with provision (widening and earthworks) for ultimate upgrade to a 4 lane divided urban standard road. These works and associated widening required shall be agreed via legal agreement entered into with the City of Cockburn prior to approval of a Local Structure Plan for the site if deemed necessary.









# TREEBY DISTRICT STRUCTURE PLAN

February 2017

## PART ONE - IMPLEMENTATION

STRUCTURE  
PLAN TREEBY  
DISTRICT

## TREEBY DISTRICT STRUCTURE PLAN

### PART TWO - EXPLANATORY SECTION

Prepared by:



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2310Rep118C  
February 2017



**DEVELOPER**

Perron Developments Pty Ltd

**PROJECT TEAM**

Town Planning - CLE Town Planning + Design

Environmental - 360 Environmental

Hydrology - JDA Consultant Hydrologists

Civil Engineering - Wood & Grieve Engineers

Traffic - Transcore

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# TREEBY DISTRICT STRUCTURE PLAN PART TWO - EXPLANATORY SECTION





## 1.0 PLANNING BACKGROUND

### 1.1 Introduction and Purpose

This District Structure Plan, hereinafter referred to as the Treeby District Structure Plan (TDSP) has been prepared at the request of the City of Cockburn in consultation with key stakeholders including relevant government agencies and major landholders. It is a strategic document to guide the City's decision making: it has not been prepared under Part 4 of Schedule 2 of the *Planning and Development (Local Planning Schemes) Regulations 2015* and endorsement by the Western Australian Planning Commission is not proposed to be sought.

The TDSP applies to the area generally bounded by Jandakot Road to the north, Warton Road to the east, Armadale Road to the south and Solomon Road to the west. This area totals around 460ha (refer Figure 1 – Site Plan).

The primary objective of the TDSP is to provide a high level strategic spatial planning framework to coordinate the development of land and provision of district level services within the Banjup Urban Precinct. The TDSP identifies the basic physical arrangement of urban areas, the primary road network, neighbourhoods, schools, district open space, commercial centres, public transportation and other major infrastructure. The TDSP consolidates background information and provides broad direction to inform the preparation of Local Structure Plans as part of the more detailed planning process to follow.

The coordination of planning for the Banjup Urban Precinct (now defined as the Treeby DSP area) presents a valuable opportunity for the State to achieve many of its planning and land use objectives for Perth, and consolidation of urban development in the southern metropolitan corridor.

The lodgement of the TDSP aligns with the Project Plan released by the City of Cockburn in September 2015. The Project Plan provides a guide for the preparation of the TDSP which covers the following –

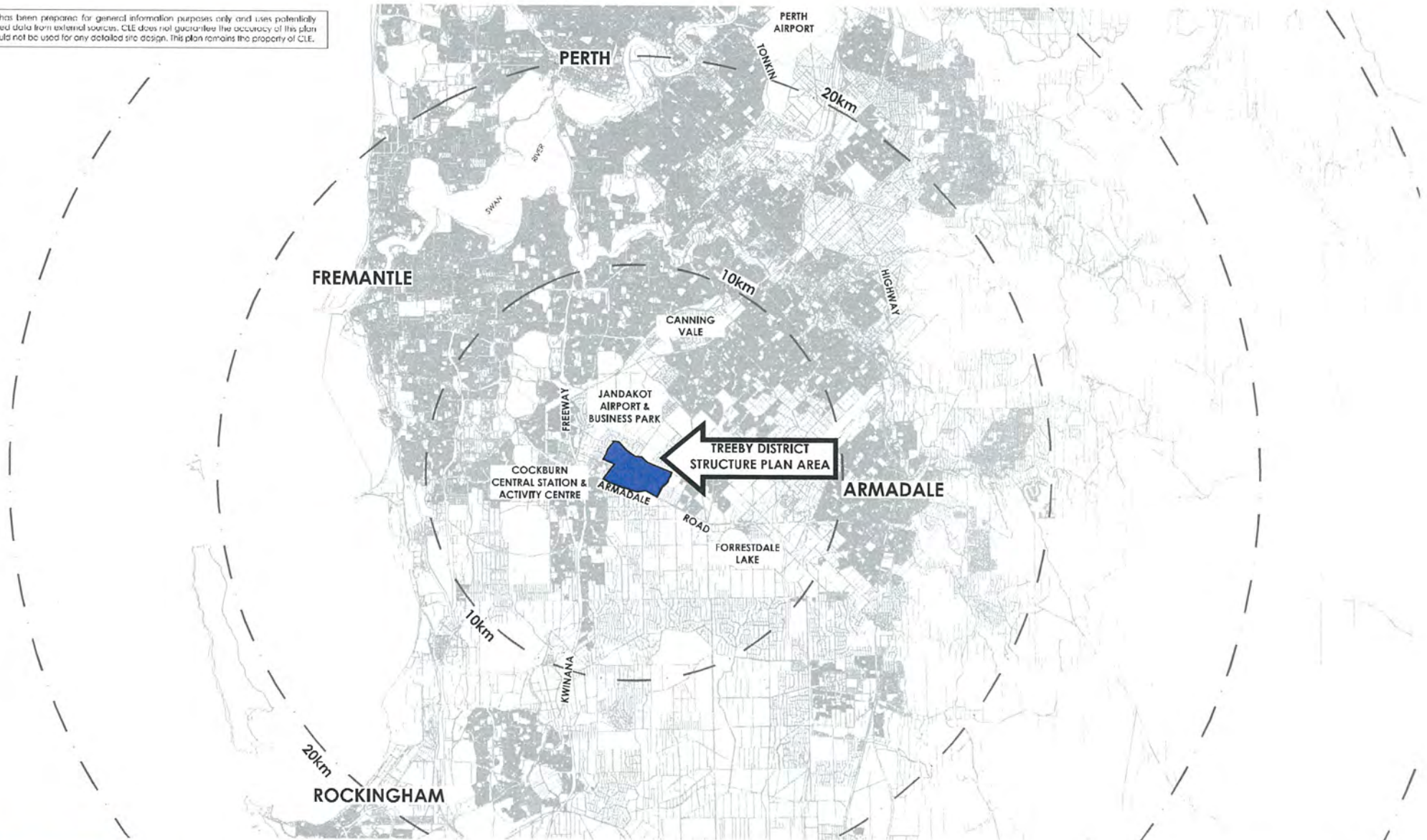
- Broad land-use arrangement, buffers and any relevant targets (eg. density targets);
- Coordination of major infrastructure including:
  - Schools;
  - District Water Management;
  - District Movement Networks;
  - Regional & District level Open Space / Conversation Areas;
  - District recreation facilities.
- Broad funding arrangements for improvements, potentially including the principles of a Development Contribution Plan (DCP).

The TDSP addresses and acknowledges all of the objectives of the City's Project Plan.

# TREEBY DISTRICT STRUCTURE PLAN

## PART TWO - EXPLANATORY SECTION

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## 1.2 Land Description

The following section provides a brief overview of the TDSP area, and examines its context with respect to location, land use and ownership.

### 1.2.1 Location

The TDSP applies to the area generally bounded by Jandakot Road to the north, Warton Road to the east, Armadale Road to the south and Solomon Road to the west within the City of Cockburn. It is located approximately 19km south of the Perth CBD, 1km east of Cockburn Central Railway Station and Activity Centre, and 13km west of the Armadale Shopping Centre (refer Figure 2 - Location Plan).

### 1.2.2 Area and land use

The TDSP covers an area of approximately 460ha. Existing land use within the TDSP includes residential, extractive industry, rural residential, rural and open space / conservation. This includes:

- 118.48ha of Regional Open Space reserved for Parks and Recreation owned by the State;
- The Calleya (Banjup Quarry) residential development estate which consists of around 145ha of land in the western portion of the TDSP, currently under development by Stockland;
- The currently vacant Lot 1 (west) Armadale Road, to the southwest of the Calleya development (8.09ha);

- Fourteen (14) Resource zoned existing rural residential homesites accessed via Skotsch Road totalling 29.83ha; and
- Four (4) consolidated vacant sites previously used for quarrying activities and now identified for development:

Table 1: Primary Potential Development Sites

Lot Details	Landowner	Area(ha)
Lot 1 (east) Ghostgum Avenue	Department of Housing	20.35
Lot 2 Armadale Road	Ronci, Palmerino	3.15
Lot 4 Armadale Road	Midland Brick Co Pty Ltd - under contract to Perron Developments P/L	58.77
Lot 131 Jandakot Road	Limebrook Holdings Pty Ltd. - subject to a JV arrangement with Perron Developments P/L	64.75



# TREEBY DISTRICT STRUCTURE PLAN PART TWO - EXPLANATORY SECTION



LAND OWNERSHIP PLAN  
Figure 3



### 1.2.3 Legal Description and Ownership

The following table provides a summary of the land ownership within the TDSP, excluding created single residential lots within Calleya. A Land Ownership Plan is provided at Figure 3.

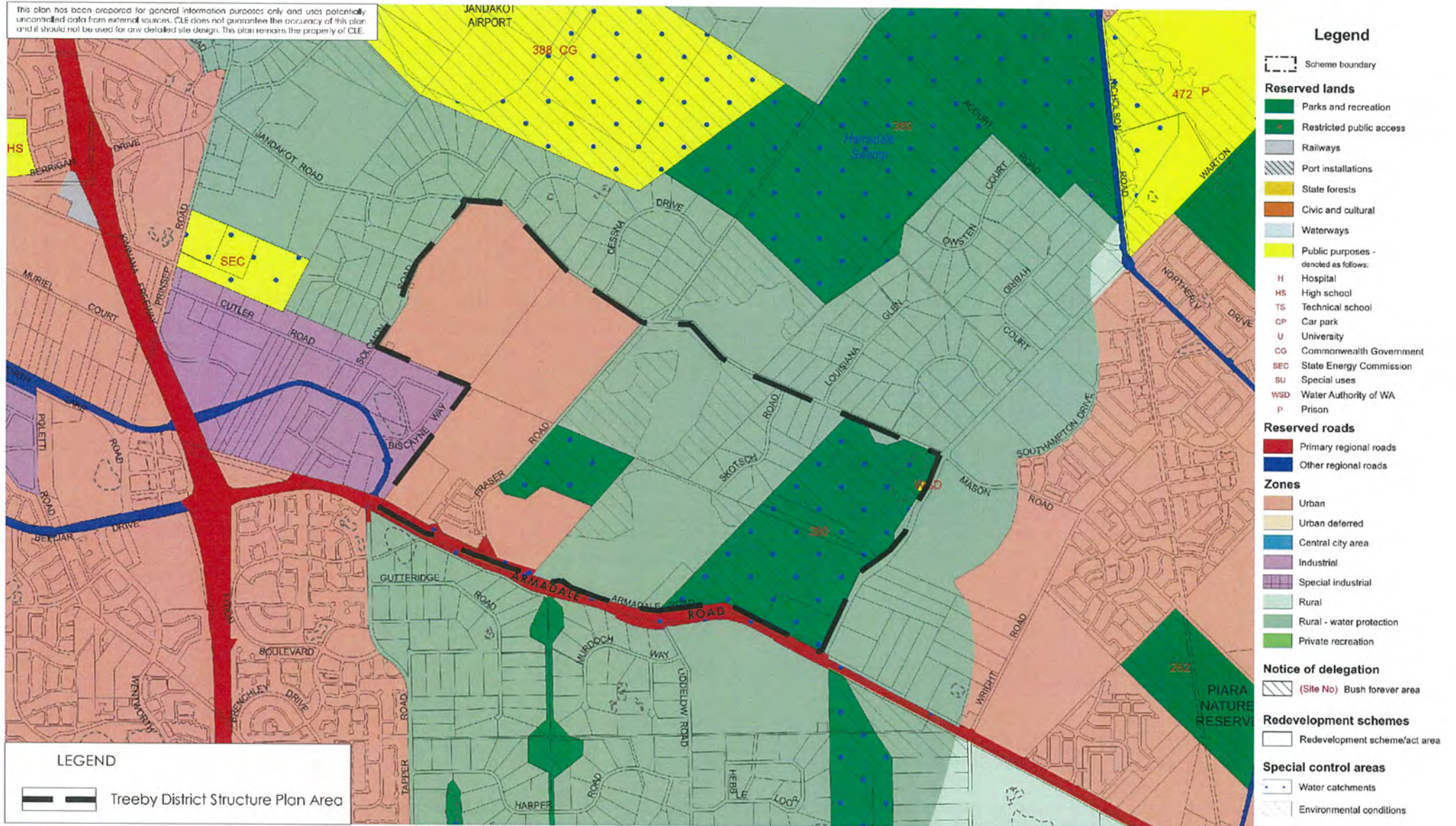
**Table 2: Land Ownership**

Lot Number	Owner	Certificate Of Title	Area(ha)
1 (west)	Armadale Road Pty Ltd	1209-240	8.09
1 (east)	Housing Authority	2887-742	20.35
2	Ronci, Palmerino	1250-966	3.15
4	Midland Brick Co Pty Ltd	333-129A	58.77
131	Limebrook Holdings Pty Ltd	1524-135	64.75
62-75	Various Skotsch Road private landowners		29.83
500	Dougan, Kiara Helen & Law-David, Daniel John	1663-61	1.19
139	State of WA	LR3144-998	5.30
140	State of WA	LR3096-571	42.56
467	State of WA	LR3081-261	40.31
468	State of WA	LR3024-166	2.59
614	State of WA	LR3032-307	7.68
820	WA Planning Commission (State of WA)	2710-373	20.05
9012	Stockland WA Development Pty Ltd	2867-287	7.43
9021	Stockland WA Development Pty Ltd	2898-453	41.26
9016	Stockland WA Development Pty Ltd	2898-982	41.56



# TREEBY DISTRICT STRUCTURE PLAN PART TWO - EXPLANATORY SECTION

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### 1.3 Planning Framework

#### 1.3.1 Zoning and Reservations

##### 1.3.1.1 Metropolitan Region Scheme

The TDSP area is subject to various zonings and reservations under the Metropolitan Region Scheme (MRS) including 'Urban', 'Rural', 'Rural-Water Protection', 'Parks and Recreation'. A 'Bush Forever' overlay associated with Bush Forever site 390 applies to many parts of the area containing remnant vegetation. The Parks and Recreation reserves are also subject to a Water Catchment Special Control Area. The table below provides details of the MRS zoning for key lots. A Metropolitan Region Scheme (MRS) zoning plan is also provided at Figure 4.

**Table 3: MRS Zoning (Summary)**

Lot Details	Metropolitan Region Scheme Zone / Reserve
Lots 1 (West), 9012, 9014, 9016, Lots 1 (east)	Urban
Lots 139, 140, 467, 468, 614, 820	Parks and Recreation, Water Catchment SCA, Bush Forever overlay
2, 500, 800 and Lots 62-78 Skotsch Road.	Rural – Water Protection.
Lot 4, 131	Rural – Water Protection, Bush Forever overlay (portions).

Lots 9012, 9014 and 9016 within the western portion of the TDSP are zoned 'Urban' under the MRS and are covered by the Banjup Quarry (Calleya) Local Structure Plan, facilitating urban development of this area. An MRS Amendment to rezone Lot 1 (east) to Urban has recently been gazetted, paving the way for a similar process and outcome for this site. A request to rezone Lots 2 and 4 to 'Urban' was also lodged with the WAPC in April 2014, however this request has been held pending further progression of the Perth and Peel @ 3.5 Million (planning) Frameworks currently being finalised.

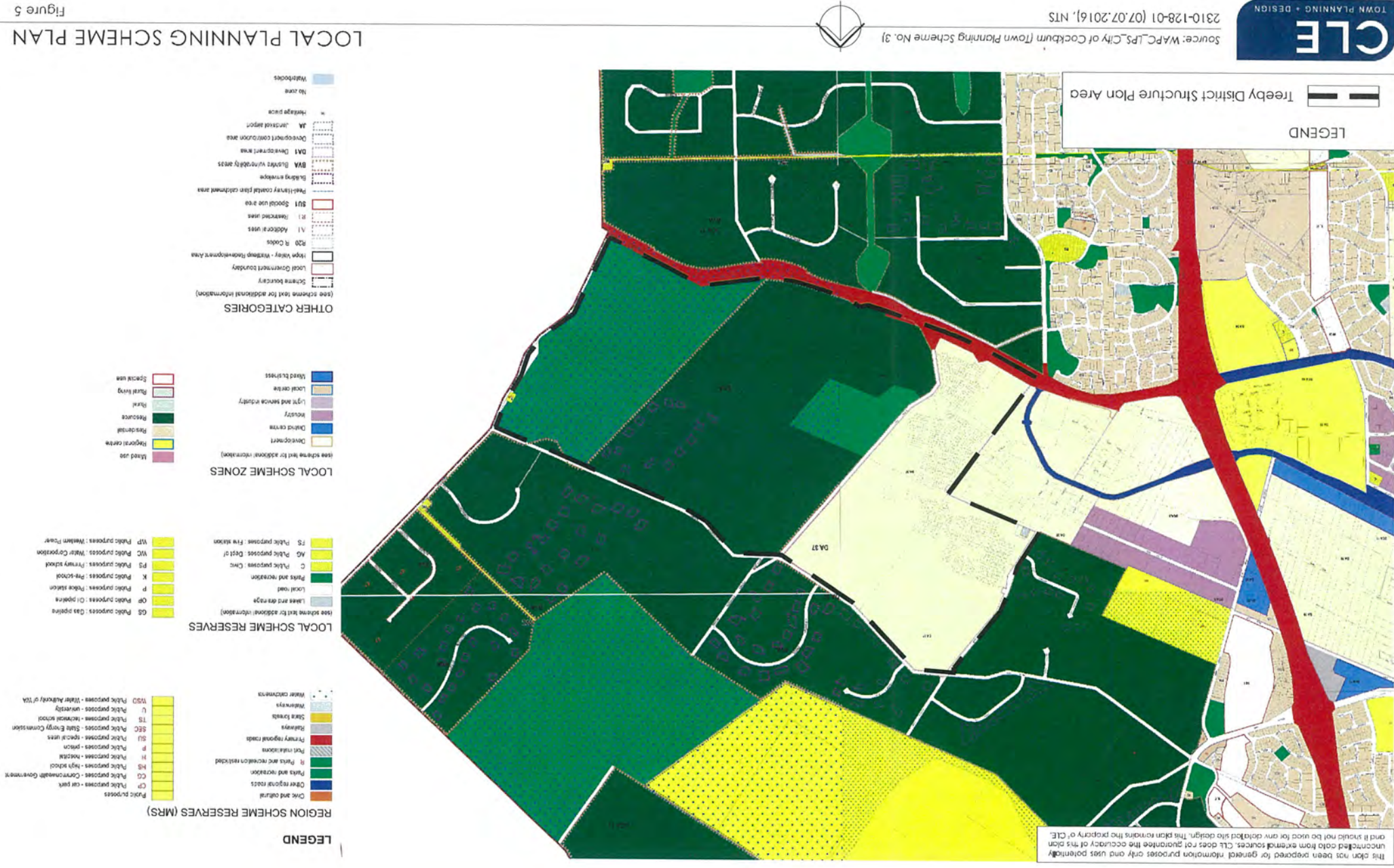
The 98ha of Parks and Recreation reserve on the eastern portion of the area, and the centrally located 20ha reserve east of Fraser Road south (now Ghostgum Avenue) are covered by the MRS Bush Forever overlay associated with Bush Forever site 390. Site 390 also extends over portions of Lots 4 and 131 which are currently zoned as Rural Water-Protection. These areas of Bush Forever will be subject to review and refinement through the rezoning and local structure planning process. In total 172ha of land within the TDSP is currently shown as Bush Forever within the MRS.

Small slivers of Primary Regional Roads reserve apply along the southern boundary of the DSP area providing for widening of Armadale Road.

The 'Rural - water protection' zone over the balance of the area reflects its historic use and the presence of the Jandakot water mound.



TREEBY DISTRICT STRUCTURE PLAN  
PART TWO - EXPLANATORY SECTION



### 1.3.1.2 Local Planning Scheme

The City of Cockburn Town Planning Scheme No. 3 (TPS 3) zoning applicable to the TDSP area is shown at Figure 5 (Local Scheme Zoning). Table 4 below also provides summary details of the local planning schemes zones applicable to key lots within the TDSP.

**Table 4: Local Scheme Zoning (Summary)**

Lot Details	Local Planning Scheme Zone
Lots 1 (west), 9012, 9014, 9016	Development
Lots 139, 140, 467, 468, 614, 820	Parks and Recreation
Lots 1 (east), 2, 131, 500, 800, 4 and 62-78 Skotsch Road	Resource

The Development zone, generally reflecting areas zoned Urban under the MRS, provides for adoption and application of local structure plans to guide subsequent subdivision and development (as is occurring over the Calleya estate). The Resource zone reflects the water protection provisions of the current MRS zoning applicable over non reserved sites and caters for larger lot (Rural Residential style) development. This would require amendment (following MRS rezoning) to facilitate urban development.

### City of Cockburn Development Contribution Plan No. 13

Schedule 12 of TPS3 specifies infrastructure and community items that are required to be funded through development contribution plans. The TDSP is within Development Contribution Area No. 13 (DCP 13). DCP 13 includes regional, sub-regional and local infrastructure items that have been determined as necessary to support the community within its boundaries, with allocation of a proportion of the cost of these items levied upon new lots created in the area.



### 1.3.2 Planning Strategies and Sub-Regional Structure Plan

#### 1.3.2.1 State Planning Strategy 2050

The State Planning Strategy (SPS) provides the basis for the long-term State and regional land use planning within Western Australia. It sets out the key principles, strategies and actions relating to the environment, community, economy, infrastructure and regional development which should guide the creation of State Planning Policy, Regional Strategies/ Frameworks and all future planning decisions.

The SPS identifies planning considerations and approaches that directly relate to the formulation of Cockburn Central Activity Centre Plan and set the agenda for more compact urban development in close proximity to public transport nodes as well as regeneration projects throughout Perth, those being:

- Place based approaches – That plan for the local economy, enhance and protect the identity of places, and provide for diverse, accessible and liveable communities.
- Affordable living – Identifying opportunities for housing diversity, infill development opportunities in appropriate locations and sustainable developments.
- Health and wellbeing – Identifying opportunities for the built environment to encourage the wellbeing of communities such as through the design of environments, streets and open spaces that people want to be active within.
- Land availability – Providing diverse and affordable housing outcomes.

Expansion of the Cockburn Central catchment to accommodate additional masterplanned communities on disused ex-quarry sites directly aligns with many of the objectives of the Strategy.

#### 1.3.2.2 Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon

'Directions 2031 and Beyond' provides a high level spatial framework and strategic plan for the metropolitan Perth and Peel region. It has a 20 year horizon within which time it anticipates how the projected growth and development of Perth can be best accommodated. Amongst other things, it anticipates the need for an additional 328,000 dwellings to accommodate the growing population, with half of these sought as infill development to limit the expanding urban footprint, service extension and vegetation clearing on the fringes of the city.

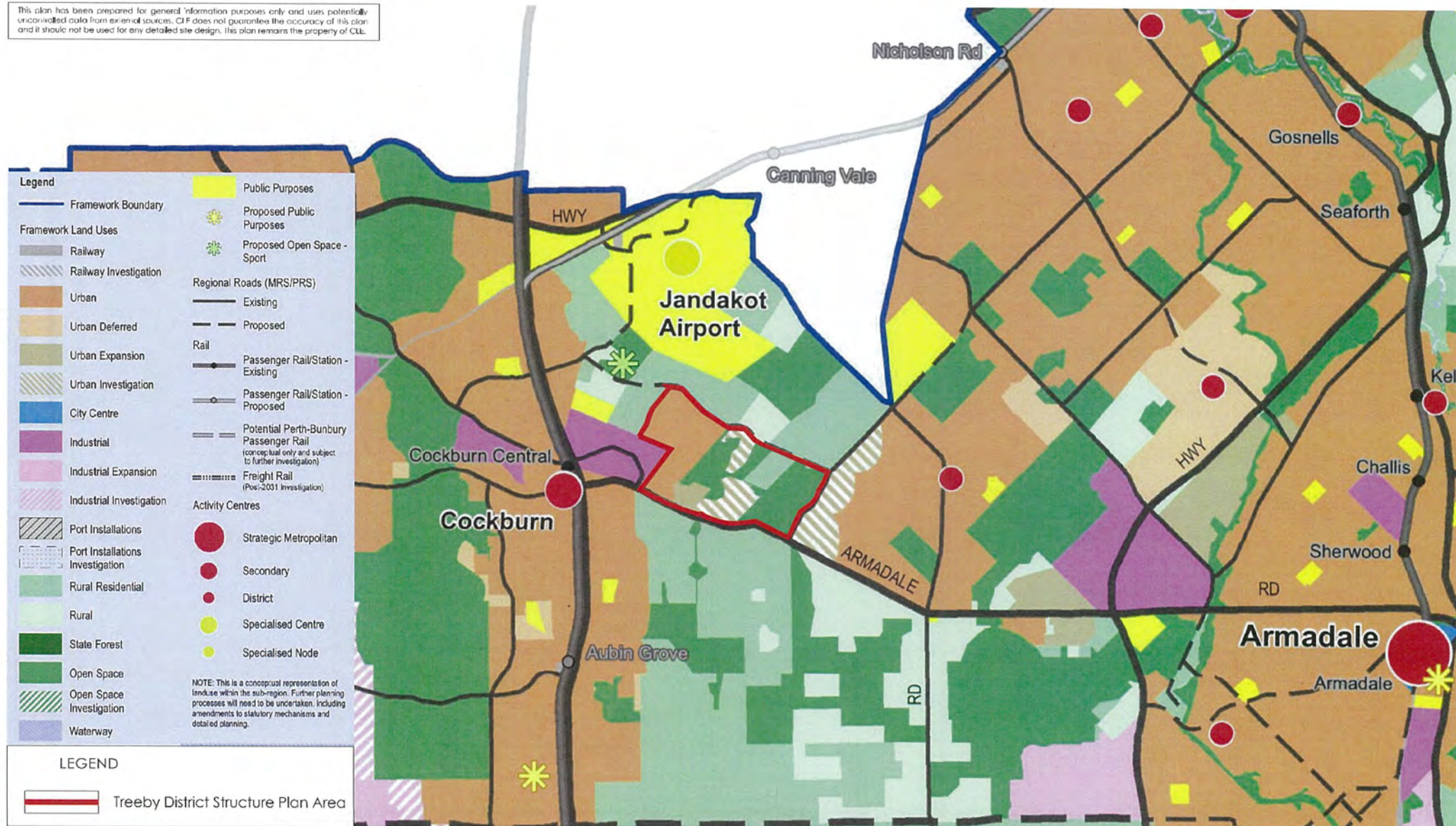
Directions 2031 seeks a 50% improvement on current infill residential development trends of 30 and 35%; and has set a target of 47 per cent or 154,000 of the required 328,000 dwellings as infill development. This translates to 11,100 as part of infill / redevelopment opportunities within the City of Cockburn.

Directions 2031 also promotes a 50 per cent increase in the current average residential density 10 dwellings per gross urban zoned hectare; and, has set a target of 15 dwellings per gross urban zoned hectare of land in new development areas. This translates to 18,280 new dwellings as part of Greenfield development opportunities within the City of Cockburn.



# TREEBY DISTRICT STRUCTURE PLAN PART TWO - EXPLANATORY SECTION

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Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon was adopted by the WAPC in August 2010 and is the current spatial planning framework document for Perth and Peel, guiding the planning vision and direction to 2031 and beyond.

The reuse of ex-quarry sites within Banjup within an established residential area in close proximity to existing infrastructure, transport and services aligns strongly with the strategy.

#### 1.3.2.3 Draft Perth and Peel @ 3.5 Million

Draft Perth and Peel @ 3.5 million seeks to build on and extend Directions 2031 in providing an overarching strategic planning framework for the metropolitan Perth and Peel regions, considering an increased population projection of 3.5 million by 2050. The documents include Central, North-West, and North-East and South Metropolitan Peel subregional frameworks (discussed below) which provide spatial guidance on where development should occur over the next 35 to 40 years. The document continues to promote more efficient use (and reuse) of land and infrastructure, and maintains a target of 47% of new lots by infill. It anticipates the need for 800,000 new dwellings to accommodate an additional 1.5 million people within the region by 2050, of which 380,000 are sought in strategic infill positions. Additional residential development within the DSP area would contribute to these targets, whilst protection of significant remnant vegetation and wetland areas responds to environmental objectives.

#### 1.3.2.4 Draft South Metropolitan Peel Sub Regional Framework

The Draft South Metropolitan Peel Sub Regional Framework (the Framework) is one of three frameworks prepared for the outer sub regions of Perth and Peel, which along with the Central

Sub-Regional Planning Framework established a long term integrated framework for land use and infrastructure provision as a component of the Perth and Peel @ 3.5 Million strategy.

The framework identified the need to accommodate more than 1.26 million people in the south metropolitan region by 2050 and identifies both the locations within which new development is to occur, and an indication of anticipated staging and sequencing of urbanisation to inform public investment in regional, community, service and service infrastructure.

The Planning Framework endeavours to facilitate the more consolidated urban form promoted by Directions 2031 and Perth and Peel @ 3.5 Million by limiting the identification of new Greenfield areas to where they provide a logical extension to the urban form, and placing a greater emphasis on urban infill and increased residential density.

The Framework satisfies the density objectives of Draft Perth and Peel @ 3.5 with a target of 30,119 dwellings to be provided in the City of Cockburn, of which 14,678 dwellings are to be via infill development opportunities and 15,441 via Greenfield development. This mix of infill and Greenfield development will contribute an estimated additional population of 66,957 people in the City of Cockburn.

The Framework identifies the larger site areas unaffected by Bush Forever site 390 within the BDSP as Urban and Urban Investigation area (refer Figure 6), with the staging and sequencing of land development being in the short term (2015 - 2021) and medium term (2015 - 2031) (refer Figure 7). The TDSP is consistent with this, albeit seeking a minor refinement to the basic boundaries illustrated in the Framework on the basis of the more detailed site analysis undertaken as part of the DSP exercise.



# TREEBY DISTRICT STRUCTURE PLAN


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### Legend

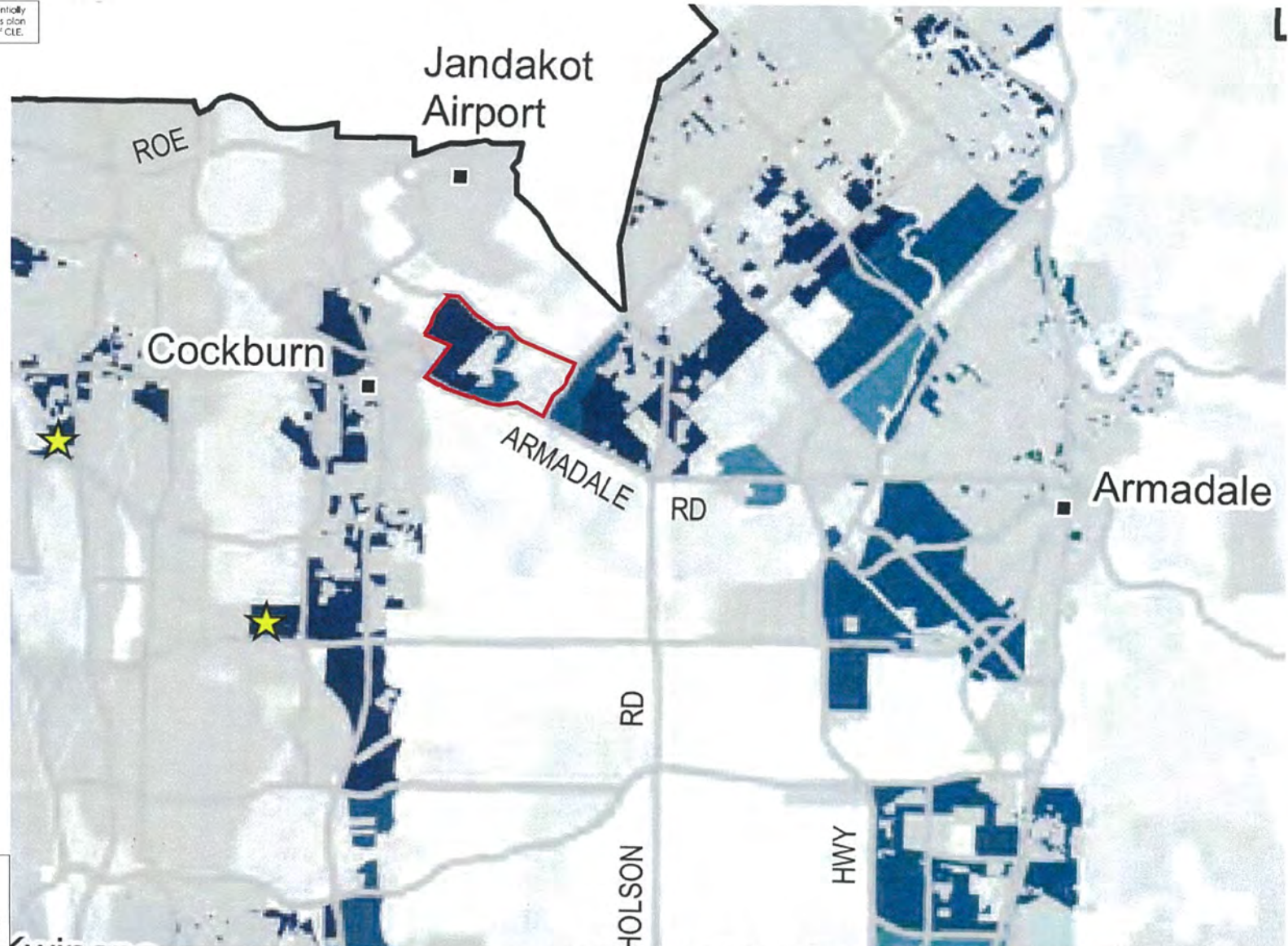
#### Staging

-  Short Term (2015-2021)
-  Short-Medium Term (2015-2031)
-  Medium Term (2022-2031)
-  Medium-Long Term (2022+)
-  Long Term (Beyond 2031)

-  Subject to the finalisation of Kwinana Industrial (including Air Quality) Buffer

#### LEGEND

-  Treeby District Structure Plan Area



#### 1.3.2.5 City of Cockburn Planning Strategy

The City of Cockburn's Local Planning Strategy sets out long term planning direction and provides the rationale for the zones and other provisions of the City of Cockburn Town Planning Scheme No.3. The Local Planning Strategy outlines the general aims and intentions for future long-term growth and change within the City of Cockburn. The Strategy includes a comprehensive list of strategies and actions to guide the development of regional and local communities, with the following particularly relevant to the TDSP:

##### *Transport*

- Maximise development near public transport routes
- Minimise trip lengths in order to maximise local convenience and minimise the environmental impacts of private car users.
- Encourage cycling by defining an implementing cycle networks and promoting the provision of end-of-trip facilities.

##### *Open Space*

- Maintain the amount of local open space per capita
- Improve the quality, amenity and accessibility of local and regional open space.

#### Heritage

- Enhance local identity and character by preserving buildings and places with historic, architectural, scientific or scenic value. (and by deduction, encouraging development in those locations without such attributes).

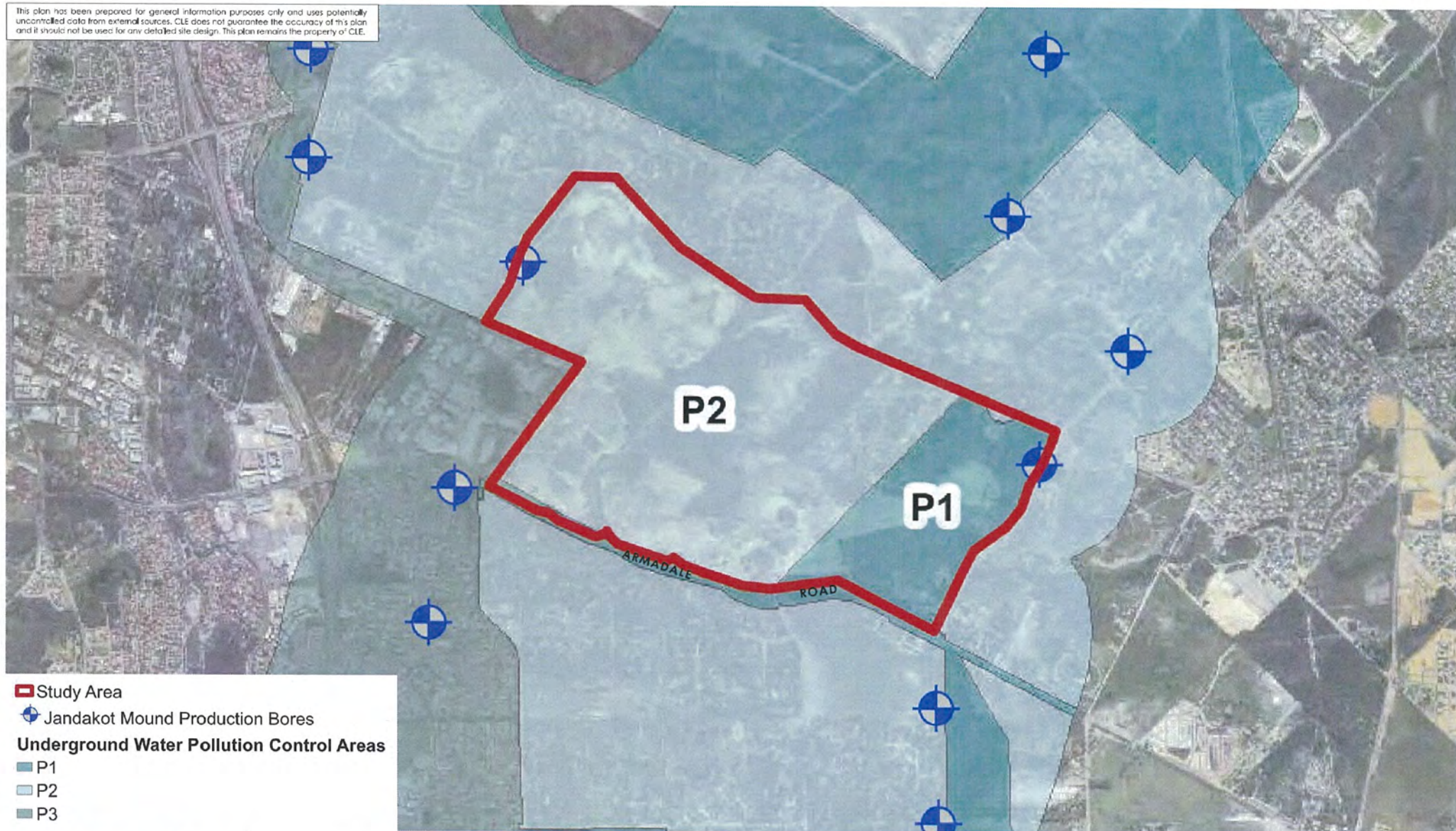
The TDSP either directly contributes to these directions, or provides a framework by which they can be pursued in more detailed planning processes to follow.



# TREEBY DISTRICT STRUCTURE PLAN

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### 1.3.3 Planning Policies

#### 1.3.3.1 SPP 2.3 Jandakot Groundwater Protection

The Jandakot Groundwater Protection policy aims to prevent, control and manage development and land use changes in the Jandakot Groundwater Protection Policy Area to limit impacts on groundwater. It works in concert with the Jandakot Underground Pollution Control Area (UWPCA) (declared under the *Sewerage and Drainage Act 1909*), and seeks to give statutory effect to, and implement the *Jandakot Land Use and Water Strategy*, and the *Jandakot Groundwater Protection Area Drinking Water Source Protection Review*. These documents allocate management priority designations 1-3 to land within the Policy Area and, amongst other things, outline the framework for assessing development within its boundaries. Priority 1 (risk prevention) applies to state owned Parks and Recreation Reserves, Priority 2 (risk minimisation) to privately owned rural areas and Priority 3 (risk management) to urban areas – refer Figure 8 Underground Water Pollution Control Areas.

Further urbanisation within the DSP area will require recategorisation of some existing Priority 2 areas to Priority 3. A revision to SPP 2.3 advertised for public comment outlines the circumstances under which this will be contemplated, as follows:

- Large land holdings that were previously cleared and disturbed;
- Land directly adjacent to already developed areas;
- Land identified as appropriate for more intensive development through strategic planning instruments such as regional or sub-regional structure plans;

- Where appropriate risk mitigation measures are available; and
- Where net long term public benefit is demonstrated.

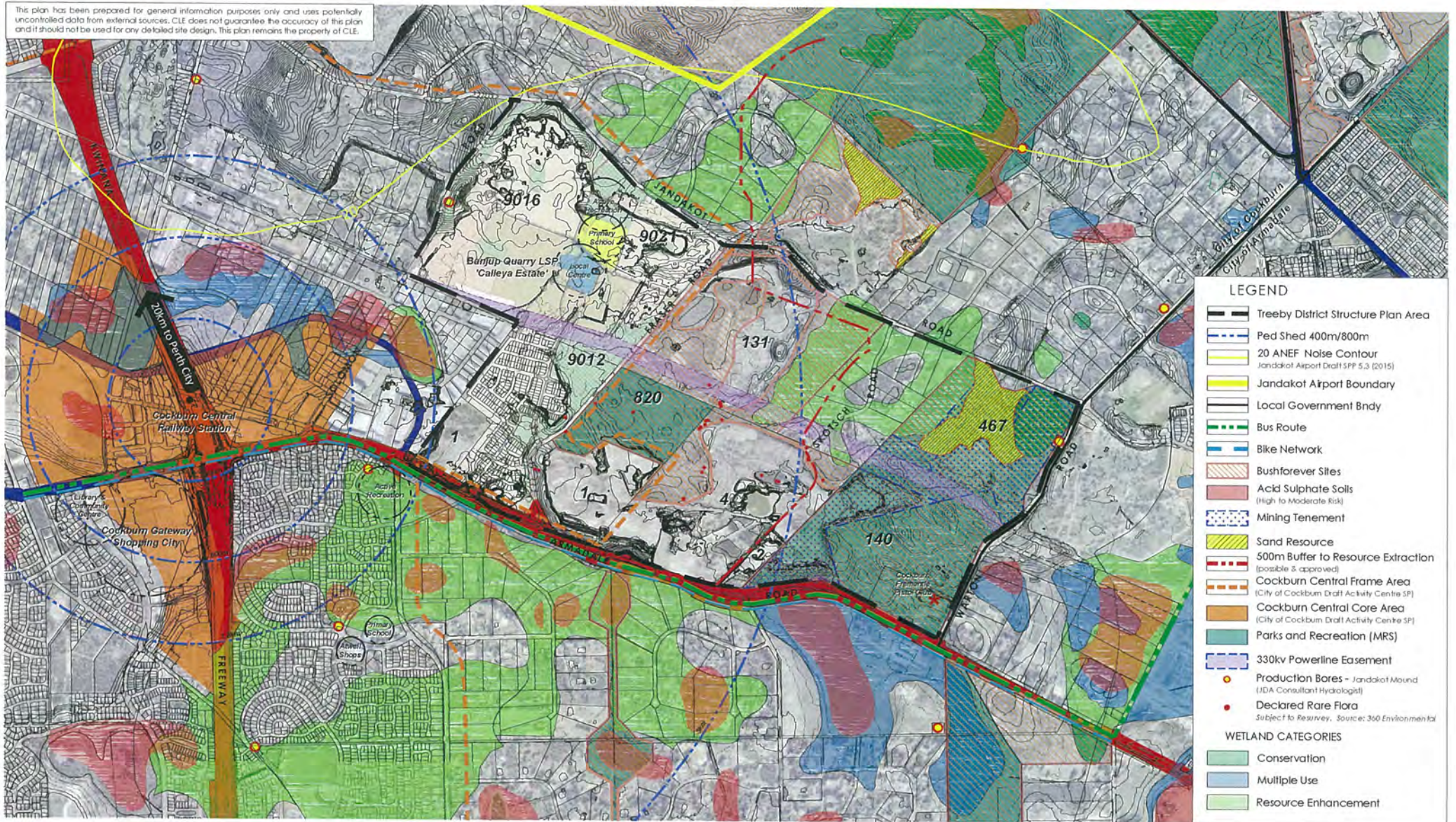
Recent advice from the Department of Water has indicated that should the WAPC determine through a strategic planning process (i.e. South Metropolitan Peel Sub Regional Planning Framework) that development in this location is warranted taking into account social, environmental and economic factors, the Department will re-classify rezoned areas to P3, which is compatible with urban development.

#### 1.3.3.2 SPP 2.8 Bushland Policy for the Perth Metropolitan Region

SPP 2.8 – *Bushland Policy for the Perth Metropolitan Region* seeks to provide a policy and implementation framework to ensure bushland protection and management in the Perth region. It identifies bushland areas, and specifies the policy approach to their management based on categorisation. Bush Forever site 390 within the DSP area (illustrated on Figure 4 – Metropolitan Region Scheme plan) is classified as 'BFA – Urban, industrial or resource development' under SPP 2.8, essentially on the basis of its status under private ownership and its prior land use. The Policy consequently requires consideration of impacts on the bushland in the future planning of the site, and promotes negotiation of the conservation of all or part of the site as part of the process. The proposed retention and management of the majority (95%) of the Bush Forever site proposed by the DSP achieves alignment with the key precepts of the policy. More detailed negotiation on the areas to be retained versus removed, and any applicable off-sets package will occur through the rezoning and local structure planning stages.



# TREEBY DISTRICT STRUCTURE PLAN PART TWO - EXPLANATORY SECTION





#### 1.3.3.3 SPP 4.2 Activity centres for Perth and Peel

SPP 4.2 Activity Centres for Perth and Peel identifies the broad requirements for the planning and development of new activity centres and the renewal of existing centres in Perth and Peel. A primary objective of the policy is to increase the density and diversity of housing within and around activity centres to the improve land use efficiency, residential amenity and access to services, housing variety and centre vitality. The Cockburn Central Secondary Centre is located approximately 1km west of the DSP boundary. Development of the DSP area will increase the population catchment east of the activity centre, contributing the Policy objectives. Provision for smaller more local services within the DSP area is also accommodated within the TDSP, consistent with the recommendations of the policy.

#### 1.3.3.4 SPP 5.3 Jandakot Airport Vicinity

SPP 5.3 Jandakot Airport Vicinity applies to land in the vicinity of Jandakot airport, which is, or may in the future, be affected by aircraft noise. The objectives of the policy are to:

- Protect Jandakot Airport from encroachment by incompatible land use and development, so as to provide for its ongoing, safe and efficient operation; and
- Minimize the impact of airport operations on existing and future communities with particular reference to aircraft noise.

The Policy describes two areas to which the policy applies. Firstly a Core Area defined by the 20ANEF contour and a Frame Area defined by the area between the 20ANEF contour and Roe Highway, Ranford Road, Warton Road, Armadale Road and Kwinana Freeway.

The TDSP is wholly located outside the 20ANEF contour, with the policy consequently containing no constraints to development within it. Notwithstanding, the City expects that memorials be placed on all new residential lots within the policy area identifying the existing of the airport and associated noise to ensure understanding of this by future lot purchasers.

The location of the TDSP area in relation to the airport and 20ANEF contour is illustrated in the Opportunities and Constraints Plan provided at Figure 9.

1.3.3.5 SPP 5.4 - Road and Rail Transport Noise and Freight Considerations in Land Use Planning

SPP 5.4 addresses how amenity impacts, specifically transport noise, associated with high volume roads, rail lines and freight routes should be addressed through the planning system. The policy provisions are applicable to development along both Armadale Road and Jandakot Road because of the expectation that traffic volumes along these roads will exceed 20,000 vehicles per day within 20 years. Armadale Road is also designated a primary freight route which also triggers application of the policy. The policy seeks to ensure that transport noise impacts on sensitive land uses (including residential development) is kept within targets for both night and day time, through the appropriate design of development. This will require assessment of anticipated transport noise reaching sensitive land uses and submission of mitigation measures to achieve the noise targets specified by the Policy as a component of local structure planning for each development site abutting either road. Typical mitigation measures include use of noise walls or bunds to screen noise reaching development sites, and application of 'Quiet House Design' requirements on dwellings requiring this to meet the specified threshold. It is understood from discussions with the City of Cockburn that conflicts can occur between the construction standards application for Quiet House Design Package B and BAL19+ construction standards and therefore it is preferable to avoid an overlap between these where possible.

In addition to SPP 5.4, consideration should be given to other potential noise sources (including the Jandakot airport and nearby

land uses including the Jandakot Pistol Club) in the local structure planning of the area to ensure that noise impacts experienced within residential areas are reduced and that conflicts between the new residences and existing operations are minimised through appropriate separation, treatment and / notification on title.

1.3.3.6 SPP 2.4 Basic Raw Materials

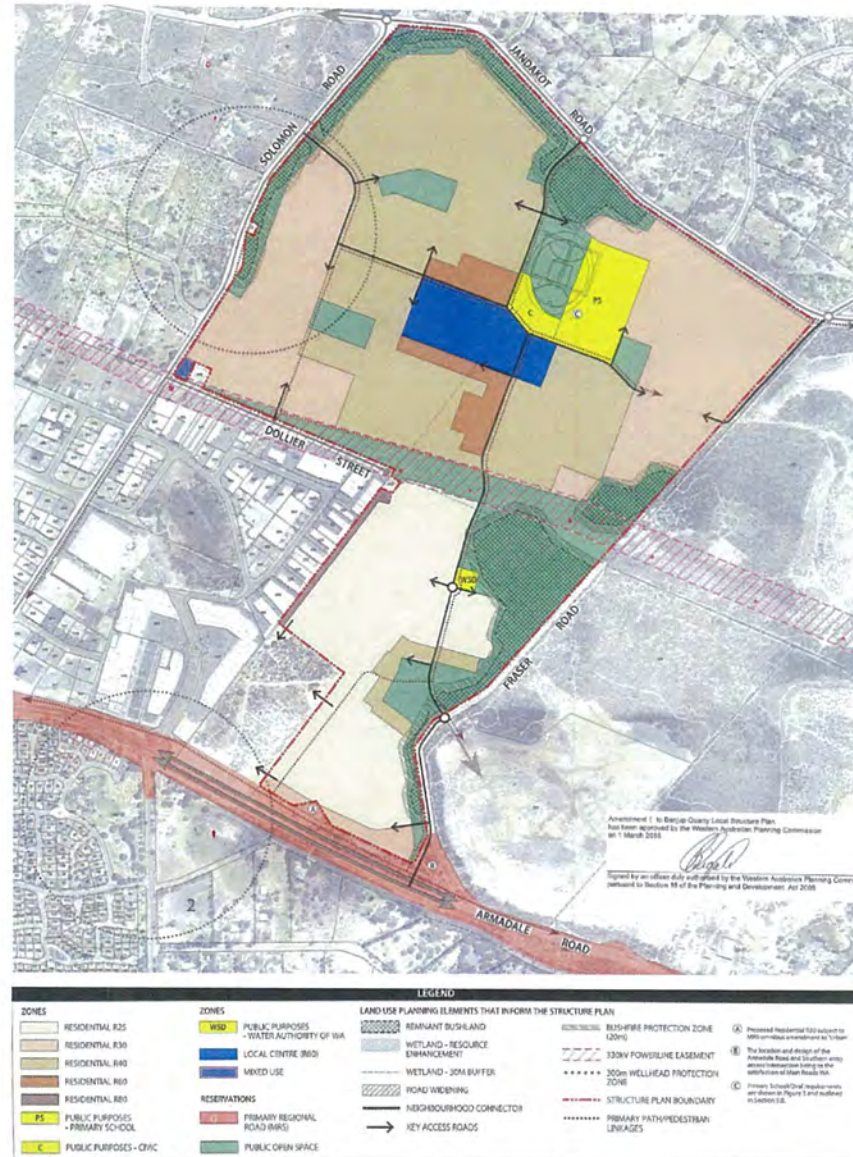
This policy sets out matters which are required to be taken into account when considering zoning, subdivision and development applications for extractive industries or on land identified as containing a strategic resource. The key objectives of this policy are to:

- Identify the location and extent of known basic raw material resources;
- Protect Priority Resource Locations, Key Extraction Areas and Extraction Areas from being developed for incompatible land uses which could limit future exploitation;
- Ensure that the use and development of land for the extraction of basic raw materials does not adversely affect the environment or amenity in the locality of the operation during or after extraction; and
- Provide a consistent planning approval process for extractive industry proposals including the early consideration of sequential land uses.



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The DSP features several sites previously used for extractive industry (primarily sand quarrying) including Calleya, Lots 1 (east), 4, 131, and 140. A live mining tenement also exists over portion of Lots 140, 139, 468 and 467 however it is uncertain whether further clearing will be permitted within this reserve to enable extraction of the remaining sand resource. Redevelopment and / or rehabilitation of sites following the completion of resource extraction as proposed within the DSP consistent with the policy. Maintenance of a temporary buffer to the live tenement and associated weighbridge in the west of the DSP area may be required along the eastern boundary of lots 2 and 4 should further mining be approved within tenement however the impacted area is small and will only be a consideration for a limited period pending completion of sand extraction. Similarly a buffer to approved sand extraction on Lot 130 north of Jandakot Road may impact on the northern portion of Lot 131 but is expected to be shortlived and can therefore be easily addressed through staging, in the event that it has not concluded at the point that development of this site commences.

#### 1.3.3.7 Local Planning Policies

In addition to the state and regional planning policies in operation, the City has a number of local planning policies relevant to the planning of the DSP area. These include (but are not limited to):

- LPP 1.12 Noise Attenuation
- LPP 5.1 Public Open Space
- LPP 5.2 Incorporating Natural Areas in Public Open Space

- LPP 5.3 Control Measures for Protecting Water Resources in Receiving Environments
- LPP 5.4 Location of High Voltage Overhead Power Lines and Microwave Towers
- LPP 5.6 Vehicle Access
- LPP 5.7 Uniform Fencing
- LPP 5.15 Access Street – Road Reserve & Pavement Standards

These do not pose a conflict with the DSP but will require consideration in the more detailed design and implementation planning processes to follow.

#### 1.3.4 Other Approvals and Decisions

##### 1.3.4.1 Banjup Quarry Local Structure Plan

Lots 9012, 9014, 9015 and the newly created residential lots west of Fraser Road south (now Ghostgum Avenue) form part of the 144ha Banjup Quarry structure plan area, being developed by Stockland as the Calleya Estate. The area was rezoned from 'Rural-Water Protection' to 'Urban' under MRS Amendment 1221/41 in November 2012 following which it was rezoned for development under the City's Local Planning Scheme.

The Banjup Quarry Local Structure Plan was formally adopted by the City of Cockburn in May 2013, and endorsed by the Western Australian Planning Commission (WAPC) (subject to conditions) on the 22<sup>nd</sup> October 2013. An amended version of the Plan approved in 2015.



The LSP provided for a 1.46ha Neighbourhood Activity Centre (NAC) incorporating a Mixed Use and Commercial (Shop/Retail) development, Public Purpose site (Primary School with co-located community land uses) and can support in excess of 2000 dwellings at 15 dwellings per gross hectare, with 1990 dwellings representing the estimate stated in current version of the LSP.

The first subdivision application (WAPC 148012) was approved by the WAPC on the 22<sup>nd</sup> October 2013, comprising 460 residential lots within the southern precinct of the LSP area, much of which has now been developed.

A second subdivision application (WAPC 149633) was approved by the WAPC on 8 August 2014, comprising approximately 1300 lots in the northern precinct (north of the Western Power easement) and inclusive of Primary School, Civic, Local Centre and Light Industry zoned sites.

Staged development of the estate is anticipated to continue over coming 5-7 years (dependent of rate of sales) to completion.

1.3.4.2 MRS Amendment 1289/57 – Lot 1 (east) Armadale Road to 'Urban'

Amendment 1289/57 to the Metropolitan Region Scheme rezoned Lot 1 (east) Ghostgum Avenue / Armadale Road from Rural to Urban and reserved the abutting Lot 820 to the north for Parks and Recreation. This was gazetted on 20 May 2016. Rezoning under the local planning scheme and formal submission of a local structure plan will be required prior to development of this site for urban (residential) purposes.

In considering the Amendment, the EPA noted the existence of flora and vegetation on Lot 1 requiring consideration in the structure planning and subdivision of the site. It recommended that fringing remnant vegetation be retained and that textual provisions be included in the Planning Scheme to this effect. The EPA also suggested that the interface with Bush Forever site 390 to the north be suitably treated to minimise adverse impacts from development, and that the protection afforded to the population of *Calandenia huegelii* on-site under both the *Environmental Protection and Biodiversity Conservation Act 1999* and the *Wildlife Conservation Act 1950* as an endangered species be noted, and that protection be incorporated into subsequent site planning processes. It is noted that while the EPA are suggesting additional scheme provisions, this amendment is yet to be formally considered by the WAPC and the Minister for Planning. The City of Cockburn has not supported the inclusion of specific scheme text as requested, as the matters can be appropriately dealt with via the structure planning process.



## 2.0 EXISTING ENVIRONMENT: SITE CONDITIONS AND CONSTRAINTS

An Environmental Assessment Report (EAR) has been prepared by 360 Environmental, refer Appendix 1. The report identifies key environmental issues relevant to the TDSP, provides the key findings of environmental assessments that relate to the TDSP, and recommends appropriate management responses to facilitate and guide future development and local structure planning within the TDSP. The EAR concludes that none of the key environmental issues identified on the site pose a significant constraint to implementation of the TDSP and that the overall environmental outcomes achieved are positive.

### 2.1 Biodiversity and Natural Area Assets

#### 2.1.1 Remnant Vegetation

Much of the DSP area has been cleared as a result of previous land uses and mining activities. The majority of vegetation remaining falls within Bush Forever Site 390. In accordance with State Planning Policy 2.8 (SPP 2.8), the Bush Forever Site 390 falls under the 'Bush Forever Area (BFA) – Urban, Industrial and Resource Development' site implementation category. SPP 2.8 recognises that regionally significant bushland in this category is constrained by existing commitments, approvals and policies. Therefore, development proposals should seek to achieve a reasonable balance between conservation and development or resource extraction through a negotiated outcome which has regard for the specific conservation values involved.

A total of 176ha of open space incorporating environmental values (including 94% of the portion of Bush Forever site 390 within the DSP area) is proposed for retention under the DSP. An area of approximately 10.5ha of Bush Forever within Lot 131 is proposed for residential development. Of this area, 4.2ha (40%) comprises of vegetation that is mapped as 'Completely Degraded' or previously cleared as a result of past sand quarrying activities and poorly rehabilitated. Further assessment of this component of the plan will occur through the subsequent rezoning and local structure planning processes, in accordance with SPP 2.8 which specifies the impact assessment process to be followed. Offsets for the removal of the better quality vegetation may be required and will be negotiated through the statutory approval process.

#### 2.1.2 Conservation Significant Flora

*Caladenia huegelii*, a conservation significant flora species (better known as a spider orchid), has been identified within the TDSP. *Caladenia huegelii* is classified as Threatened in accordance with the *Wildlife Conservation Act 1950* (WC Act) and *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). The population of *Caladenia huegelii* is mainly known to occur within Bush Forever 390 and all *Caladenia huegelii* within Bush Forever 390 are proposed to be retained. Two isolated occurrences located outside the Bush Forever area within Lot 4 will be proposed for relocation.

### 2.1.3 Conservation Significant Fauna

The TDSP has been assessed as containing suitable habitat for conservation significant fauna including the Carnaby's, Baudin's and Forest Red-tailed Black Cockatoos. Retention of the majority of existing remnant vegetation within the structure plan area limits impact on these species.

The proposal to develop Lot 4 of the TDSP has been referred to the Federal Department of Environment under the *EPBC Act 1999*. The referral attracted a "not a controlled action" level of assessment, meaning that it is considered not to significantly impact on matters of national environmental significance including listed black cockatoos.

## **2.2 Landform and Soils**

The Department of Agriculture and Food Western Australia (DAFWA) has mapped the entire site as forming part of the Bassendean System (DAFWA 2012). The Bassendean System is described as occurring on the Swan Coastal Plain from Busselton to Jurien and consists of sand dunes and sand plains with pale deep sand, semi-wet and wet soil.

### 2.2.1 Acid Sulphate Soils

Acid Sulphate Soil (ASS) mapping undertaken by the DER indicates that the site is within an area mapped as being of "moderate to low risk of ASS". Areas mapped as being of "high moderate risk of ASS" occurs approximately 50m south of the site. Further assessment and management of this will form a routine

component of the detailed planning and development phases in the event of disturbing activities such as earthworking being proposed within this area.

## **2.3 Groundwater and Surface Water**

The TDSP falls within the Jandakot Underground Water Pollution Control Area (JUWPCA). The western portion of the TDSP (the Calleya Estate) was originally classified as Priority 2 (P2) area. The Department of Water (DoW) endorsed the area to be reclassified to Priority 3 (P3) for urban development following its rezoning as it was concluded that the drinking water resource risk could be adequately managed through application of best practice water management, and the WAPC had determined that the benefits of urbanisation in this location warrant this. A similar position has been taken in relation to Lot 1 (east) during the rezoning process for this site. The balance of the privately owned TDSP area is classified as P2 with the eastern (reserved) portion of the site classified as Priority 1 (P1) under the JUWPCA. Rezoning and urbanisation within the Priority 2 area will necessitate demonstration of adequate risk management and public benefit against the criteria listed in the revised SPP 2.3, and through District and Local Water Management Strategies. This issue is further addressed within the Strategic District Water Management Strategy prepared for the precinct, discussed in section 3.6 below.

Surface water is present within several excavated depressions across the mined portions of the DSP area which will require recontouring and / or management as part of redevelopment.



The mapped Resource Enhancement wetland within Lot 131 is proposed for retention within a public reserve, and will be subject to an appropriate management strategy.

## 2.4 Bushfire Hazard

SPP 3.7 Planning in Bushfire Prone Areas seeks to apply risk-based land use planning and development controls to ensure that bushfire hazards are considered in planning decisions, to preserve life and reduce the impact of bushfire on property and infrastructure. The Policy is to be read in conjunction with the Deemed provisions of the *Planning and Development (Local Planning Scheme) Amendment Regulation 2015*, the supporting *Guidelines for Planning in Bushfire Prone Areas*, and *Australian Standard 3959: Construction of Buildings in Bushfire Prone Areas*.

Areas of the DSP are mapped as Bushfire Prone and so will require detailed Bushfire Hazard Assessment and application of Bushfire Management Plans to address bushfire risk. Likely measures include provision of hazard separation through the placement of roads and / or managed local open space abutting areas of retained vegetation, and application of BAL construction standard requirements to lots in closest proximity to areas of retained vegetation. This approach has been successfully applied within Calleya. Detailed assessment will be required as a routine component of the preparation of local structure plans.

## 2.5 Heritage

The Department of Aboriginal Affairs (DAA) Aboriginal Heritage Information System (AHIS) indicates the location of three 'Other Heritage Places' and no 'Registered Sites' with the TDSP. The three 'Other Heritage Places' are defined below –

- Banjup Calsil – Place ID. 3301 associated with artefacts/scatter. The status of the place is 'Stored Data/Not a Site', which means it has been assessed as not meeting Section 5 of the *Aboriginal Heritage Act 1972*.
- Readymix Sandpit 1 – Place ID. 4108 associated with artefacts/scatter. The status of the place is 'Lodged Site', which means it has not been determined whether or not it meets Section 5 of the *Aboriginal Heritage Act 1972*.
- Camp Site – Place ID. 18752 associated with artefacts/scatter. The status of the place is 'Lodged Site', which means it has not been determined whether or not it meets Section 5 of the *Aboriginal Heritage Act 1972*.

The location of these places is shown in Figure 12 of the Environmental Assessment Report. The latter two places are located within Calleya and in the very south-west corner of the DSP area (potentially outside its actual boundaries), respectively. The Calsil site impacts a substantial portion of the regional reserve in the east of the DSP area and portion of Lots 2, 4 and the Skotsch Road estate.

The closest 'Registered Site' is Kraemer Reserve (Place ID. 21811), which is approximately 1.1km to the south of the Study Area. The site is registered due to its mythological significance.

Obligations precluding interference with registered sites without prior clearance, and disturbance of any artefacts discovered exist under the Aboriginal Heritage Act which will need to be observed in any development within the DSP.

## **2.6 Context Analysis and Opportunities and Constraints**

An Opportunities and Constraints Plan has been prepared illustrating the context and the site and its key opportunities and constraints (refer Figure 9). This illustrates the strategic location of the site from an urban infill potential and the availability of goods, services, transport and urban infrastructure already in place. It also identifies a number of constraints to which the DSP and subsequent local structure plans must respond. Items illustrated on the plan include:

- The area's exceptional access to employment opportunities, retail and services, both within the immediate area, and accessible via the Perth-Mandurah Rail Line nearby;
- Its proximity to the Cockburn Central railway station providing direct access to the Perth CBD, Mandurah, and other stops along the line (including Murdoch providing a regional hospital and university facility);
- The surrounding road network and cycle network;
- Existing cadastral boundaries, illustrating areas in consolidated ownership versus those previously developed;
- Existing planning for the Calleya Estate;
- Areas of regional reserve, and Bush Forever sites;

- Surveyed Declared Rare Flora (surveyed locations subject to confirmation);
- Areas cleared for sand mining versus areas of remnant vegetation;
- Mapped wetland areas;
- The location of ground water extraction bores;
- The boundaries of the Jandakot Airport and associated ANEAF noise contours;
- The absence of buffers associated with kennel zones to the north east affecting the area;
- Mapped sand resources;
- The 330kv powerline easement running east west through the DSP area;
- Walking and cycling catchments to Cockburn Central railway station and activity centre.

The TDSP provides a design response to these considerations as detailed in section 3.0 below.



### 3.0 DISTRICT STRUCTURE PLAN

The District Structure Plan has been drafted to respond to the key opportunities and constraints presented by the precinct and provide a broad framework for future land use planning and infrastructure provision. It seeks to optimise the reuse of consolidated sites which have previously been cleared for sand mining given the strategic location of the precinct, whilst preserving areas of significance, and recognising existing uses and approvals. It provides for:

- The continued development of the Banjup Quarry / Calleya estate in accordance with the approved Local Structure Plan;
- The development of Lot 1 (west) Armadale Road for either Service Commercial and/or Residential purposes, in accordance with an approved Local Structure Plan (to be prepared);
- The development of Lot 1 (east), 4, 2 and 131 for urban residential purposes in accordance with approved Local Structure Plans (to be prepared following or concurrent with rezoning);
- The retention of Lot 500 and the Skotsch Road precinct for Rural Residential purposes;
- Retention of Lots 467, 139, 468, 140, 614 and 820 for Regional Open Space;
- Retention of additional areas (totalling 58 ha to create a total of approximately 177ha) of open space incorporating environmental values and vegetation retention;
- Restriction of access from Armadale Road to approved access points into Lot 1 (west) (Left in Left out), Ghostgum Avenue / Calleya (full movement but ultimately subject to restriction to Left in Left out) and Lots 2 and 4 (full movement at extension of Liddelow Road). Potential for an additional Left in Left out into Lot 4 to relieve pressure on the full movement intersections has also been recommended by Transcore to improve traffic flow and load share however the impact of this intersection on the function of Armadale Road has been flagged by MRWA as of concern and so it is subject to further investigation and approval during the local structure planning phase;
- Extension of internal north south road linkages through Calleya (as approved) and through Lots 4 and 131 to Fraser Road to provide for through connection between Armadale Road and Jandakot Road;
- Extension of internal east-west linkages to facilitate internal movement within the DSP area, and access to local services and amenities;
- Upgrade of Jandakot Road to a two lane divided urban road with ultimate provision for upgrading to a four lane road;
- Provision of two centrally located Primary Schools (within Calleya and Lot 4);
- Provision of a Neighbourhood (within Calleya) and a Local (within Lot 4) Activity Centre to cater for provision of local services to supplement those available within Cockburn Central and the broader district.



Development in accordance with the DSP is estimated to yield approximately 3500-3800 dwellings (including the 1990-2350 estimated to be created/potentially created within the approved Calleya area). In the event that portion or all of Lot 1 (west) is developed for Residential instead of Service Commercial purposes, this might yield a further 100 commercial lots (approximately) or a higher number of retirement dwellings.

### 3.1 Land Use

The Structure Plan provides a general indication of land use designation and arrangements. However, refinements to the details of boundary alignment and layout may occur as part of the more detailed site planning occurs.

The basic land use areas indicated on the DSP are as follows:

**Table 5 – Land Use Schedule (Plan 2310-122D-01)**

	Sub Total (ha)	Total (ha)
Total DSP Area		458ha
<b>Non Residential Land Uses</b>		
Mixed Business (assume 100% Urban-zoned portion of Lot 1 west)	7.03	
Neighbourhood & Local Centres	4.57	
Primary School & Community Purpose	8.20	
Non Residential Land Use Total		19.61
Rural Residential		31.02
<b>Open Space with Conservation Values</b>		
Existing Parks & Recreation Reserve	118.48	
Additional Open Space incorporating Conservation Values	58.75	
Open Space with Conservation Values Sub Total		177.23
<b>Gross Residential Area</b>		230.30

\* All areas approximate only.

\* Areas of open space credited under WAPC policy (including potential areas with conservation value) to be determined through Local Structure Plan and subdivision processes.

### 3.1.1 Residential Densities and Yield Projections

The Calleya LSP estimates a total residential lot yield of 1,990 with ultimate planned potential up to 2,350 to provide an upper range catering for growth over time. These yields are provided via a range of residential densities including 'traditional' R20/25 single residential lots with a proportion of smaller R30, R40 and a smaller component of R60 lots within strategic locations.

Extension of these principles and the Perth and Peel @ 3.5 Million target of 15 dwellings per hectare to Lots 1 (east), Lots 4 and 2 and the portion of Lot 131 identified for urban investigation will generate approximately 1,500 additional lots. Lot 1 (West) might provide a further 100 lots (approximately) if fully developed for traditional residential purposes.

Density allocation within development sites should follow the principles of Liveable Neighbourhoods (as illustrated at Calleya) with a base providing for traditional single residential lots with higher density lots concentrated around local amenities, open space and transport routes. Further detail on density codings will be provided through local structure plans prepared for each site.

### 3.1.2 Non-Residential Land Uses/Facilities

The site is exceptionally well located in relation to access to employment opportunities, retail and services. Cockburn Central, a strategic metropolitan centre, is located within 1.5km-3km from the DSP whilst the rail line provides direct connection to the Perth CBD 20km to the north. Jandakot Business Park and other district business and industrial areas nearby provide further opportunities.

To supplement these, the DSP provides for a Neighbourhood Centre within Calleya and a small Local Centre within Lot 4 to provide for a range of daily needs within walking distance of most urban areas of the DSP. Uses accommodated within these centres might include a deli, cafe, medical services, childcare and / or local offices, depending on market demand. The Neighbourhood Centre might also incorporate a small supermarket and specialty shops.

The Calleya Neighbourhood Centre incorporates provision for a community centre to be developed in conjunction with the local school and active recreation facilities, consolidating this as a focus for community interaction. Collocation of the school with the local centre is also proposed on Lot 4 to facilitate multi-purpose trip, manage traffic and access, and provide a concentration of activity within a central point within the precinct. The shared use oval abutting the Lot 4 primary school has also be notionally sized to accommodate a senior sized oval, should there be unmet demand for this (as has been the case elsewhere within the region).

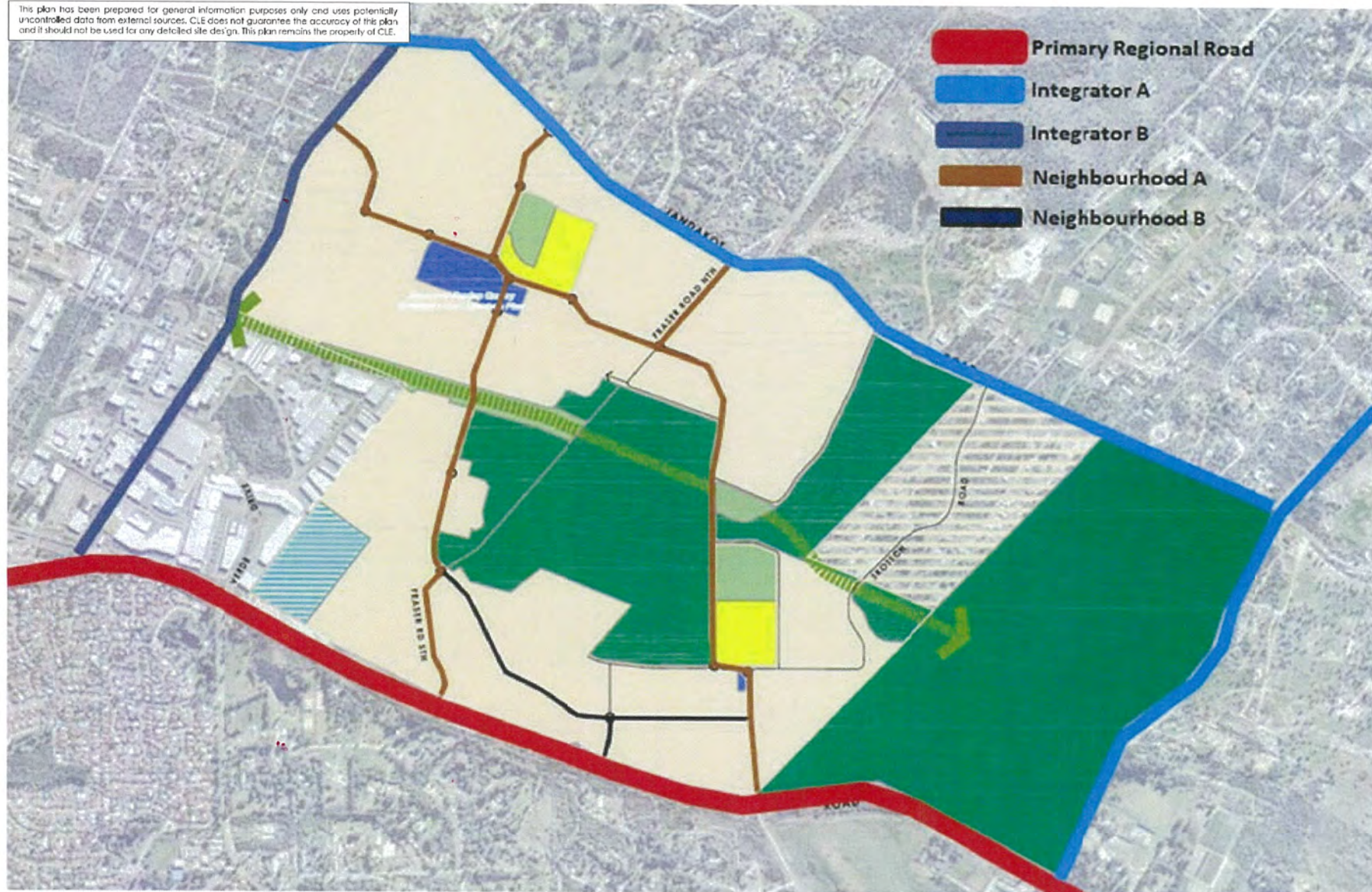
Lot 1 (west) abuts service commercial (showroom type) development to the west, and residential to the east and north. As such, this site has the opportunity to accommodate either land use or a combination of the two (subject to appropriate planning and interface treatment). Any residential component would be required to integrate with Calleya, and access provision has been incorporated in the Calleya LSP to facilitate this. The City has indicated that non residential uses would be expected to restrict access and egress to Armadale Road (and / or integration with development to the west if this can be negotiated). The details



# TREEBY DISTRICT STRUCTURE PLAN

## PART TWO - EXPLANATORY SECTION

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of land use mix, access and layout for this site will be determined through the subsequent LSP. Given its location, either land use option integrates with the DSP, and its size limits the impact on either land use scenario on the overall outcome.

### 3.2 Public Open Space and Recreation

The DSP illustrates the existing network of state owned regional reserves supplemented by additional areas (approximately 58ha) of open space incorporating environmental values. These areas incorporate the majority of Bush Forever site 390 and an area of contiguous conservation within Lot 9012. These areas, ultimately forming part of a district parkland, total 177ha. Whilst much of this area is proposed for retention for environmental reasons, it includes parts with an existing or potential recreation function, including cleared areas previously subject to sandmining. There is also the opportunity to integrate the park with the 330kv Western Power Easement running east-west through the precinct to provide not only a 'green linkage' through the area, but also a potential recreation linkage. Preparation of a masterplan over the park could assist in achieving a well thought out and integrated management arrangement which maximises both conservation, recreational and aesthetic benefits, and creates a focus for the district.

Two active recreation areas are identified on the DSP to provide for playing fields abutting schools. The precise sizing and location of these will be subject to detailed planning in conjunction with the City, but both cater for multiple sporting uses including potential senior sized football oval. The City has indicated the need for clubrooms (change rooms, toilets and the like) to service these.

Local open space areas are not illustrated on the DSP (being a detailed design item) however provision for these will be required in addition to those areas identified on the DSP in accordance with Liveable Neighbourhoods policy. These will need to be placed to ensure accessibility to local residents, and provision of a range of functions accommodating different recreational and social needs. Management considerations will also inform detailed open space planning and treatment in the detailed design processes to follow.

### 3.3 Education Facilities

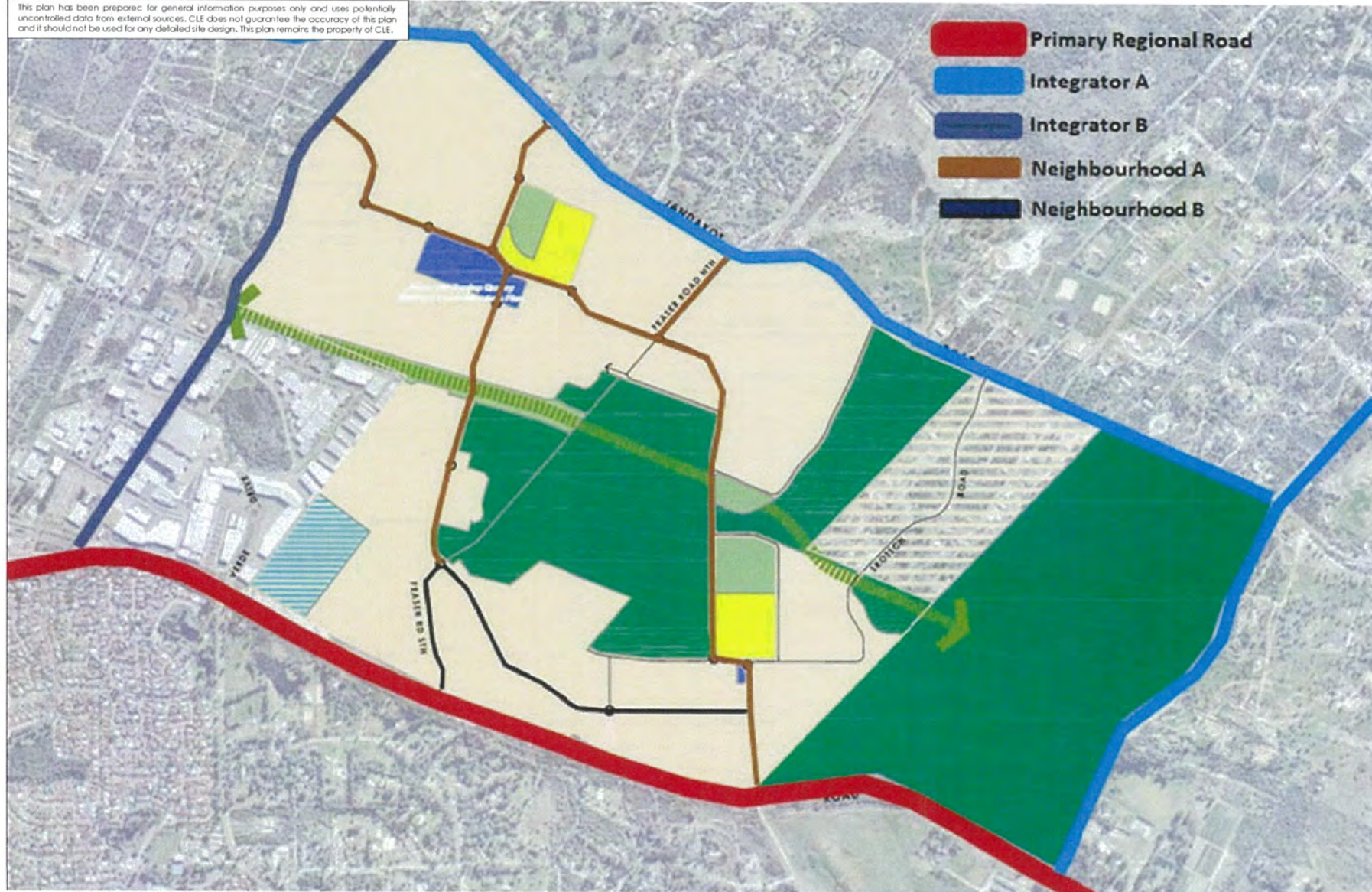
Provision for two primary school sites, one within Calleya and one in the east of the DSP within Lot 4 is made within the DSP to accommodate projected population. This rate of provision is consistent with Liveable Neighbourhoods and the advice of the Department of Education based on the estimated lot yield. The eastern (Lot 4) school site is shown at 4ha at the request of the Department of Education catering for the higher end of the yield range and some incremental growth. The Department of Education has advised that no high school is required for the site with demand to be met by existing and planned high schools within the locality including Lakelands, Atwell and Harrisdale.

Tertiary education facilities are provided at a range of locations accessible from the DSP area including at Murdoch, Bentley, Crawley, Armadale, Mandurah, Fremantle, Perth CBD and within private facilities within nearby business parks.



# TREEBY DISTRICT STRUCTURE PLAN PART TWO - EXPLANATORY SECTION

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### 3.4 Employment

The DSP area has excellent access to a range of employment opportunities provided at:

- Cockburn Central (1.5-3km from DSP);
- Jandakot Business Park (2.5km from DSP);
- Perth CBD (20km from DSP on train line);
- Canning Vale industrial area (6km from DSP);
- Armadale centre (10km from DSP); and
- Bentley Business Park (15km from DSP).

Employment opportunities within the DSP will include those available at the two local primary schools, within the Neighbourhood and Local centres, within the community facility, and within home based businesses.

### 3.5 Movement Networks

The Precinct is bounded by an established (and largely higher order) road network, with the local network being extended through the Calleya development providing for internal movement. Extension of this to integrate with additional development sites, and optimise access to services and amenities is relatively simple, though access to Armadale Road and Jandakot Road is restricted due to projected volumes, existing access points and topography, making interconnection of the internal network particularly critical. Transcore traffic engineers have provided input into the preparation of the DSP and prepared the appended Transport Assessment (refer Appendix 2) confirming the suitability of the structure proposed in the DSP. The following section outlines the key elements of the Transport Assessment including details of

the existing and proposed road networks and road hierarchy classifications. The section also provides an overview of public transport, cyclist and pedestrian network provision within the TDSP area.

#### 3.5.1 Ultimate Road Network

The proposed road network for Banjup provides sufficient and logical connectivity through Primary Regional, Integrator and Neighbourhood Connector Roads, compatible with sub-regional planning outcomes including the existing and potential future network changes. The proposed internal road network (shown in Figure 11) of the TDSP reflects local structure planning within the Calleya Estate and facilitates good traffic circulation throughout the balance of the TDSP, and appropriate connectivity to the surrounding regional roads including Armadale Road and Jandakot Road. A revision of this to reflect longer term upgrading plans for Armadale Road is shown in Figure 12.

The Transport Assessment notes that:

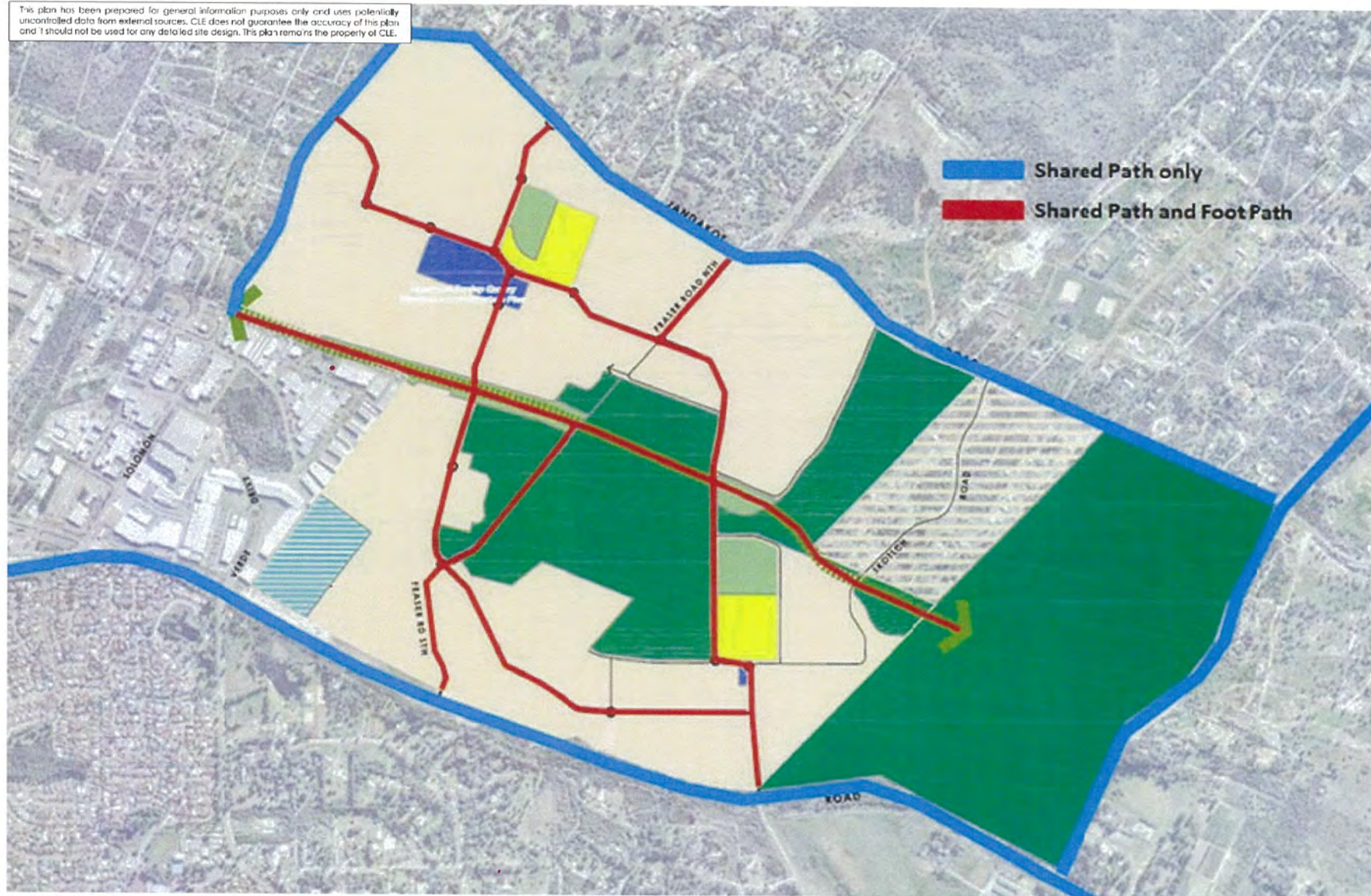
- Armadale Road is a Primary Distributor and is proposed to be upgraded to dual carriageway in the vicinity of the DSP in the short-medium term, and 6 lanes in the long term, at which point the projected traffic volume is expected to be over 50,000vpd. The proposed internal road network includes three connections with Armadale Road, including:
  - One full movement intersection (at Liddelow Road);
  - The existing Ghostgum Avenue intersection (ultimately requiring modification to Left in Left out upon construction of the Armadale Road deviation); and
  - A Left in Left out intersection to Lot 1 (west)



# TREEBY DISTRICT STRUCTURE PLAN

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A further Left in Left out only intersection was proposed between Liddelow Road and Ghostgum Avenue to improve connectivity and permeability of the DSP areas and to relieve pressure on the 4-way intersection/s, however this will only proceed if MRWA concern with it can be resolved.

- Jandakot Road forms the northern boundary of the DSP area and is classified as an Integrator A road requiring dual carriageway standard with a predicted traffic volume of 20,000-30,000vpd. The ultimate road design will include two traffic lanes in both directions and a 6m median. This upgrade will require land resumption to accommodate the widening. The internal road network includes four connections to Jandakot Road including roundabout intersections at Solomon Road, the north-south Neighbourhood Connector A road through Calleya, and Fraser Road, and a priority T-intersection at Skotsch Road.
- Warton Road is a north-south District Distributor A road of dual carriageway standard, connecting Jandakot Road with Armadale Road along the eastern boundary of the DSP area. The Jandakot Road intersection is currently controlled with a roundabout whilst the Armadale Road intersection is signalised. Warton Road experiences traffic volumes of approximately 18,600 vpd.
- Solomon Road is a north-south Integrator B road, running between Armadale Road and Jandakot Road on the western edge of the DSP area. It will carry a projected traffic volume of approximately 12,000vpd. Two priority controlled T-intersections are proposed to connect the DSP area with Solomon Road, at Dollier Road and the east-west Calleya Estate Neighbourhood Connector A road.

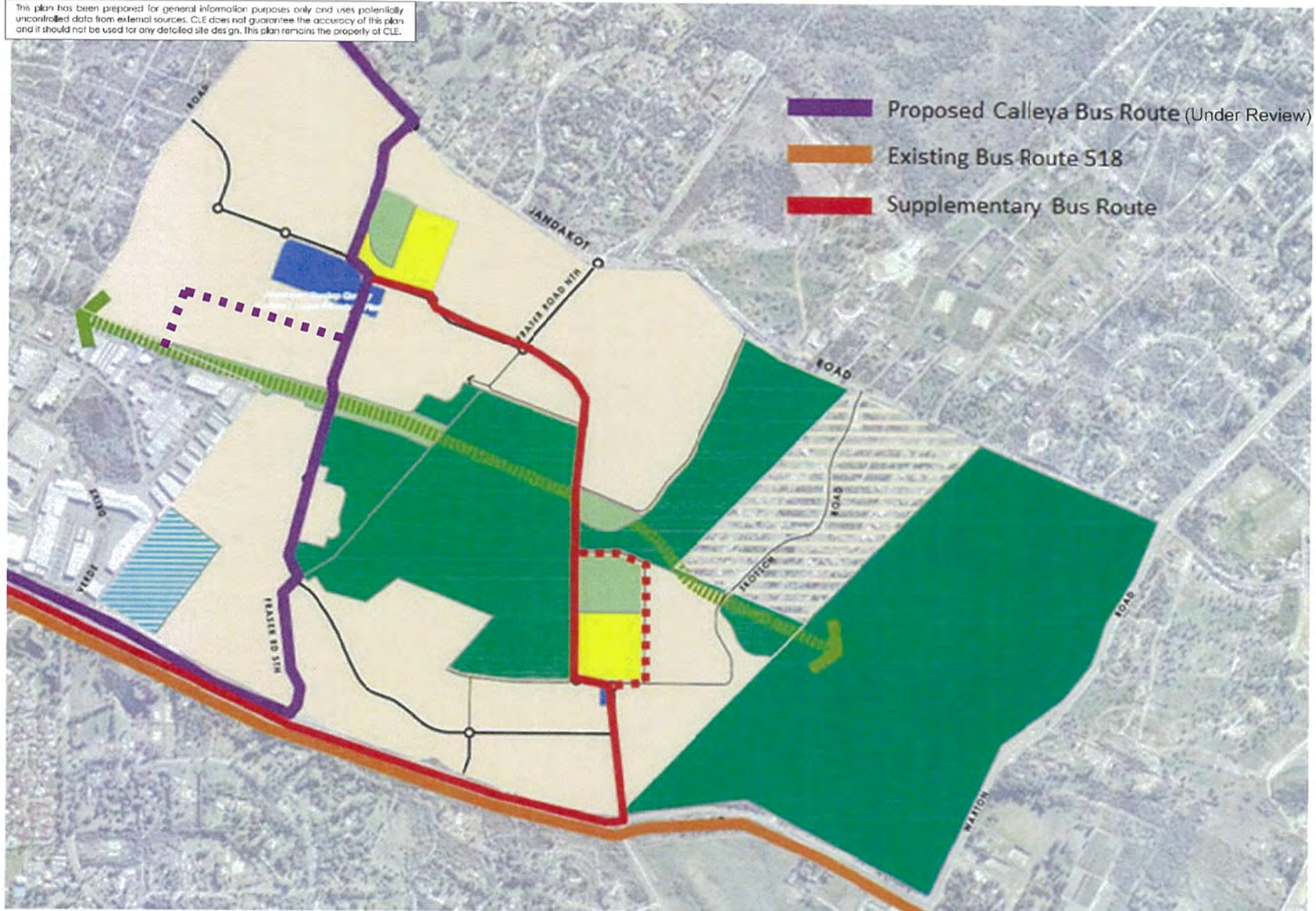
- A Planning Control Area has been issued by the WAPC for the future upgrade and deviation of Armadale Road west of the DSP area. The upgrade would involve modification to the alignment of Armadale Road including trenching portions of the road to improve through movement capacity and reduce traffic congestion in and around the Cockburn Central activity centre and Station precinct. Regardless of whether these additions to the regional road network eventuate, this proposal can connect into the current network configuration.
- The DSP proposes a permeable network of north-south and east-west Neighbourhood Connector roads providing good access to the Calleya Neighbourhood Centre, two primary schools and residential areas. The roads provide efficient connectivity to the surrounding arterial road network of Armadale Road, Jandakot Road and Solomon Road.

Neighbourhood Connectors within the eastern portion of the DSP area (Calleya Estate) are classified as Neighbourhood Connector A roads, and have been established as part of Local Structure Plan associated with this site. The eastern portion of the TDSP area includes a north-south Neighbourhood Connector A road through lots 4 and 131, providing a connection between Jandakot Road, Armadale Road and linking into the Calleya Estate. The proposed east-west road between lots 4 and 1 (east), and the Left in Left out access point to Armadale Road are classified as Neighbourhood Connector B roads.

Traffic volumes on Neighbourhood Connector roads are predicted to be less than 5,000vpd; therefore no restrictions to direct lot access are required for lots within the DSP area.



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### 3.5.2 Pedestrian and Cycle Network

The TDSP proposes a pedestrian and cycle network that will provide excellent accessibility and permeability for residents within the DSP area, connecting the area to neighbouring precincts and strategic locations. On average, the walking / cycling distance between the DSP area and the Cockburn Central Station/ Activity Centre will be 2 to 3km. The DSP includes a network of shared paths and footpaths on all Neighbourhood Connector A roads and the east-west neighbourhood Connector B road proposed through lots 4 and 1 (east) refer Figure 13. Shared or dedicated cycle and foot paths are also proposed on the existing arterial road network, including Armadale Road, Solomon Road and Jandakot Road, and potentially through the parkland and Western Power easement running east-west through the site (subject to open space masterplan).

### 3.5.3 Public Transport

Public transport provision for the Banjup DSP area is anticipated to include the following:

- Continuation of route 518 along Armadale Road between Murdoch and Piara Waters;
- A proposed route through the Calleya Estate between Jandakot Road and Armadale Road servicing the Calleya Neighbourhood Centre and primary school. This route is likely to ultimately connect Banjup with the Cockburn and Murdoch Stations. The precise route is currently under review given MRWA plans restrict access from Armadale

Road, with several options being considered.

- A possible supplementary bus service between the Calleya Neighbourhood Centre and the eastern residential area and primary school, providing access to Cockburn Central (refer Figure 14). The WAPC Transport Assessment Guidelines for Developments (2006) suggest that it is desirable for at least 90% of dwellings to be within 400m of a bus route. The provision of the secondary bus route in the east of the DSP area would satisfy this objective.
- Possible future bus rapid transit route between Armadale and Cockburn Central on Armadale Road, proposed as part of the Public Transport Plan for Perth in 2031.

Access to the Cockburn Central Railway Station can be enhanced through extension of an east-west cycle / pedestrian link through the DSP area and connection to Dollier and Solomon Roads to the station.

## **3.6 Water Management**

The TDSP is located within the Jandakot Underground Water Pollution Control Area (UWPCA) and incorporates Priority 1 and 2 areas. This makes consideration of groundwater impacts a critical consideration in any land use planning for the future of the site, and one which has been very carefully assessed in the formulation of this proposal. A Strategic District Water Management Strategy has been prepared by JDA Hydrologists for the TDSP (refer Appendix 3) to provide direction on appropriate management of water and groundwater, in particular, to inform more detailed site strategies required to support individual rezoning and local structure plan proposals.



The SDWMS investigations conclude that the extensive work undertaken in relation to site conditions, hydrogeology and groundwater management for the Calleya and Lot 4 rezoning proposals is pertinent to abutting sites (which exhibit similar attributes), with the conclusion that groundwater impacts can be appropriately managed through best practice management practices similarly extended.

Initiatives recommended to be applied to limit potential groundwater impact associated with urban development, include:

- Extension of deep sewer to all lots;
- Application of water sensitive urban design principles including at-source stormwater infiltration, rain gardens and water harvesting;
- Appropriate road design and treatments to minimise the risk of high speed car collision (which may result in oil or petrol spillage);
- Provision of lot types which maximise land use efficiency and reduce excessive garden area (and hence fertiliser and pesticide use);
- Encouragement of home purchasers to use native plants for landscaping (which will also reduce fertiliser and pesticide use);
- Use of promotional information to land purchasers aimed at raising awareness of water issues; and,
- An on-going monitoring programme.

Exclusion of higher risk land uses (such as service stations) is also proposed.

The analysis concludes that reclassification of the land within the TDSP from a P2 to P3 water protection zone classification (with retention of P1 or P2 in areas of retained bushland), can be supported against the criteria listed within the revised SPP 2.3, subject to implementation of appropriate Local Water Management Strategies and Urban Water Management Plans consistent with the direction set within the SDWMS.

### **3.7 Service Infrastructure**

Wood and Grieve Engineers have reviewed service capability within the area and prepared the appended Engineering Infrastructure Report for TDSP, refer Appendix 4. This concludes that the DSP area can be serviced by the construction, upgrade and / or extension of regional service infrastructure to the site, with details as follows.

#### 3.7.1 Sewer

Water Corporation has commenced conceptual wastewater supply planning for the DSP area. Approval of MRS amendments within the DSP area will trigger review of the Water Corporation formal sewer planning scheme and detailed network design.

Wastewater disposal will be achieved via a network of gravity fed reticulation sewers, gravitating to two Waste Water Pumping Stations (WWPS). One station has been constructed within the Calleya Estate which discharges to existing infrastructure west of the DSP area. The balance of the DSP area discharges to a

proposed type 40 WWPS within Lot 4, which will discharge to the existing Calleya estate WWPS.

A site of approximately 1000m<sup>2</sup> is required centrally within lot 4 to accommodate an additional pumping station, which will be determined through local structure planning. Design of local structure plan development concepts will have a layout sympathetic to the landform and will provide direct links through the development to the WWPS to minimise sewer length and depth.

#### 3.7.2 Water Supply

The Water Corporation has commenced conceptual water supply planning for the DSP area, as an extension to the Thompson Lake Gravity Supply Scheme. This indicates provision of a water main extension from the existing DN760 main crossing Liddelow Road south of Armadale Road. Provision of a potable water supply to individual lots would be achieved through the construction of a network of smaller DN100 to DN250 pipes throughout the internal road network.

Approval of the MRS amendment will provide the catalyst for more detailed planning for water supply over the site.

#### 3.7.3 Power

Power supply can be achieved via expansion and/ or upgrade to the existing Western Power network in the Vicinity of the DSP area. 22kv power lines are currently installed within the Armadale Road and Jandakot Road reserves and high voltage underground

power has been installed within the Calleya estate.

It is anticipated that the existing Armadale Road and Jandakot Road overhead power lines will be replaced with underground cables as part of the development. An underground network will be provided throughout the DSP area providing low voltage connections to each lot.

#### 3.7.4 Telecommunications

National Broadband Network (NBN) has been installed within the Calleya estate. It is expected that this would be extended through the DSP area (in a common trench with underground power) as a component of urban development, and would be progressively constructed with fibre distribution hubs located throughout the site as required.

#### 3.7.5 Gas

The DSP can be serviced by ATCO Gas's DN300 high-pressure steel gas main located in the Armadale Road reserve. It is anticipated that ATCO Gas will service the development with reticulation of natural gas within a common trench with water reticulation. A pressure reducing valve will also be required to reduce operating pressures to that suitable for residential reticulation.



#### 4.0 IMPLEMENTATION

The TDSP provides a broad overarching framework to coordinate more detailed local structure planning required of individual development sites following their rezoning. It also outlines the basic principles upon which such rezonings may be based.

Implementation of the TDSP will primarily occur through the rezoning of identified development sites under the MRS and TPS3, and subsequent local structure planning which would refine and build upon the basic structure and principles outlined in this document. It is anticipated that individual LSPs would be required for Lots 1 (west), 1 (east), 4, 2 and 131 with Lots 4 and 2 expected to combine. These LSPs would provide more detailed analysis and justification for the layouts proposed in accordance with the WAPC's Structure Planning Framework.

Preparation of an overarching Masterplan for the interconnected regional open space area may also be desirable and could form a component of an offset package for removal of a portion of remnant vegetation in the north of Lot 131. Individual open space management plans are routinely required as a condition of subdivision approval for individual sites however the Masterplan would provide a framework for a more integrated and strategic approach to management, given the scale of the open space area and the multiple functions and conditions it currently contains.

The sites are already subject to Development Contribution Plan No. 13 which provides for per lot contributions towards regional, district and local community infrastructure. Rezoning

of additional sites within the TDSP area would trigger a review of the DCP to factor in the additional lots over which DCP items costs would be allocated. Inclusion of limited additional items (namely an additional district recreational facilities required to support the active open space shown on Lot 4) into a new DCP or through private arrangement may be appropriate, and upgrading obligations associated with the portion of Jandakot Road abutting urban areas will also require agreement.





# TREEBY DISTRICT STRUCTURE PLAN

TECHNICAL APPENDICES

October 2016

COCKBURN CENTRAL

STRUCTURE  
TREEBY  
DISTRICT



## TREEBY DISTRICT STRUCTURE PLAN

### TECHNICAL APPENDICES

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October 2016

## APPENDICES

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- Appendix 1: Environmental Assessment Report
- Appendix 2: Transport Assessment
- Appendix 3: District Water Management Strategy
- Appendix 4: Engineering Infrastructure Report

## Appendix 1

### Environmental Assessment Report (360 Environmental)



Treeby District Structure  
Plan

## Environmental Assessment Report

Prepared for:

Perron Developments Pty  
Ltd

September 2016

● people ● planet ● professional



Document Reference	Revision	Prepared by	Reviewed by	Admin Review	Submitted to Client	
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1405AE	E CLIENT FINAL	KC	SB	AT	1 Hardcopy 1 Electronic (email)	07/09/2016

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360 Environmental Pty Ltd

## Executive Summary

360 Environmental Pty Ltd (360 Environmental) has been engaged by Perron Developments Pty Ltd (Perron) to prepare an environmental assessment report (EAR) to support the preparation and submission of the Treeby District Structure Plan (DSP) on behalf of the City of Cockburn. The DSP area includes approximately 461 ha within the City of Cockburn. The DSP covers landholdings bounded by Warton Road, Jandakot Road, Solomon Road, and Armadale Road, Banjup ('the study area').

The Treeby DSP has been identified by the City of Cockburn as a key initiative for 2016. This initiative has been the result of recent urban development within the Study Area and changes to the metropolitan strategic planning framework over the locality of Banjup.

The purpose of the EAR is to;

- Review a number of environmental assessments that have been undertaken over the Study Area;
- Identify the key environmental issues relevant to the DSP;
- Demonstrate the proposed change in land use will not result in adverse environmental impacts; and
- Recommend appropriate management responses to facilitate and guide future development and local structure planning within the Study Area.

### Key Environmental Issues

#### Bush Forever

A large portion of the Study Area has been historically cleared and disturbed for sand quarrying operations. Approximately 95% of Bush Forever is proposed to be retained as part of future development. However, 10.5 ha within Lot 131 is proposed to be developed for residential purposes, of which approximately 40% (4.2 ha) is comprised of vegetation condition that is mapped as being 'Completely Degraded'. Additionally, approximately 47% of the Bush Forever area that is proposed to be developed has been previously cleared as a result of past sand quarrying activities and poorly rehabilitated (4.9 ha).

It is important to note that within Lot 131 approximately 1.8 ha (that is not currently in Bush Forever) is proposed to be included within the Public Open Space, of which approximately 90% (1.6 ha) is comprised of vegetation that is mapped as being in 'Excellent' condition.

Most of the vegetation remaining within the Study Area forms part of Bush Forever Site 390. In accordance with SPP 2.8, Bush Forever Site No. 390 falls under the 'Bush Forever Area (BFA) - Urban, industrial and resource development' site implementation category. The policy recognises that regionally significant bushland in this category is constrained by existing commitments, approvals and policies. Therefore, development proposals should seek to achieve a reasonable balance between conservation and development or resource extraction through a negotiated outcome which has regard for the specific conservation values involved (WAPC 2010).

Given the above any proposed MRS rezoning of areas within the DSP that may result in unavoidable impacts on regionally significant bushland within Bush Forever Site No. 390 will be the subject of an impact assessment being undertaken. The impact assessment will be done in accordance with the process outlined in Appendix 1 of SPP 2.8 and the framework provided in Figure A of this report.

The primary purpose of this impact assessment will be to inform

- The development of a statement of environment effect (guided by Appendix 1 of SPP 2.8);
- The development of a Bush Forever offsets package that will provide a net environmental outcome; and
- Assist in any future negotiated outcome over the final boundary for Bush Forever Site No. 390.

The provision of a Bush Forever offsets package will lead to a positive net environmental outcome. There are opportunities to provide an offset package through the addition of remnant vegetation (outside of Bush Forever) on site, purchase of vegetated land and the rehabilitation of land in the immediate vicinity to achieve an appropriate offset ratio, which will be determined through the application of Appendix 4 of SPP 2.8 and in consultation with the Department of Planning and the Office of the EPA..

#### Conservation Significant Flora

One conservation significant flora species has been found on site, *Caladenia huegelii* that is Threatened under the *Wildlife Conservation Act 1950* (WC Act) and *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). There are no *Caladenia huegelii* within Bush Forever Site 390 that within areas proposed to be cleared and all known *Caladenia huegelii* within Bush Forever Site 390 are to be retained.

#### Conservation Significant Fauna

The Study Area has been assessed as containing suitable habitat for a number of conservation significant fauna, including the Carnaby's, Baudin's and Forest Red-tailed Black Cockatoos.

The proposal to develop Lot 4 of the site has been referred to the Federal Department of Environmental under the EPBC Act 1999. As a result the proposal attracted a “not a controlled action” level of assessment, meaning the project is considered not to significantly impact on matters of national environmental significance such as black cockatoos.

#### Jandakot Underground Water Pollution Control Area

The Study Area forms part of the Jandakot Underground Water Pollution Control Area (JUWPCA). The majority of the Study Area is classified as P2 and the eastern portion of the site is classified as a Priority 1 (P1) area under the UWPCA.

The western portion of the Study Area (Calleya Estate) was originally classified as a Priority 2 (P2) area; however the Department of Water (DoW) formally endorsed the area to be reclassified to Priority 3 (P3) for urban development as it was demonstrated that the drinking water source will be protected.

Lot 1 (previously Lot 821) has recently been rezoned to ‘Urban’ under the MRS. During the MRS Amendment submission period, the DoW advised that following the WAPC’s determination to rezone the site to ‘Urban’, the DoW would reclassify the site from a P2 to a P3 protection status and may recommend mitigation measures are applied to the development.

Provided the MRS rezoning process concludes that it is acceptable to rezone land to ‘Urban’ or ‘Urban deferred’, land proposed to be developed for residential housing can be reclassified from P2 to P3. The remaining areas proposed to become ‘Urban’ within the Study Area meet these requirements due to previous clearing and disturbance and the presence of the Calleya Estate that is zoned ‘Urban’. Furthermore, the WAPC identified a substantial portion of the Study Area as ‘Urban Investigation’ and ‘Urban Expansion’ in the Draft Metropolitan Perth and Peel Sub-regional Planning Framework (WAPC 2015b). This indicates that the WAPC would consider more intensive development within the current P2 areas proposed to be rezoned to ‘Urban’.

Furthermore, the following initiatives will ensure potential risks to the drinking water source are minimised:

- Extension of deep sewer to all lots;
- Implementation of water sensitive urban design principles including at-source stormwater infiltration, rain gardens and water harvesting;
- Preservation of large areas of existing native vegetation and wetland;
- Future urban design with incorporates the current trend for smaller lot sizes with reduced landscaping and irrigation areas (thereby reducing fertiliser and pesticide use);
- An on-going monitoring programme; and



- Exclusion of high risk land uses from the development area (e.g. service station).

### Environmental Outcomes

*Based on the high-level review undertaken, the following key environmental issues are identified:*

- Terrestrial flora and vegetation;
- Terrestrial fauna; and
- Hydrological process.

Future development, in accordance with the DSP, will deliver the following key environmental outcomes:

- Provision of regional and local POS areas will result in establishing a consolidated, highly manageable and substantially sized reserve within the Study Area;
- Provision of a Bush Forever offsets package, which will lead to a net positive environmental outcome;
- Linear east-west open space along the south of Lot 131 and north of Lot 4 will connect with the state-owned 98 ha Bush Forever reserve located in the western portion of the site;
- Retention of the 17.5 ha of wetland and Bush Forever landholding in the eastern portion of Lot 131 provides a north-south connection in addition to the east-west connection established along the southern boundary;
- Development and implementation of an Open Space Masterplan and subsequent environmental management plans (i.e. Vegetation Management Plan, Wetland Management and Bushfire Management Plan) will ensure the long-term management and viability of the proposed conservation areas; and
- Application of water management initiatives and a framework to the guide future development of the site to ensure water sensitive urban design is achieved (i.e. LWMS and UWMP).

Other environmental issues (such as wetlands, acid sulfate soils, potential contamination etc) are capable of being resolved (i.e. avoided or managed) through site-specific investigations and detailed engineering drainage design.

Therefore, a key conclusion of this environmental assessment report is that, based on the review undertaken and the environmental outcomes proposed by the DSP and future land use planning, none of the key environmental issues pose a significant constraint to future residential development of the Study Area.

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# 1 Introduction

## 1.1 Location

360 Environmental Pty Ltd (360 Environmental) has been engaged by Perron Developments Pty Ltd (Perron) to prepare an environmental assessment report (EAR) to support the preparation and submission of the Treeby District Structure Plan (DSP) on behalf of the City of Cockburn. The DSP area includes approximately 461 ha in the City of Cockburn.

The DSP covers landholdings bounded by Warton Road, Jandakot Road, Solomon Road, and Armadale Road, Banjup that is approximately 17.7 km south east of the Perth CBD (Figure 1) ('the study area'). The lots included in the DSP boundary are shown on Figure 1.

## 1.2 Planning Context

### 1.2.1 Draft Perth and Peel @ 3.5 Million Sub-Regional Planning Framework

The draft Perth and Peel @ 3.5 million suite of strategic land use planning documents aim to accommodate 3.5 million people by 2050. The WAPC identified a substantial portion of the Study Area as 'Urban Investigation' and 'Urban Expansion' in the Draft Metropolitan Perth and Peel Sub-regional Planning Framework (WAPC 2015b).

### 1.2.2 Draft Perth and Peel Green Growth for 3.5 million

In response to the draft Perth and Peel Sub-Regional Frameworks, the draft Perth and Peel Green Growth Plan for 3.5 Million (draft Green Growth Plan) has been prepared. The public submission period recently ended.

The draft Green Growth Plan proposes (DPC 2016):

- to secure upfront Commonwealth environmental approvals and streamline State environmental approvals for development required to support growth to 3.5 million people; and
- provide protection of bushland, rivers, wildlife and wetlands through implementation of Strategic

Much of the Study Area is identified for urban development and is consistent with the draft Perth and Peel at 3.5 Million Sub-Regional Frameworks which describes much of the site as Urban Investigation. However, there is some inconsistency over Lot 131 and it is noted that the boundary for the urban areas to be largely based on the Bush Forever boundary (Bush Forever Site 390).

An important conclusion of the environmental work done to date is that the distribution and condition of the native vegetation on the site does not correspond with the Bush Forever mapping. Conformance to the current Bush Forever boundary will result in an area that will be impractical to manage from a conservation perspective. Furthermore, the current boundary will also result in a highly compromised urban development form, undermining some of the benefits of master planned development and integration of land use, environmental and transport planning in this location.

Therefore, a critical element of the proposed DSP and future land use planning will be to achieve an outcome which balances the key conservation values of the Study Area with the planning, social and economic considerations for the general area.

### 1.2.3 State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region

The WAPCs *State Planning Policy 2.8: Bushland Policy for the Perth Metropolitan Region* (SPP 2.8) aims to ensure bushland protection and management issues are appropriately addressed and integrated with broader land use planning and decision-making by providing a policy and implementation framework for regionally significant bushland within the Perth Metropolitan Region (WAPC 2010).

SPP 2.8 recognises the protection and management of significant bushland areas as an integral part of the planning process and while doing so, it also seeks to integrate and balance wider environmental, social and economic considerations (WAPC 2010).

In accordance with SPP 2.8, Bush Forever Site 390 falls under the 'Bush Forever Area (BFA) - Urban, industrial and resource development' site implementation category. The policy recognises that regionally significant bushland in this category is constrained by existing commitments, approvals and policies. Therefore, development proposals should seek to achieve a reasonable balance between conservation and development or resource extraction through a negotiated outcome which has regard for the specific conservation values involved (WAPC 2010).

Therefore, any proposed MRS rezoning of areas within the DSP that may result in unavoidable impacts on regionally significant bushland within Bush Forever Site No. 390 will result in an impact assessment being undertaken. The impact assessment will be done in accordance with the process outlined in Appendix 1 of SPP 2.8 and the framework provided overleaf (Figure A).

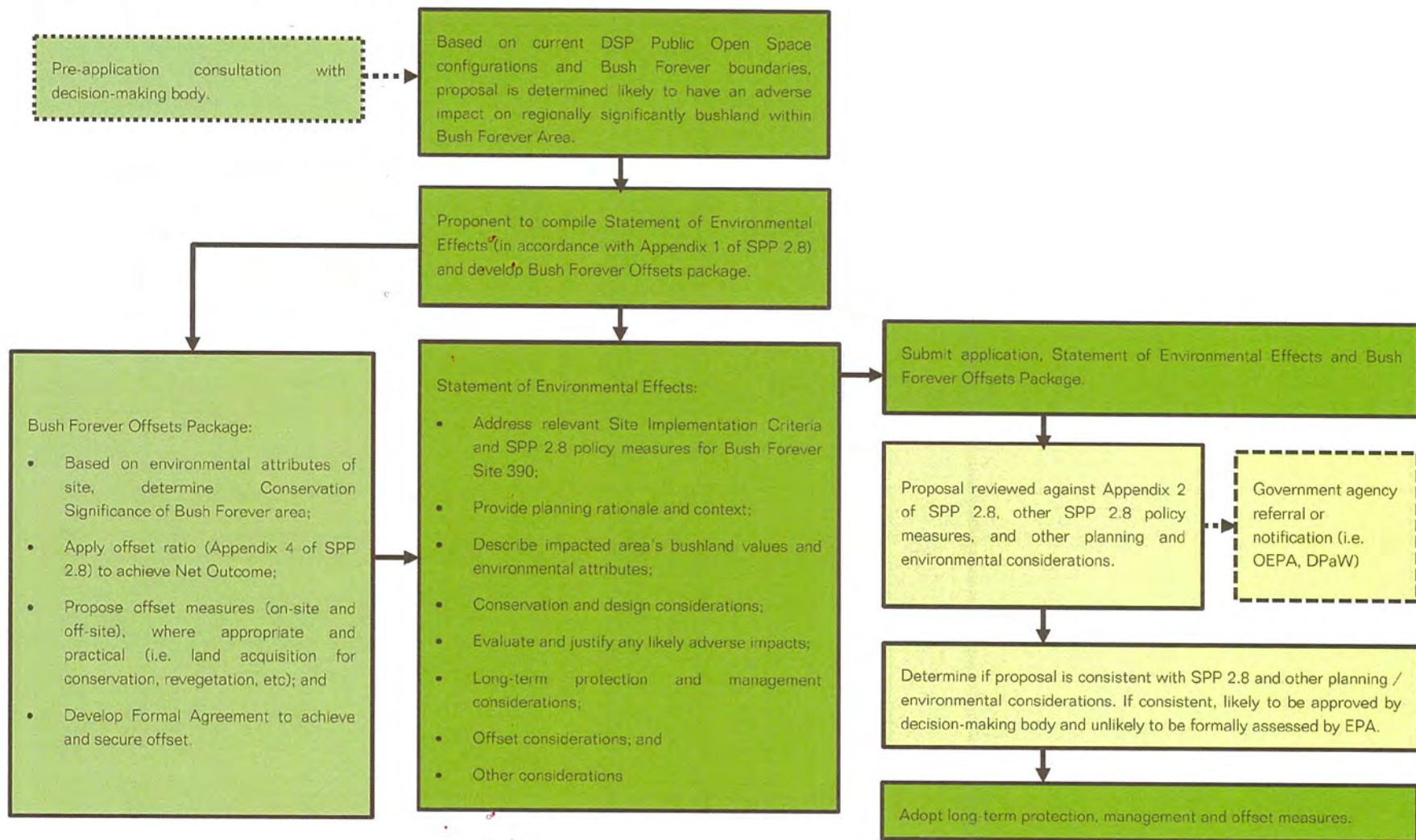
The primary purpose of this impact assessment will be to inform

- The development of a statement of environment effect (guided by Appendix 1 of SPP 2.8);
- The development of a Bush Forever offsets package that will provide a net environmental outcome; and
- Assist in any future negotiated outcome over the final boundary for Bush Forever Site No. 390.

The provision of a Bush Forever offsets package will lead to a positive net environmental outcome. There are opportunities to provide an offset package through the addition of remnant vegetation (outside of Bush Forever) on site, purchase of vegetated land and the rehabilitation of land in the immediate vicinity to achieve an appropriate offset ratio, which will be determined through the application of Appendix 4 of SPP 2.8 and in consultation with the Department of Planning and the Office of the EPA..



Figure A: Framework for Bush Forever Impact Assessment Process





### 1.3 Treeby District Structure Plan

The Treeby DSP has been identified by the City of Cockburn as a key initiative for 2016. This initiative has been the result of recent urban development within the Study Area and changes to the metropolitan strategic planning framework over the locality of Banjup.

#### 1.3.1 Key Characteristics

The draft DSP consists of an existing regional reserve, the approved Calleya estate, a rural residential precinct and four potential development sites (Appendix A).

The draft DSP key site and proposal characteristics are summarised in Table 1.

**Table 1: Key characteristics of the Treeby District Structure Plan**

ASPECT	DESCRIPTION
Project Location	The DSP area is approximately 17.7 km south-east of the Perth CBD
DSP Context	<p>Total DSP Area – 460 ha (approx.)</p> <p>The DSP consists of the following land uses:</p> <ul style="list-style-type: none"> <li>• Existing regional reserve – 118.5 ha</li> <li>• Approved residential development (Calleya Estate) – 105.9 ha</li> <li>• Existing Rural Residential precinct – 30 ha (approx.)</li> <li>• Four potential development sites: <ul style="list-style-type: none"> <li>○ Lot 1 Armadale Road – 20.4 ha</li> <li>○ Lot 2 Armadale Road – 3.2 ha</li> <li>○ Lot 4 Armadale Road – 58.8 ha</li> <li>○ Lot 131 Jandakot Road – 64.8 ha</li> </ul> </li> <li>• Proposed additions to the regional reserve: <ul style="list-style-type: none"> <li>○ Lot 4 Armadale Road – 4 ha (approx.)</li> <li>○ Lot 131 Jandakot Road – 33 ha (approx.)</li> </ul> </li> <li>• Primary regional roads</li> <li>• Primary schools</li> <li>• Neighbourhood / Local Centre</li> <li>• Active and local public open space</li> </ul>

ASPECT	DESCRIPTION
	<ul style="list-style-type: none"> <li>Powerline easement</li> </ul>
Responsible Authority	City of Cockburn

### 1.3.2 Objectives

In order to provide an effective planning framework for future development within the Study Area, the draft DSP has been prepared. The DSP establishes a framework to co-ordinate current and future land uses as well as the delivery of infrastructure.

The overarching objectives of the DSP will be to:

- Provide a high level strategic, spatial planning framework to coordinate the development of land and provision of district level services within the Urban Precinct;
- Establish the basic road network and interconnectivity across the precinct (including access from Armadale Road and Jandakot Road);
- Establish the basic structure / location of district open space and conservation areas;
- Establish the location and provision of school sites;
- Identify potential commercial nodes and the basic land use allocation through the remainder of the area; and
- Guide the preparation and coordination of future local structure planning.

#### 1.4 Local Structure Plans in the Study Area

#### 1.4.1 Calleya Estate

The Calleya Estate Local Structure Plan (LSP) area is zoned 'Development' under the *City of Cockburn Town Planning Scheme No. 3* (TPS No. 3) and 'Urban' under the Metropolitan Region Scheme (MRS). This Estate consists of Lot 9014 (previously Lot 132) Fraser Road, Lot 9016 (previously Lot 9002) Jandakot Road and 9012 (previously Lot 9004) Armadale Road, Banjup. It is approximately 144 ha in size and covers the former Banjup sand quarry site.

This LSP area is proposed to be redeveloped into a residential estate by Stocklands and will include community and educational facilities, and pedestrian connections. The LSP was endorsed by the Western Australian Planning Commission (WAPC) in October

2013. An amendment to the LSP, which primarily consisted of design reconfigurations and an increase in dwelling density, was endorsed by the WAPC in March 2016.

#### 1.4.2 Lot 1 (Previously Lot 821)

Lot 1 on Plan 407384 (previously Lot 821) is zoned 'Urban' under the MRS. The Housing Authority has prepared a LSP to facilitate development of Lot 1 for residential housing.

### 1.5 Past Environmental Assessments and Approvals

#### 1.5.1 Environmental Assessment and Studies

A number of environmental assessments have been undertaken over the Study Area. The environmental studies undertaken within the Study Area (based on the Lot numbers at the time of report being prepared) are listed below:

- Targeted Flora and Vegetation Survey for Lots 132, 9002 and 9004 Armadale Road, Banjup by RPS in 2010;
- Flora and Vegetation Survey for Lots 1 and 868 Armadale Road, Banjup in 2010;
- Level 2 Flora and Vegetation Survey of Lot 4 Armadale Road, Banjup by ENV Australia in 2013;
- Level 2 Flora and Vegetation Survey of Lot 131 Jandakot Road, Banjup by 360 Environmental in 2015;
- Level 2 Flora and Vegetation Survey of Lot 467 Jandakot Road, Banjup by Brian Morgan on behalf of RPS in 2011;
- Level 1 Flora and Vegetation Survey and Fauna Survey for Lot 821 Armadale Road, Banjup by PGV Environmental in 2012;
- Targeted Carnaby's Black Cockatoo and Graceful Sun Moth Fauna Surveys for Lots 1 and 868 and Lots 132, 9002 and 9004 Armadale Road, Banjup by RPS in 2010;
- District Water Management Strategy (DWMS) for Lots 1, 132, 9002, 9004, 132 Armadale, Banjup by Emerson Stewart Consulting in 2011;
- Local Water Management Strategy (LWMS) for Lots 9004 Armadale Road, Lot 9002 Jandakot Road and Lot 132 Fraser Road, Banjup by Emerson Stewart Consulting in 2013;
- DWMS for Lot 821 Armadale Road, Banjup by Hyd2o in 2013;
- DWMS for Lots 2 and 4 Armadale Road, Banjup by JDA Hydrology Consultants in 2015;



- EAR for Lots 1, 868, 132, 9002 and 9004 Armadale Road, Banjup;
- EAR for Lots 2 and 4 Armadale Road, Banjup by 360 Environmental in 2014;
- EAR Lot 821 Armadale Road, Banjup by PGV Environmental in 2012; and
- Environmental Pre-Referral Document for Sand Extraction for Lot 467 Jandakot Road and Lot 140 Armadale Road by RPS in 2013.

### 1.5.2 Environmental Approvals

The Calleya Estate and Lot 1 Armadale Road (the very south-western Lot) was referred to the Environmental Protection Authority (EPA) as part of the MRS rezoning to 'Urban' (MRS Amendment 1221/41). The MRS amendment was referred to the EPA for its consideration. In September 2011, the EPA advised the scheme amendment did not require formal assessment and no public advice was given.

Lot 1 (previously Lot 821) was referred to the EPA as part of the MRS rezoning to 'Urban' (MRS Amendment 1289/57). The MRS amendment was referred to the EPA for its consideration. In May 2015, the EPA advised the scheme amendment did not require formal assessment and that it had based its decision on the following:

- Remnant vegetation along the south western and southern boundaries being retained as well as the area of remnant vegetation on the eastern side of the site, containing *Caladenia huegelii*; and
- The District Water Management Strategy for the site has been approved by the Department of Water and the proposed amendment is in accordance with the Draft State Planning Policy No. 23 – Jandakot Groundwater Protection.

Lot 4 Armadale Road was referred under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) in 2013 for potential impacts on Matters of National Environmental Significant (MNES). The proposed clearing for residential development of Lot 4 (excluding the Bush Forever) received 'not a controlled action' on 16 December 2016 (Appendix B).

## 1.6 Purpose of this Report

The purpose of this environmental assessment is to:

- Demonstrate a clear understanding of the key environmental issues relevant to the Study Area and the draft DSP;
- Provide an overview of the general environmental features of the Study Area through review of existing information and desktop assessment;
- Identify and map the environmental constraints and opportunities associated with the DSP and Study Area;



- Reference past environmental assessments and environmental approvals within the Study Area;
- Demonstrate the proposed change in land use will not result in adverse environmental impacts;
- Develop and recommend appropriate environmental implementation mechanisms to be incorporated into the DSP and guide future rezoning and local structure planning within the Study Area; and
- Identify any further technical studies that may be required to support future local structure planning within the Study Area.

## 2 Key Environmental Legislation and Policies

### 2.1 State Legislation

#### 2.1.1 Environmental Protection Act 1986

The *Environmental Protection Act 1986* (EP Act) is the key legislative tool for environmental protection in Western Australia. It is administered by the EPA and the Minister for the Environment. Under Part IV of the EP Act, the EPA undertakes environmental impact assessment of development proposal and schemes. The environmental impact assessment process provides an orderly and systematic evaluation of a proposal and its potential impact on the environment. A critical component of the assessment is the consideration of ways in which the proposal, if implemented, could avoid or reduce any potential impact on the environment.

Any future rezoning within the DSP area will be referred and assessed by the EPA in accordance with Section 48 of the EP Act and the *Planning and Development Act 2005*.

#### 2.1.2 Relevant Legislation and Regulations

Future development within the DSP area will be required to comply with the requirements of other relevant state legislation and regulations. Table 2 provides a summary of the key state legislation and regulations relevant to the future residential development.

**Table 2: Key State Legislation**

KEY LEGISLATION	RESPONSIBLE GOVERNMENT AGENCY	ASPECT
Aboriginal Heritage Act 1972	Department of Aboriginal Affairs	Archaeological and ethnographic heritage
Aboriginal Heritage Regulations 1974	Department of Aboriginal Affairs	Archaeological and ethnographic heritage
Agricultural and Related Resources Protection Act 1976	Department of Agriculture	Weeds and feral animals
Bush Fires Act 1954	Department of Fires and Emergency Services	Bush fire control
Conservation and Land	Department of Park and	Flora and fauna / habitat /

KEY LEGISLATION	RESPONSIBLE GOVERNMENT AGENCY	ASPECT
Management Act 1984	Wildlife Department of Agriculture	weeds / pests / diseases
Conservation and Land Management Regulations 2002	Department of Park and Wildlife Department of Agriculture	Flora and fauna / habitat / weeds / pests / diseases
Contaminated Sites Act 2003	Department of Environment Regulation	Management of contaminated soils and water
Environmental Protection Act 1986	Environmental Protection Authority Department of Environmental Regulation	Part IV – Environmental Impact Assessment Part V – Works Approvals and Licences
Environmental Protection (Clearing of Native Vegetation) Regulations 2004	Department of Environmental Regulation	Clearing of native vegetation
Planning and Development Act 2005	Department of Planning	Structure planning and subdivision approval
Rights in Water and Irrigation Act 1914	Department of Water	Governs management of the use, service and health of water and watercourses (including beds and banks). Water licensing is required in all proclaimed areas and for all artesian groundwater wells throughout the state.
Wildlife Conservation Act 1950	Department of Parks and Wildlife	Wildlife conservation and protection



### 2.1.3 Relevant Standards, Guidelines and Policies

Future development within the DSP is subject to compliance with applicable standards and guidelines developed by the State's regulators to assist proponents and the public to understand the minimum requirements for environmental protection. The following table details the key standards, guidelines and state planning policies relevant to future residential development.

**Table 3: Relevant Standards, Guidelines and Policies**

DOCUMENT	DESCRIPTION
<b><i>EPA Guidance Statements</i></b>	
Guidance Statement No. 3: <i>Separation Distances between Industrial and Sensitive Land Uses</i> (EPA 2005)	Provides advice on the use of generic separation distances (buffers) between industrial and sensitive land uses to avoid conflicts between incompatible land uses.
Guidance Statement No. 6: <i>Rehabilitation of Terrestrial Ecosystems</i> (EPA 2006)	Provides guidance to ensure the return of biodiversity in rehabilitated areas by increasing the quality, uniformity, and efficiency of standards and processes for rehabilitation of native vegetation in Western Australia and to allow more effective monitoring and auditing of outcomes.
Guidance Statement No. 33: <i>Environmental Guidance for Planning and Development</i> (EPA 2008)	Provides information and advice to assist land use planning and development processes to protect, conserve and enhance the environment.  Describes the processes the EPA may apply under the EP Act to land use planning and development in Western Australia, and the environmental impact assessment process applied by the EPA to schemes.
Guidance Statement No. 41: <i>Aboriginal Heritage Assessment</i> (EPA 2004b)	Provides guidance on the EPA's position on the assessment of Aboriginal heritage and information that the EPA will consider when assessing proposals where Aboriginal heritage is a relevant environmental factor.
Guidance Statement No. 51: <i>Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia</i> (EPA 2004c)	Provides guidance and information on the EPA's expected standards and protocols for terrestrial flora and vegetation surveys to environmental consultants and proponents.
Guidance Statement No. 55: <i>Implementing Best Practice in Proposals submitted to the</i>	Provides guidance on the EPA's position on the use of best practice to protect the environment, and the approach that the EPA will take when assessing best practice



DOCUMENT	DESCRIPTION
<i>Environmental Impact Assessment Process</i> (EPA 2003)	implementation in proposals.
Guidance Statement No. 56: <i>Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia</i> (EPA 2004d)	Provides guidance and information on the EPA's expected standards and protocols for terrestrial flora and vegetation surveys to environmental consultants and proponents.
<b>EPA Bulletins</b>	
Environmental Protection Bulletin No. 1: <i>Environmental Offsets</i> (EPA 2014b)	Clarifies how the EPA will consider offsets through the environmental impact assessment process.
Environmental Protection Bulletin No. 16: <i>Minor or preliminary works and investigation work</i> (EPA 2011b)	Clarifies what information a proponent needs to submit to the EPA if it wants the EPA's consent to undertake minor or preliminary works.
<b>State Planning Policies</b>	
State Planning Policy 2.3: <i>Jandakot Groundwater Protection Policy</i> (WAPC 2003)	Provides guidance to ensure development over the Jandakot public groundwater supply mound is compatible with the long term use of the groundwater for human consumption.
State Planning Policy 2.8: <i>Bushland Policy for the Perth Metropolitan Region</i> (WAPC 2010)	Provides a policy and implementation framework that will ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision making.
State Planning Policy 2.9: <i>Water Resources</i> (WAPC 2006)	Provides clarification and additional guidance to planning decision-makers for consideration of water resources in land use planning strategy.
State Planning Policy 3.7: <i>Planning in Bushfire Prone Areas</i> (WAPC 2015)	Provides guidance on the implementation of effective risk-based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure.
State Planning Policy 4.1 (Draft): <i>State Industrial Buffer (Amended)</i> (WAPC 2009a)	The policy applies state wide, to planning decision-making, and proposals which seek to provide for new industrial areas and uses, and essential infrastructure, sensitive land uses in proximity to existing industrial areas.

DOCUMENT	DESCRIPTION
State Planning Policy 5.4: <i>Road and Rail Transport Noise and Freight Considerations in Land Use Planning</i> (WAPC 2009b)	The policy aims to promote a system in which sustainable land use and transport are mutually compatible.

## 2.2 Commonwealth Legislation

### 2.2.1 Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) protects Matters of National Environmental Significance (MNES), and is administered by the Commonwealth Minister of the Environment. If an action is likely to have a significant impact on any MNES a referral to the Commonwealth Department of Energy and Environment (DoEE) is required.

Future development of the site will be required to consider undertaking a significant impact test against the Commonwealth Significant Impact Guidelines 1.1 – Matters of National Environmental Significance prior to determining whether to refer a proposal to the Commonwealth.

## 3 Existing Environment

### 3.1 Climate

The closest official Bureau of Meteorology (BoM) weather station currently operating is Jandakot Aero Station, which is located approximately 3 km north-west of the Study Area. The climate is identified as warm Mediterranean, with mean minima of approximately 6.7°C during July and mean maxima of 31.7°C during February (BoM 2016). Rainfall totals approximately 824.3 mm per annum (BoM 2016).

### 3.2 Zoning

The western portion of the site known as the Calleya Estate area is zoned 'Urban' under the MRS and 'Development' under the TPS (Figure 2). Lot 1 to the south-west of the Calleya Estate is zoned 'Urban' under the MRS, and 'Urban Deferred' under the TPS.

Lot 1 on Plan 407384 (previously Lot 821) has recently been zoned 'Urban' under the MRS and 'Resource' under the TPS.

The remainder of the site is a mix of 'Rural-Water Protection' and 'Parks and Recreation' under the MRS and 'Resource' and 'Region Reserve- Parks and Recreation' under the TPS (Figure 2). The Parks and Recreation boundaries under the MRS and TPS align within the site and are also classified as 'water catchment' special areas.

The objective of the 'Rural-Water Protection' zone is to ensure there is no increased risk of contamination of the water source (WAPC 2015a). The use and development of the 'Resource' zoned land must be in accordance with the *Statement of Planning Policy No. 2.3- Jandakot Groundwater Protection Policy*.

A MRS Amendment proposal to rezone Lots 2 and 4 Armadale Road from 'Rural- Water Protection' to 'Urban' will be lodged in the near future. Lot 131 Jandakot Road is also proposed to be rezoned from 'Rural- Water Protection' to 'Urban' in the near future.

### 3.3 On-site and Surrounding Land Uses

#### 3.3.1 On-site Land Uses

The site contains three active mining tenements for sand quarries. Information about the current mining tenements within the site is presented in Table 4 below. A number of sand quarries registered through the Department of Mines and Petroleum (DMP), and that are no longer active, previously occurred on the Calleya Estate LSP area, the Housing Authority LSP Area (Lot 1, previously 821), Lot 2 and 4 Armadale Road (DMP 2016). Lot 131 Jandakot Road also contained a sand quarry that was not administered under a mining tenement due to the extraction of raw materials occurring on private land.



**Table 4: Information about mining tenements within Study Area (Source: DMP 2016).**

TENEMENT NUMBER	MATERIAL EXTRACTION	LOT NUMBER/S	DATE OF GRANT	TENEMENT STATUS	AREA (HA)	TENEMENT EXPIRY
M70/1088	Sand	L467	24/08/2010	LIVE	9	23/08/2031
M70/1142	Sand	L467/ L139	24/08/2010	LIVE	64.9	23/08/2031
M70/357	Sand	L140	11/03/1992	LIVE	16.7	10/03/2034

In addition to the mining tenements for quarrying (as described above in Table 4), Lot 4 is part of the previous Midland Brick, and the Boral Brick works facility. Lots 62 to 75 contain special rural residences, and Lot 614 in the south-eastern corner is Banjup Memorial Reserve.

The remainder of the land consists of bushland and cleared areas that are unused. As a result of past land uses, large portions of the Study Area have been extensively disturbed.

### 3.3.2 Surrounding Land Uses

Residential housing exists to the south-west of the Study Area. Mixed business and light industrial and Service and Light Industry land uses exist west of the Study Area and the Jandakot Industrial Area exists directly to the west (Figure 3). The land to the north, south and west of the Study Area consists of special rural landholdings and areas reserved for Parks and Recreation. Residential housing also exists as close as 445 m east of the Study Area and outside the Jandakot Underground Water Pollution Control Area (UWPCA). An active sand quarry exists to the north of Lot 131.

The site falls outside of the Water Corporation Waste Water Pump Station odour buffers (Figure 3). Review of the City of Cockburn Intramaps identifies that the only buffers that fall within the Study Area are associated with wellhead protection zones in the north-west, south-west and north-east of the Study Area (Figure 3).

The boundary of Jandakot Airport exists as close as 445 m north of the Study Area. Pursuant to the adopted *State Planning Policy 5.3- Jandakot Airport Vicinity* (SPP 5.3), the Study Area complies with the policy provisions for residential housing as it sits outside the 'Core Area 20 Australian Noise Exposure Forecast (ANEF)' boundary (Figure 3). The Study Area is within the SPP 5.3 'Frame Area' that identifies residential development as being compatible with.

It should be noted that the ANEF zones shown are from the most recent Jandakot Airport Master Plan (JAH 2014).



## 3.4 Topography, Landforms and Soils

### 3.4.1 Topography

The topography of the site ranges from 27 m Australian Height Datum (AHD) in the north-western corner and 28 m AHD in the north-eastern corner to 44 m AHD in the south-eastern corner and north-western corner (Figure 4) (DoW 2015). Much of the Study Area has been used for sand extraction. Therefore, the natural landform and elevation has been significantly altered. The mined areas have been levelled out following completion of extraction.

### 3.4.2 Landforms and Soils

The Department of Agriculture and Food Western Australia (DAFWA) has mapped the entire site as forming part of the Bassendean System (DAFWA 2012). The Bassendean System is described as occurring on the Swan Coastal Plain from Busselton to Jurien and consists of sand dunes and sand plains with pale deep sand, semi-wet and wet soil (Figure 5).

### 3.4.3 Acid Sulfate Soils

Acid sulfate soil (ASS) mapping undertaken by the DER indicates that the site is within an area mapped as being of "moderate to low risk of ASS" (DER 2016). Areas mapped as being of "high to moderate risk of ASS" occur as close as 50 m south of the site.

## 3.5 Hydrology

### 3.5.1 Groundwater

Review of the Department of Water (DoW) groundwater mapping for Perth using historical minima contours found that the depth to groundwater sits at approximately 15 m below ground level (bgl) in the north-western portion of the Study Area, to 16 m bgl in the north-western portion of Lot 140 and ranges to 2 m bgl in the north-eastern portion of the Study Area (DoW 2016a).

### 3.5.2 Public Water Supply Areas

The Study Area is located in the Jandakot UWPCA and subject to the provisions of the *Statement of Planning Policy No. 2.3- Jandakot Groundwater Protection Policy* (SPP 2.3) and the *Water Quality Protection Note 25: Land use compatibility tables for public drinking water source areas* (WQPN 25).

The UWPCA occupies a total area of 7,400 ha, including more than 4,000 ha within the City of Cockburn. The UWPCA was proclaimed in 1975 under the *Metropolitan Water Supply Sewerage and Drainage Act 1909*. Water from the mound is extracted by the Water Corporation as part of the Perth Metropolitan integrated water supply system (IWSS).

The DoW is the lead agency in protecting catchments for water supply in Western Australia. The DoW supports the Australian Drinking Water Quality Guidelines (ADWQG) barrier approach to water quality protection, with catchment management being the first barrier of protection. Subsequent barriers include water storage, treatment and sterilization. The catchment management measures are also supported by Wellhead Protection Zones (WPZ) around public water supply wells (JDA 2016).

WQPN 25 sets out the groundwater catchment priority system (DoW 2016b):

**Priority 1 (P1)** areas are defined and managed to ensure there is no degradation of the quality of the drinking water source with the objective of risk avoidance. P1 areas occur within PDWSAs where the existing land uses have low risks to PDWSAs.

**Priority 2 (P2)** areas are defined and managed to maintain or improve the quality of the drinking water source with the objective of risk minimisation. P2 areas occur within PDWSAs where the land is zoned rural and the risks need to be minimised.

**Priority 3 (P3)** areas are defined and managed to maintain the quality of the drinking water source for as long as possible with the objective of risk management. P3 areas occur within PDWSAs where the land is zoned for urban and commercial or light industrial uses.

WQPN 25 sets out 'protection zones' that are defined in the immediate vicinity of drinking water extraction points (DoW 2016). Protection zones can be located within P1, P2 or P3 areas. There are two types of protection zones: WPZs defined for groundwater sources; and reservoir protection zones (RPZs) defined for surface water sources.

Three WPZs exist in the north-west, south-west and north-east of the Study Area and a number of wellhead protection zones surround the site (Figure 3) (DoP 2014a). Of these only two fall within the footprint proposed to be developed for residential housing and the wellhead protection zone in Lot 467 will remain undisturbed in public open space (POS).

### 3.5.2.1 Reclassification of Priority Areas

The 'Draft State Planning Policy 2.3 Jandakot Groundwater Protection Policy' states that "proposals to rezone land may be supported where they meet the following criteria:

- Large land holdings that were previously cleared and disturbed;
- Land directly adjacent to already developed areas; and
- Land identified as appropriate for more intensive development through strategic planning instruments such as regional or sub-regional structure plan." (DoP 2014a).

The western portion of the Study Area (Calleya Estate) was originally classified as a P2 area; however the DoW formally endorsed the area to be reclassified to P3 for urban development as it was demonstrated that the drinking water source will be protected.

The majority of the Study Area is classified as P2 and the eastern portion of the site is classified as a P1 area under the UWPCA (Figure 6) (DoP 2014a). The Calleya Estate has since been reclassified from P2 to P3 through the State planning process and reflects the amended draft SPP 2.3 (DoP 2014a).

In relation to Lot 1 (previously Lot 821), the site has recently been rezoned to 'Urban' under the MRS. During the MRS Amendment submission period, the DoW advised that following the WAPCs determination to rezone the site to 'Urban', the DoW would reclassify the site from a P2 to a P3 protection status and may recommend mitigation measures are applied to the development. That is, management measures beyond those normally recommended for P3 areas and which reflect the additional risk posed to the drinking water source by the proposed development. Such measures would be addressed in water management strategies/plans at later stages of the planning process.

Provided the MRS rezoning process concludes that it is acceptable to rezone land to 'Urban' or 'Urban deferred', land proposed to be developed for residential housing can be reclassified from P2 to P3. T. The land presents as an important and likely site for progression to an Urban zoning given (JDA 2016):

- Identification of a Study Area within the Draft South Metropolitan Peel Sub Regional Framework and classification of this land within short to medium term development timeframes;
- The proximity of the site to a high order activity centre, railway station and freeway interchange;
- The site represents a logical extension of development east of the developing Calleya Estate;
- A large portion of the site has been cleared and disturbed for sand quarrying operations;
- Service infrastructure within the area can accommodate the additional development; and
- Compliance with the criteria for urbanisation included within draft State Planning Policy 2.3 – Jandakot Groundwater Protection.

The following initiatives will be applied to ensure any potential groundwater impacts arising from urban development are minimised (JDA 2016):

- Extension of deep sewer to all lots;
- Application of water sensitive urban design principles including at-source stormwater infiltration, rain gardens and water harvesting;
- Appropriate road design and treatments to minimise the risk of high speed car collisions (which might result in oil or petrol spillage);



- Provision of lot types which maximise land use efficiency and reduce excessive garden area and hence fertiliser and pesticide use;
- Encourage home purchasers to use native plants for landscaping (which will also reduce fertiliser and pesticide use);
- Use of promotional information to land purchasers aimed at raising awareness of water issues;
- An on-going monitoring programme; and
- Exclusion of high risk land uses from the development area (e.g. service station).

### 3.5.3 Surface Water and Drainage

The DoW has not classified any parts of the Study Area as being subject to inundation (Figure 7) (DoW 2012). The DoW has identified a number of earth dams within the site; however the ones within the Calleya Estate no longer exist (Figure 7). The earth dams within Lot 4 Armadale Road were previously used as effluent ponds.

Hydrography mapping undertaken by the DoW indicates that no rivers, creeks or streams intersect the site (DoW 2012).

### 3.5.4 Wetlands

The Department of Parks and Wildlife (DPaW) geomorphic wetland dataset shows that the Study Area contains three Resource Enhancement Wetlands (REWs) and one Conservation Category Wetland (CCW) (Figure 7) (DPaW 2016a). Details of these wetlands are described below:

**Table 5: Information about Geomorphic Wetlands within the Study Area.**

WETLAND UFI	WETLAND MANAGEMENT CATEGORY	WETLAND TYPE	LOT NO(S) IN SITE
6881	REW	Sumpland	9016
6781	REW	Dampland	9014
13328	REW	Dampland	4, 62-75,131,467
7169	CCW	Dampland	467

Several Multiple Use Wetlands (MUWs), REWs and CCWs surround the Study Area. The site is not listed as a Ramsar site or listed under the Directory of Important Wetlands (DPaW 2014; DoE 2008).



## 3.6 Terrestrial Flora and Vegetation

### 3.6.1 Interim Biogeographical Regionalisation of Australia

The Interim Biogeographic Regionalisation for Australia (IBRA) divides Australia into 89 bioregions based on major biological and geographical/ geological attributes (Thackway & Cresswell 1995). These bioregions are subdivided into 419 subregions, as part of a refinement of the IBRA framework (DSEWPaC 2012).

The site is located in the Perth subregion (SWA02) of the Swan Coastal Plain bioregion (Thackway & Cresswell 1995). The Perth subregion is composed of colluvial and aeolian sands, alluvial river flats and coastal limestone (Mitchell *et al.* 2002). Vegetation can be characterised by heath and/or Tuart woodlands on limestone, Banksia and Jarrah-/ Banksia woodlands on Quaternary marine dunes of various ages and Marri on colluvial and alluvials (Mitchell *et al.* 2002).

### 3.6.2 Broad Vegetation Types

Mapping of the vegetation of the Perth region of Western Australia was completed on a broad scale by Beard (1981). These vegetation units were re-assessed by Shepherd *et al.* (2001) to account for clearing in the intensive land use zone, dividing some larger vegetation units into smaller units.

There is one Shepherd vegetation mapped within the Study Area. The Shepherd *et al.* (2001) vegetation type is described below, and its representation within the State, Bioregion and subregion is shown in Table 6.

- 'Bassendean\_1001': Medium very sparse woodland; *Eucalyptus marginata* (Jarrah), with low woodland; *Banksia* & *Casuarina* (Shepherd *et al.* 2001).

Table 6: Broad Vegetation Types within the Study Area and its State and Regional Representation (Government of Western Australia 2014).

	PRE-EUROPEAN AREA (HA)	CURRENT EXTENT (HA)	REMAINING (%)	CURRENT EXTENT % IN IUCN CLASS I-IV RESERVES
Vegetation Types (Beard 1981/ Shepherd <i>et al.</i> 2001) in the state				
1001	57,410.23	13,240.22	23.06	1.14
Vegetation Types (Beard 1981/ Shepherd <i>et al.</i> 2001) in the Swan Coastal Bioregion				
1001	57,410.23	13,240.22	23.06	1.14
Vegetation Types (Beard 1981/ Shepherd <i>et al.</i> 2001) in the Perth Subregion				
1001	57,410.23	13,240.22	23.06	1.14

Vegetation complexes of the Drummond Botanical Subdistrict, in which the Swan Coastal Plain occurs, have been mapped by Heddle *et al.* (1978). Mapping by Heddle *et al.* (1980) is based on the relationship to the landform-soil units determined by Churchward & McArthur (1980). The Study Area contains two Swan Coastal Plain vegetation complexes which are associated with the underlying soil profile. These are described below and their representation is shown in Table 7:

- **'Bassendean Complex - Central and South'** that covers majority of the Study Area: vegetation ranging from woodland of *Eucalyptus marginata* - *Allocasuarina fraseriana* - *Banksia* spp. to low woodland of *Melaleuca* spp. and sedgelands on the moister sites. This area includes the transition of *Eucalyptus marginata* to *Eucalyptus tottiana* in the vicinity of Perth (Heddle *et al.*, 1980); and
- **'Southern River Complex'** that covers the eastern portion of the Study Area: open woodland of *Corymbia calophylla*, *Eucalyptus marginata*, *Banksia* spp. with fringing woodland of *Eucalyptus rudis* - *Melaleuca raphiophylla* along creek beds.

Table 7: Vegetation Complex within the Study Area and its representation in the Swan Coastal Bioregion (LBP 2013).

	PRE- EUROPEAN AREA (HA)	CURRENT EXTENT (HA)	REMAINING (%)	CURRENT EXTENT SECURE TENURE RESERVES (%)
Bassendean Complex- Central and South	87,392.73	24,206.24	27.70	2.57
Southern River Complex	57,171.55	11,254.99	19.69	2.16

Within constrained areas on the Swan Coastal Plain, the EPA has set a threshold for retention of 10% of the pre-existing extent of native vegetation (EPA 2008). The site is considered to be a constrained area as it is within the Perth metropolitan region and contains, and adjoins, urban areas. There is a reasonable expectation that development will be able to proceed. All the current vegetation extents are greater than the abovementioned 10% threshold.

### 3.6.3 Vegetation Associations

A number of flora and vegetation surveys have been undertaken over the Study Area. These include the following:

- Targeted Flora and Vegetation Survey for Lots 132, 9002 and 9004 Armadale Road, Banjup by RPS in 2010;
- Flora and Vegetation Survey for Lots 1 and 868 Armadale Road, Banjup in 2010;



## 1.0 Introduction

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Transcore prepared a Transport Impact Assessment (TIA) report on behalf of Perron Developments for the proposed Banjup District Structure Plan (DSP) in June 2016. The outcome of the TIA report was presented to the relevant authorities including the City of Cockburn, Main Roads WA and Public Transport Authority (PTA) during a Stakeholder Meeting on 20 September 2016.

During the Stakeholder Meeting Main Roads WA indicated that the existing traffic lights at Ghostgum Avenue/ Armadale Road would be converted to a left in/ left out intersection in the long term if the Armadale Road Deviation project and the construction of a grade separated interchange at Armadale Road/ Verde Drive/ Tapper Road was to proceed. Main Roads WA also expressed some concerns regarding the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road.

Accordingly, the June 2016 TIA report has been amended to include the outcome of the transport modelling and analysis for the proposed access arrangements along Armadale Road fronting the DSP area as per Main Roads WA request. The proposed Main Roads WA access arrangements (assuming that the Armadale Road Deviation project occurs in future) include:

- Downgrading the intersection of Armadale Road/ Ghostgum Avenue to a Left in/ Left out intersection in the long term;
- Removing the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road; and
- Installation of a roundabout at Armadale Road/ Liddelow Road/ DSP access road.

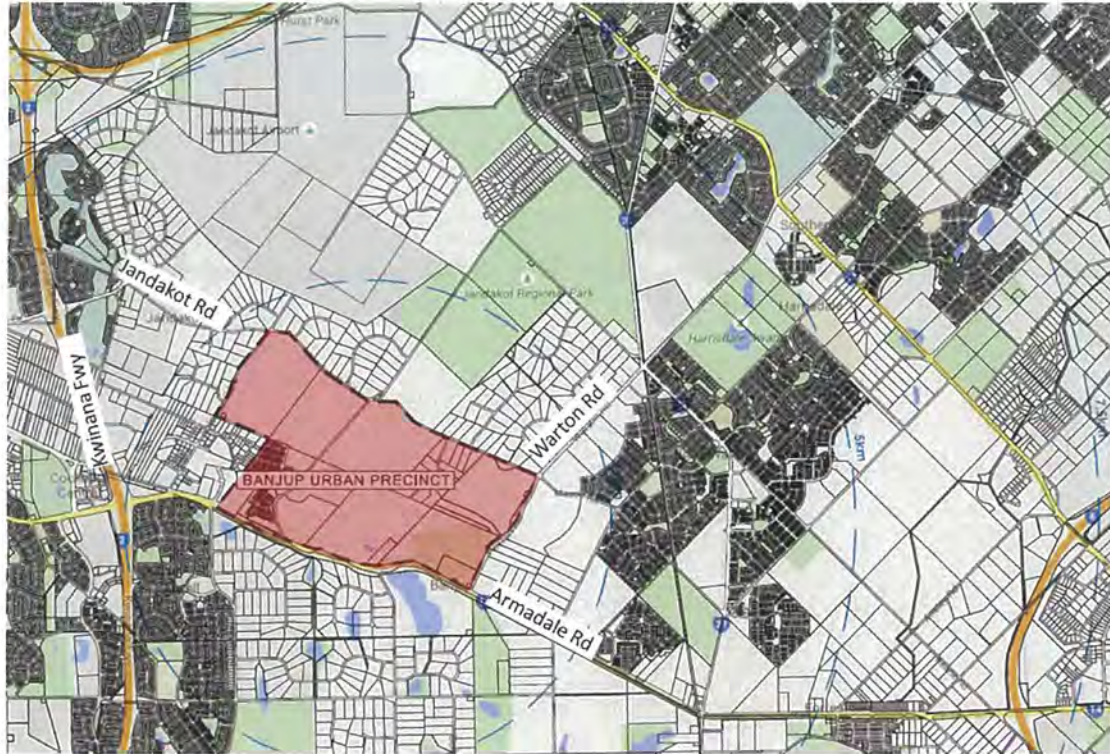
PTA and City of Cockburn also indicated that in the longer term if the intersection of Ghostgum Avenue/ Armadale Road is converted to a left in/ left out intersection, an alternative bus route should be prepared to replace the original proposed bus route within the Calleya LSP area.

This Transport Impact Assessment (TIA) report is an amendment to the June 2016 TIA report and provides the outcome of the additional modelling and analysis which has been undertaken to reflect the access arrangements proposed by MRWA along Armadale Road fronting the DSP area in the long term. The TIA also provides an alternative bus route option should the intersection of Ghostgum Avenue/ Armadale Road be converted to a left in/ left out intersection.

The boundary of the DSP is defined by Solomon Road, Armadale Road, Warton Road and Jandakot Road. The DSP area is approximately 641 ha and includes the existing 118.5 ha of regional reserves and the following Lots:

- Lots 132 and 9004 (Calleya Estate), 105.9 ha;
- Lot 1 east (previously Lot 821) Armadale Road, about 20.35 ha;
- Lot 2 Armadale Road, 3.15 ha;
- Lots 4 Armadale Road, 58.77 ha;
- Lot 131 Jandakot Road, 64.75 ha; and
- Lot 1 west Armadale Road.

**Figure 1** shows the location of the DSP in relation to the surrounding regional roads.

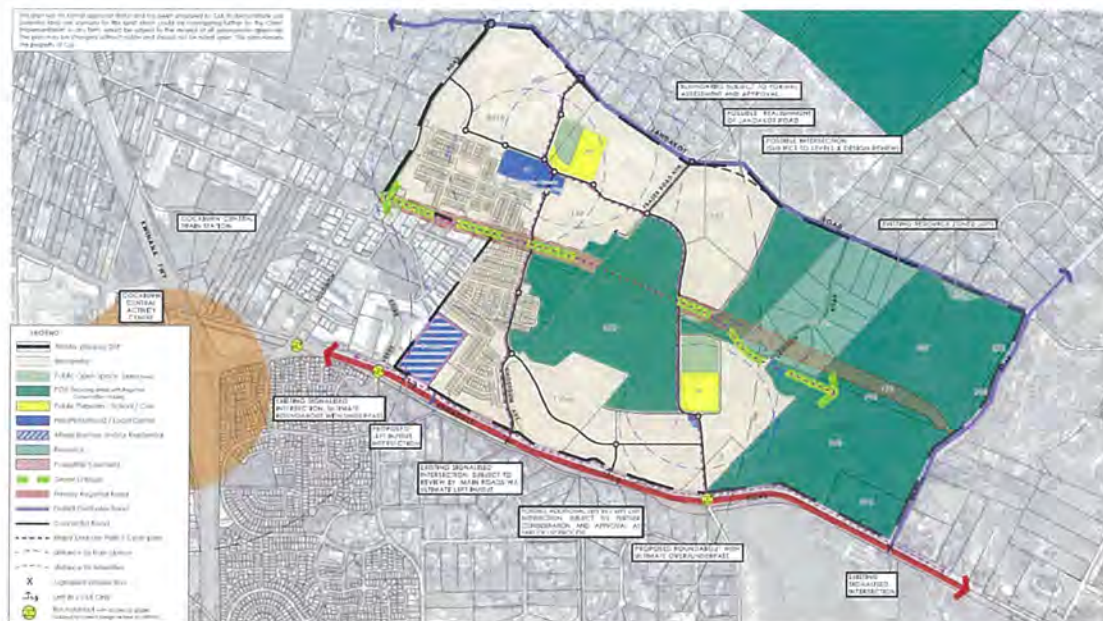


**Figure 1: Location of Banjup District Structure Plan**



## 2.0 Proposed District Structure Plan

The proposed Banjup District Structure Plan is shown in **Figure 2**. The proposed DSP entails the approved Banjup Quarry (Calleya) Local Structure Plan, the existing 14 Lots within the Skotsch Road Rural Residential Precinct, existing 118.5 ha of regional reserves and four potential development sites at Lots 1 west & east, 2, 4 and 131 Armadale Road.



**Figure 2: Proposed Banjup District Structure Plan**

The proposed DSP internal road network is established through a number of Neighbourhood Connector roads which provides sufficient and logical connectivity through different Lots within the DSP area. The proposed internal road network facilitates the traffic circulation within the DSP area and provides connectivity to the surrounding regional roads including Armadale Road and Jandakot Road.

The access arrangements along Jandakot Road include three roundabout intersections at Solomon Road, the N-S spine road (within Calleya LSP) and Fraser Road. The existing priority controlled T-intersection of Jandakot Road/Skotsch Road also provides access to the DSP area.

Jandakot Road in the vicinity of the DSP area will be upgraded to a dual divided carriageway standard with localised widening at intersections to cater for turn lanes. The proposed concept design for Jandakot Road includes 2x7.0m carriageways, 6.0m median with variable verges.

According to the information obtained from Main Roads WA Armadale Road in the vicinity of the DSP area will be duplicated in near future (Funding for

duplication of Armadale Road between Anstey and Tapper roads has been approved). Ultimately, Armadale Road is planned to be upgraded to six lanes.

The proposed DSP access arrangements along Armadale Road entail the existing traffic lights at Fraser Road/ Armadale Road and a proposed 4-way roundabout intersection at Liddelow Road/ Armadale Road/ DSP access road (to Lots 2&4 Armadale Road). In order to improve permeability and connectivity of the proposed DSP area a left in/ left out intersection is also proposed on Armadale Road between Ghostgum Avenue and Liddelow Road.

It is Transcore's understanding that Main Roads WA has some concerns regarding the proposed left in/ left out intersection on Armadale Road. Accordingly the revised modelling and analysis undertaken for the long term option (assuming implementation of Armadale Road Deviation project) does not include the proposed left in/ left out intersection.

The proposed DSP area also shows a left in/ left out intersection for Lot 1 west as approved. It is Transcore's understanding that the final location and layout of the proposed left in/ left out intersection along Armadale Road for Lot 1 west is subject to future planning of this Lot.

The total number of residential lots within the DSP area is estimated to be about 3,500 lots with the following distribution on each Lot:

- About 2,000 Lots on Calleya LSP;
- About 330 Lots on Lot 1 east Armadale Road;
- About 700 Lots on Lots 2 & 4; and,
- About 500 Lots on Lot 131.

It must be noted that the proposed 3,500 Lots for the DSP area does not include any residential Lots on Lot 1 west or Skotsch Road locality.

According to the information provided to Transcore, the current status of planning for Lot 1 west is not clear yet, however for the purpose of traffic modelling and analysis and in the absence of more detailed planning for Lot 1 west, it has been assumed that Lot 1 west would accommodate about 60% service commercial with a lesser proportion (about 40%) residential Lots. Any changes to the above percentages would not change the traffic outcome of this report.



## 3.0 Existing Situation

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### 3.1 Existing Land Use

The site currently is mainly vacant. There are about 14 residential Lots along Skotsch Road. The northern precinct of the Calleya LSP area is currently vacant but the southern precinct is under construction with the majority of the internal roads and some residential dwellings already constructed. About 118.5 ha (about 25%) of the DSP area is allocated to the Regional Reserve.

### 3.2 Existing Road Network

**Armadale Road** is a Primary Distributor road according to the Main Roads WA Functional Road Hierarchy and a Primary Regional Road in the Metropolitan Region Scheme. Armadale Road has been recently upgraded to dual carriageway standard at the intersection with Ghostgum Avenue. Armadale Road is of single carriageway standard with a speed limit of 80 km/h to the east of the Calleya LSP area and becomes dual carriageway again immediately to the west of Calleya. According to traffic counts published by Main Roads WA Armadale Road in this vicinity (west of Liddelow Road) carried 28,000vpd with 10% heavy vehicles in June 2015.

**Jandakot Road** is of single carriageway standard with a speed limit of 80km/h in the vicinity of the DSP area. According to Main Roads WA, Jandakot Road is a Regional Distributor and a District Distributor (B) in accordance with City of Cockburn classification. According to traffic counts provided by the City of Cockburn, Jandakot Road, 220m west of Skotsch Road, carried about 11,200vpd in 2015.

Jandakot Road continues to the east to form a dual lane roundabout intersection with Warton Road. Jandakot Road forms a 4-way roundabout with Berrigan Drive. This roundabout currently has single lane approaches on all legs. According to traffic counts provided by Main Roads WA Berrigan Drive, east of Kwinana Freeway, carried about 19,000vpd in 2014/2015.

**Solomon Road** is a District Distributor B Road of single carriageway standard with a speed limit of 70km/h in the vicinity of the DSP area. According to traffic counts provided by the City of Cockburn, Solomon Road, south of Jandakot Road, carried about 6,500vpd in 2015. Solomon Road connects to Jandakot Road at a T-intersection without any turn lanes or widening on Jandakot Road. Solomon Road connects to Armadale Road at a T-intersection with a 45m left turn pocket and a 70m right turn pocket on Armadale Road as well as a 45m flare on Solomon Road.

**Skotsch Road** is an access road which provides access to the existing residential dwellings to the south of Jandakot Road. The existing intersection of

Skotsch Road/ Jandakot Road is a priority controlled T-intersection with right turn pocket on Jandakot Road.

**Warton Road** is a District Distributor A Road of dual carriageway standard with a speed limit of 70km/h in the vicinity of the DSP area. According to traffic counts provided by Main Roads WA, Warton Road, south of Jandakot Road, carried about 18,600vpd in 2014/2015. Warton Road connects to Jandakot Road at a roundabout intersection. Warton Road connects to Armadale Road at a signalised intersection.

### 3.3 Public Transport

The closest bus service in the vicinity of the DSP area is the existing bus route 518 (from Challenger Institute of Technology to Cockburn Central Station) running along Armadale Road to the south of the DSP area.

The closest train station in the vicinity of the subject site is the Cockburn Central train station (refer **Figure 3**) which is located about 1.5km and 3km from the western and eastern boundary of the DSP area, respectively. On average the walking distance between the DSP area and the Cockburn Central Station is about 2 to 3km.

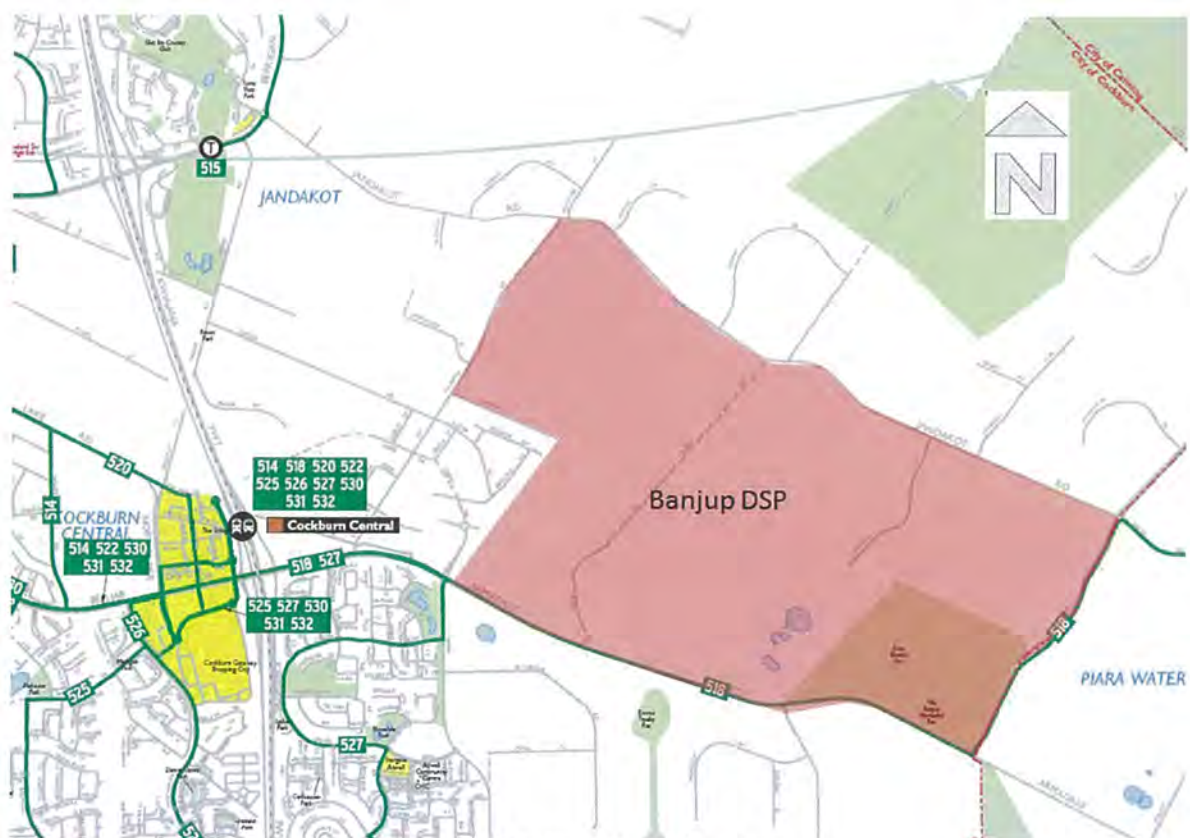


Figure 3: Existing Bus Routes



### 3.4 Pedestrian and Cyclist Facilities

There are no existing pedestrian or cyclist facilities on Jandakot Road or Solomon Road in the vicinity of the DSP area. The recent upgrading of Armadale Road through the Ghostgum Avenue intersection has provided on-road cycle lanes on Armadale Road along the frontage of the Calleya LSP although other sections of Armadale Road to the east and west have not yet been upgraded to this standard. A 2.5m concrete shared path is in place at the eastern side of Warton Road.

The Department of Transport's Perth Bike Map series (see **Figure 4**) shows that bicycle lanes or sealed shoulder are provided either side of Armadale Road and Jandakot Road.

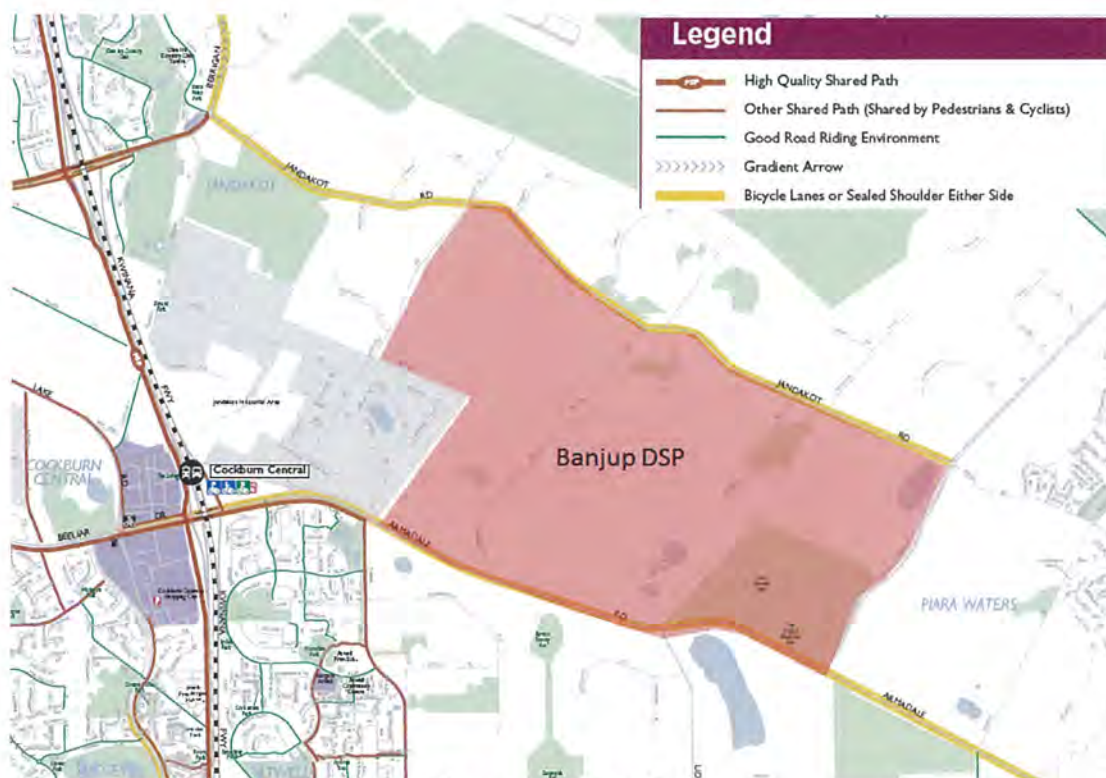


Figure 4: Bike Map

### 3.5 Changes to the Surrounding Road Network

There are regional and local proposed changes to the surrounding road network in this area. Armadale Road is expected to be upgraded to 4 lanes in the medium term and 6 lanes in the longer term. Jandakot Road is also expected to be upgraded to 4 lanes in future to provide another strong east-west link parallel to Armadale Road.

The Western Australian Planning Commission (WAPC) has recently issued a Planning Control Area (PCA No 122) for the Armadale Road Deviation (ARD) which indicates the realignment proposal of Armadale Road in this area. **Appendix A** contains a copy of PCA No 122.

The following statement provides City of Cockburn's advice on this project:

*"Even with the Armadale Road Deviation project it should be noted that the existing North Lake Road (Verde Drive) Other Regional Roads alignment (established as part of MRS amendment 1038/33) remains unaffected by this proposal. That is, the Armadale Road Deviation does not in itself represent an overall road arrangement which in total would perform the general functions and objectives equivalent to those of the specific Other Regional Road alignment achieved by MRS Amendment 1038/33. Thus as established by the MRS amendment, the Other Regional Roads reserved portion representing North lake Road (Verde Drive) retains its function of providing regional access to the regionally significant Industrial area".*

It is understood that the ARD proposes lowering Armadale Road and placing it in a trench from west of Solomon Road all the way to the east of Verde Drive. As a result, the existing intersections of Armadale Road/ Solomon Road and Armadale Road/ Tapper Road/Verde Drive would need to be converted to roundabout at surface level, with on and off ramps connecting the roundabouts to the Armadale Road (referred to as a "duck and dive" treatment).

Due to the close proximity of the existing signalised intersection on Ghostgum Avenue/ Armadale Road to the future potential grade separated intersection on Armadale Road/ Tapper Road/Verde Drive, there would be a risk of safety issues associated with weaving movements for the section of Armadale Road between the end of the Armadale Road trench (the grade separation would involve lowering the through traffic lanes on Armadale Road) and the signalised intersection on Ghostgum Avenue. The length of the weaving would be affected by the queue back on Armadale Road at the traffic lights.

Main Roads WA is currently investigating the details of the traffic operation along Armadale Road assuming the proposed ARD project occurred. It is likely that the existing traffic lights at Ghostgum Avenue intersection would be converted to a left in / left out intersection to facilitate the future traffic operation on Armadale Road in this locality.

With respect to Jandakot Road upgrades (responsibility of the City of Cockburn and various developers), the plan is to:

- Upgrade Jandakot Road to dual carriageway ultimately. The ultimate standard would include two traffic lanes each way and 6m median (the proposed cross section does not fit with the existing road reserve of Jandakot Road and requires land take from both sides) and;
- The intersection of Jandakot Road/ Berrigan Drive/ Airport south link would be converted to traffic lights and Berrigan Drive would be duplicated between the Freeway and Jandakot Road (construction to commence in 2016).

The proposed local changes within the DSP area include provision of the proposed internal neighbourhood connector roads and in particular the N-S spine road within Calleya Master Plan area which provides a north-south link between

Armadale Road and Jandakot Road and would assist in the distribution of traffic onto Armadale Road and Jandakot Road.

The other proposed local changes to Armadale Road include conversion of the existing T-intersection of Armadale Road/ Liddelow Road into a roundabout intersection. A potential left in/ left out intersection on Armadale Road is also proposed in the DSP area.

Transcore understands that Main Roads WA has provided “in principal” approval for the proposed 4-way roundabout intersection at Armadale Road/ Liddelow Road; however Main Roads WA has concerns about the proposed left in/ left out intersection on Armadale Road. For the purpose of this report additional modelling and analysis are undertaken to reflect the removal of the proposed left in/ left out intersection from Armadale Road as per Main Roads WA request.

### **3.6 Public Transport Network Planning**

According to the information provided by the Public Transport Authority (PTA) in February 2015 as part of the Calleya Master Plan development application, a bus route is likely to be run through the Calleya LSP area. This bus route would travel north-south through Calleya (refer **Figure 5**). This potential bus route could be:

- A new PTA bus route between Cockburn and Murdoch stations;
- A connection with Route 515 (Glen Iris); or
- An extension or alternative route to Route 515 (Glen Iris).

The timing of any future bus route is unknown at this stage and is subject to Government funding that may be influenced by passenger demand and the developers providing adequate road access/connections. Figure 5 also shows the potential bus stops along the proposed bus route within the Calleya LSP area.

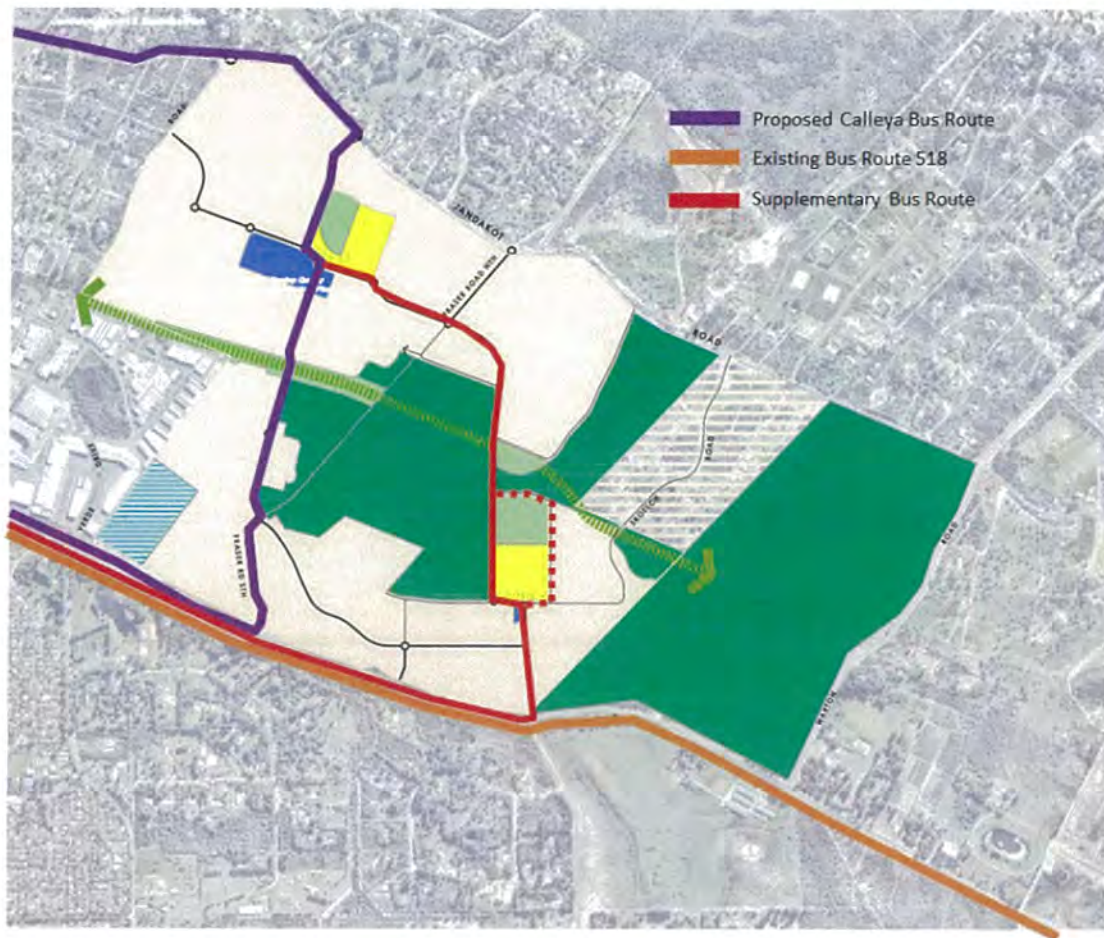


**Figure 5: Proposed Bus Route through Calleya LSP Area**

The latest information received from PTA in June 2016 confirms the above planning is still valid. According to the same information, a 1km separation distance between parallel bus routes in this area has been recommended. Accordingly, the proposed north south route through Calleya LSP area is not likely to be replicated through future developments further east and the existing bus route which currently travels on Warton Road will shift to Wright Road (in Piara Waters) once Wright Road is fully constructed.

However, PTA suggested that in the event that residential development extends east of the Calleya Master Plan and sufficient demand arises for secondary bus services, then there is likely to be a need for a supplementary bus route (indicated as the red line in **Figure 6**). The route would likely operate from Cockburn Central, along Armadale Road, then north- south through the eastern development across to the proposed Neighbourhood Activity Centre.





**Figure 6: Potential future bus routes (PTA)**

The proposed bus route within the Calleya LSP area shown in Figure 5 is subject to the availability of the full movement intersection at Ghostgum Avenue/ Armadale Road in future. However, if the existing signalised intersection at Ghostgum Avenue converts to a left in/ left out intersection in the longer term as a result of the proposed ARD project, then an alternative bus route option would be required to replace the current proposed bus route.

It is Transcore's understanding that City of Cockburn and PTA are collectively investigating the possible potential options for the proposed alternative bus route through consultation with Stockland. As a result of the current investigations PTA and City of Cockburn have prepared a potential alternative bus route option as shown in **Figure 7**.

The proposed alternative bus route option travels between Jandakot Road and Solomon Road through the northern part of the N-S spine road and some of the local roads within Calleya LSP area.



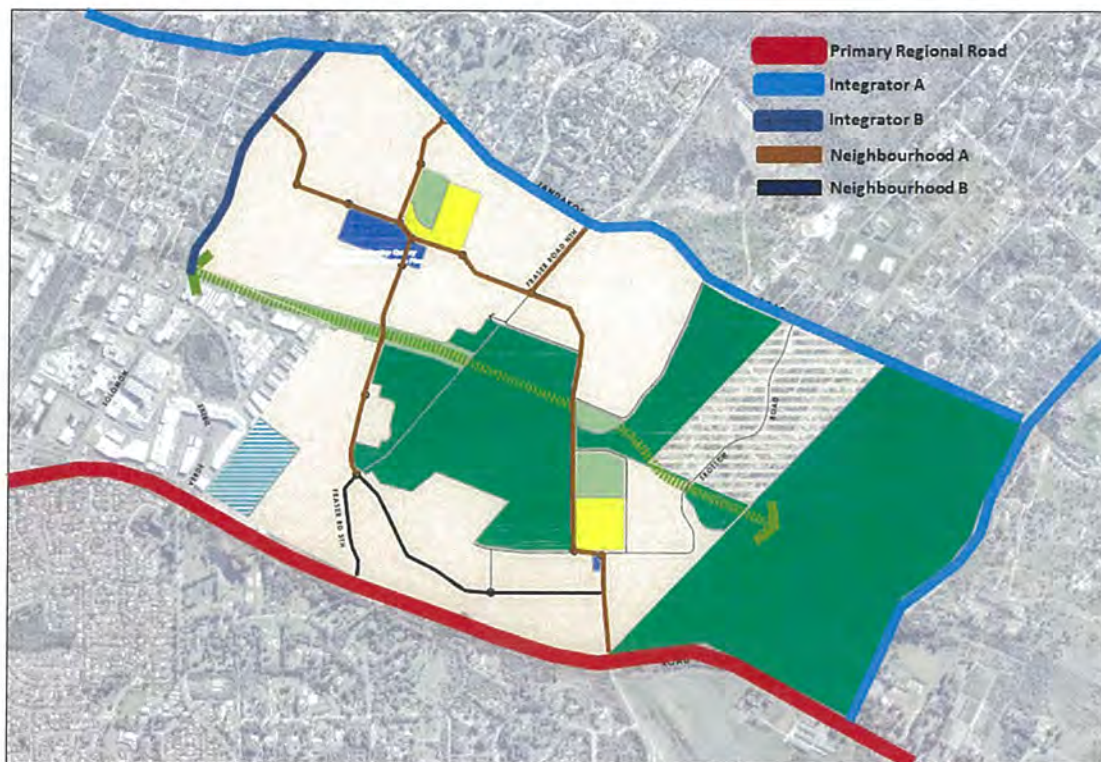




Figure 8: Transperth Future Service Development Plan Map

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**Figure 10: Proposed Road Hierarchy (Main Roads WA proposed access arrangements along Armadale Road)**

Armadale Road is a Primary Distributor road according to the Main Roads WA Functional Road Hierarchy and a Primary Regional Road in the Metropolitan Region Scheme. The projected traffic volume along Armadale Road is expected to be over 50,000vpd in future after upgrading Armadale Road to six lanes.

The proposed Banjup DSP only shows the major internal roads within the DSP area. Some key characteristics of the relevant road classifications have been summarised in **Table 1** below. These are generally based on Liveable Neighbourhoods guidelines although the proposed widths would vary slightly from the standard Liveable Neighbourhoods cross-section diagrams.

**Table 1: Key Characteristics for the Proposed LSP Road Classifications**

<b>Road Classification</b>	<b>Indicative upper volume (vpd)</b>	<b>Indicative road reserve width (m)</b>	<b>Indicative road pavement width (m)</b>
Integrator A	35,000	40m	2 x 8.5m (incl. cycle lanes) + 6m median
Integrator B	15,000	25m	2 x 5m (incl. cycle lanes) + median
Neighbourhood Connector A	7,000	23m	2 x 5m (incl. cycle lanes), 2m median and embayed parking
Neighbourhood Connector B	3,000	20m	7.4m and embayed parking

It should be noted that these reserve widths are indicative only and are subject to further adjustment in consultation with the Department of Planning and City of Cockburn during detailed subdivision design.

#### **Integrator A**

Jandakot Road and Warton Road are expected to carry about 20,000vpd to 30,000vpd in the vicinity of the DSP area and therefore are classified as Integrator A Road of dual carriageway standard. The ultimate standard of Jandakot Road would include two traffic lanes each way and 6m median.

#### **Integrator B**

Solomon road will be an Integrator B road in the Liveable Neighbourhoods road hierarchy. The projected traffic volume on Solomon Road is about 10,000vpd to 12,000vpd in the vicinity of the DSP area.

#### **Neighbourhood Connectors**

The proposed north-south and east-west roads within the Calleya Master Plan area are expected to carry about 3,000vpd to 7,000vpd and therefore are classified as Neighbourhood Connector A roads. The southern section of Ghostgum Avenue would be classified as Neighbourhood Connector B road if the intersection of Ghostgum Avenue/ Armadale Road converts to left in/ left out in longer term.

Fraser Road to the south of Jandakot Road is also classified as Neighbourhood Connector A road.

The proposed north-south Road within Lots 4 and 131 which connects Armadale Road to Fraser Road is expected to carry traffic volume of more than 3,000vpd and therefore is classified as Neighbourhood Connector A road.

The proposed east-west Road which travels through Lots 4 and 821 and the proposed left in/left out connector link into Armadale Road are classified as Neighbourhood Connector B Roads.



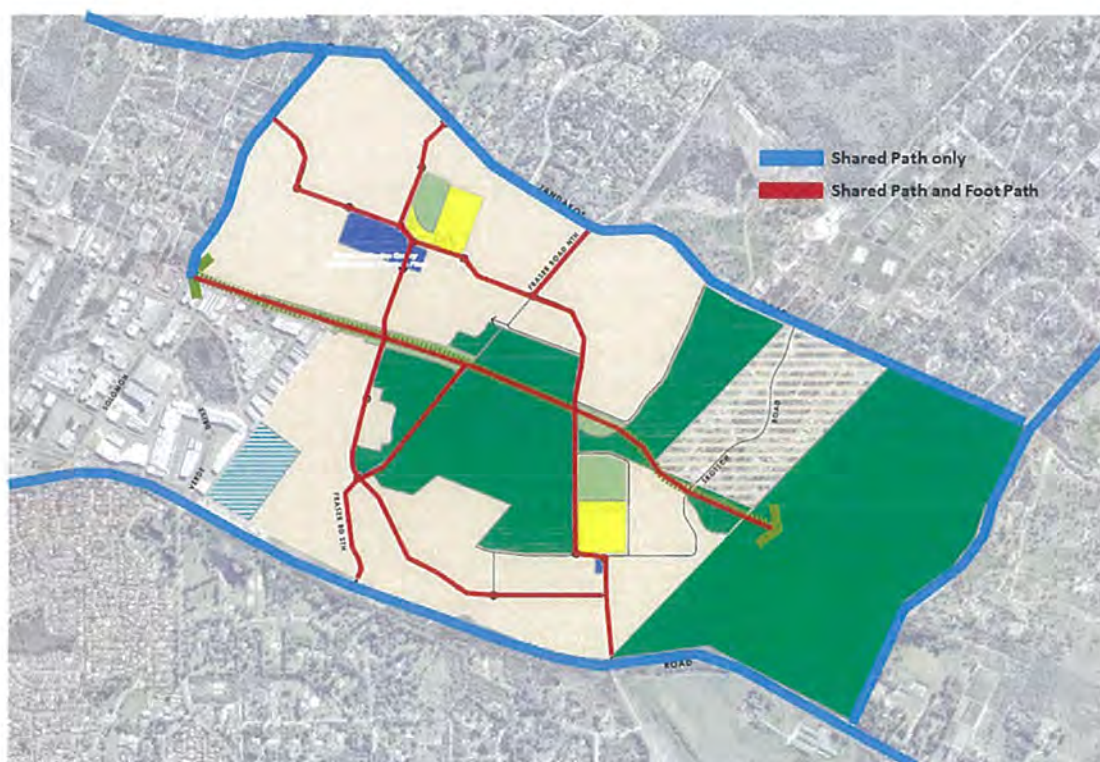
## 4.2 Public Transport

Existing bus services in this area are described in section 3.3 of this report and current planning by the Public Transport Authority is discussed in section 3.6.

## 4.3 Pedestrian and Cyclist Facilities

**Figure 11** outlines the proposed pedestrian and cyclist network for the DSP area. The proposed pedestrian and cyclist facilities aim to provide a permeable road network within the DSP area and create excellent opportunities for the provision of good pedestrian and cyclist facilities that maximise the use of non-motorised transport modes.

According to Liveable Neighbourhood Guidelines Shared Paths and Footpaths are proposed along all Neighbourhood Connector A roads. Shared Paths are also proposed along Armadale Road, Solomon Road, Warton Road and Jandakot Road.



**Figure 11: Proposed Pedestrian and Cyclist Network**

## 4.4 Integration with Surrounding Area

The proposed land uses for the DSP area are predominantly residential dwellings which are in line with the existing and future surrounding land uses in this area.

The road network of the DSP area will connect to the surrounding road network including Armadale Road and Jandakot Road at a number of locations. This will include two connections to Armadale Road and four connections to Jandakot Road. The proposed pedestrian and cyclist facilities within the DSP area would provide connection to the proposed Shared Paths along Armadale Road and Jandakot Road.



## 5.0 Analysis of the Transport Network

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### 5.1 Assessment Period

The assessment year that has been adopted for this analysis is 2031, with full development of the DSP area.

### 5.2 Traffic generation and distribution

Transcore has developed a subregional strategic transport model for weekday traffic flows for the Armadale area using the EMME transport modelling software package. This model was used to estimate the traffic projections of the proposed DSP area.

The daily traffic generation rate used for the DSP area for this transport assessment is 8 vehicle trips per day (vpd) per dwelling, which corresponds to peak hour trip generation rates recommended in the Western Australian Planning Commission (WAPC) Transport Assessment Guidelines for Development (2006).

The anticipated 3,500 ( $2000+330+700+500= 3,530$  say 3,500) dwellings of the DSP area will therefore generate approximately 28,000vpd. It must be noted that the proposed 3,500 Lots for the DSP area does not include any residential Lots on Lot 1 west or the Skotsch Road locality.

According to the information provided to Transcore, the current status of planning for Lot 1 west is not clear yet, however for the purpose of traffic modelling and analysis and in the absence of more detailed planning for Lot 1 west, it has been assumed that Lot 1 west would accommodate primarily about 60% service commercial with a lesser proportion (about 40%) residential Lots.

For the proposed primary schools within the DSP area the trip rate used is 1.0 vph per student during the before and after school peak periods (typically 8-9am and 3-4pm) and 2vpd per student overall. For this assessment the Education Department's standard 430 student primary school design has been assumed, so each of the proposed primary schools are assumed to attract traffic flows of 860vpd.

For the proposed Neighbourhood and Local Centres within the DSP area a trip rate of 121 vpd per 100sqm NLA of the retail area is adopted. Accordingly, the local neighbourhood centre of about 2,800m<sup>2</sup> NLA within the Calleya LSP area is estimated to attract about 3,400vpd. Similarly the proposed 500m<sup>2</sup> Local Centre within Lot 4 would attract about 600vpd.

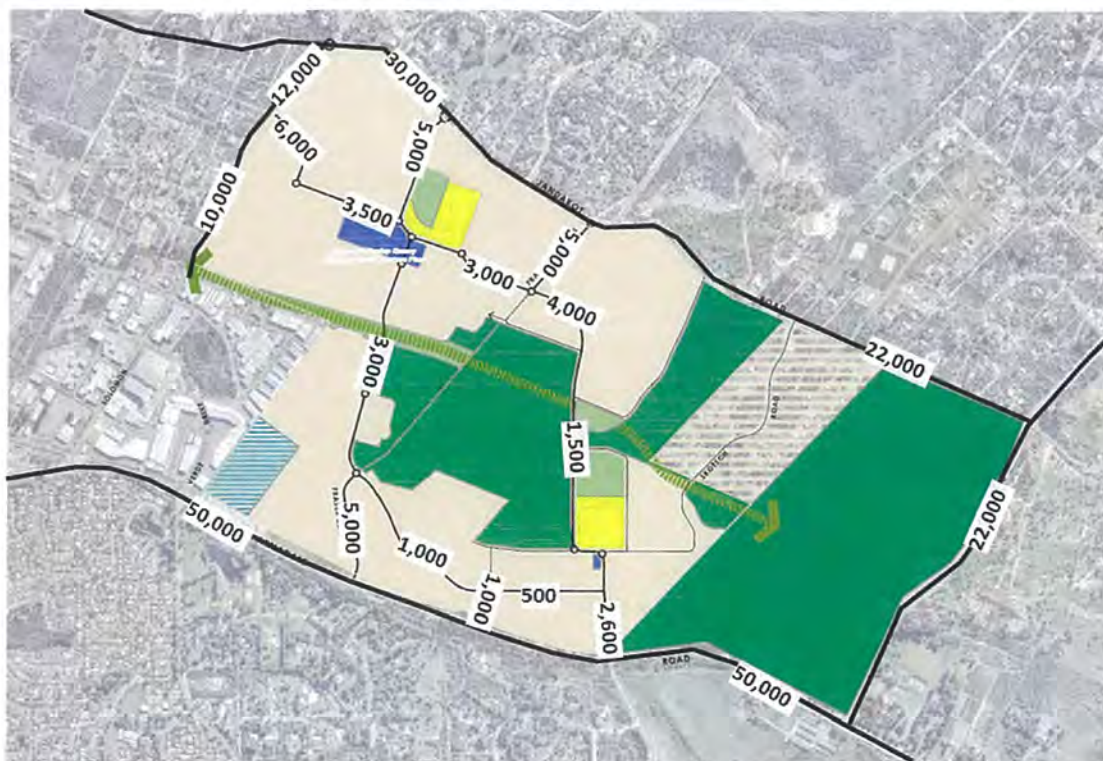
The distribution of these trips is determined by the traffic model in proportion to the location of trip productions and attractors for work trips, education trips and other trips (shopping, social, recreational, etc.) among all the land uses in the traffic model.

### 5.3 Traffic Flow Forecasts

**Figure 12** illustrates future total daily traffic flows estimated for the road network of the DSP area based on the road network and access arrangements shown in the Banjup DSP (refer Figure 2).

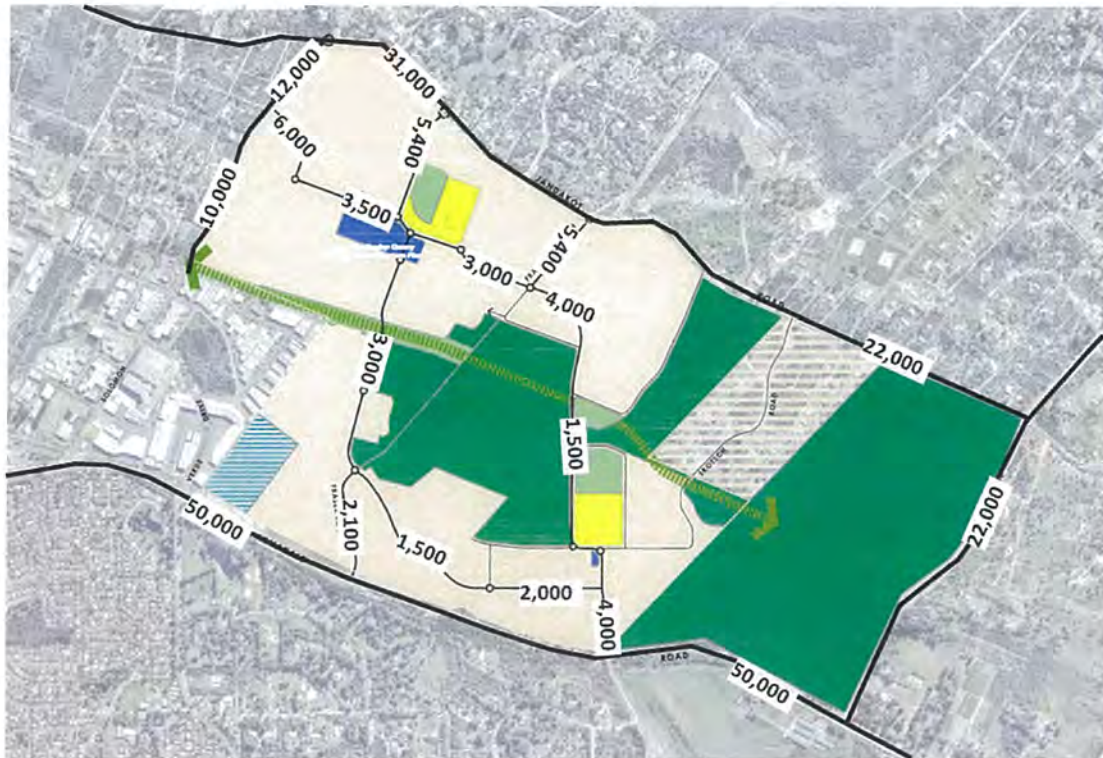
**Figure 13** shows the same figures for the long term. In the longer term it is likely that the existing signalised intersection of Armadale Road/ Ghostgum Avenue converts to a left in/ left out intersection. The traffic projections in Figure 13 reflect the proposed changes to the existing traffic lights at Ghostgum Avenue. The modelling and analysis undertaken for the long term option does not include the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road.

The future total daily traffic flows on the road network in and around the DSP area has been modelled for the future scenario of full development of this area. The modelled surrounding district road network reflects latest future road network upgrades for this area. Accordingly 6 and 4 lanes were assumed for Armadale and Jandakot Roads respectively to reflect the future upgrades proposed for these roads in long term.



**Figure 12: Projected Daily Traffic Volumes (Original access arrangements along Armadale Road)**





**Figure 13: Projected Daily Traffic Volumes (Main Roads WA proposed access arrangements along Armadale Road)**

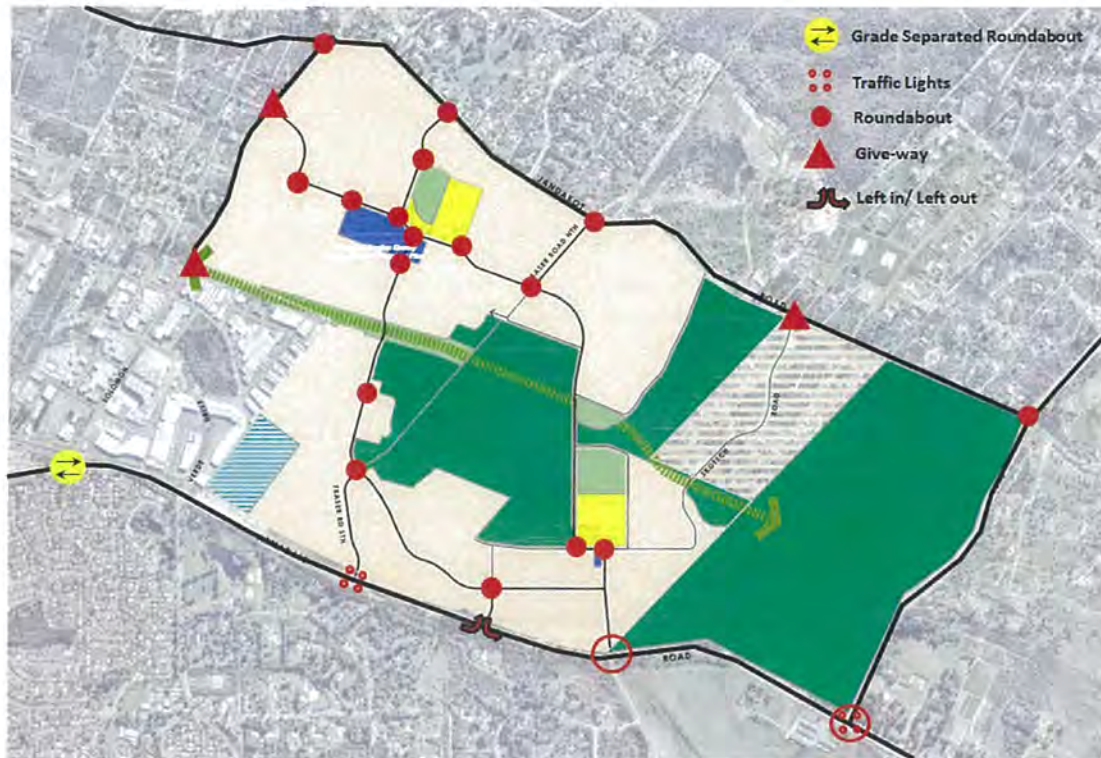
Reviewing the projected traffic volumes in Figures 12 and 13 indicates that in the long term (after downgrading the Ghostgum Avenue/ Armadale Road signalised intersection to left in/ left out intersection and removal of the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road) more traffic would utilise the future roundabout intersection at Armadale Road/ Liddelow Road/ DSP access road. Accordingly the proposed east-west neighbourhood connector B road parallel to Armadale Road would attract more traffic and the projected daily traffic volume on the southern section of the N-S spine road (Ghostgum Avenue) would drop to less than 3,000vpd.

#### **5.4 Roads and Intersections**

The proposed road network to accommodate these traffic volumes has been detailed in section 4 of this transport assessment, including the details of the proposed road hierarchy in section 4.1.

**Figure 14** details the proposed intersection controls for key intersections within the DSP area.





**Figure 14: Intersection Treatments**

#### **Armadale Road Intersections**

The primary access to the DSP area on Armadale Road is proposed by two 4-way intersections at Ghostgum Avenue and Liddelw Road as shown in Figure 14.

Currently the intersection of Ghostgum Avenue/ Armadale Road is controlled by traffic lights, however in the longer term (after the Armadale Road Deviation project), this intersection would be downgraded to a left in left out intersection and the existing traffic lights would be removed. The proposed 4-way intersection of Armadale Road/ Liddelw Road/ DSP access road is proposed to operate as a roundabout.

The DSP shows a left in/ left out access intersection on Armadale Road between Ghostgum Avenue and Liddelw Road. The proposed left in/ left out intersection would improve connectivity and permeability of the DSP area. Main Roads WA expressed some concerns with the proposed left in/ left out intersection and therefore the traffic modelling and analysis in the amended TIA report includes the option without the left in/ left out intersection.

#### **Jandakot Road Intersections**

The proposed DSP provides four connections to Jandakot Road including three roundabout intersections at Solomon Road, N-S road and Fraser Road. The existing intersection of Skotsch Road and Jandakot Road is expected to operate as a priority controlled T-intersection. It is Transcore's understanding that Skotsch Road would not connect to the Lot 4 from south to minimise the level of through traffic on this road.



### **Solomon Road Intersections**

Two priority controlled T-intersections are proposed on Solomon Road from Dolier Road and main east-west road in the Calleya LSP area.

### **Internal Intersections**

A number of roundabouts are proposed within the DSP area for the proposed internal 4-way intersections and major T-intersections. These roundabouts will help manage circulating traffic flows and assist with speed management on the neighbourhood connector roads.

## **5.5 Intersection Analysis**

Capacity analysis of the proposed intersections on Armadale Road and Jandakot Road has been undertaken using the SIDRA computer software package for the typical peak hour. SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

- Degree of Saturation is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for infrequent traffic flow up to one for saturated flow or capacity.
- Level of Service is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- Average Delay is the average of all travel time delays for vehicles through the intersection.
- 95% Queue is the queue length below which 95% of all observed queue lengths fall.

The results of the SIDRA analysis are summarised in **Appendix B**.

The SIDRA analysis indicates that the existing traffic lights on Armadale Road/Ghostgum Avenue and proposed roundabout at Liddelow Road/ Armadale Road/ DSP access road would operate satisfactorily and within capacity.

The proposed roundabout intersections along Jandakot Road would also operate satisfactorily with acceptable levels of service at the intersections. The existing intersection of Skotsch Road/ Jandakot Road is also expected to operate satisfactorily as priority controlled T-intersection in future. The proposed large median along Jandakot Road would provide the opportunity for right turn traffic from Skotsch Road to Jandakot Road to occur in two stages.

Additional transport modelling and intersection analysis are undertaken for the future roundabout intersection of Armadale Road/ Liddelow Road/ DSP access road during the longer term and assuming that the intersection of Ghostgum

Avenue/ Armadale Road converts to a left in/ left out intersection. Figure B7 and Table B7 in Appendix B show the intersection layout and intersection operation respectively. SIDRA analysis undertaken indicates that the proposed roundabout intersection would work satisfactorily with overall level of service A and maximum queue of about 48m on Armadale Road.

## **5.6 Access to Frontage Properties**

The WAPC *Liveable Neighbourhoods* policy requires that “Development along integrator B and neighbourhood connector streets with ultimate vehicle volumes over 5,000 vehicles per day should be designed either so vehicles entering the street can do so travelling forward, or are provided with alternative forms of vehicle access. Wider lots with paired driveways and protected reversing areas in the parking lane may be used on streets with up to 7,000 vehicles per day.”

All of the neighbourhood connector roads within the DSP area are expected to carry less than 5,000vpd, so no restriction on vehicular access is required on the proposed neighbourhood connector roads.

No direct access is permitted for the properties along Armadale Road, Jandakot Road and Solomon Road.

## **5.7 Pedestrian / Cycle Networks**

The proposed network of shared paths for pedestrians and cyclists is described in section 4.3 of this transport assessment. This network of paths will provide an excellent level of accessibility and permeability for pedestrians and cyclists within the DSP area, and connections to neighbouring precincts at strategic locations.

## **5.8 Access to Public Transport**

WAPC Transport Assessment Guidelines for Developments (2006) suggest that it is desirable for at least 90 per cent of dwellings to be within 400m straight line distance of a bus route.

The original proposed PTA bus routes within the Calleya LSP area and potential secondary bus route within the residential developments to the east of Calleya (indicated as the red line in Figure 6) would cover the majority of the proposed residential developments within the DSP area.

The proposed alternative bus route option which would replace the original PTA bus route within the Calleya LSP (should the intersection of Ghostgum Avenue/ Armadale Road be converted to a left in/ left out intersection, should the ARD project occur) would cover only the northern part of the Calleya LSP.

Therefore the southern part of the Calleya LSP would be outside of the 400m straight line distance of the proposed alternative bus route. It is desirable that further consideration be given to public transport accessibility of the southern part of Calleya LSP during the detailed planning stages of ARD project.

## 6.0 Conclusions

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The DSP area is anticipated to accommodate approximately 3,500 dwellings, two primary schools, a neighbourhood centre and a local centre.

This residential area is anticipated to generate traffic flows of approximately 28,000vpd. The proposed schools are estimated to attract about 1,700vpd. The proposed local and neighbourhood centres are expected to attract about 4,000vpd.

The proposed key road network of the DSP area has been planned based on WAPC Liveable Neighbourhoods guidelines to accommodate the future traffic flows that will be generated in this area.

Access to the DSP area will be served by two four-way intersections and a left in/ left out intersection on Armadale Road, Three roundabout intersections and a priority controlled T-intersection on Jandakot Road.

Main Roads WA has provided “in principal” support for the proposed 4-way intersection of Armadale Road/ Liddelow Road and installation of a roundabout at this intersection. However, Main Roads WA have expressed concerns regarding the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road.

Main Roads WA also indicated that the existing signalised intersection of Ghostgum Avenue/ Armadale Road could be converted to left in/ left out intersection should the Armadale Road Deviation and construction of a grade separated intersection on Verde Drive/ Tapper Road/ Armadale Road intersection occur.

Due to the uncertainty of the timing of confirmation of the Armadale Road Deviation project this TIA report provides the outcome of the modelling and analysis for the proposed access arrangements shown in the DSP area and the proposed access arrangements by Main Roads WA along Armadale Road assuming implementation of Armadale Road Deviation and construction of the grade separated intersection on Verde Drive/ Tapper Road/ Armadale Road.

Transport modelling and analysis undertaken indicate that if the intersection of Ghostgum Avenue/ Armadale Road converts to left in/ left out and the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road is removed then more traffic would utilise the future roundabout intersection at Armadale Road/ Liddelow Road/ DSP access road.

SIDRA analysis undertaken indicates that the proposed roundabout intersection at Armadale Road/ Liddelow Road/ DSP access road would work satisfactorily in the longer term with overall level of service A and maximum queue of about 48m on Armadale Road.



SIDRA analysis undertaken for future traffic flows (when the DSP area is fully developed) indicates that the proposed intersections on Jandakot Road would operate satisfactorily and within capacity and therefore they can accommodate the DSP traffic after full development and future traffic growth along Armadale Road and Jandakot Road.

The proposed DSP area provides for a comprehensive network of shared paths and footpaths to encourage and facilitate non-motorised travel as well.

The original PTA bus routes within the Calleya LSP area and potential secondary bus route within the residential developments to the east of Calleya would cover the majority of the proposed residential developments within the DSP area.

The proposed alternative bus route option prepared by PTA and City of Cockburn which would replace the original PTA bus route within the Calleya LSP in the longer term (should the intersection of Ghostgum Avenue/ Armadale Road be converted to a left in/ left out intersection) would cover only the northern part of the Calleya LSP. Therefore the southern part of the Calleya LSP would be outside of the 400m straight line distance of the proposed alternative bus route.

It is desirable that further consideration be given to public transport accessibility of the southern part of Calleya LSP during the detailed design stage of the Armadale Road Deviation Project.

# Appendix A

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## Planning Control Area No 122 Armada Road Deviation



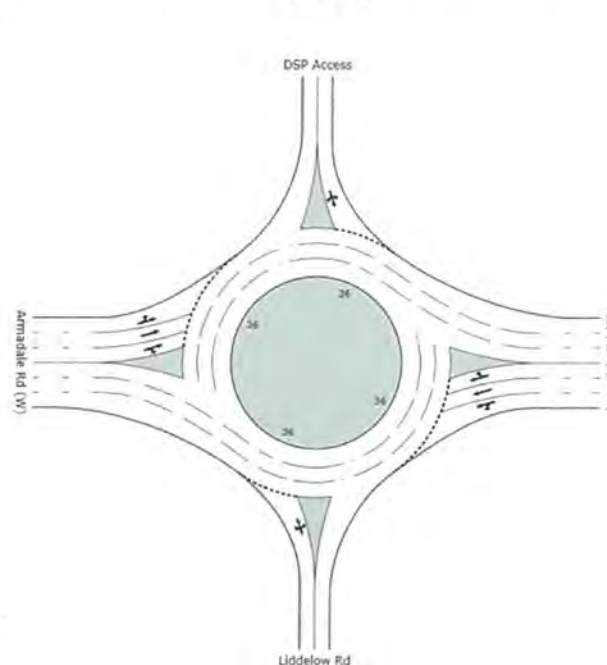
# Appendix B

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## Intersection Analysis (2031 Typical Peak Hours)



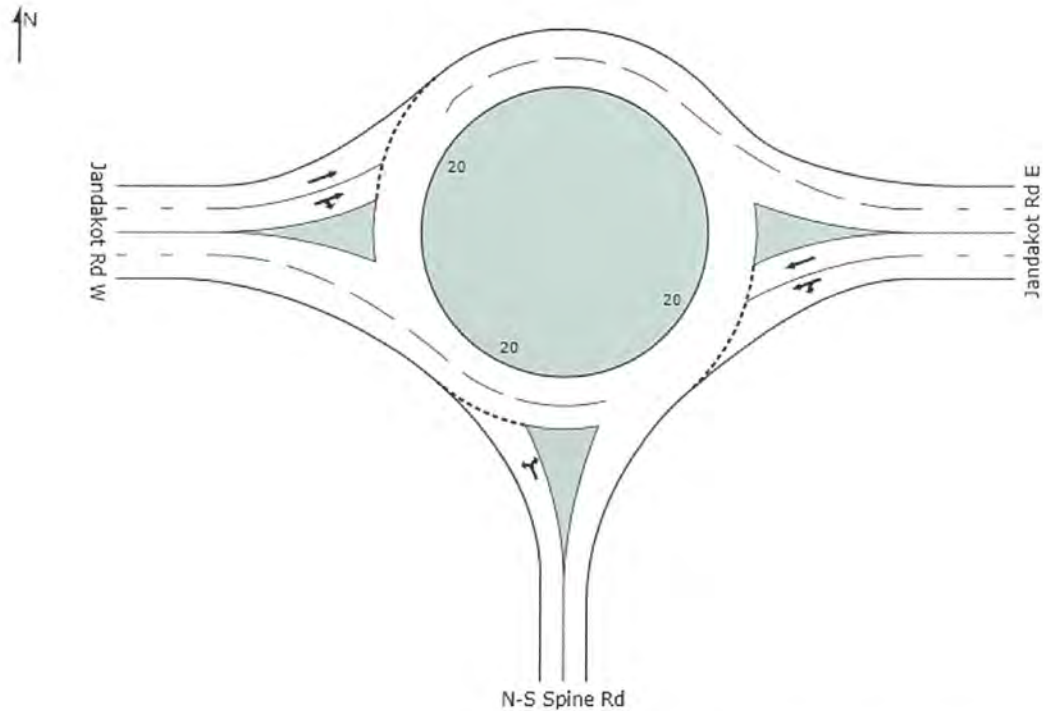
**Figure B1: Proposed roundabout Intersection on Armadale Road/ Liddelow Road/DSP Road (based on DSP access arrangements along Armadale Road)**



**Table B1. SIDRA results for Armadale Road/ Liddelow Road/ DSP Road (based on DSP access arrangements along Armadale Road)**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Liddelow Rd											
1	L	11	0.0	0.454	15.8	LOS B	2.2	15.4	0.86	0.99	41.1
2	T	24	0.0	0.454	14.8	LOS B	2.2	15.4	0.86	0.98	41.3
3	R	151	0.0	0.454	22.2	LOS C	2.2	15.4	0.86	1.04	38.9
Approach		185	0.0	0.454	20.9	LOS C	2.2	15.4	0.86	1.03	39.3
East: Armadale Rd (E)											
4	L	175	0.0	0.637	5.8	LOS A	5.2	38.8	0.39	0.52	50.2
5	T	2446	10.0	0.637	4.5	LOS A	5.3	40.3	0.38	0.40	51.0
6	R	72	0.0	0.637	11.8	LOS B	5.2	39.1	0.39	0.82	46.9
Approach		2693	9.1	0.637	4.8	LOS A	5.3	40.3	0.38	0.42	50.8
North: DSP Access											
7	L	53	0.0	0.419	16.6	LOS B	2.0	14.2	0.89	0.99	41.0
8	T	36	0.0	0.419	15.7	LOS B	2.0	14.2	0.89	0.98	41.2
9	R	53	0.0	0.419	23.0	LOS C	2.0	14.2	0.89	1.04	38.8
Approach		141	0.0	0.419	18.8	LOS B	2.0	14.2	0.89	1.01	40.2
West: Armadale Rd (W)											
10	L	34	0.0	0.668	7.0	LOS A	5.5	41.3	0.58	0.64	49.2
11	T	2474	10.0	0.668	5.6	LOS A	5.5	41.4	0.57	0.51	49.5
12	R	11	0.0	0.668	12.9	LOS B	5.5	41.4	0.58	0.87	46.7
Approach		2518	9.8	0.668	5.6	LOS A	5.5	41.4	0.57	0.52	49.5
All Vehicles		5537	8.9	0.668	6.1	LOS A	5.5	41.4	0.50	0.50	49.3

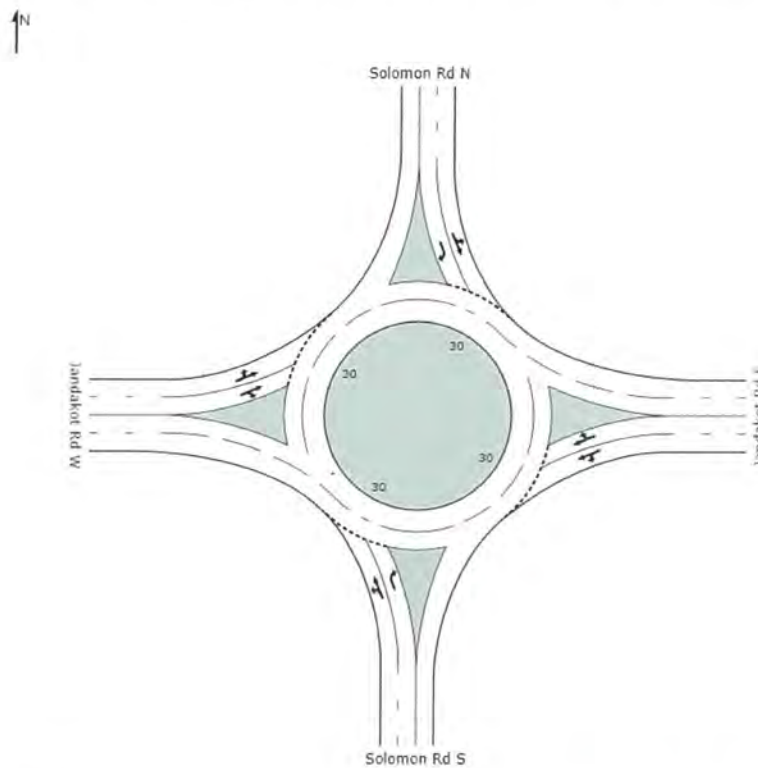
**Figure B2: Proposed Roundabout at Jandakot Road/N-S Spine Road**



**Table B2: SIDRA result for the Jandakot Road/N-S Spine Road intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: N-S Spine Rd											
1	L	232	0.0	0.548	13.9	LOS B	3.1	21.9	0.82	0.99	43.3
3	R	53	0.0	0.548	18.7	LOS B	3.1	21.9	0.82	1.04	40.8
Approach		284	0.0	0.548	14.8	LOS B	3.1	21.9	0.82	1.00	42.8
East: Jandakot Rd E											
4	L	21	0.0	0.535	7.8	LOS A	4.4	32.4	0.53	0.63	48.4
5	T	1393	6.0	0.535	6.9	LOS A	4.4	32.4	0.55	0.58	48.5
Approach		1414	5.9	0.535	6.9	LOS A	4.4	32.4	0.55	0.58	48.5
West: Jandakot Rd W											
11	T	1495	6.0	0.550	5.9	LOS A	5.7	41.9	0.32	0.44	50.0
12	R	211	0.0	0.550	11.5	LOS B	5.6	40.8	0.34	0.73	46.1
Approach		1705	5.3	0.550	6.6	LOS A	5.7	41.9	0.32	0.48	49.4
All Vehicles		3403	5.1	0.550	7.4	LOS A	5.7	41.9	0.46	0.56	48.4

**Figure B3: Proposed Roundabout at Jandakot Road/Solomon Road**

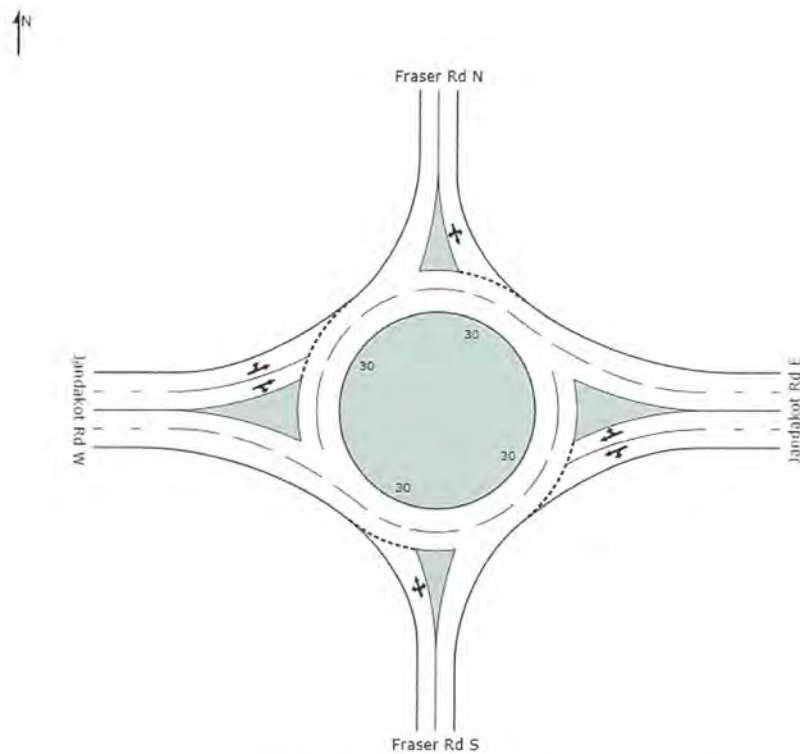


**Table B3: SIDRA result for the Jandakot Road/Solomon Road intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Solomon Rd S											
1	L	145	0.0	0.349	11.1	LOS B	1.7	12.2	0.79	0.92	46.2
2	T	37	0.0	0.349	9.9	LOS A	1.7	12.2	0.79	0.89	46.5
3	R	358	0.0	0.492	16.4	LOS B	3.1	22.0	0.84	1.01	42.4
Approach		540	0.0	0.492	14.5	LOS B	3.1	22.0	0.82	0.98	43.6
East: Jandakot Rd E											
4	L	238	0.0	0.645	6.8	LOS A	5.4	39.5	0.57	0.60	48.7
5	T	1389	6.0	0.645	5.9	LOS A	5.4	39.6	0.59	0.52	48.9
6	R	26	0.0	0.645	12.7	LOS B	5.4	39.6	0.60	0.83	46.6
Approach		1654	5.0	0.645	6.1	LOS A	5.4	39.6	0.59	0.54	48.8
North: Solomon Rd N											
7	L	26	0.0	0.129	12.0	LOS B	0.8	5.4	0.89	0.92	45.7
8	T	38	0.0	0.129	10.8	LOS B	0.8	5.4	0.89	0.90	46.0
9	R	35	0.0	0.100	19.6	LOS B	0.5	3.6	0.85	0.95	40.1
Approach		99	0.0	0.129	14.2	LOS B	0.8	5.4	0.88	0.92	43.6
West: Jandakot Rd W											
10	L	35	0.0	0.717	9.4	LOS A	7.7	56.7	0.81	0.86	47.8
11	T	1347	6.0	0.717	8.6	LOS A	7.7	56.7	0.81	0.84	47.2
12	R	142	0.0	0.717	15.8	LOS B	7.5	54.8	0.82	0.98	44.1
Approach		1524	5.3	0.717	9.3	LOS A	7.7	56.7	0.81	0.86	46.9
All Vehicles		3817	4.3	0.717	8.8	LOS A	7.7	56.7	0.72	0.74	47.1



**Figure B4: Proposed Roundabout at Jandakot Road/Fraser Road**

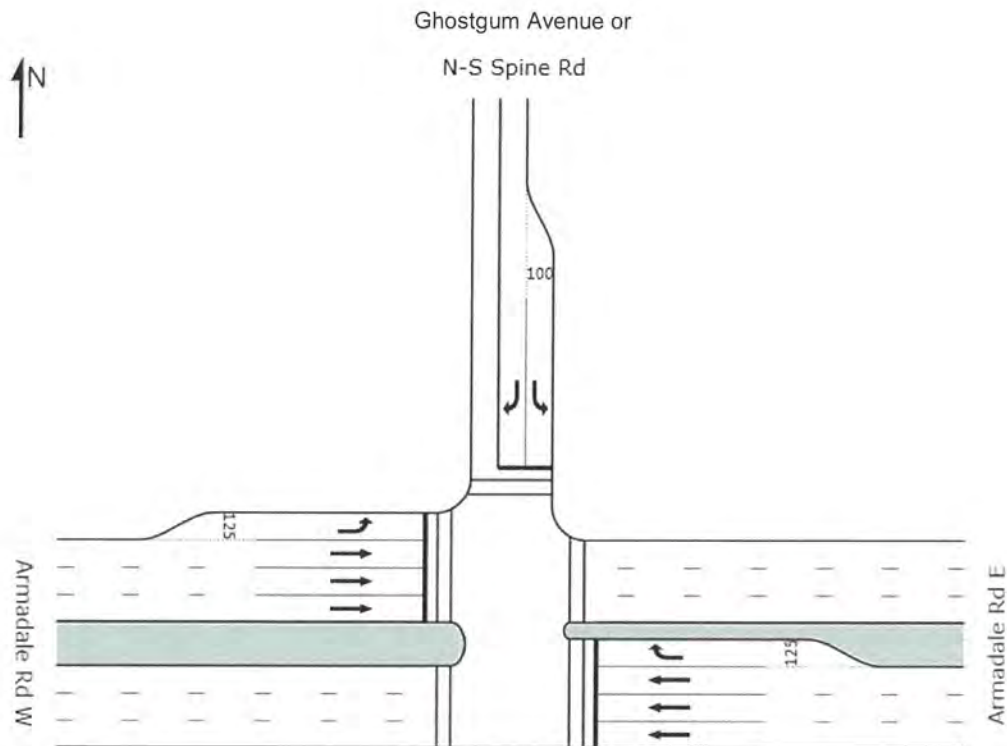


**Table B4: SIDRA result for the Jandakot Road/Fraser Road intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Fraser Rd S											
1	L	118	0.0	0.484	11.9	LOS B	2.9	20.2	0.83	0.97	44.9
2	T	54	0.0	0.484	11.0	LOS B	2.9	20.2	0.83	0.95	45.1
3	R	101	0.0	0.484	17.8	LOS B	2.9	20.2	0.83	1.03	42.0
Approach		273	0.0	0.484	13.9	LOS B	2.9	20.2	0.83	0.99	43.8
East: Jandakot Rd E											
4	L	89	0.0	0.552	8.1	LOS A	4.4	32.3	0.70	0.73	48.2
5	T	1053	6.0	0.552	7.3	LOS A	4.4	32.3	0.70	0.67	48.1
6	R	26	0.0	0.552	14.3	LOS B	4.3	31.9	0.71	0.92	45.4
Approach		1168	5.4	0.552	7.5	LOS A	4.4	32.3	0.70	0.68	48.0
North: Fraser Rd N											
7	L	53	0.0	0.594	13.4	LOS B	4.0	28.2	0.85	1.02	43.3
8	T	57	0.0	0.594	12.4	LOS B	4.0	28.2	0.85	1.00	43.5
9	R	252	0.0	0.594	19.3	LOS B	4.0	28.2	0.85	1.06	40.7
Approach		361	0.0	0.594	17.3	LOS B	4.0	28.2	0.85	1.05	41.4
West: Jandakot Rd W											
10	L	360	0.0	0.581	6.5	LOS A	4.8	34.7	0.51	0.58	48.9
11	T	1053	6.0	0.581	5.6	LOS A	4.8	34.7	0.53	0.50	49.2
12	R	107	0.0	0.581	12.4	LOS B	4.7	34.3	0.54	0.79	46.5
Approach		1520	4.2	0.581	6.3	LOS A	4.8	34.7	0.52	0.54	48.9
All Vehicles		3322	3.8	0.594	8.5	LOS A	4.8	34.7	0.65	0.68	47.2



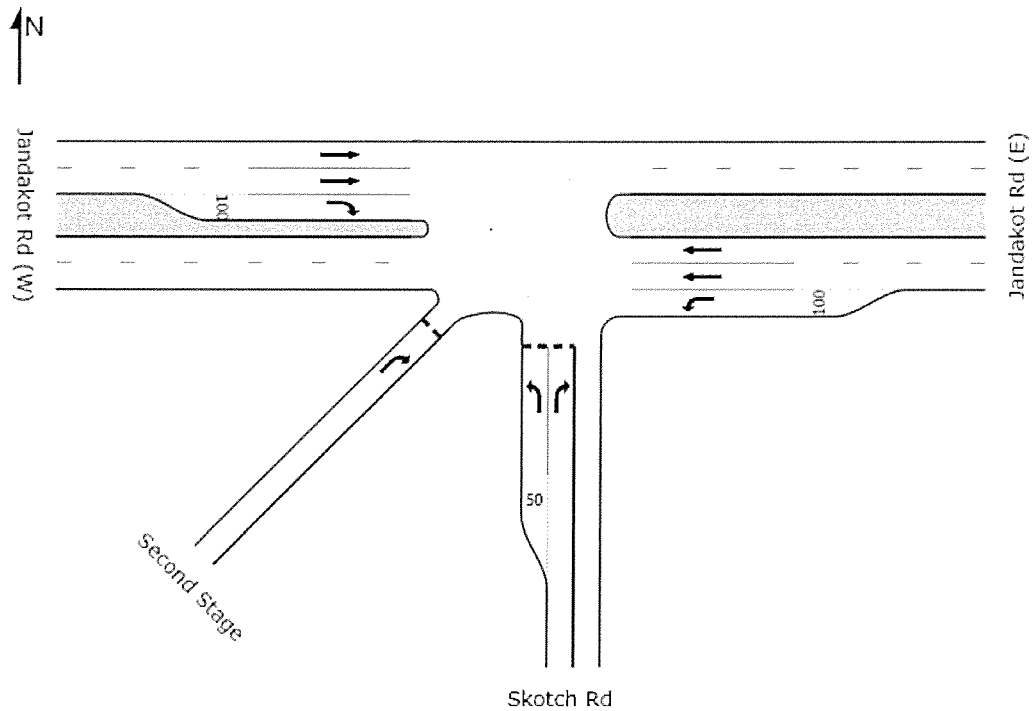
**Figure B5: Proposed Traffic Lights at Armadale Road/Ghostgum Avenue  
(N-S Spine Rd)**



**Table B5: SIDRA result for the Armadale Road/Ghostgum Avenue (N-S Spine Rd) intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Armadale Rd E											
5	T	2632	4.0	0.705	12.9	LOS B	29.7	215.4	0.70	0.64	42.2
6	R	53	0.0	0.554	67.3	LOS E	3.0	20.9	1.00	0.76	21.1
Approach		2684	3.9	0.705	14.0	LOS B	29.7	215.4	0.70	0.65	41.3
North: N-S Spine Rd											
7	L	53	0.0	0.120	43.7	LOS D	2.2	15.5	0.82	0.75	27.2
9	R	211	0.0	0.480	47.3	LOS D	9.8	68.9	0.91	0.81	26.1
Approach		263	0.0	0.480	46.6	LOS D	9.8	68.9	0.89	0.80	26.3
West: Armadale Rd W											
10	L	211	0.0	0.134	8.6	LOS A	0.7	4.8	0.13	0.69	48.4
11	T	2632	4.0	0.846	26.1	LOS C	42.1	305.0	0.92	0.88	33.2
Approach		2842	3.7	0.846	24.8	LOS C	42.1	305.0	0.86	0.87	34.0
All Vehicles		5789	3.6	0.846	20.8	LOS C	42.1	305.0	0.79	0.76	36.5

**Figure B6: Proposed priority controlled T-intersection at Jandakot Road/Skotsch Road**

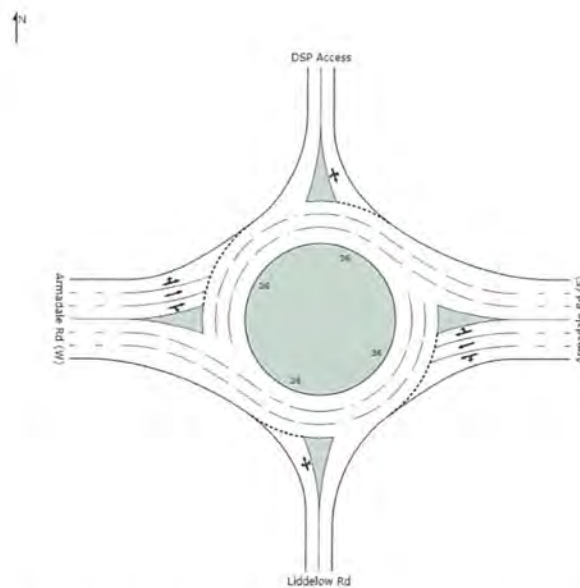


*Note: The diagonal link is not a physical traffic lane at this intersection. This is just a technique to represent the second stage of the Skotsch Road right turn movement from the median to Jandakot Road eastbound.*

**Table B6: SIDRA result for controlled T-intersection at Jandakot Road/Skotsch Road**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Skotch Rd											
1	L	11	0.0	0.032	17.3	LOS C	0.1	0.7	0.73	0.91	40.6
3	R	26	0.0	0.080	17.6	LOS C	0.3	1.8	0.74	0.91	40.4
Approach		37	0.0	0.080	17.5	LOS C	0.3	1.8	0.74	0.91	40.5
East: Jandakot Rd (E)											
4	L	37	0.0	0.020	8.2	LOS A	0.0	0.0	0.00	0.67	49.0
5	T	1053	0.0	0.270	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1089	0.0	0.270	0.3	NA	0.0	0.0	0.00	0.02	59.5
West: Jandakot Rd (W)											
11	T	1053	0.0	0.270	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	11	0.0	0.024	15.1	LOS C	0.1	0.6	0.70	0.85	42.4
Approach		1063	0.0	0.270	0.1	NA	0.1	0.6	0.01	0.01	59.8
South West: Second Stage											
32	R	26	0.0	0.046	14.9	LOS B	0.2	1.2	0.69	0.88	42.5
Approach		26	0.0	0.046	14.9	LOS B	0.2	1.2	0.69	0.88	42.5
All Vehicles		2216	0.0	0.270	0.7	NA	0.3	1.8	0.02	0.04	58.9

**Figure B7: Proposed roundabout Intersection on Armadale Road/ Liddelow Road/ DSP Road (based on Main Roads WA access arrangements along Armadale Road)**



**Table B7: SIDRA result for roundabout Intersection on Armadale Road/ Liddelow Road/ DSP Road (based on Main Roads WA access arrangements along Armadale Road)**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Liddelow Rd											
1	L	11	0.0	0.700	24.3	LOS C	4.3	29.8	0.93	1.14	35.4
2	T	37	0.0	0.700	23.3	LOS C	4.3	29.8	0.93	1.13	35.6
3	R	195	0.0	0.700	30.7	LOS C	4.3	29.8	0.93	1.16	34.3
Approach		242	0.0	0.700	29.3	LOS C	4.3	29.8	0.93	1.16	34.5
East: Armadale Rd (E)											
4	L	172	0.0	0.677	6.3	LOS A	5.7	43.0	0.55	0.56	49.3
5	T	2398	10.0	0.677	4.9	LOS A	5.9	45.1	0.54	0.44	49.7
6	R	106	0.0	0.677	12.2	LOS B	5.7	43.2	0.55	0.80	46.8
Approach		2676	9.0	0.677	5.3	LOS A	5.9	45.1	0.54	0.46	49.5
North: DSP Access											
7	L	72	0.0	0.735	26.3	LOS C	4.6	32.2	0.95	1.16	34.6
8	T	56	0.0	0.735	25.4	LOS C	4.6	32.2	0.95	1.15	34.7
9	R	107	0.0	0.735	32.8	LOS C	4.6	32.2	0.95	1.18	33.6
Approach		235	0.0	0.735	29.1	LOS C	4.6	32.2	0.95	1.17	34.1
West: Armadale Rd (W)											
10	L	51	0.0	0.685	8.1	LOS A	6.2	46.5	0.68	0.76	48.7
11	T	2349	10.0	0.685	6.6	LOS A	6.3	47.7	0.67	0.64	48.8
12	R	11	0.0	0.685	14.0	LOS B	6.2	46.7	0.68	0.92	46.0
Approach		2411	9.7	0.685	6.7	LOS A	6.3	47.7	0.67	0.64	48.7
All Vehicles		5563	8.5	0.735	8.0	LOS A	6.3	47.7	0.63	0.60	47.3



### Appendix 3

#### District Water Management Strategy (JDA Consultant Hydrologist)

Perron Developments Pty Ltd

## **Treeby (Banjup) Strategic District Water Management Strategy**

September 2016



## DISCLAIMER

This document is published in accordance with and subject to an agreement between JDA Consultant Hydrologists ("JDA") and the client for whom it has been prepared ("Client"), and is restricted to those issues that have been raised by the Client in its engagement of JDA. It has been prepared using the skill and care ordinarily exercised by Consultant Hydrologists in the preparation of such documents.

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JDA does not take responsibility for checking landscape and engineering plans attached to this report for accuracy or consistency with this report.

This Report is based on the current edition of Australian Rainfall & Runoff – A Guide to Flood Estimation (Engineers Australia, 1987) referred to as ARR.

Engineers Australia released a partial update to ARR in December 2015. The completed version of ARR may include different design methods and data for flood estimation in Australia including rainfall intensity, rainfall temporal patterns, rainfall runoff coefficients as well as a guideline for taking into account the effect of climate change on design rainfall and hence design floods depending on projected design life of land development. The revised version of ARR may include information which may require this Report to be revised.

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## EXECUTIVE SUMMARY

Lots 1, 2, 4, 140, 820 and 9004 Armadale Rd; Lot 1 Ghostgum Avenue; Lots 131, 132, 467, 500 and 9002 Jandakot Road; Lots 62 to 75 Skotsch Rd; and Lots 139, 468, 533, 614 and 800 Warton Road, Banjup have historically supported several rural and quarrying land uses including sand extraction and brick manufacturing with considerable clearing of vegetation and substantial quantities of sand removed. The area is hydrologically unconstrained with free draining sandy soils, clearance to groundwater, moderate to low risk of Acid Sulphate Soils (ASS), and no regional surface water features.

The primary constraint to rezoning is the P1 and P2 water protection zone which covers a portion of the Study Area. Urban development is listed as an incompatible land use within P1 or P2 areas. With certain controls in place, development is compatible with a P3 classification. The DoW is the lead agency in protecting catchments for water supply in WA.

The reclassification of the land from a P2 to P3 water protection zone (with retention of P1 as undeveloped bushland), will be subject to a favourable determination to rezone the Study Area to Urban. With the implementation of best practice water sensitive urban design the Study Area represents an important and likely site for progression to an Urban zoning given:

- Identification of a Study Area within the Draft South Metropolitan Peel Sub Regional Framework and classification of this land within short to medium term development timeframes.
- The proximity of the site to a high order activity centre, railway station and freeway interchange.
- The site represents a logical extension of development east of the developing Calleya Estate.
- A large portion of the site has been cleared and disturbed for sand quarrying operations.
- Service infrastructure within the area can accommodate the additional development.
- Compliance with the criteria for urbanisation included within draft State Planning Policy 2.3 – Jandakot Groundwater Protection.

A number of initiatives will be applied to limit any potential groundwater impacts associated with urban development, including:

- Extension of deep sewer to all lots;
- Application of water sensitive urban design principles including at-source stormwater infiltration, rain gardens and water harvesting;
- Appropriate road design and treatments to minimise the risk of high speed car collisions (which might result in oil or petrol spillage);
- Provision of lot types which maximise land use efficiency and reduce excessive garden area and hence fertiliser and pesticide use;
- Encourage home purchasers to use native plants for landscaping (which will also reduce fertiliser and pesticide use);
- Use of promotional information to land purchasers aimed at raising awareness of water issues;
- An on-going monitoring programme;
- Exclusion of high risk land uses from the development area (e.g. service station).

The information provided in the Strategic District Water Management Strategy (SDWMS) demonstrates that the Study Area can support urban development and best practice urban water management.

## SUMMARY OF SDWMS DESIGN OBJECTIVES

### Key Guiding Principles

- Provide a framework for the preparation of future LWMS
- Facilitate implementation of sustainable best practice urban water management
- Provide integration with planning processes and clarity for agencies involved with implementation
- To minimise public risk, including risk of injury or loss of life
- Protection of infrastructure and assets from flooding and inundation
- Encourage environmentally responsible development

Category	SDWMS Objectives
Stormwater Management	<ul style="list-style-type: none"> <li>• Non-structural measures to reduce applied nutrient loads</li> <li>• At source retention of 1yr 1hr ARI events</li> <li>• On site infiltration of all stormwater runoff of at least 5yr ARI.</li> <li>• Water quality treatment systems and water sensitive urban design structures designed in accordance with the Stormwater Management Manual for Western Australia (DoW, 2009) Chapter 9 (Structural Controls) and Australian Runoff Quality (Engineers Australia, 1997).</li> </ul>
Groundwater Management	<ul style="list-style-type: none"> <li>• No management of groundwater levels is proposed (subsoil drainage)</li> <li>• Finished levels to provide sufficient separation to groundwater to allow infiltration of stormwater on-site to enhance recharge to the Jandakot Mound.</li> <li>• Limit impacts to Bush Forever and wetland sites.</li> <li>• Limit groundwater abstraction.</li> <li>• Manage fertiliser and pesticide application in streetscapes and POS areas using soil amendments, appropriate plant selection, limiting turf areas and maintenance management plans.</li> </ul>
Water Conservation and Sustainability	<ul style="list-style-type: none"> <li>• Ensure that non-potable water supply systems are considered as part of an integrated water supply;</li> <li>• Household target water use of 100 kL/person/year;</li> <li>• Scheme water target use of 40-60 kL/person/year</li> <li>• Use of waterwise landscaping practices both at development and lot scale.</li> </ul>
Water Quality	<ul style="list-style-type: none"> <li>• Adopt nutrient load reduction design objectives for stormwater runoff</li> <li>• Use of amended soils and ephemeral bio-retention systems to treat stormwater.</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• Pre-development monitoring to inform decisions at LWMS stage</li> <li>• Post-development programme to ensure water quality targets are met.</li> </ul>

# 1. INTRODUCTION

This Strategic District Water Management Strategy (SDWMS) has been prepared by JDA Consultant Hydrologists on behalf of Perron Developments Pty Ltd. The SDWMS area comprises Lots 1, 2, 4, 140, 820 and 9004 Armadale Rd; Lot 1 Ghostgum Avenue; Lots 131, 132, 467, 500 and 9002 Jandakot Road; Lots 62 to 75 Skotsch Rd; and Lots 139, 468, 533, 614 and 800 Warton Road, Banjup comprising a total area of approximately 461 ha (Figure 1), herein referred to as the Study Area.

The Study Area is located within the City of Cockburn, approximately 19 km south of Perth and 2.5 km from Cockburn Central and the Kwinana Freeway.

This SDWMS has been prepared to provide a coordinating framework and to guide the key requirements for water sensitive urban design. The preparation of this SDWMS has been prepared in consultation with relevant stakeholders.

## 1.1 Planning Context

### 1.1.1 Drinking Water Source Protection Areas

The site is located in the Jandakot Underground Water Pollution Control Area (JUWPCA) (DoW, 2013c).

The JUWPCA occupies a total area of 7400 ha, including more than 4000 ha within the City of Cockburn. The JUWPCA was proclaimed in 1975 under the Metropolitan Water Supply Sewerage and Drainage Act 1909. Water from the mound is extracted by the Water Corporation as part of the Perth Metropolitan integrated water supply system (IWSS) (WAPC, 2003).

The DoW is the lead agency in protecting catchments for water supply in Western Australia. The Department supports the Australian Drinking Water Quality Guidelines (ADWQG) barrier approach to water quality protection, with catchment management the first barrier of protection. Subsequent barriers are water storage, treatment and disinfection. The catchment management measures are also supported by Wellhead Protection Zones (WPZ) around public water supply wells. Two public water supply production wells are located within the Study Area, one on the western boundary (P2, UWPCA) and one on the eastern boundary (P1, UWPCA); see Figure 2. These production wells (located in the UWPCA) currently require a WPZ of 300 m radius around each production well. Wellhead protection zones are generally circular (unless information is available to determine a different shape or size) (DoW, 2009a).

Water Quality Protection Note 36 (WQPN) (DoW, 2009a) sets out the groundwater catchment priority classification system. Water Quality Protection Note 25 (DoW, 2016) sets out land use compatible with public water source priority areas.

**Priority 1 (P1)** – P1 source protection areas are defined to ensure no degradation of the water source. P1 areas are declared over land where the high quality drinking water is the prime beneficial land use protected in accordance with the objective of risk avoidance.

**Priority 2 (P2)** – P2 source protection areas are defined to ensure there is no increased risk to the water source. P2 areas are generally declared over land with low intensity development such as pasture which already exists. Public water supply protection is of a high priority relative to other land use values protected in accordance with the objective of risk minimisation.

**Priority 3 (P3)** – P3 source protection areas are defined where it is necessary to manage the risk of pollution to the water source where other land use such as residential areas occur. P3 areas generally have the requirement of using best management practices and connection to deep sewerage. P3 areas are protected in accordance with the objective of risk management.



Other information provided in the WQPN includes (DoW, 2009a):

- DoW's advice on land and water based activities in proclaimed Public Drinking Water Source Areas (PDWSA);
- Best Management Practices (BMPs) guidance used to protect water quality in PDWSAs;
- Overview of legislation, policies and processes used to protect PDWSAs; and
- The development of a multi-agency guideline designed to balance views of community, industry and government, in order to maintain a reliable safe public drinking water supply.

### 1.1.2 Land Use Zoning

Lots 131, 500 Jandakot Road, 62 to 75 Skotsch Road, and Lots 2 and 4 Armadale Road are currently zoned 'Rural – Water Protection'; Lots 140 Armadale Rd and 139, 468, 533, 614 and 800 Warton Road are zoned 'Parks and Recreation' and; Lots 467 Jandakot Rd and 139 Warton Road are zoned 'Public Purpose (Special Uses)' under the Metropolitan Region Scheme (MRS) (Figure 2). Implementation of the DSP would see Lots 2, 4 and 131 as 'Urban'.

Lots 1, 132, 9002 and 9004 were rezoned 'Urban' under Metropolitan Region Scheme Amendment 1221/4, 1 gazetted in January 2013. The site is currently undergoing subdivision in line with water management plans prepared for the site. The plans include an approved District Water Management Strategy (DWMS, Emerson Stewart, 2011), Local Water Management Strategy (LWMS, PDC, 2013) and Urban Water Management Plan (UWMP).

Lot 1 Ghostgum Avenue has recently been rezoned to 'Urban' under the MRS and includes a DWMS (Hyd2o, 2013).

Lots 2, 4 and 131 have been identified as 'Urban Investigation' within Perth and Peel at 3.5 Million Draft Sub-Regional Spatial Framework (Structure Plan). An MRS rezoning application is currently being considered by WAPC for Lots 2 and 4, also supported by a DWMS (JDA, 2013).

This SDWMS supports the Treeby District Structure Plan as shown on Figure 3. This SDWMS consolidates background information and provides broad direction to inform preparation of Local Water Management Strategies to follow.

### 1.1.3 Land Use Rezoning

The primary constraint to rezoning is the P1 and P2 water protection zone which covers a portion of the Study Area. Urban development is not a compatible land use within P1 or P2 areas. With certain controls in place, development is compatible with a P3 classification.

The reclassification of the land from a P2 to P3 water protection zone (with retention of P1 as undeveloped bushland), will be subject to a favourable determination to rezone the Study Area to Urban. With the implementation of best practice water sensitive urban design, the Study Area represents an important and likely site for progression to an Urban zoning given:

- Identification of a Study Area within the Draft South Metropolitan Peel Sub Regional Framework and classification of this land within short to medium term development timeframes.
- The proximity of the site to a high order activity centre, railway station and freeway interchange.
- The site represents a logical extension of development east of the developing Calleya Estate.
- A large portion of the site has been cleared and disturbed for sand quarrying operations.

- Service infrastructure within the area can accommodate the additional development.
- Compliance with the criteria for urbanisation included within draft State Planning Policy 2.3 – Jandakot Groundwater Protection.

#### **1.1.4 Relevant Documents**

Key documents used to guide the SDWMS are:

- State Planning Policy No. 2.3: Jandakot Groundwater Protection Policy (WAPC, 1998)
- Better Urban Water Management (WAPC, 2008);
- Stormwater Management Manual for Western Australia (Department of Water, 2009b); and
- Liveable Neighbourhoods (WAPC, 2007).

## 2. SITE CHARACTERISTICS

### 2.1 Land Use

The Study Area includes old sand quarries and brick manufacturing sites, semi-rural residential lots, remnant native vegetation, Rose Shank Reserve, Banjup Memorial Reserve and Cockburn Fremantle Pistol Club. The sand extraction has resulted in gradual clearing of vegetation with substantial quantities of sand removed. Three surface expressions of groundwater exist as a result of sand extraction.

### 2.2 Rainfall

The long term average annual rainfall (1972 to 2016) at the closest Bureau of Meteorology's monitoring site, Jandakot Aero (Station No: 009172) located approximately 2.5 km to the north of the Study Area, is 824.3 mm. The short term (2003 to 2016) average annual rainfall is 726.9 mm, a decrease of approximately 12%, with most of the reduction occurring during the winter months.

### 2.3 Topography

Topographic mapping from Landgate (DoW, 2013d) shows a mixture of undulating and steep rises with elevations ranging from 28 to 42 mAHD (Figure 4). The steep rises are a result of the previous sand extraction carried out across the Study Area.

### 2.4 Acid Sulphate Soils

The WAPC *Planning Bulletin No. 64* (2009) classifies the Study Area as having moderate to low risk of actual acid sulphate soils (AASS) or potential acid sulphate soils (PASS) occurring at depths < 3m from the soil surface (DoW, 2013a) (Figure 5).

### 2.5 Surface Geology

Surface geology mapping by Gozzard (1986) is shown on Figure 4.

The surface geology of the Study Area is classified by Gozzard as Bassendean Sands (S8 and S10). S8 sand is described as very light grey at surface, yellow at depth, fine to medium grained, sub-rounded quartz, moderately well sorted, of eolian origin. S10 sand is described as S8 sands, but occurring as a thin veneer over clayey sands of the Guildford Formation.

### 2.6 Wetlands and Significant Vegetation

Geomorphic Wetland mapping (DoW, 2013b) shows a Resource Enhancement Wetland (REW) within Lots 131 and 467 Jandakot Road, 62 to 75 Skotsch Rd and Lot 4 Armadale Road; and Conservation Category Wetland (CCW) within Lot 467 Warton Rd. Both wetlands are located within Bush Forever site 390 and will be maintained as part of the DSP (Figure 6).

Bush Forever site 390 currently occupies 172 ha of the Study Area. The final boundary is subject to a negotiated planning solution in order to manage the integration of the Bush Forever with the planning and design of the urban development.

### 2.7 Surface Water Hydrology

No natural surface water features are present across the Study Area. Groundwater expressions are found in three locations and are the result of previous sand extraction (Figure 6).

## 2.8 Hydrogeology

### 2.8.1 Superficial Aquifer

The superficial aquifer in this region is referred to as the Jandakot Mound, and extends approximately 522 km<sup>2</sup>. The aquifer has a maximum thickness of 40 m and includes three formations which are, in order of increasing depth: Bassendean Sand, Gngangara Sand and Ascot Formation. Aquifer transmissivities range between 200 to 1000 m<sup>2</sup>/d (Davidson, 1995).

The formations are highly permeable with horizontal hydraulic conductivity ranging between 10 to 50 m/d. In the Jandakot area, where limonite cement (coffee rock) is present, horizontal hydraulic conductivity may reduce to less than 10 m/d (Davidson & Yu, 2008). Site specific investigations completed to date indicate limonite cement is more extensive than indicated on regional mapping. Given the extent of the limonite mapped over Calleya and Lot 4, we would expect the limonite to be present to some extent at Lot 131 and the other lots further east.

Vertical fluctuations in the water table may be several metres and generally occur seasonally, consistent with Perth's winter-dominated rainfall pattern. Groundwater levels from 1975 to 2015, captured from DoW JM bores series, show groundwater levels between 21.96 and 27.96 mAHD (Table 1). Maximum (DoW, 1997) and minimum (DoW, 2004) groundwater contours prepared by DoW are shown on Figure 7 and 8.

**TABLE 1: DOW GROUNDWATER MONITORING BORE DATA**

Bore	Period of Record	Minimum Recorded (mAHD)	Maximum Recorded (mAHD)
JM19	1975-2015	24.29	27.96
JM22	1975-2010	24.50	26.92
JM25	1975-1995	23.74	25.91
JM26	1975-2015	24.91	27.56
JM27	1975-2015	21.96	26.22
JM45	1975/2015	22.70	25.83

#### 2.8.1.1 Department of Water Ministerial Sites

Ministerial Statement 688 established in 1992 provides a framework for the management and abstraction of groundwater for public and private water supply from the Jandakot Mound, with provision for environmental requirements (EPA, 1992). As part of the conditions twenty-three sites across the Jandakot Mound have Ministerial water level criteria to ensure the protection of environmental assets.

For the 2008 to 2011 monitoring period thirteen out of the twenty-three sites breached the relevant criteria (DoW, 2012) as a direct result of declining rainfall and groundwater abstraction by existing users.

Seven Ministerial sites (8284/8284B, JM19, JM45, JM14, JM16, JM8 and JM7) located near the top of the Jandakot Mound are in close proximity to the Study Area. Three sites, JM19, JM45 and JM14, have all breached ministerial conditions with the latest breach in 2011.

#### 2.8.1.2 Groundwater Quality

Water quality is not measured in DoW monitoring bores. Water quality is measured by Water Corporation to inform treatment of public water supply abstracted from production bores across the mound.

Water quality information presented in Water Corporation (2006), states that the water quality of the Jandakot Mound has consistently been good, with the exception of iron and colour, and has generally met



Australian Drinking Water Quality Guideline (ADWQG) values. The absence of thermotolerant coliforms indicates that there has not been any pathogenic contamination of the wellfield, despite a large percentage of the UWPCA being privately owned (Water Corporation, 2006), which includes P3 urban areas.

Although there has been no evidence of contaminants reaching the groundwater, many activities throughout the Control Area, including irrigated parks and uncontrolled domestic activities on residential properties, are considered medium management priorities (major to significant risks) because of their potential to transmit contaminants to the groundwater. Controls currently in place have improved protection and there has been no observed increase in risk since the 1998 assessment (Water Corporation, 2006).

### 2.8.1.3 Non-Potable Supply for Land Development

The Study Area is located within the groundwater management sub-area of Canning Vale. As of 30<sup>th</sup> March 2016 Department of Water advised there was 310,000 kL/yr available for allocation in the Superficial Aquifer (Table 2).

**TABLE 2: GROUNDWATER AVAILABILITY**

Aquifer	Allocation Limit	Licensed Allocation	Total Allocated & Committed	% Committed & Additional Allocations
Perth - Superficial Swan	310,000 kL	68,352kL	163,575 kL	52.77%

The use of local groundwater resources for non-potable supply within the Study Area will be considered as part of future LWMS's. If considered appropriate, the implementation of the strategy should take into consideration bore design to ensure the installation of the wells do not create unwanted contaminant pathways through the aquifer.

## 2.8.2 Leederville Aquifer

The Leederville Aquifer is of Cretaceous age and consists of interbedded sandstone, siltstone and shales made up by the Mariginiup, Wanneroo and Pinjar Members and the Henley Sandstone Formation. It is separated from the overlying Superficial Aquifer by the Kardinya Shale, which acts as a confining bed between the two aquifers (Davidson & Yu, 2008).

The Leederville aquifer is a major regional water resource of good quality water. Underneath the Jandakot Mound, groundwater salinity is typically <500 mg/L. Jandakot production bore J105 screened in the Leederville Aquifer has the highest concentration of bicarbonate (compared to other Jandakot drinking water production bores) with a concentration of 200 mg/L. Dissolved iron concentrations from the production bores generally exceed Australian Drinking Water Guidelines (Davidson, 1995).

## 2.8.3 Yarragadee Aquifer

The South Perth Shale underlies the Leederville Aquifer and acts as the confining bed between the Leederville and Yarragadee aquifers (Davidson, 1995).

The Yarragadee aquifer is a major regional water resource of generally good quality water. South of Perth salinities vary between 1000 and 2000 mg/L. Dissolved iron levels are generally below Australian Drinking Water Quality Guidelines (Davidson, 1995).

## **3. DISTRICT WATER MANAGEMENT STRATEGY**

### **3.1 Groundwater Management**

#### **3.1.1 Existing Groundwater Expressions**

Sand extraction from the site has resulted in some areas where the groundwater is exposed at surface. Excavations are to be filled in as part of future development so that groundwater is no longer exposed.

#### **3.1.2 Fill and Groundwater Controls**

It is expected there is sufficient sand within the Study Area to allow development with adequate separation to groundwater without the need for subsoil drainage to manage groundwater levels. This will be confirmed by a more detailed analysis of earthworks at LWMS stage.

### **3.2 Stormwater Management**

For the Study Area the following key objectives will apply:

- Minimise changes in hydrology to prevent impacts on receiving environments.
- Manage water flows from major events to protect infrastructure and assets.
- Apply the principles of WSUD.

Due to the elevation and sandy soils that characterise the site, many of the best practice stormwater management strategies presented in the Stormwater Management Manual for Western Australia (DoW, 2009) are appropriate and can be implemented.

These strategies include;

- Retention of rainfall events up to the 1yr ARI 1 hour duration at source via infiltration.
- Retention of rainfall events up to the 5yr ARI high in the catchment using infiltration swales and underground infiltration devices.
- The use of vegetation and amended soils within infiltration swales to treat stormwater runoff and improve the quality of stormwater infiltrating to the groundwater table.
- Using road levels and grading to convey major storm events away from houses and other key infrastructure.
- Retention of rainfall events of at least 5yr ARI on site by integrating infiltration storages into Public Open Spaces.

With the exception of Lot 131, previous DWMS and LWMS documents prepared for existing and proposed MRS zoned 'Urban' lots have had stormwater modelling carried out. Results of these analysis are presented in Table 3 and shown on Figure 9.

Preliminary modelling of the 100yr ARI stormwater infiltration storage for Lot 131 (Catchment 3) was performed by JDA using the infiltration model MODRET.

**TABLE 3: STORAGE DATA FOR THE CRITICAL 100YR ARI RAINFALL EVENT**

Catchment	1 <sup>1</sup>	2 <sup>2</sup>	3	4 <sup>3</sup>
Catchment Area (ha)	153.0	20.5	64.7	61.9
Assumed Impervious Area (ha)	53.0	8.2	20.9	18.6
Top Water Level Area (m <sup>2</sup> )	36,545	4700	21,385	20,000
Stored Volume (m <sup>3</sup> )	21,870	3300	19,670	18,700

1- PDC (2013)

2- Hyd2o (2013)

3- JDA (2013)

More detailed analysis of the stormwater management system will be completed as part of future LWMS's based on additional site information and more refined analysis.

Catchment 5 (Figure 9) is not proposed for urban development and preliminary stormwater storage has not been assessed.

### 3.3 Water Source Planning & Conservation

#### 3.3.1 Water Supply

##### Residential Lots

In order to minimise any potential impact on the groundwater resource the development will aim to:

- Utilise scheme water as the main water supply for residents.
- Appropriately manage bore use through structure planning and community education.

##### Public Open Spaces

The use of local groundwater resources for non-potable supply within the Study Area will be considered in more detail as part of the LWMS. Based on the proposed 253 ha of residential development an indicative water demand for irrigation of approximately 25 ha of POS would be 187,500 kL/yr, based on an allocation of 7,500 kL/ha/yr. While there is only 146,425 kL/yr available for allocation (Table 2), urban Lots 1, 132, 9002 and 9004 currently have an allocation of 119,500 kL/yr (GWL 155669) for irrigation.

#### 3.3.2 Wastewater Management

The Water Corporation has advised that this site falls outside of a planned sewerage scheme and therefore a reticulated wastewater supply is not immediately available. An approved MRS amendment would facilitate sewer reticulation scheme planning by the Water Corporation.

The project engineers have indicated that wastewater servicing is likely to come from Armadale Rd, via a connection at Liddelow Rd, south-east of the site. Two pump stations will likely be required to meet demand for the Study Area. Pump stations are a compatible land use with conditions in P3 areas, as presented in WQPN 25, Table 3 (DoW, 2016)

#### 3.3.3 Water Conservation Measures

The objective for water conservation is to minimise use of water and maximise water use efficiency where possible. This objective can be achieved at both the development and lot scale and is identified in the State Water Plan (Government of Western Australia, 2007) as a priority item for potable water. The State Water Plan target for household water use is 100 kL/person/year (potable and non-potable water), with a consumption target for scheme water of 40-60 kL/person/year (potable water).



Consistent with the State Water Plan, the main objectives for the development are:

- Avoid use of potable water for irrigation in POS areas
- Reduce household water use to not more than 100 kL/person/year
- Minimise use of potable water where drinking water quality is not essential.
- Household consumption targets for in-house potable water use of 40-60 kL/person/yr.

#### Development Scale

Development scale water conservation measures appropriate for the site include:

- Strategic planning (orientation, shape, elevation etc.) of irrigation areas such as pocket parks, active and passive public open space areas, and road reserves to minimise long-term irrigation demand.
- Where possible co-locate facilities with significant irrigation demand.
- Within irrigation areas, the use of waterwise landscaping practices including hydrozoning, mulching, soil amendments, water retention products and installation of appropriate water efficient irrigation fixtures.
- Retain and where appropriate rehabilitate native bush areas.

#### Lot Scale

Lot scale water conservation measures appropriate for the site include;

- Increased residential density, including smaller lots with reduced ex-house irrigation areas.
- Buildings constructed to current Building Codes of Australia (BCA) water efficiency standards and the State Government 5 Star Plus Scheme. These include using AAA rated appliances such as toilets, washing machines, dishwashers, water saving showerheads, taps and toilets and sub-surface irrigation. The Water Corporation's Waterwise Rebate Program will also assist in encouraging the purchase of waterwise AAA rated appliances.
- Initiatives to encourage waterwise landscaping of residential lots including hydrozoning, mulching, soil amendments, water retention products and installation of appropriate irrigation fixtures.



## 4. IMPLEMENTATION FRAMEWORK

### 4.1 Local Structure Planning

The water management planning requirements for the various stages of land use planning are set out in Better Urban Water Management (WAPC, 2008) and include a Local Water Management Strategy (LWMS) in support of the Local Structure plan and an Urban Water Management Plan (UWMP) as a condition of subdivision approval. The design objectives outlined in this DSWMS form the basis for design criteria to be developed and reported in the LWMS. The design criteria of the LWMS are implemented through the final design concept presented in the UWMP.

### 4.2 Monitoring Requirements

Pre-development monitoring for a minimum two year period is required to support rezoning applications as outlined in BUWM. At the end of the two-year program the results should be submitted to the Department of Water and City of Cockburn and utilised to assist preparation of the LWMS's.

A post development monitoring program will be developed at the LWMS stage. The monitoring program will be designed to allow a quantitative assessment of the hydrological impacts of the proposed development within the Study Area. Post-development monitoring program will include measurement of groundwater levels and quality for comparison to pre-development levels.

### 4.3 Funding and Responsibilities

The key roles and responsibilities for the implementation of this SDWMS are presented in Table 4 below.

**TABLE 4: SUMMARY OF RESPONSIBILITIES OF FUNDING**

Management Issue	Responsibility and Funding		
	Developer	Department of Water	City of Cockburn
Pre-development monitoring	✓		
Preparation of LWMS	✓		
Approval of LWMS		✓	✓
Preparation of UWMP	✓		
Approval of UWMP		✓	✓
Construction of urban infrastructure	✓		
Long-term maintenance of stormwater management system			✓
Post-development monitoring	✓		

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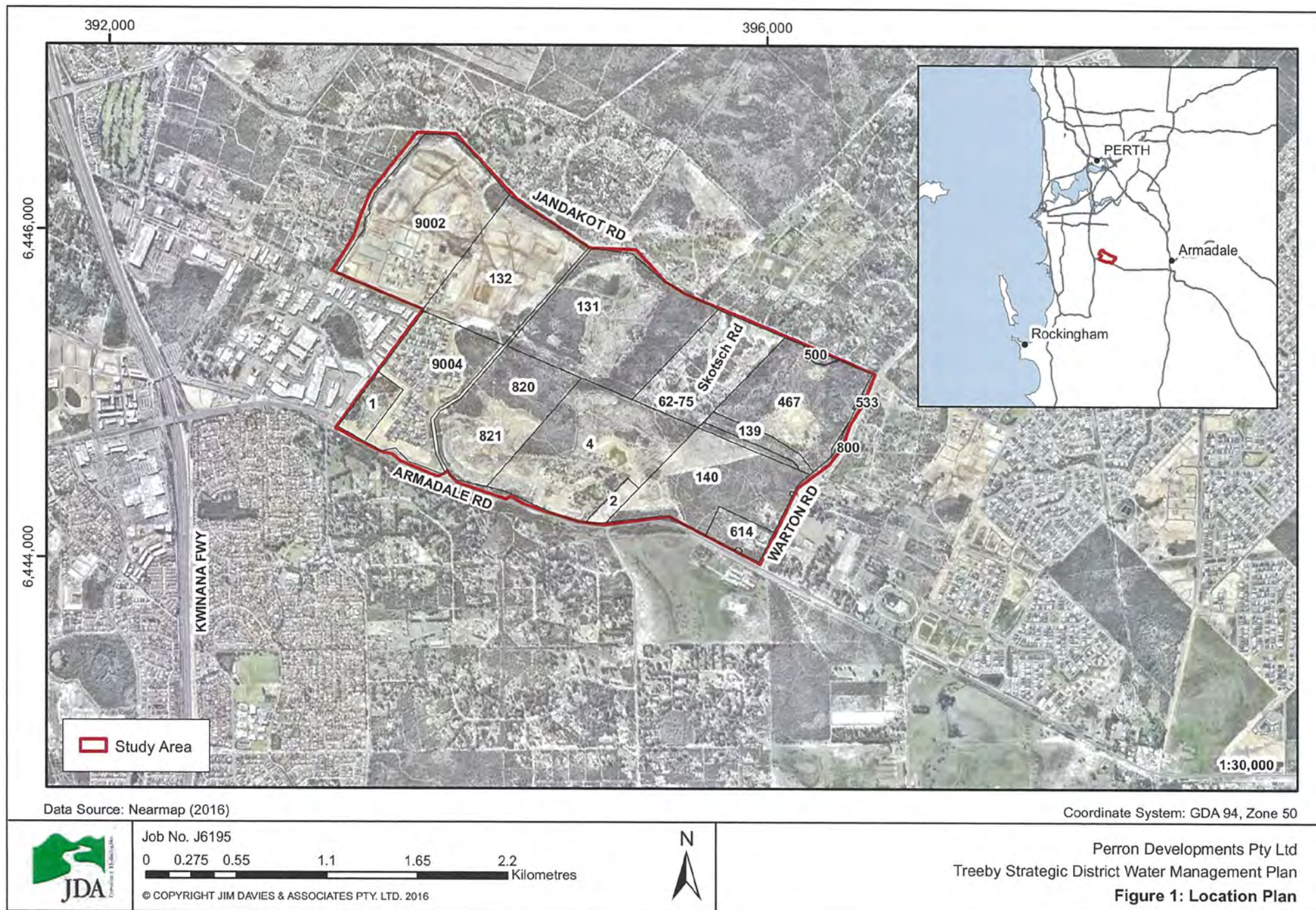
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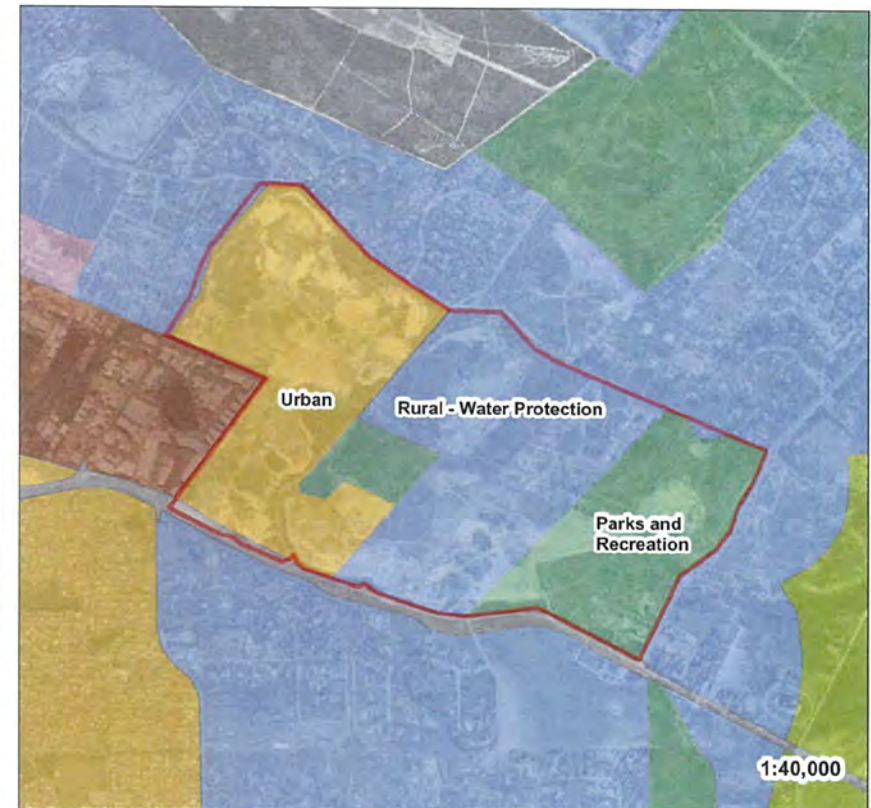
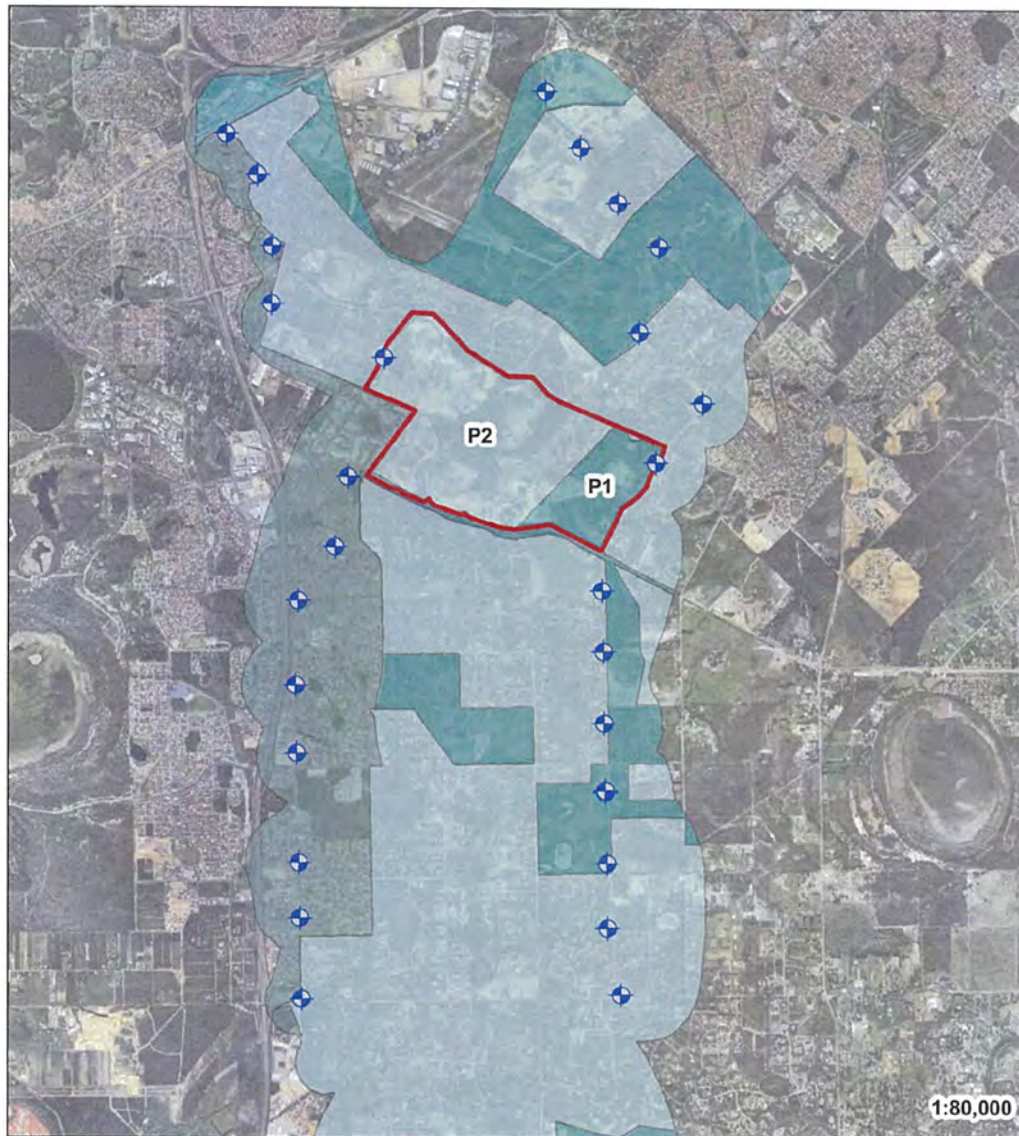
## Figures





Perron Developments Pty Ltd  
 Treeby Strategic District Water Management Plan  
**Figure 1: Location Plan**

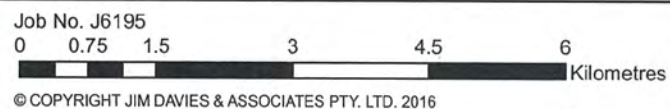




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|---|--|
| <ul style="list-style-type: none"> <li><span style="color: red;">■</span> Study Area</li> <li><span style="color: blue;">◆</span> Jandakot Mound Production Bores</li> </ul> <p><b>Underground Water Pollution Control Areas</b></p> <ul style="list-style-type: none"> <li><span style="background-color: #4682B4; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> P1</li> <li><span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> P2</li> <li><span style="background-color: #808080; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> P3</li> </ul> | <p><b>MRS Land Zonings</b></p> <ul style="list-style-type: none"> <li><span style="background-color: #8B4513; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Industrial</li> <li><span style="background-color: #3CB371; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Parks &amp; Recreation</li> <li><span style="background-color: #A9A9A9; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Primary Regional Roads</li> <li><span style="background-color: #D3D3D3; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Public Purposes (SECWA)</li> <li><span style="background-color: #ADD8E6; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Public Purposes (Special Uses)</li> <li><span style="background-color: #9ACD32; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Rural</li> <li><span style="background-color: #4682B4; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Rural - Water Protection</li> <li><span style="background-color: #FFD700; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Urban</li> </ul> |
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Data Source: DoW (2013c), DoP (2012)

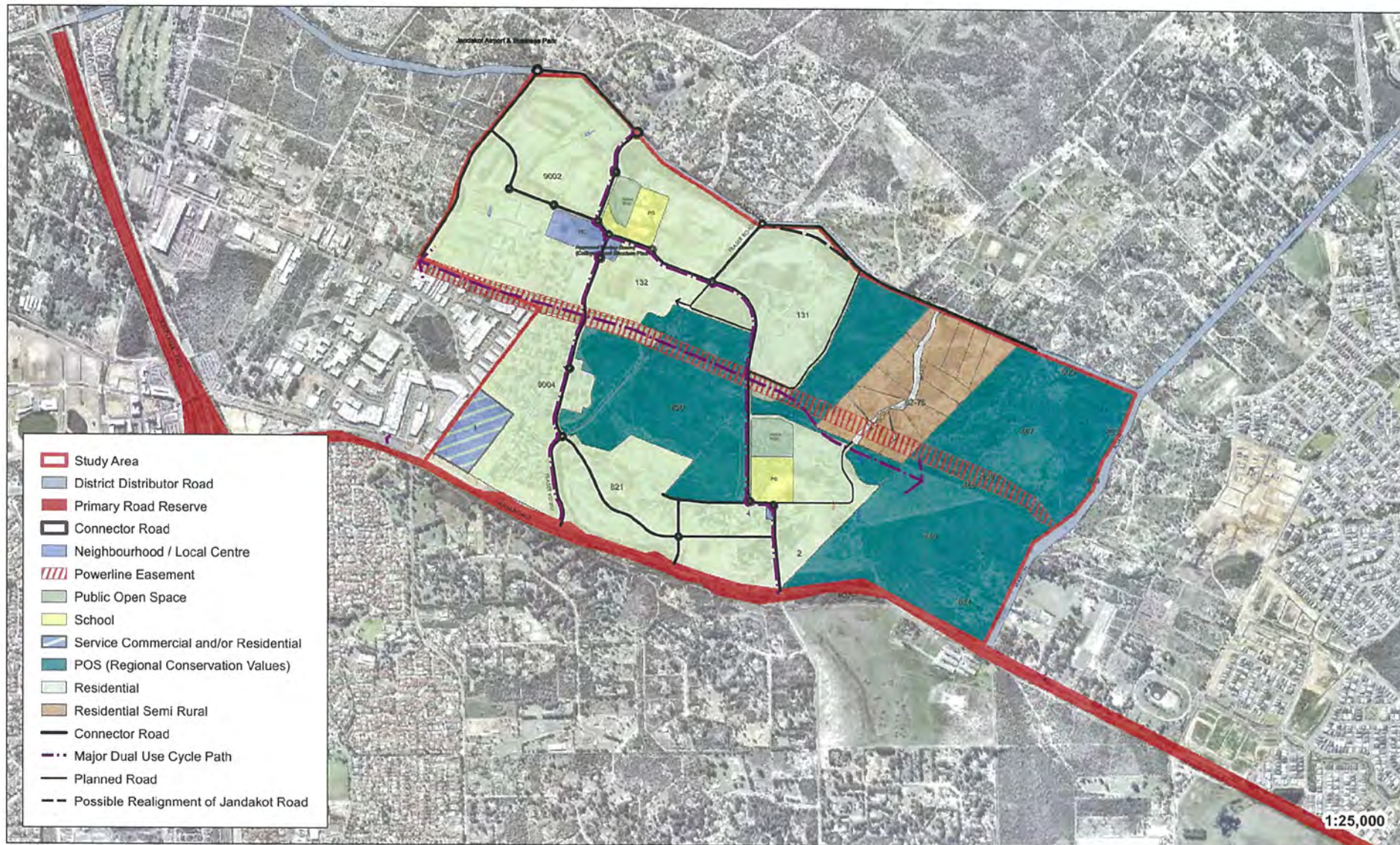
Coordinate System: GDA 94, Zone 50



Perron Developments Pty Ltd  
Treeby Strategic District Water Management Plan

**Figure 2: Underground Water Pollution Control Areas and Regional Planning**





Data Source: Nearmap (2016), CLE (2016)

Coordinate System: GDA 94, Zone 50



Job No. J6195

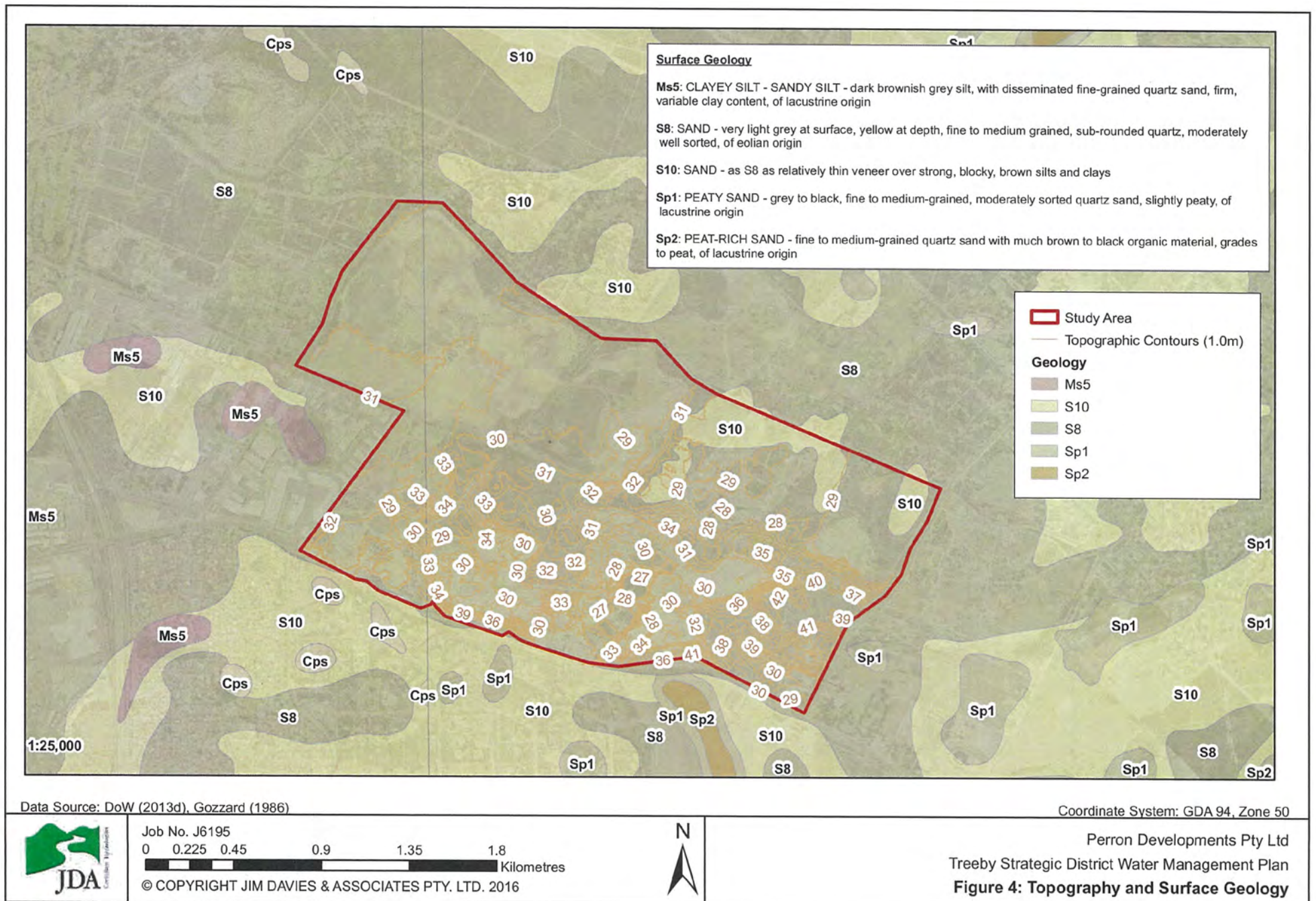
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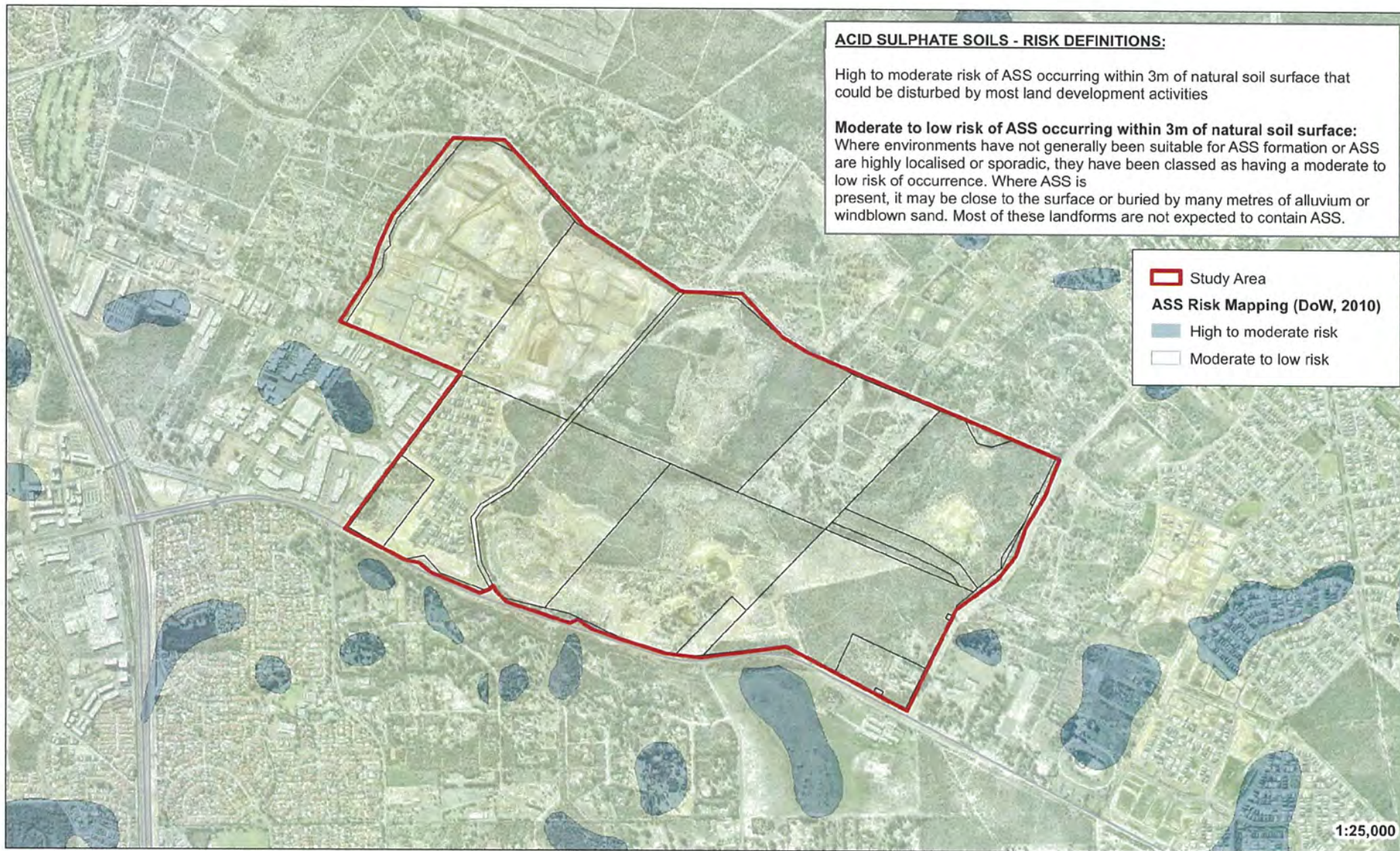


Perron Developments Pty Ltd  
Treeby Strategic District Water Management Plan  
**Figure 3: Concept Plan**









Data Source: Nearmap (2016), DoW (2013a)

Coordinate System: GDA 94, Zone 50



Job No. J6195

0 0.225 0.45 0.9 1.35 1.8 Kilometres

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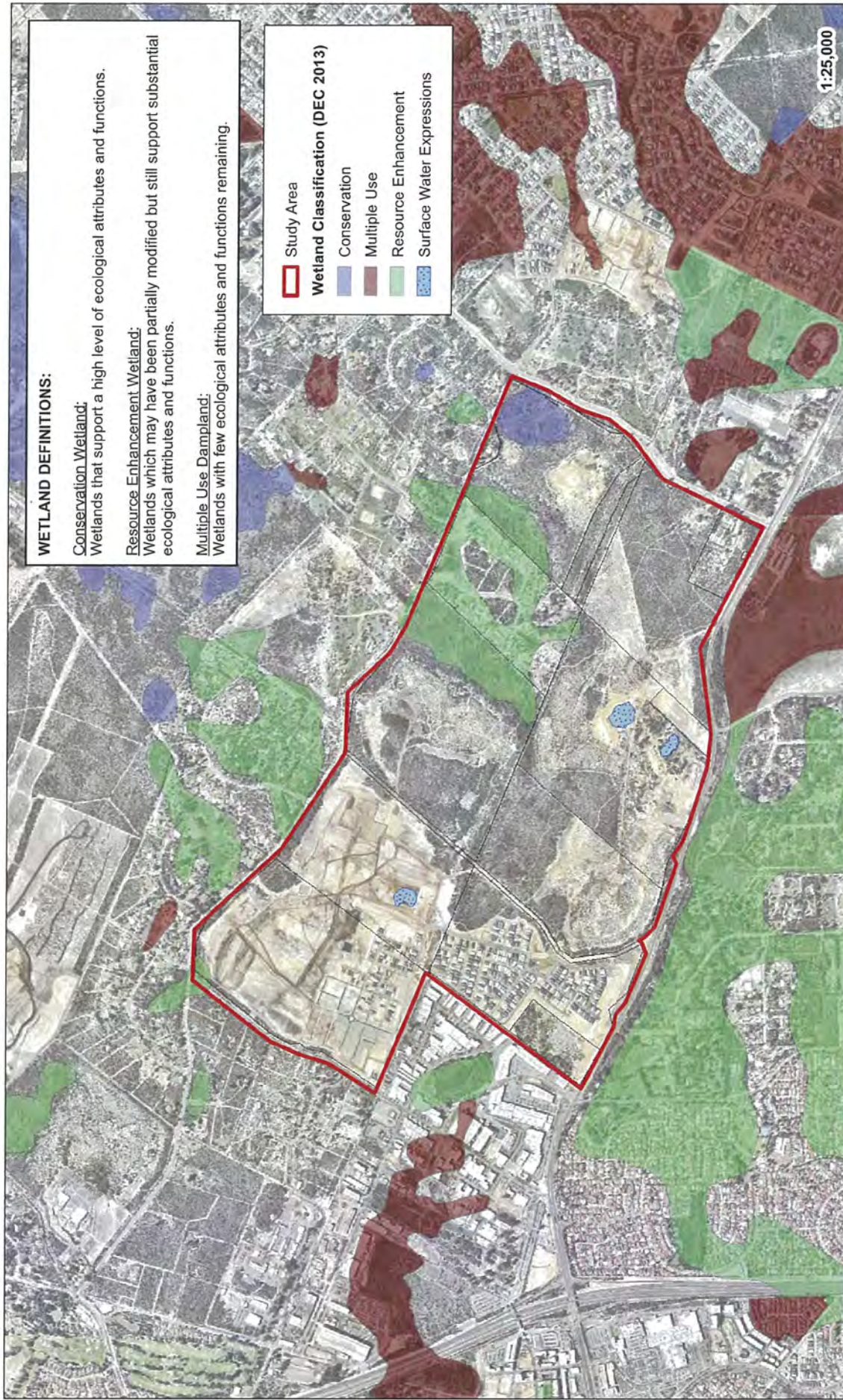
Perron Developments Pty Ltd  
Treeby Strategic District Water Management Plan

**Figure 5: Acid Sulphate Soils**



# WETLAND DEFINITIONS:

- Conservation Wetland:**  
Wetlands that support a high level of ecological attributes and functions.
- Resource Enhancement Wetland:**  
Wetlands which may have been partially modified but still support substantial ecological attributes and functions.
- Multiple Use Dampland:**  
Wetlands with few ecological attributes and functions remaining.



Data Source: Nearmap (2016)

Job No. J6195



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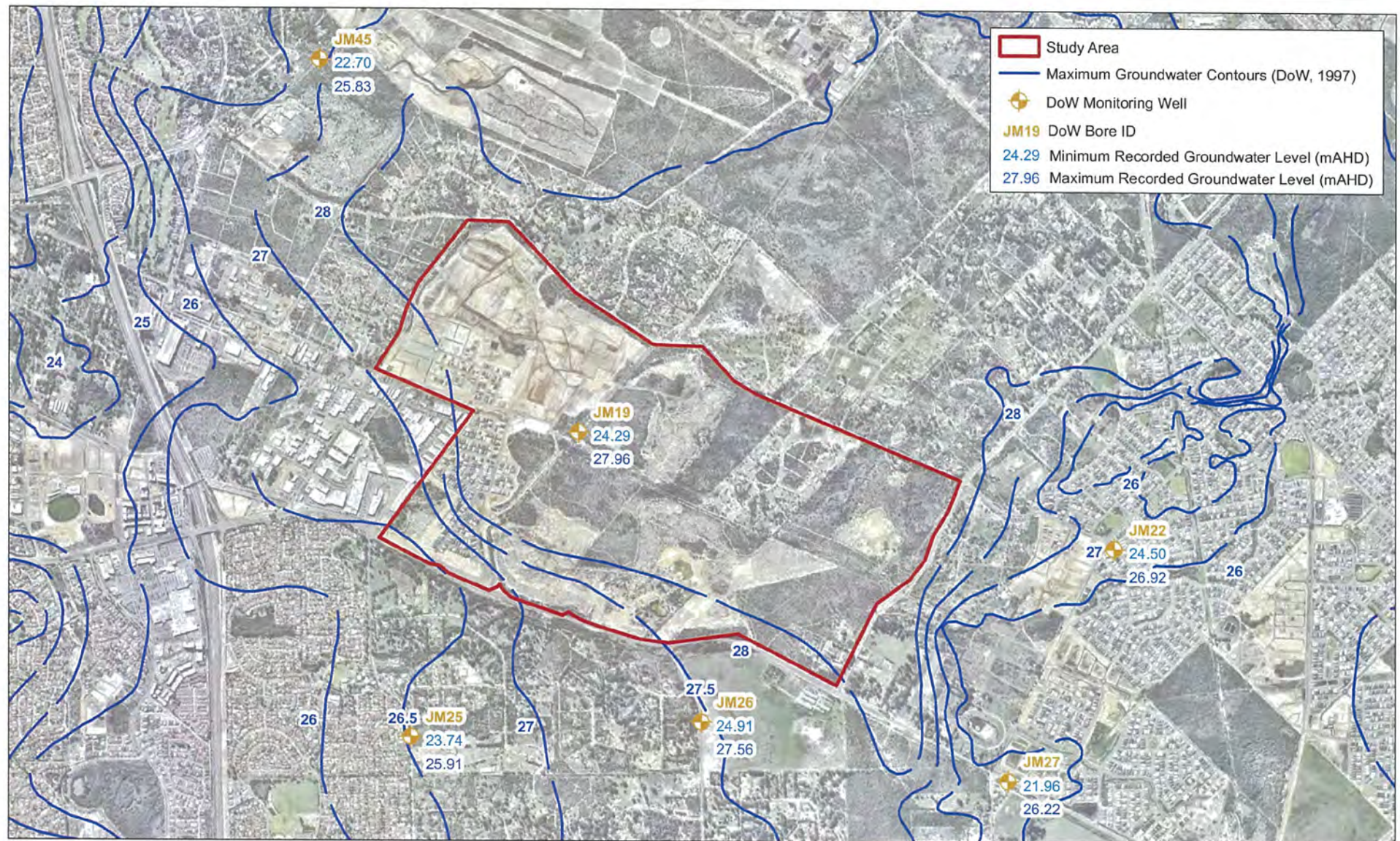
Coordinate System: GDA 94, Zone 50

Perron Developments Pty Ltd  
Treeby Strategic District Water Management Plan

**Figure 6: Wetlands**



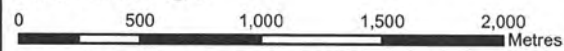




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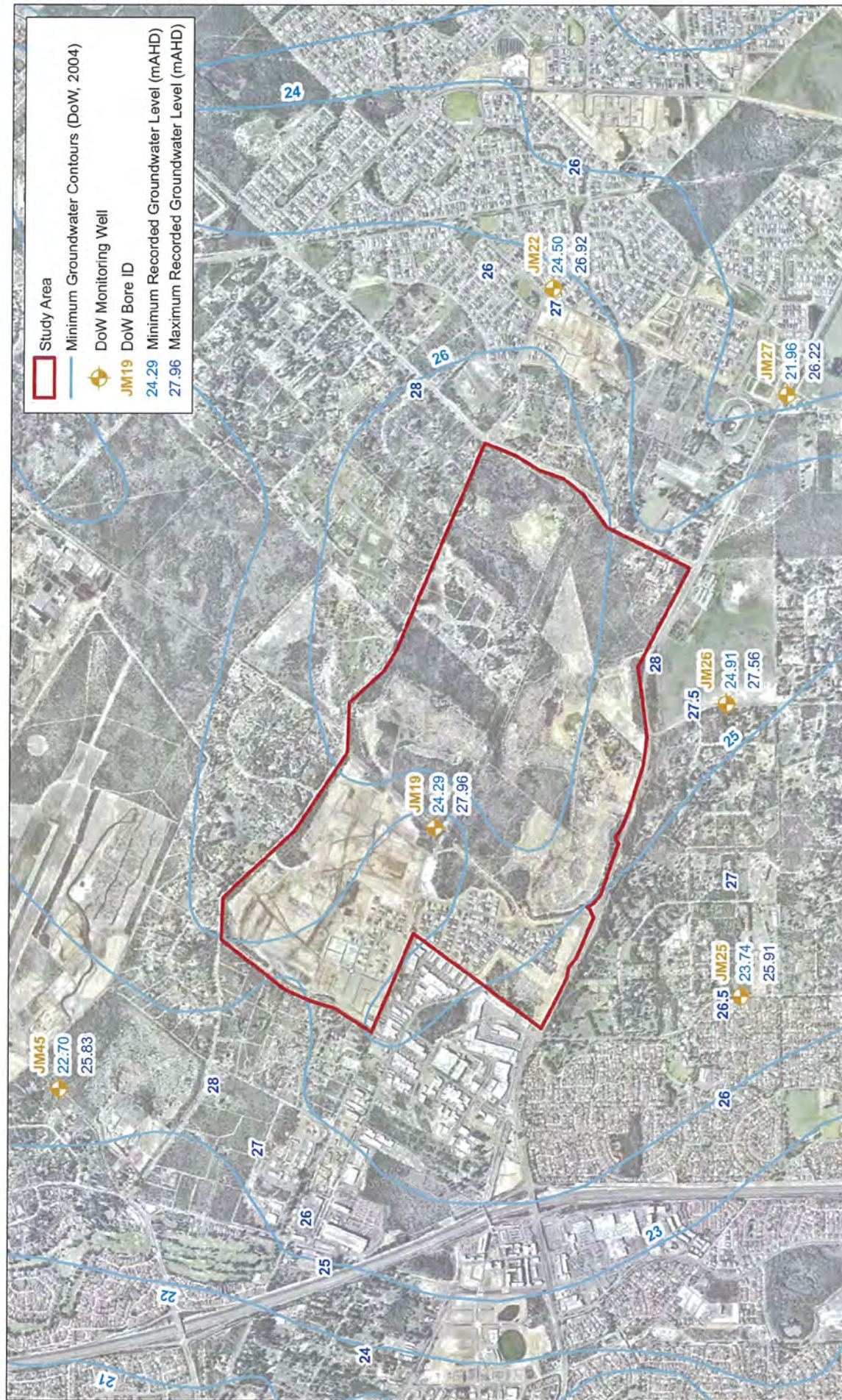


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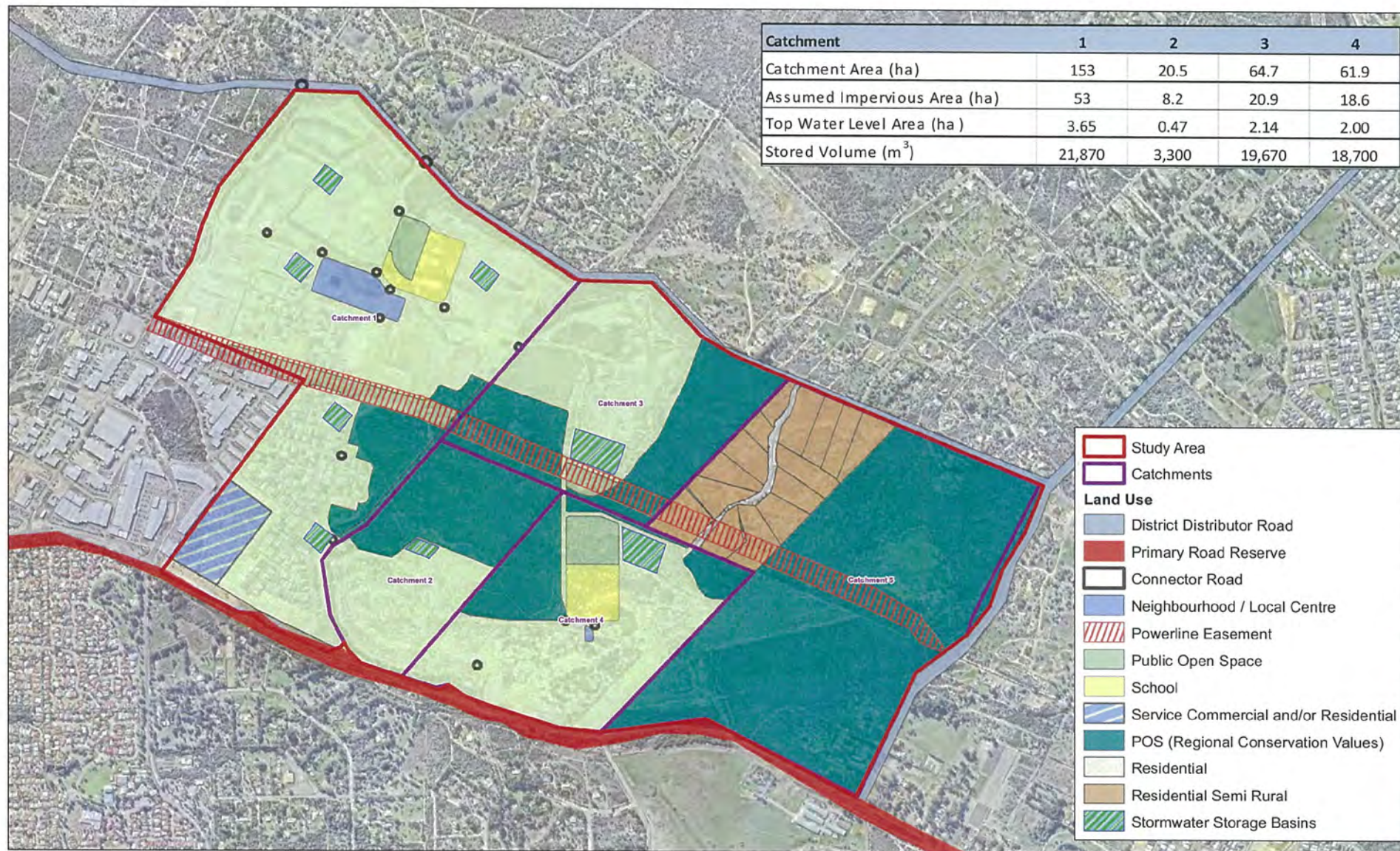


Perron Developments Pty Ltd  
Treenby Strategic District Water Management Strategy  
**Figure 7: Maximum Groundwater Levels**









Data Source: Nearmap (2016), CLE (2016)

Coordinate System: GDA 94, Zone 50



Job No. J6195  
Scale: 1:20,000 @A4

0 400 800 1,200 1,600 Metres

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Perron Developments Pty Ltd  
Treenby Strategic District Water Management Strategy  
**Figure 9: Stormwater Management Plan**

# **APPENDIX A**

## **Infiltration Basin Modelling Results**



## MODRET - Summary Results

Job: Lot 131 Jandakot Rd, SDWMS

Date : 19/05/2016 Performed by : RD



Basin: Catchment 3

Catchment Area 1	20.9 EIA	ha
Catchment Area 2		ha
Top Elevation	29.8	mAHD
Base Elevation	28.8	mAHD
Base Length	120	m
Base Width	150	m
Depth	1	m
Batter	1 in 6	
K <sub>h</sub>	5	m/day
K <sub>v</sub>	5	m/day
n	0.2	
Groundwater Level	26.8	mAHD
Base of Aquifer	-20	mAHD

Stage Volume relationship		
Stage (mAHD)	Volume (m <sup>3</sup> )	Area (m <sup>2</sup> )
28.8	0	18000
28.9	1815	18325
29.0	3665	18655
29.1	5547	18985
29.2	7460	19320
29.3	9410	19655
29.4	11395	19995
29.5	13410	20340
29.6	15460	20685
29.7	17545	21035
29.8	19670	21385

Duration	1 Yr ARI			5 Yr ARI			10 Yr ARI			100 Yr ARI		
	Peak Level (mAHD)	Volume (m <sup>3</sup> )	Total Runoff (m <sup>3</sup> )	Peak Level (mAHD)	Volume (m <sup>3</sup> )	Total Runoff (m <sup>3</sup> )	Peak Level (mAHD)	Volume (m <sup>3</sup> )	Total Runoff (m <sup>3</sup> )	Peak Level (mAHD)	Volume (m <sup>3</sup> )	Total Runoff (m <sup>3</sup> )
0.5hr										28.84	18120	7950
1hr										28.94	18450	9905
3hr										29.10	18985	13795
6hr										29.19	19320	17055
12hr										29.32	19655	21770
24hr										29.50	20340	28740
48hr										29.70	21035	38420
72hr										29.80	21385	44090

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## Appendix 4

### Engineering Infrastructure Report (Wood & Grieve Engineers)

# Treeby (Banjup) District Structure Plan Engineering Infrastructure Report

Perron Developments Pty Ltd

30 June 2016

Revision No. 1

Project Number: 25421-PER-C

Ground Floor, 226 Adelaide Terrace, Perth WA 6000

Phone (08) 6222 7000 Fax (08) 6222 7100 Email [perth@wge.com.au](mailto:perth@wge.com.au) Web [www.wge.com.au](http://www.wge.com.au)

## Revision

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REVISION	DATE	COMMENT	APPROVED BY
1	30 June 2016	Original Issue	J. Fabling

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## 1. Background

---

Wood & Grieve Engineers have been engaged by Perron Developments Pty Ltd to undertake an assessment of civil infrastructure requirements for the development of land within the Treeby District Structure Plan (DSP).

The purpose of this report is to outline the servicing strategy for the purposes of the preparation of the Treeby District Structure Plan.

It is noted that the Stockland Calleya development (Lot 9004 Armadale Road and Lot 9002 & 132 Jandakot Road) is included within the District Structure Plan however as the development and servicing of this land parcel is significantly progressed we have not focussed on this area within our report.

In summary the DSP area can be serviced by the construction, upgrade and/or extension of regional service infrastructure to the site.

## 2. Earthworks

---

The final earthworks levels for the site are a complex combination of geotechnical, hydrological, planning, environmental, engineering design and marketing factors.

The existing topography of the site varies in elevation from RL25 at the center of the site to RL46 near Warton Road, with undulation varying between these levels over the site. The gradient available provides the subject land with the flexibility to orientate the home sites to suit passive solar orientation and to obtain some cut material, together with imported fill material to achieve required lot levels to suit clearance to groundwater and storm event flood routing.

The DSP design has considered the need to match into existing ground levels to suit the preservation Bush Forever vegetation.

Detailed hydrological and geotechnical investigations have been undertaken over Lot 4 which have revealed a typical subsurface profile of a relatively thick 4.5m layer of Bassendean Sands overlaying cemented "coffee rock" at depth. It is anticipated that this surface profile would be indicative of the greater structure plan area. These results indicate that a site classification of Class A in accordance with AS2870-2011 would be anticipated.

Market forces presently dictate the provision of flat building sites with retaining walls to accommodate level differences. It is anticipated that lots will be designed with a maximum of 500mm front elevation from the verge level, with retaining walls installed for greater elevations.

Final earthwork levels will be designed to accommodate market requirements together to ensure adequate clearance to the 100 year flood level for the local and district drainage network, as well as providing adequate clearance to groundwater and ensuring roadway geometrical design incorporates flood routing constraints. Sufficient site levels will be required to be provided for the operation of gravity sewer connections.

## 3. Storm Water Drainage

---

The Better Urban Water Management requirements for Western Australia prescribes that storm water drainage design ensures that the post development flows are maintained to the predevelopment levels specified, as well as incorporating best practice water sensitive urban design.

It is proposed that minor drainage events (typically less than 5year ARI) discharge via a piped drainage network to drainage treatment train systems with water quality structural controls.

Major storm events (those in excess of the 5 year event and up to the 100 year event) are to be conveyed via roadways to online detention storage systems within multiple use corridors. Discharge from these detention areas is to be controlled to retain existing outflow discharge rates and is to be conveyed offsite using swales and spillways. Seasonal fluctuations in the water table result in groundwater levels being close to the existing surface levels at the some portions of the site though the year. These areas will be filled to remove the expressions of groundwater at the

surface. Individual lot levels will need to have sufficient clearance to the average annual maximum groundwater level to achieve the desired site classification.

It is anticipated that the Local Structure Plans developed for the individual developments would incorporate storm water detention requirements of the individual Local Water Management Strategy, with POS locations selected to logically and sympathetically cater for proposed catchments.

## 4. Roadworks

The DSP is bounded by Jandakot Road (to the north), Warton Road (to the east), Armadale Road (to the south) and Solomon Road (to the west). It is proposed that Liddelow Road is extended north through the structure plan area and this together with Fraser Road south will provide two north south links from Armadale Road to Jandakot Road.

Roadways within the DSP area would be constructed in accordance with the configurations established as part of the traffic engineering requirements of this proposal and the City of Cockburn standard requirements. Road pavement configuration would be designed in accordance with specific geotechnical advice.

It is recommended that the upgrading of Armadale Road by Main Roads WA (MRWA) considers the intersection connections with the DSP area. These intersections will be required to be constructed to the standards of MRWA.

## 5. Wastewater

The DSP area is currently outside of the Water Corporations current formal sewer planning scheme, which will require review to accommodate the proposal. The Water Corporation have advised that an approved MRS Amendment would be the catalyst for the review of their wastewater planning scheme to establish the detailed requirements for servicing of the site. However, the Water Corporation have commenced conceptual wastewater supply planning about the subject site which is included as Appendix 1.

Disposal of wastewater within the subject land will be achieved via a network of gravity reticulation sewers gravitating to two wastewater pumping stations. One of the wastewater pump stations servicing the DSP area has already been constructed at the intersection of Clementine Boulevard and Ginger Loop within the Calleya development which discharges, via a pressure to existing infrastructure west of the DSP area. The balance of the DSP area discharges to a proposed Type 40 wastewater pumping station within Lot 4, which will discharge via a section of 100 diameter pressure main and 225 diameter gravity sewer to the existing pump station within the Calleya development. The structure plan would ultimately provide for suitable site to house the required Water Corporation infrastructure. It is anticipated a site in the order of 1000 m<sup>2</sup> would be required near the center of Lot 4.

Local structure plans for individual developments will be designed to have a layout sympathetic to the landform, while providing very direct links through the development to the wastewater pumping station to ensure minimisation of sewer extent and depth.

## 6. Water Supply

The Water Corporation have commenced conceptual water supply planning about the DSP area, as an extension of the Thomson Lake Gravity Supply Scheme, which is included as Appendix 2. This indicates that provision of a DN375 water main extension from the existing DN760 water distribution main crossing Liddelow Road south of Armadale Road and the provision of DN500 water main extension from the existing DN760 water distribution main to Armadale Road, becoming a DN375 within the DSP area.

This water supply arrangement to the site is conceptual and the approval of the MRS Amendment would provide the catalyst for review of the water supply scheme to suit the proposal.

Provision of a potable water supply to individual lots would be achieved the construction of a network of DN100 to DN250 throughout the internal road network of the landholding.



## 7. Underground Power

---

Power supply to the DSP area can be achieved via expansion and/or upgrading of Western Power's network in the vicinity of the site. There are currently 22kV high voltage overhead power lines installed in Armadale Road and in the western portion of Jandakot Road adjacent to the DSP area. There is existing underground high voltage infrastructure that has been constructed as part of the Calleya development within the DSP area.

An underground network will be progressively constructed through the proposed subdivision with interconnected switchgear and transformers located about the site being reticulated as a low voltage underground network connecting to each lot.

It is anticipated that the existing overhead power lines located in Armadale Road and Jandakot Road would be removed and be replaced by underground power cables as part of the development works.

330kv transmission lines traverse the DSP area in a north west to south east alignment. The DSP has allowed for a easement about these transmission lines and landuse within this easement will be required to conform with Western Power's requirements.

## 8. Telecommunications

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The current communications legislation details developments of greater than 100 premises National Broadband Network (NBN) are the Wholesale Provider of last resort, recent amendments to the Communications act has encouraged competition within the wholesale sector; as such the developer has the option to sign up with an alternative provider for a Broadband solution.

NBN has already been installed within the Calleya development and noting the relatively large landholdings within the DSP area, it is expected that the NBN network would be extended through the DSP area. An underground network of NBN cabling (in a common trench with underground power) would be progressively constructed through the proposed land parcel with fibre distribution hubs located about the site as required.

If a particular development was to be less than 100 lots then it is anticipated that telecommunication services would be provided by Telstra.

## 9. Gas

---

The DSP area is currently serviced by an existing connection to Atco Gas's DN300 high-pressure steel gas main located in Armadale Road.

It is anticipated that ATCO Gas will service this development by the internal reticulation of natural gas about the subdivision, utilising a common trench with water reticulation being provided by the developer, connecting to the existing gas mains adjacent to the site.

It is anticipated that a pressure reducing valve will be required to reduce operating pressures at the site to that suitable for residential reticulation.

## Appendix 1 – Wastewater Supply Planning

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## Appendix 2 – Water Supply Planning

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## 1.0 Introduction

---

Transcore prepared a Transport Impact Assessment (TIA) report on behalf of Perron Developments for the proposed Banjup District Structure Plan (DSP) in June 2016. The outcome of the TIA report was presented to the relevant authorities including the City of Cockburn, Main Roads WA and Public Transport Authority (PTA) during a Stakeholder Meeting on 20 September 2016.

During the Stakeholder Meeting Main Roads WA indicated that the existing traffic lights at Ghostgum Avenue/ Armadale Road would be converted to a left in/ left out intersection in the long term if the Armadale Road Deviation project and the construction of a grade separated interchange at Armadale Road/ Verde Drive/ Tapper Road was to proceed. Main Roads WA also expressed some concerns regarding the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road.

Accordingly, the June 2016 TIA report has been amended to include the outcome of the transport modelling and analysis for the proposed access arrangements along Armadale Road fronting the DSP area as per Main Roads WA request. The proposed Main Roads WA access arrangements (assuming that the Armadale Road Deviation project occurs in future) include:

- Downgrading the intersection of Armadale Road/ Ghostgum Avenue to a Left in/ Left out intersection in the long term;
- Removing the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road; and
- Installation of a roundabout at Armadale Road/ Liddelow Road/ DSP access road.

PTA and City of Cockburn also indicated that in the longer term if the intersection of Ghostgum Avenue/ Armadale Road is converted to a left in/ left out intersection, an alternative bus route should be prepared to replace the original proposed bus route within the Calleya LSP area.

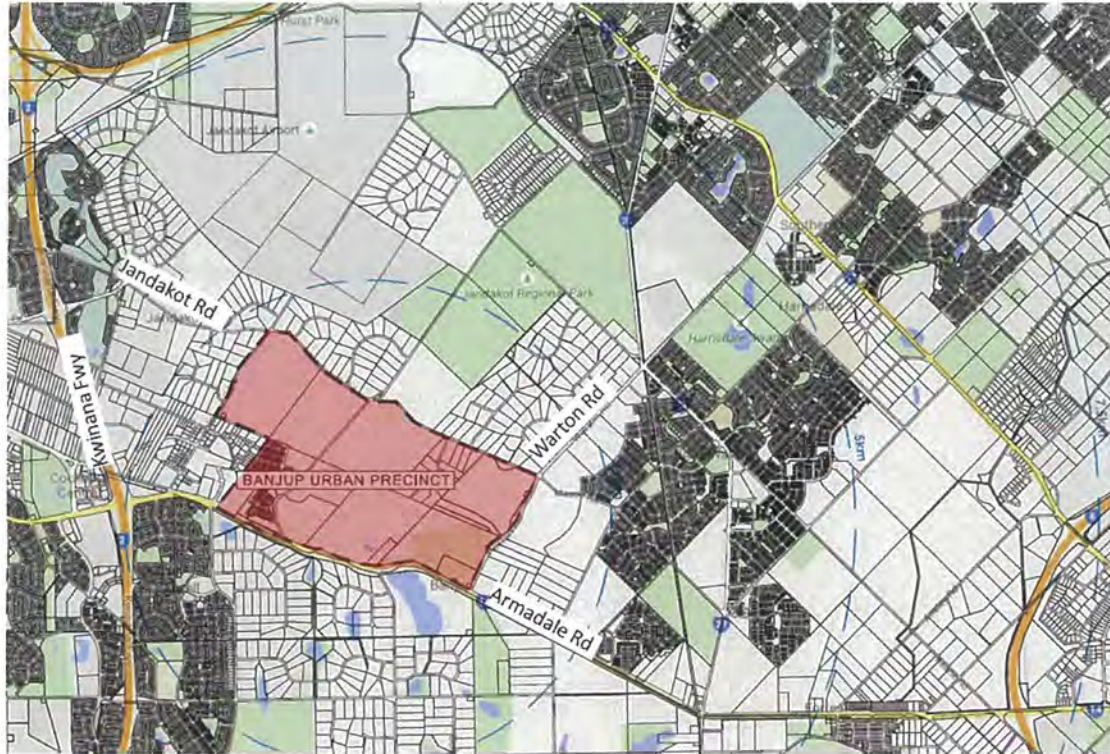
This Transport Impact Assessment (TIA) report is an amendment to the June 2016 TIA report and provides the outcome of the additional modelling and analysis which has been undertaken to reflect the access arrangements proposed by MRWA along Armadale Road fronting the DSP area in the long term. The TIA also provides an alternative bus route option should the intersection of Ghostgum Avenue/ Armadale Road be converted to a left in/ left out intersection.

The boundary of the DSP is defined by Solomon Road, Armadale Road, Warton Road and Jandakot Road. The DSP area is approximately 641 ha and includes the existing 118.5 ha of regional reserves and the following Lots:



- Lots 132 and 9004 (Calleya Estate), 105.9 ha;
- Lot 1 east (previously Lot 821) Armadale Road, about 20.35 ha;
- Lot 2 Armadale Road, 3.15 ha;
- Lots 4 Armadale Road, 58.77 ha;
- Lot 131 Jandakot Road, 64.75 ha; and
- Lot 1 west Armadale Road.

**Figure 1** shows the location of the DSP in relation to the surrounding regional roads.

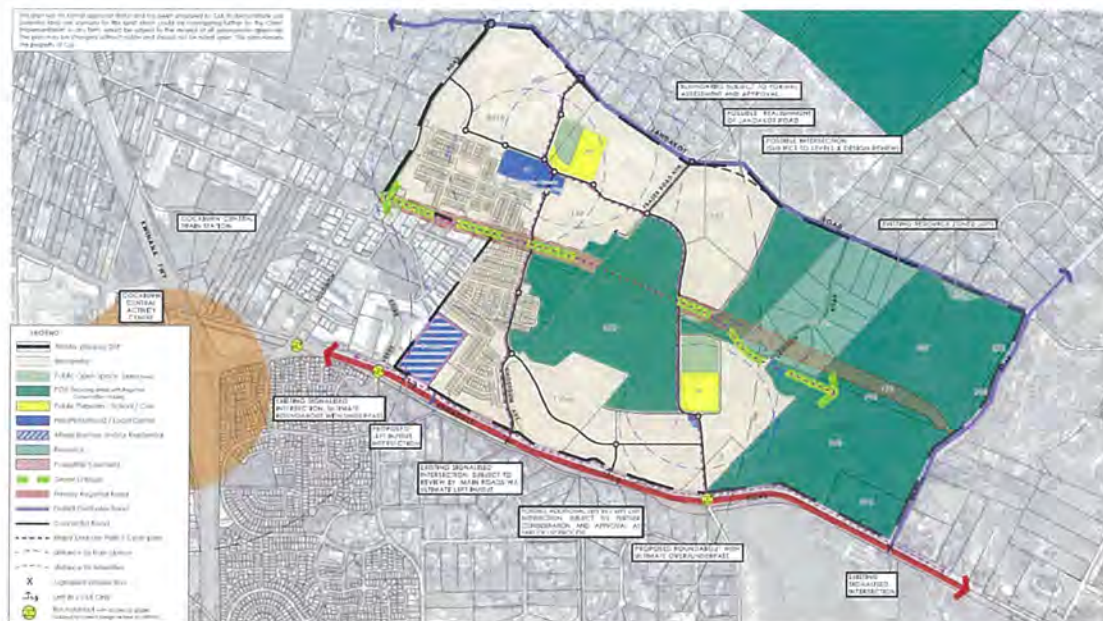


**Figure 1: Location of Banjup District Structure Plan**



## 2.0 Proposed District Structure Plan

The proposed Banjup District Structure Plan is shown in **Figure 2**. The proposed DSP entails the approved Banjup Quarry (Calleya) Local Structure Plan, the existing 14 Lots within the Skotsch Road Rural Residential Precinct, existing 118.5 ha of regional reserves and four potential development sites at Lots 1 west & east, 2, 4 and 131 Armadale Road.



**Figure 2: Proposed Banjup District Structure Plan**

The proposed DSP internal road network is established through a number of Neighbourhood Connector roads which provides sufficient and logical connectivity through different Lots within the DSP area. The proposed internal road network facilitates the traffic circulation within the DSP area and provides connectivity to the surrounding regional roads including Armadale Road and Jandakot Road.

The access arrangements along Jandakot Road include three roundabout intersections at Solomon Road, the N-S spine road (within Calleya LSP) and Fraser Road. The existing priority controlled T-intersection of Jandakot Road/Skotsch Road also provides access to the DSP area.

Jandakot Road in the vicinity of the DSP area will be upgraded to a dual divided carriageway standard with localised widening at intersections to cater for turn lanes. The proposed concept design for Jandakot Road includes 2x7.0m carriageways, 6.0m median with variable verges.

According to the information obtained from Main Roads WA Armadale Road in the vicinity of the DSP area will be duplicated in near future (Funding for

duplication of Armadale Road between Anstey and Tapper roads has been approved). Ultimately, Armadale Road is planned to be upgraded to six lanes.

The proposed DSP access arrangements along Armadale Road entail the existing traffic lights at Fraser Road/ Armadale Road and a proposed 4-way roundabout intersection at Liddelow Road/ Armadale Road/ DSP access road (to Lots 2&4 Armadale Road). In order to improve permeability and connectivity of the proposed DSP area a left in/ left out intersection is also proposed on Armadale Road between Ghostgum Avenue and Liddelow Road.

It is Transcore's understanding that Main Roads WA has some concerns regarding the proposed left in/ left out intersection on Armadale Road. Accordingly the revised modelling and analysis undertaken for the long term option (assuming implementation of Armadale Road Deviation project) does not include the proposed left in/ left out intersection.

The proposed DSP area also shows a left in/ left out intersection for Lot 1 west as approved. It is Transcore's understanding that the final location and layout of the proposed left in/ left out intersection along Armadale Road for Lot 1 west is subject to future planning of this Lot.

The total number of residential lots within the DSP area is estimated to be about 3,500 lots with the following distribution on each Lot:

- About 2,000 Lots on Calleya LSP;
- About 330 Lots on Lot 1 east Armadale Road;
- About 700 Lots on Lots 2 & 4; and,
- About 500 Lots on Lot 131.

It must be noted that the proposed 3,500 Lots for the DSP area does not include any residential Lots on Lot 1 west or Skotsch Road locality.

According to the information provided to Transcore, the current status of planning for Lot 1 west is not clear yet, however for the purpose of traffic modelling and analysis and in the absence of more detailed planning for Lot 1 west, it has been assumed that Lot 1 west would accommodate about 60% service commercial with a lesser proportion (about 40%) residential Lots. Any changes to the above percentages would not change the traffic outcome of this report.



## 3.0 Existing Situation

---

### 3.1 Existing Land Use

The site currently is mainly vacant. There are about 14 residential Lots along Skotsch Road. The northern precinct of the Calleya LSP area is currently vacant but the southern precinct is under construction with the majority of the internal roads and some residential dwellings already constructed. About 118.5 ha (about 25%) of the DSP area is allocated to the Regional Reserve.

### 3.2 Existing Road Network

**Armadale Road** is a Primary Distributor road according to the Main Roads WA Functional Road Hierarchy and a Primary Regional Road in the Metropolitan Region Scheme. Armadale Road has been recently upgraded to dual carriageway standard at the intersection with Ghostgum Avenue. Armadale Road is of single carriageway standard with a speed limit of 80 km/h to the east of the Calleya LSP area and becomes dual carriageway again immediately to the west of Calleya. According to traffic counts published by Main Roads WA Armadale Road in this vicinity (west of Liddelow Road) carried 28,000vpd with 10% heavy vehicles in June 2015.

**Jandakot Road** is of single carriageway standard with a speed limit of 80km/h in the vicinity of the DSP area. According to Main Roads WA, Jandakot Road is a Regional Distributor and a District Distributor (B) in accordance with City of Cockburn classification. According to traffic counts provided by the City of Cockburn, Jandakot Road, 220m west of Skotsch Road, carried about 11,200vpd in 2015.

Jandakot Road continues to the east to form a dual lane roundabout intersection with Warton Road. Jandakot Road forms a 4-way roundabout with Berrigan Drive. This roundabout currently has single lane approaches on all legs. According to traffic counts provided by Main Roads WA Berrigan Drive, east of Kwinana Freeway, carried about 19,000vpd in 2014/2015.

**Solomon Road** is a District Distributor B Road of single carriageway standard with a speed limit of 70km/h in the vicinity of the DSP area. According to traffic counts provided by the City of Cockburn, Solomon Road, south of Jandakot Road, carried about 6,500vpd in 2015. Solomon Road connects to Jandakot Road at a T-intersection without any turn lanes or widening on Jandakot Road. Solomon Road connects to Armadale Road at a T-intersection with a 45m left turn pocket and a 70m right turn pocket on Armadale Road as well as a 45m flare on Solomon Road.

**Skotsch Road** is an access road which provides access to the existing residential dwellings to the south of Jandakot Road. The existing intersection of



**Warton Road** is a District Distributor A Road of dual carriageway standard with a speed limit of 70km/h in the vicinity of the DSP area. According to traffic counts provided by Main Roads WA, Warton Road, south of Jandakot Road, carried about 18,600vpd in 2014/2015. Warton Road connects to Jandakot Road at a roundabout intersection. Warton Road connects to Armadale Road at a signalised intersection.

The closest bus service in the vicinity of the DSP area is the existing bus route 518 (from Challenger Institute of Technology to Cockburn Central Station) running along Armadale Road to the south of the DSP area.

A map of the Cockburn Central area in Western Australia. The map shows several bus routes and zones. A large red-shaded area is labeled 'Banjup DSP'. A yellow-shaded area is labeled 'COCKBURN CENTRAL'. A green-shaded area is labeled 'JANDAKOT'. A brown-shaded area is labeled 'PIARA WATER'. A north arrow is located in the top right corner. A legend box in the center lists bus routes: 514, 518, 520, 522, 525, 526, 527, 530, 531, 532. A legend box in the bottom left lists bus routes: 514, 522, 530, 531, 532. A legend box in the bottom right lists bus routes: 518, 527, 530, 531, 532. A legend box in the bottom center lists bus routes: 525, 527, 530, 531, 532. A legend box in the bottom right lists bus routes: 527. A legend box in the bottom right lists bus routes: 527. A legend box in the bottom right lists bus routes: 527.

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Version: 1, Version Date: 08/09/2017

### 3.4 Pedestrian and Cyclist Facilities

There are no existing pedestrian or cyclist facilities on Jandakot Road or Solomon Road in the vicinity of the DSP area. The recent upgrading of Armadale Road through the Ghostgum Avenue intersection has provided on-road cycle lanes on Armadale Road along the frontage of the Calleya LSP although other sections of Armadale Road to the east and west have not yet been upgraded to this standard. A 2.5m concrete shared path is in place at the eastern side of Warton Road.

The Department of Transport's Perth Bike Map series (see **Figure 4**) shows that bicycle lanes or sealed shoulder are provided either side of Armadale Road and Jandakot Road.

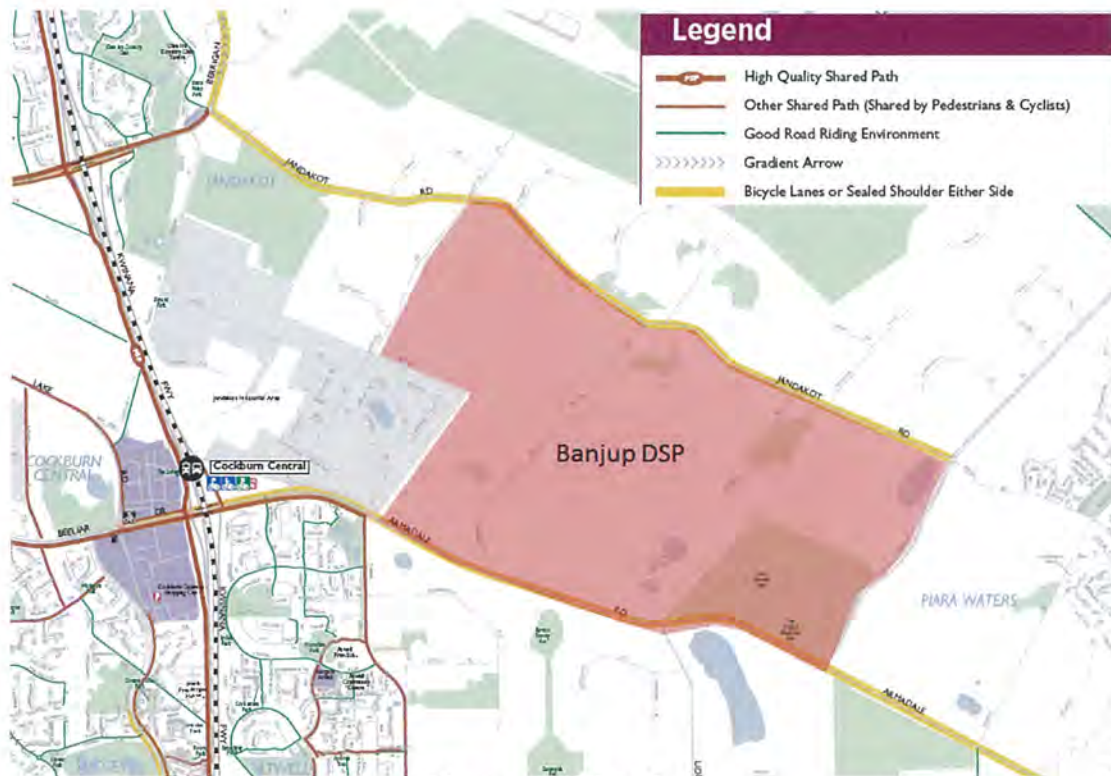


Figure 4: Bike Map

### 3.5 Changes to the Surrounding Road Network

There are regional and local proposed changes to the surrounding road network in this area. Armadale Road is expected to be upgraded to 4 lanes in the medium term and 6 lanes in the longer term. Jandakot Road is also expected to be upgraded to 4 lanes in future to provide another strong east-west link parallel to Armadale Road.

The Western Australian Planning Commission (WAPC) has recently issued a Planning Control Area (PCA No 122) for the Armadale Road Deviation (ARD) which indicates the realignment proposal of Armadale Road in this area. **Appendix A** contains a copy of PCA No 122.

The following statement provides City of Cockburn's advice on this project:

*"Even with the Armadale Road Deviation project it should be noted that the existing North Lake Road (Verde Drive) Other Regional Roads alignment (established as part of MRS amendment 1038/33) remains unaffected by this proposal. That is, the Armadale Road Deviation does not in itself represent an overall road arrangement which in total would perform the general functions and objectives equivalent to those of the specific Other Regional Road alignment achieved by MRS Amendment 1038/33. Thus as established by the MRS amendment, the Other Regional Roads reserved portion representing North lake Road (Verde Drive) retains its function of providing regional access to the regionally significant Industrial area".*

It is understood that the ARD proposes lowering Armadale Road and placing it in a trench from west of Solomon Road all the way to the east of Verde Drive. As a result, the existing intersections of Armadale Road/ Solomon Road and Armadale Road/ Tapper Road/Verde Drive would need to be converted to roundabout at surface level, with on and off ramps connecting the roundabouts to the Armadale Road (referred to as a "duck and dive" treatment).

Due to the close proximity of the existing signalised intersection on Ghostgum Avenue/ Armadale Road to the future potential grade separated intersection on Armadale Road/ Tapper Road/Verde Drive, there would be a risk of safety issues associated with weaving movements for the section of Armadale Road between the end of the Armadale Road trench (the grade separation would involve lowering the through traffic lanes on Armadale Road) and the signalised intersection on Ghostgum Avenue. The length of the weaving would be affected by the queue back on Armadale Road at the traffic lights.

Main Roads WA is currently investigating the details of the traffic operation along Armadale Road assuming the proposed ARD project occurred. It is likely that the existing traffic lights at Ghostgum Avenue intersection would be converted to a left in / left out intersection to facilitate the future traffic operation on Armadale Road in this locality.

With respect to Jandakot Road upgrades (responsibility of the City of Cockburn and various developers), the plan is to:

- Upgrade Jandakot Road to dual carriageway ultimately. The ultimate standard would include two traffic lanes each way and 6m median (the proposed cross section does not fit with the existing road reserve of Jandakot Road and requires land take from both sides) and;
- The intersection of Jandakot Road/ Berrigan Drive/ Airport south link would be converted to traffic lights and Berrigan Drive would be duplicated between the Freeway and Jandakot Road (construction to commence in 2016).

The proposed local changes within the DSP area include provision of the proposed internal neighbourhood connector roads and in particular the N-S spine road within Calleya Master Plan area which provides a north-south link between

Armadale Road and Jandakot Road and would assist in the distribution of traffic onto Armadale Road and Jandakot Road.

The other proposed local changes to Armadale Road include conversion of the existing T-intersection of Armadale Road/ Liddelow Road into a roundabout intersection. A potential left in/ left out intersection on Armadale Road is also proposed in the DSP area.

Transcore understands that Main Roads WA has provided “in principal” approval for the proposed 4-way roundabout intersection at Armadale Road/ Liddelow Road; however Main Roads WA has concerns about the proposed left in/ left out intersection on Armadale Road. For the purpose of this report additional modelling and analysis are undertaken to reflect the removal of the proposed left in/ left out intersection from Armadale Road as per Main Roads WA request.

### **3.6 Public Transport Network Planning**

According to the information provided by the Public Transport Authority (PTA) in February 2015 as part of the Calleya Master Plan development application, a bus route is likely to be run through the Calleya LSP area. This bus route would travel north-south through Calleya (refer **Figure 5**). This potential bus route could be:

- A new PTA bus route between Cockburn and Murdoch stations;
- A connection with Route 515 (Glen Iris); or
- An extension or alternative route to Route 515 (Glen Iris).

The timing of any future bus route is unknown at this stage and is subject to Government funding that may be influenced by passenger demand and the developers providing adequate road access/connections. Figure 5 also shows the potential bus stops along the proposed bus route within the Calleya LSP area.

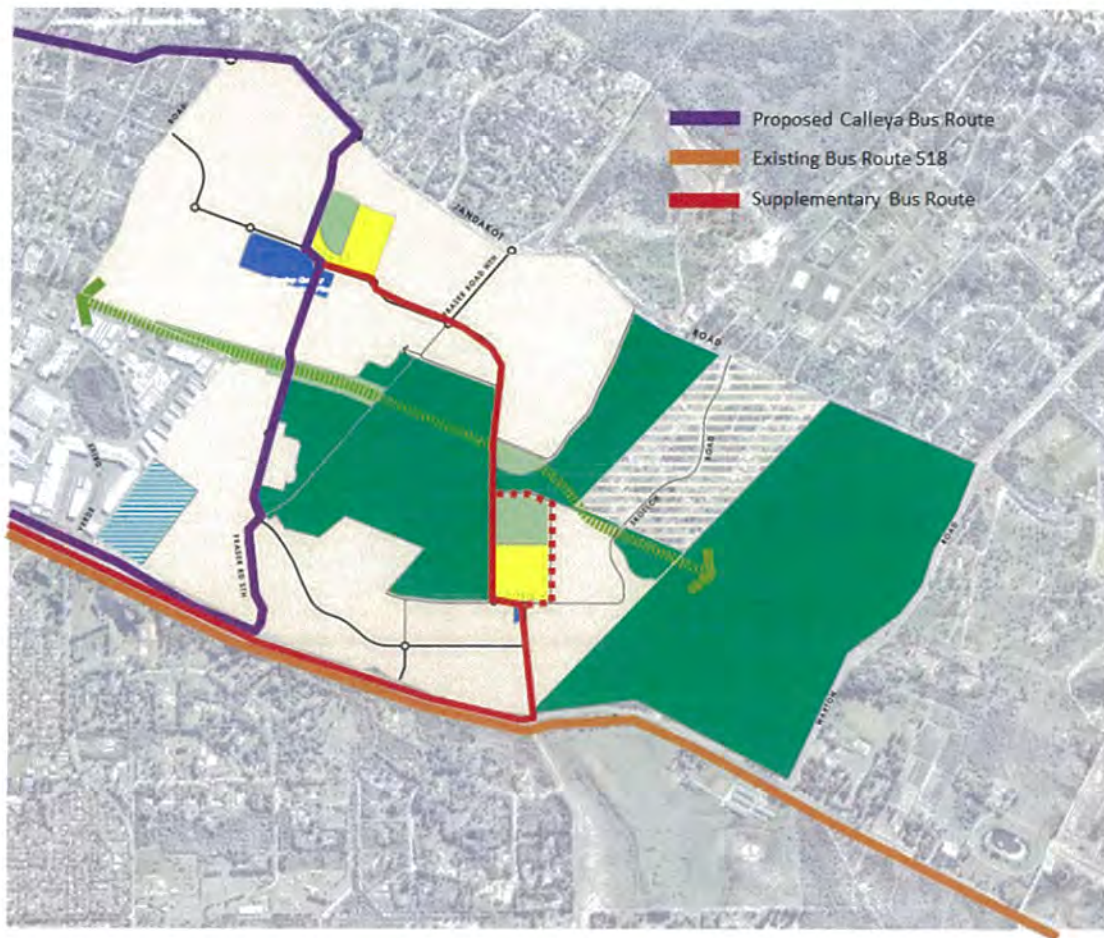




**Figure 5: Proposed Bus Route through Calleya LSP Area**

The latest information received from PTA in June 2016 confirms the above planning is still valid. According to the same information, a 1km separation distance between parallel bus routes in this area has been recommended. Accordingly, the proposed north south route through Calleya LSP area is not likely to be replicated through future developments further east and the existing bus route which currently travels on Warton Road will shift to Wright Road (in Piara Waters) once Wright Road is fully constructed.

However, PTA suggested that in the event that residential development extends east of the Calleya Master Plan and sufficient demand arises for secondary bus services, then there is likely to be a need for a supplementary bus route (indicated as the red line in **Figure 6**). The route would likely operate from Cockburn Central, along Armadale Road, then north- south through the eastern development across to the proposed Neighbourhood Activity Centre.



**Figure 6: Potential future bus routes (PTA)**

The proposed bus route within the Calleya LSP area shown in Figure 5 is subject to the availability of the full movement intersection at Ghostgum Avenue/ Armadale Road in future. However, if the existing signalised intersection at Ghostgum Avenue converts to a left in/ left out intersection in the longer term as a result of the proposed ARD project, then an alternative bus route option would be required to replace the current proposed bus route.

It is Transcore's understanding that City of Cockburn and PTA are collectively investigating the possible potential options for the proposed alternative bus route through consultation with Stockland. As a result of the current investigations PTA and City of Cockburn have prepared a potential alternative bus route option as shown in **Figure 7**.

The proposed alternative bus route option travels between Jandakot Road and Solomon Road through the northern part of the N-S spine road and some of the local roads within Calleya LSP area.







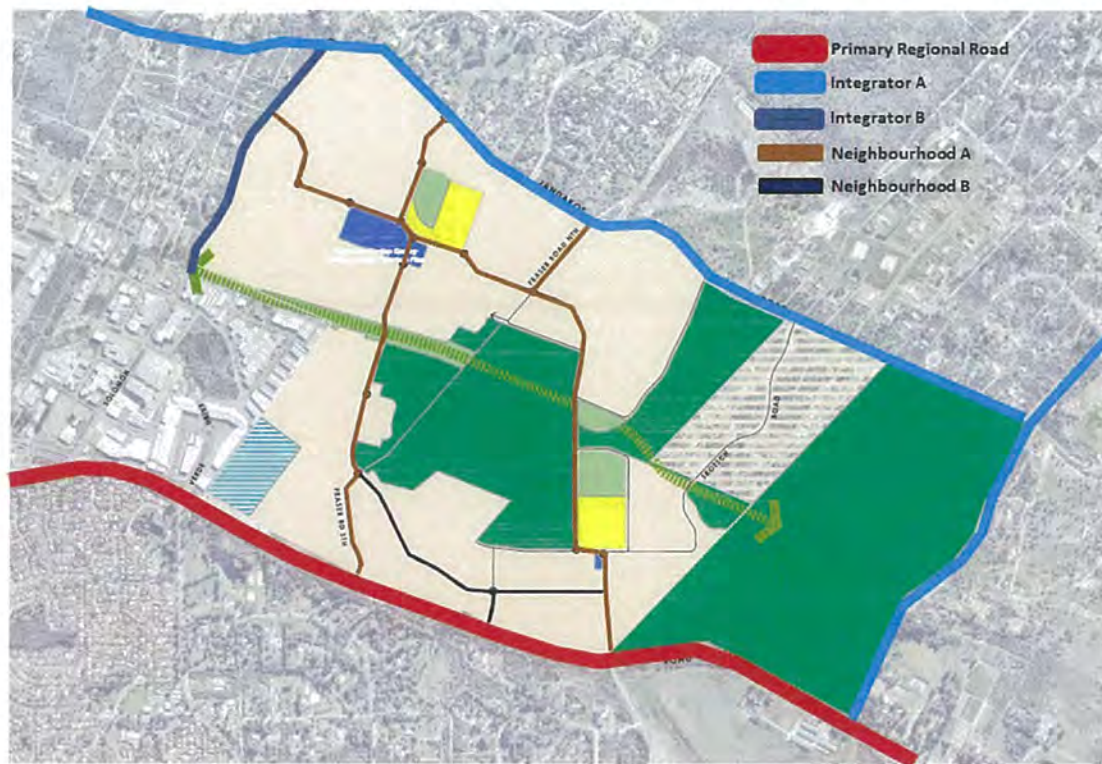
Figure 8: Transperth Future Service Development Plan Map



## 4.0 Proposed Transport Network

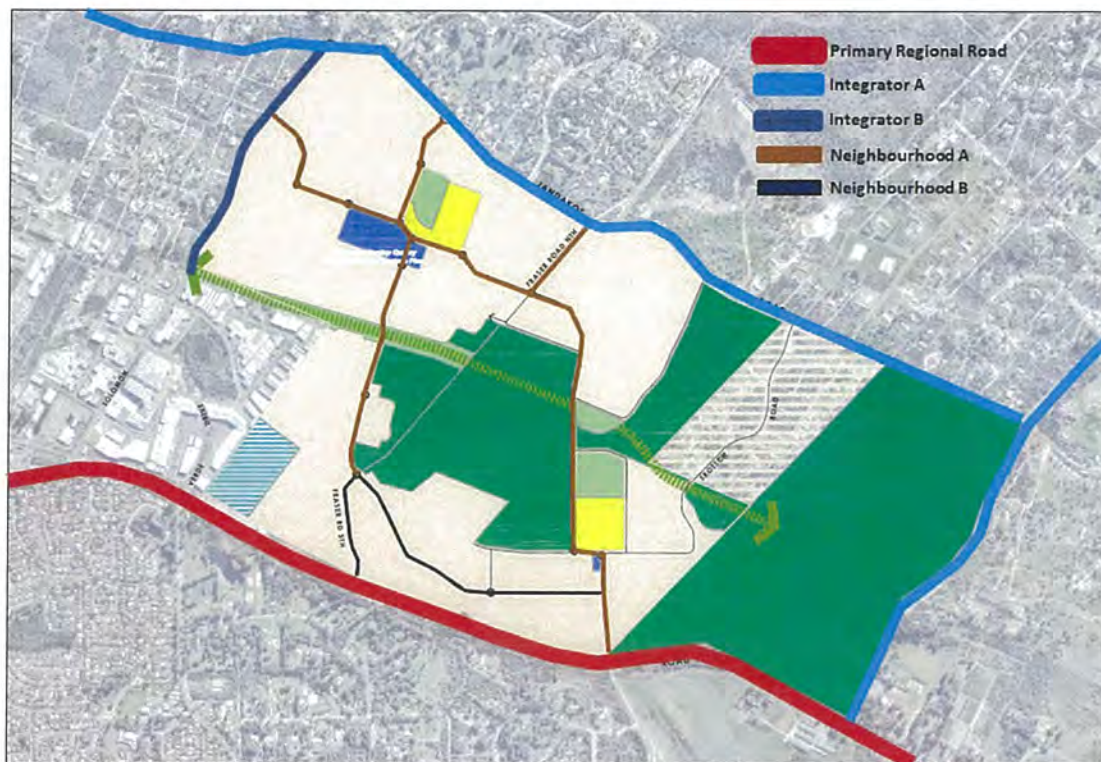
### 4.1 Road Hierarchy

The proposed hierarchy of roads within the DSP area is illustrated in **Figure 9** using the road hierarchy classification from Liveable Neighbourhoods (2007).



**Figure 9: Proposed Road Hierarchy (Original access arrangements along Armadale Road)**

**Figure 10** illustrates the proposed road hierarchy of the DSP area as per access arrangements proposed by Main Roads WA for the longer term along Armadale Road. Traffic modelling and analysis undertaken indicates that if the intersection of Ghostgum Avenue/ Armadale Road converts to left in/ left out and the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road is removed then the projected daily traffic volume on the southern section of the N-S spine road (Ghosgum Avenue) would drop to less than 3,000vpd and therefore this section of Ghosgum Avenue would be classified as Neighbourhood Connector B road (refer Figure 10).



**Figure 10: Proposed Road Hierarchy (Main Roads WA proposed access arrangements along Armadale Road)**

Armada Road is a Primary Distributor road according to the Main Roads WA Functional Road Hierarchy and a Primary Regional Road in the Metropolitan Region Scheme. The projected traffic volume along Armada Road is expected to be over 50,000vpd in future after upgrading Armada Road to six lanes.

The proposed Banjup DSP only shows the major internal roads within the DSP area. Some key characteristics of the relevant road classifications have been summarised in **Table 1** below. These are generally based on Liveable Neighbourhoods guidelines although the proposed widths would vary slightly from the standard Liveable Neighbourhoods cross-section diagrams.



**Table 1: Key Characteristics for the Proposed LSP Road Classifications**

<b>Road Classification</b>	<b>Indicative upper volume (vpd)</b>	<b>Indicative road reserve width (m)</b>	<b>Indicative road pavement width (m)</b>
Integrator A	35,000	40m	2 x 8.5m (incl. cycle lanes) + 6m median
Integrator B	15,000	25m	2 x 5m (incl. cycle lanes) + median
Neighbourhood Connector A	7,000	23m	2 x 5m (incl. cycle lanes), 2m median and embayed parking
Neighbourhood Connector B	3,000	20m	7.4m and embayed parking

It should be noted that these reserve widths are indicative only and are subject to further adjustment in consultation with the Department of Planning and City of Cockburn during detailed subdivision design.

#### **Integrator A**

Jandakot Road and Warton Road are expected to carry about 20,000vpd to 30,000vpd in the vicinity of the DSP area and therefore are classified as Integrator A Road of dual carriageway standard. The ultimate standard of Jandakot Road would include two traffic lanes each way and 6m median.

#### **Integrator B**

Solomon road will be an Integrator B road in the Liveable Neighbourhoods road hierarchy. The projected traffic volume on Solomon Road is about 10,000vpd to 12,000vpd in the vicinity of the DSP area.

#### **Neighbourhood Connectors**

The proposed north-south and east-west roads within the Calleya Master Plan area are expected to carry about 3,000vpd to 7,000vpd and therefore are classified as Neighbourhood Connector A roads. The southern section of Ghostgum Avenue would be classified as Neighbourhood Connector B road if the intersection of Ghostgum Avenue/ Armadale Road converts to left in/ left out in longer term.

Fraser Road to the south of Jandakot Road is also classified as Neighbourhood Connector A road.

The proposed north-south Road within Lots 4 and 131 which connects Armadale Road to Fraser Road is expected to carry traffic volume of more than 3,000vpd and therefore is classified as Neighbourhood Connector A road.

The proposed east-west Road which travels through Lots 4 and 821 and the proposed left in/left out connector link into Armadale Road are classified as Neighbourhood Connector B Roads.

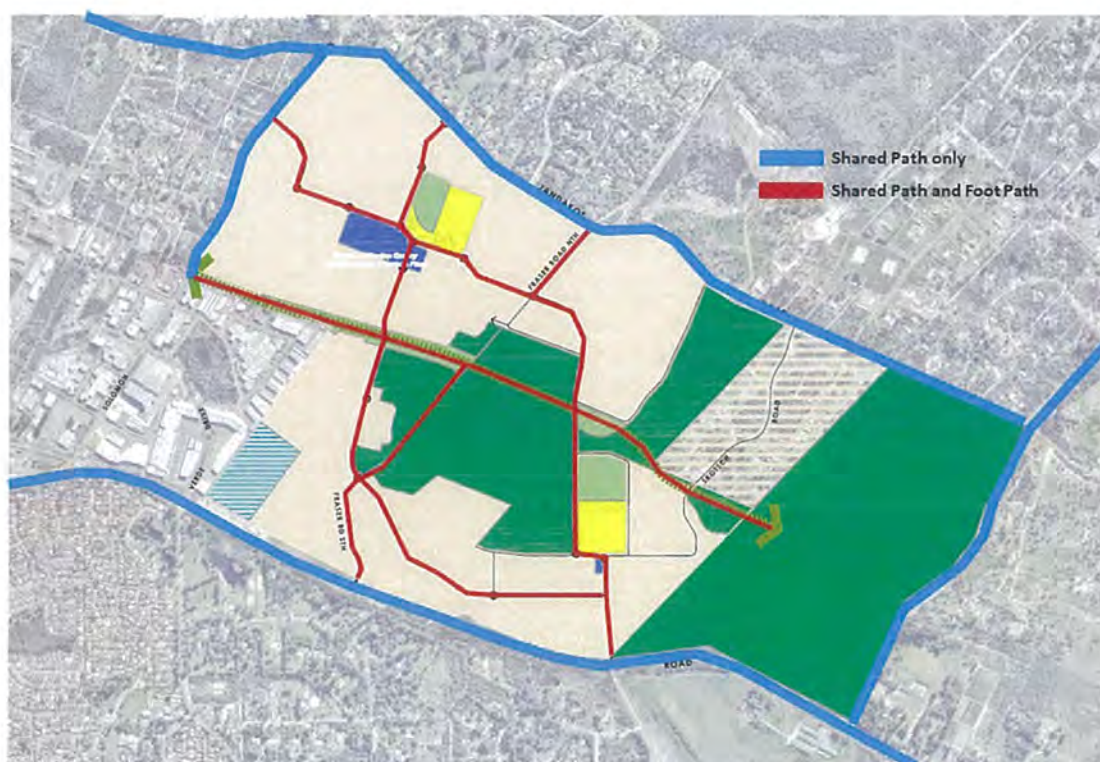
## 4.2 Public Transport

Existing bus services in this area are described in section 3.3 of this report and current planning by the Public Transport Authority is discussed in section 3.6.

## 4.3 Pedestrian and Cyclist Facilities

**Figure 11** outlines the proposed pedestrian and cyclist network for the DSP area. The proposed pedestrian and cyclist facilities aim to provide a permeable road network within the DSP area and create excellent opportunities for the provision of good pedestrian and cyclist facilities that maximise the use of non-motorised transport modes.

According to Liveable Neighbourhood Guidelines Shared Paths and Footpaths are proposed along all Neighbourhood Connector A roads. Shared Paths are also proposed along Armadale Road, Solomon Road, Warton Road and Jandakot Road.



**Figure 11: Proposed Pedestrian and Cyclist Network**

## 4.4 Integration with Surrounding Area

The proposed land uses for the DSP area are predominantly residential dwellings which are in line with the existing and future surrounding land uses in this area.



The road network of the DSP area will connect to the surrounding road network including Armadale Road and Jandakot Road at a number of locations. This will include two connections to Armadale Road and four connections to Jandakot Road. The proposed pedestrian and cyclist facilities within the DSP area would provide connection to the proposed Shared Paths along Armadale Road and Jandakot Road.

## 5.0 Analysis of the Transport Network

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### 5.1 Assessment Period

The assessment year that has been adopted for this analysis is 2031, with full development of the DSP area.

### 5.2 Traffic generation and distribution

Transcore has developed a subregional strategic transport model for weekday traffic flows for the Armadale area using the EMME transport modelling software package. This model was used to estimate the traffic projections of the proposed DSP area.

The daily traffic generation rate used for the DSP area for this transport assessment is 8 vehicle trips per day (vpd) per dwelling, which corresponds to peak hour trip generation rates recommended in the Western Australian Planning Commission (WAPC) Transport Assessment Guidelines for Development (2006).

The anticipated 3,500 ( $2000+330+700+500=3,530$  say 3,500) dwellings of the DSP area will therefore generate approximately 28,000vpd. It must be noted that the proposed 3,500 Lots for the DSP area does not include any residential Lots on Lot 1 west or the Skotsch Road locality.

According to the information provided to Transcore, the current status of planning for Lot 1 west is not clear yet, however for the purpose of traffic modelling and analysis and in the absence of more detailed planning for Lot 1 west, it has been assumed that Lot 1 west would accommodate primarily about 60% service commercial with a lesser proportion (about 40%) residential Lots.

For the proposed primary schools within the DSP area the trip rate used is 1.0 vph per student during the before and after school peak periods (typically 8-9am and 3-4pm) and 2vpd per student overall. For this assessment the Education Department's standard 430 student primary school design has been assumed, so each of the proposed primary schools are assumed to attract traffic flows of 860vpd.

For the proposed Neighbourhood and Local Centres within the DSP area a trip rate of 121 vpd per 100sqm NLA of the retail area is adopted. Accordingly, the local neighbourhood centre of about 2,800m<sup>2</sup> NLA within the Calleya LSP area is estimated to attract about 3,400vpd. Similarly the proposed 500m<sup>2</sup> Local Centre within Lot 4 would attract about 600vpd.

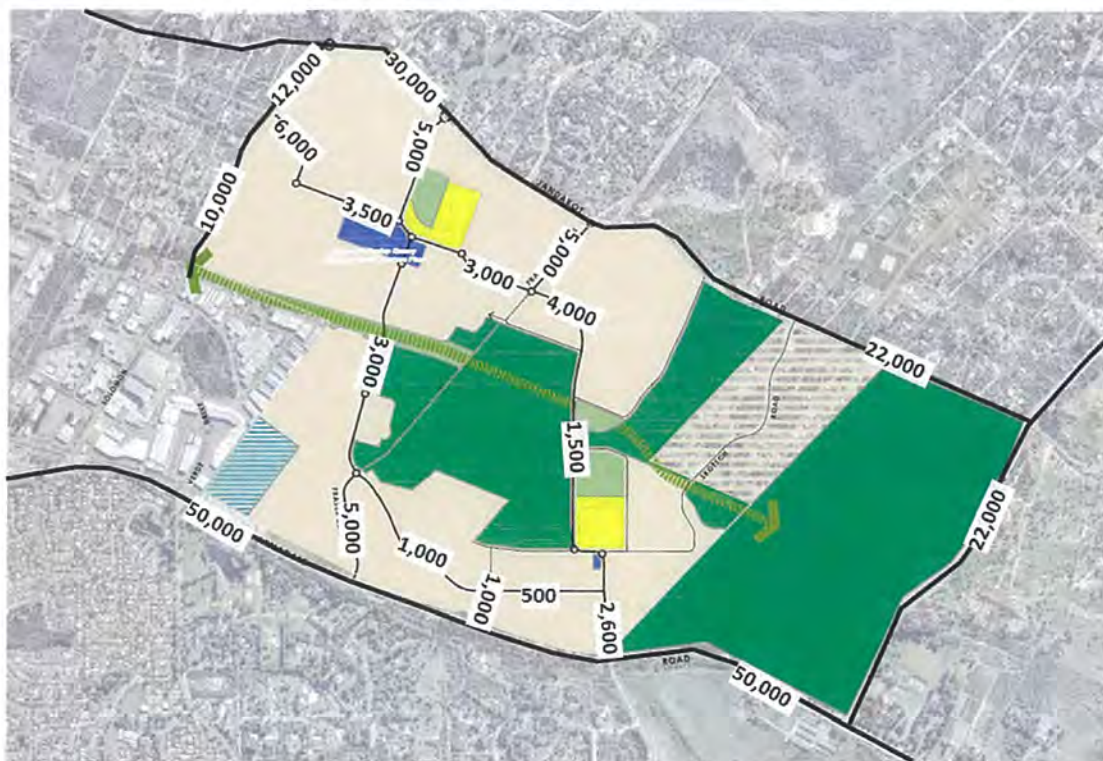
The distribution of these trips is determined by the traffic model in proportion to the location of trip productions and attractors for work trips, education trips and other trips (shopping, social, recreational, etc.) among all the land uses in the traffic model.

### 5.3 Traffic Flow Forecasts

**Figure 12** illustrates future total daily traffic flows estimated for the road network of the DSP area based on the road network and access arrangements shown in the Banjup DSP (refer Figure 2).

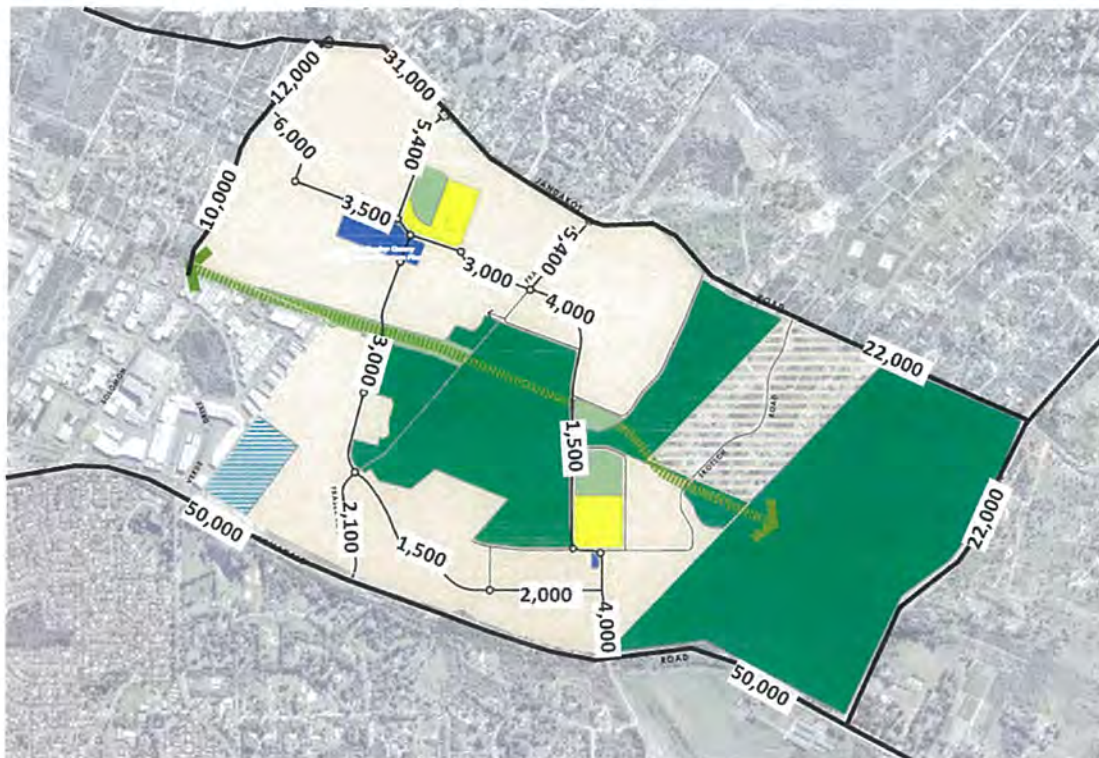
**Figure 13** shows the same figures for the long term. In the longer term it is likely that the existing signalised intersection of Armadale Road/ Ghostgum Avenue converts to a left in/ left out intersection. The traffic projections in Figure 13 reflect the proposed changes to the existing traffic lights at Ghostgum Avenue. The modelling and analysis undertaken for the long term option does not include the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road.

The future total daily traffic flows on the road network in and around the DSP area has been modelled for the future scenario of full development of this area. The modelled surrounding district road network reflects latest future road network upgrades for this area. Accordingly 6 and 4 lanes were assumed for Armadale and Jandakot Roads respectively to reflect the future upgrades proposed for these roads in long term.



**Figure 12: Projected Daily Traffic Volumes (Original access arrangements along Armadale Road)**





**Figure 13: Projected Daily Traffic Volumes (Main Roads WA proposed access arrangements along Armadale Road)**

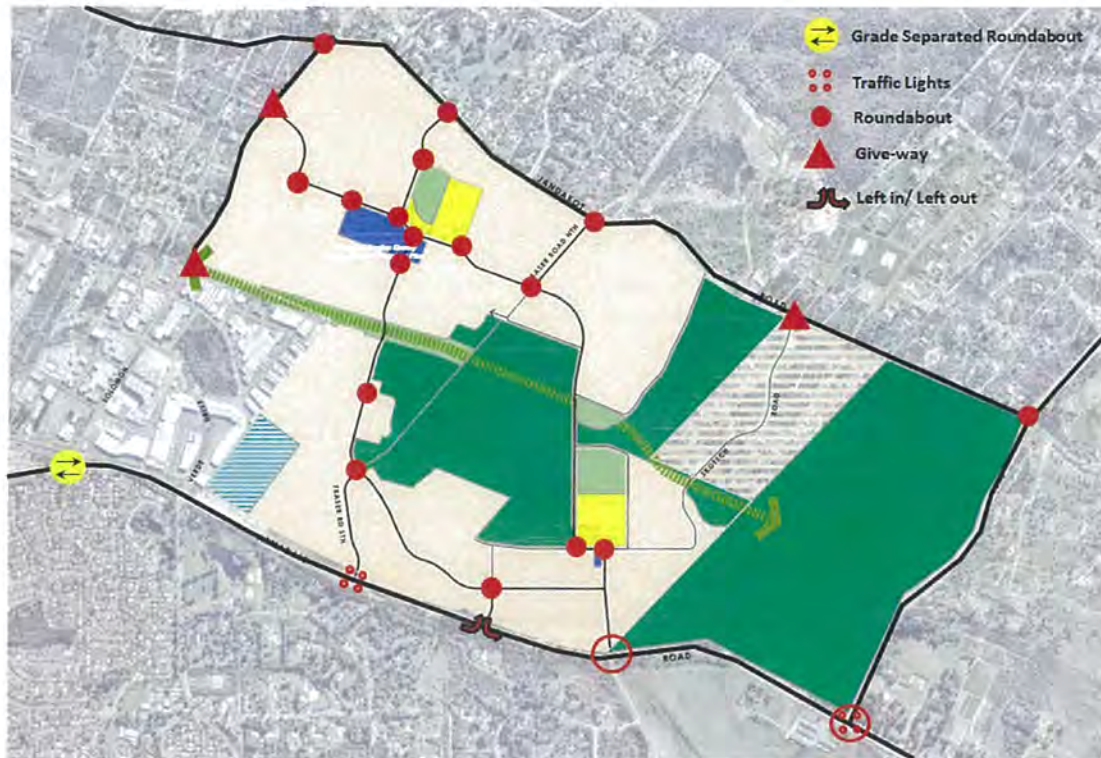
Reviewing the projected traffic volumes in Figures 12 and 13 indicates that in the long term (after downgrading the Ghostgum Avenue/ Armadale Road signalised intersection to left in/ left out intersection and removal of the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road) more traffic would utilise the future roundabout intersection at Armadale Road/ Liddelow Road/ DSP access road. Accordingly the proposed east-west neighbourhood connector B road parallel to Armadale Road would attract more traffic and the projected daily traffic volume on the southern section of the N-S spine road (Ghostgum Avenue) would drop to less than 3,000vpd.

#### **5.4 Roads and Intersections**

The proposed road network to accommodate these traffic volumes has been detailed in section 4 of this transport assessment, including the details of the proposed road hierarchy in section 4.1.

**Figure 14** details the proposed intersection controls for key intersections within the DSP area.





**Figure 14: Intersection Treatments**

#### **Armadale Road Intersections**

The primary access to the DSP area on Armadale Road is proposed by two 4-way intersections at Ghostgum Avenue and Liddelw Road as shown in Figure 14.

Currently the intersection of Ghostgum Avenue/ Armadale Road is controlled by traffic lights, however in the longer term (after the Armadale Road Deviation project), this intersection would be downgraded to a left in left out intersection and the existing traffic lights would be removed. The proposed 4-way intersection of Armadale Road/ Liddelw Road/ DSP access road is proposed to operate as a roundabout.

The DSP shows a left in/ left out access intersection on Armadale Road between Ghostgum Avenue and Liddelw Road. The proposed left in/ left out intersection would improve connectivity and permeability of the DSP area. Main Roads WA expressed some concerns with the proposed left in/ left out intersection and therefore the traffic modelling and analysis in the amended TIA report includes the option without the left in/ left out intersection.

#### **Jandakot Road Intersections**

The proposed DSP provides four connections to Jandakot Road including three roundabout intersections at Solomon Road, N-S road and Fraser Road. The existing intersection of Skotsch Road and Jandakot Road is expected to operate as a priority controlled T-intersection. It is Transcore's understanding that Skotsch Road would not connect to the Lot 4 from south to minimise the level of through traffic on this road.

### **Solomon Road Intersections**

Two priority controlled T-intersections are proposed on Solomon Road from Dolier Road and main east-west road in the Calleya LSP area.

### **Internal Intersections**

A number of roundabouts are proposed within the DSP area for the proposed internal 4-way intersections and major T-intersections. These roundabouts will help manage circulating traffic flows and assist with speed management on the neighbourhood connector roads.

## **5.5 Intersection Analysis**

Capacity analysis of the proposed intersections on Armadale Road and Jandakot Road has been undertaken using the SIDRA computer software package for the typical peak hour. SIDRA is an intersection modelling tool commonly used by traffic engineers for all types of intersections. SIDRA outputs are presented in the form of Degree of Saturation, Level of Service, Average Delay and 95% Queue. These characteristics are defined as follows:

- Degree of Saturation is the ratio of the arrival traffic flow to the capacity of the approach during the same period. The Degree of Saturation ranges from close to zero for infrequent traffic flow up to one for saturated flow or capacity.
- Level of Service is the qualitative measure describing operational conditions within a traffic stream and the perception by motorists and/or passengers. In general, there are 6 levels of service, designated from A to F, with Level of Service A representing the best operating condition (i.e. free flow) and Level of Service F the worst (i.e. forced or breakdown flow).
- Average Delay is the average of all travel time delays for vehicles through the intersection.
- 95% Queue is the queue length below which 95% of all observed queue lengths fall.

The results of the SIDRA analysis are summarised in **Appendix B**.

The SIDRA analysis indicates that the existing traffic lights on Armadale Road/Ghostgum Avenue and proposed roundabout at Liddelow Road/ Armadale Road/ DSP access road would operate satisfactorily and within capacity.

The proposed roundabout intersections along Jandakot Road would also operate satisfactorily with acceptable levels of service at the intersections. The existing intersection of Skotsch Road/ Jandakot Road is also expected to operate satisfactorily as priority controlled T-intersection in future. The proposed large median along Jandakot Road would provide the opportunity for right turn traffic from Skotsch Road to Jandakot Road to occur in two stages.

Additional transport modelling and intersection analysis are undertaken for the future roundabout intersection of Armadale Road/ Liddelow Road/ DSP access road during the longer term and assuming that the intersection of Ghostgum

Avenue/ Armadale Road converts to a left in/ left out intersection. Figure B7 and Table B7 in Appendix B show the intersection layout and intersection operation respectively. SIDRA analysis undertaken indicates that the proposed roundabout intersection would work satisfactorily with overall level of service A and maximum queue of about 48m on Armadale Road.

## **5.6 Access to Frontage Properties**

The WAPC *Liveable Neighbourhoods* policy requires that “Development along integrator B and neighbourhood connector streets with ultimate vehicle volumes over 5,000 vehicles per day should be designed either so vehicles entering the street can do so travelling forward, or are provided with alternative forms of vehicle access. Wider lots with paired driveways and protected reversing areas in the parking lane may be used on streets with up to 7,000 vehicles per day.”

All of the neighbourhood connector roads within the DSP area are expected to carry less than 5,000vpd, so no restriction on vehicular access is required on the proposed neighbourhood connector roads.

No direct access is permitted for the properties along Armadale Road, Jandakot Road and Solomon Road.

## **5.7 Pedestrian / Cycle Networks**

The proposed network of shared paths for pedestrians and cyclists is described in section 4.3 of this transport assessment. This network of paths will provide an excellent level of accessibility and permeability for pedestrians and cyclists within the DSP area, and connections to neighbouring precincts at strategic locations.

## **5.8 Access to Public Transport**

WAPC Transport Assessment Guidelines for Developments (2006) suggest that it is desirable for at least 90 per cent of dwellings to be within 400m straight line distance of a bus route.

The original proposed PTA bus routes within the Calleya LSP area and potential secondary bus route within the residential developments to the east of Calleya (indicated as the red line in Figure 6) would cover the majority of the proposed residential developments within the DSP area.

The proposed alternative bus route option which would replace the original PTA bus route within the Calleya LSP (should the intersection of Ghostgum Avenue/ Armadale Road be converted to a left in/ left out intersection, should the ARD project occur) would cover only the northern part of the Calleya LSP.

Therefore the southern part of the Calleya LSP would be outside of the 400m straight line distance of the proposed alternative bus route. It is desirable that further consideration be given to public transport accessibility of the southern part of Calleya LSP during the detailed planning stages of ARD project.



## 6.0 Conclusions

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The DSP area is anticipated to accommodate approximately 3,500 dwellings, two primary schools, a neighbourhood centre and a local centre.

This residential area is anticipated to generate traffic flows of approximately 28,000vpd. The proposed schools are estimated to attract about 1,700vpd. The proposed local and neighbourhood centres are expected to attract about 4,000vpd.

The proposed key road network of the DSP area has been planned based on WAPC Liveable Neighbourhoods guidelines to accommodate the future traffic flows that will be generated in this area.

Access to the DSP area will be served by two four-way intersections and a left in/ left out intersection on Armadale Road, Three roundabout intersections and a priority controlled T-intersection on Jandakot Road.

Main Roads WA has provided “in principal” support for the proposed 4-way intersection of Armadale Road/ Liddelow Road and installation of a roundabout at this intersection. However, Main Roads WA have expressed concerns regarding the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road.

Main Roads WA also indicated that the existing signalised intersection of Ghostgum Avenue/ Armadale Road could be converted to left in/ left out intersection should the Armadale Road Deviation and construction of a grade separated intersection on Verde Drive/ Tapper Road/ Armadale Road intersection occur.

Due to the uncertainty of the timing of confirmation of the Armadale Road Deviation project this TIA report provides the outcome of the modelling and analysis for the proposed access arrangements shown in the DSP area and the proposed access arrangements by Main Roads WA along Armadale Road assuming implementation of Armadale Road Deviation and construction of the grade separated intersection on Verde Drive/ Tapper Road/ Armadale Road.

Transport modelling and analysis undertaken indicate that if the intersection of Ghostgum Avenue/ Armadale Road converts to left in/ left out and the proposed left in/ left out intersection on Armadale Road between Ghostgum Avenue and Liddelow Road is removed then more traffic would utilise the future roundabout intersection at Armadale Road/ Liddelow Road/ DSP access road.

SIDRA analysis undertaken indicates that the proposed roundabout intersection at Armadale Road/ Liddelow Road/ DSP access road would work satisfactorily in the longer term with overall level of service A and maximum queue of about 48m on Armadale Road.

SIDRA analysis undertaken for future traffic flows (when the DSP area is fully developed) indicates that the proposed intersections on Jandakot Road would operate satisfactorily and within capacity and therefore they can accommodate the DSP traffic after full development and future traffic growth along Armadale Road and Jandakot Road.

The proposed DSP area provides for a comprehensive network of shared paths and footpaths to encourage and facilitate non-motorised travel as well.

The original PTA bus routes within the Calleya LSP area and potential secondary bus route within the residential developments to the east of Calleya would cover the majority of the proposed residential developments within the DSP area.

The proposed alternative bus route option prepared by PTA and City of Cockburn which would replace the original PTA bus route within the Calleya LSP in the longer term (should the intersection of Ghostgum Avenue/ Armadale Road be converted to a left in/ left out intersection) would cover only the northern part of the Calleya LSP. Therefore the southern part of the Calleya LSP would be outside of the 400m straight line distance of the proposed alternative bus route.

It is desirable that further consideration be given to public transport accessibility of the southern part of Calleya LSP during the detailed design stage of the Armadale Road Deviation Project.

# Appendix A

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## Planning Control Area No 122 Armadale Road Deviation



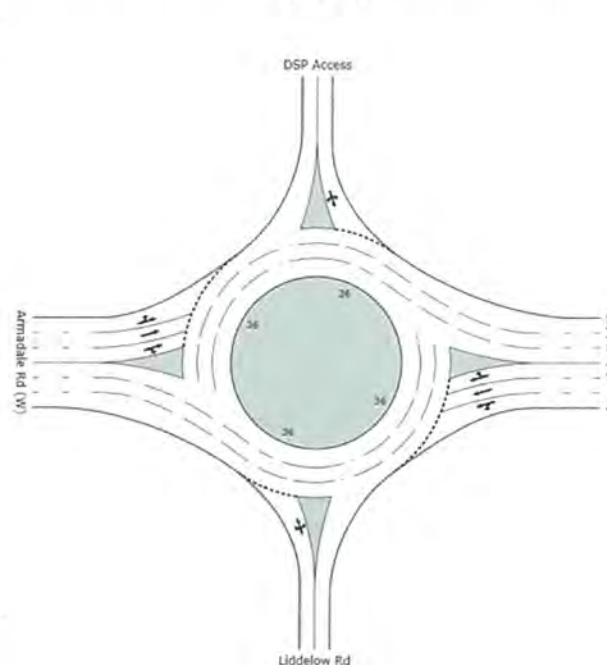


# Appendix B

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## Intersection Analysis (2031 Typical Peak Hours)

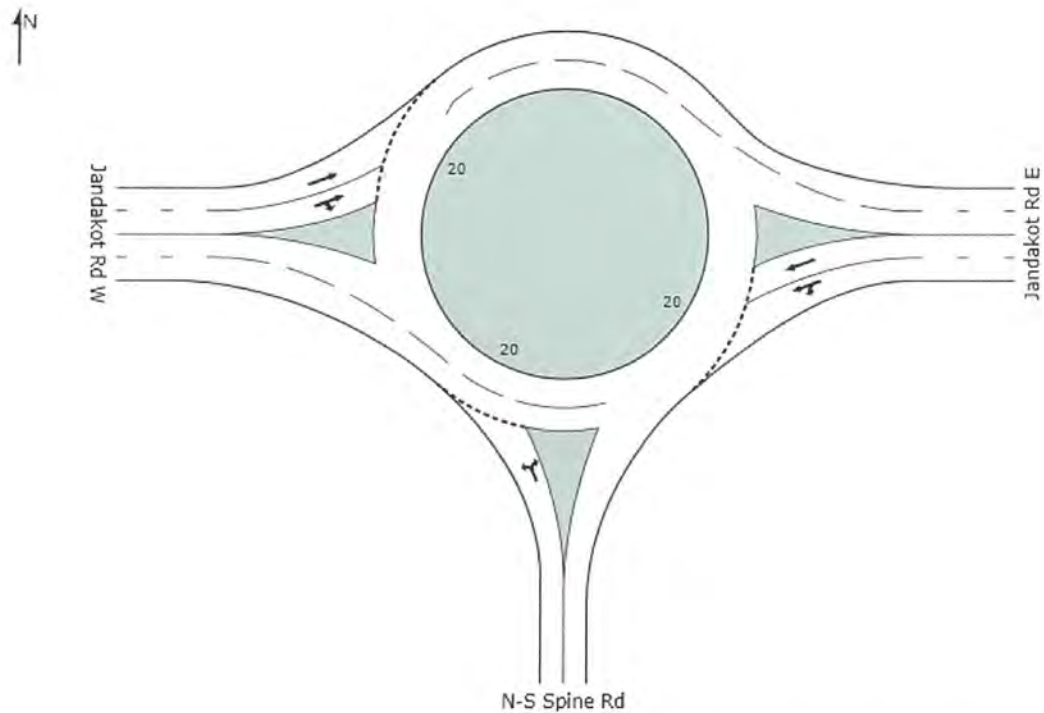
**Figure B1: Proposed roundabout Intersection on Armadale Road/ Liddelow Road/DSP Road (based on DSP access arrangements along Armadale Road)**



**Table B1. SIDRA results for Armadale Road/ Liddelow Road/ DSP Road (based on DSP access arrangements along Armadale Road)**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Liddelow Rd											
1	L	11	0.0	0.454	15.8	LOS B	2.2	15.4	0.86	0.99	41.1
2	T	24	0.0	0.454	14.8	LOS B	2.2	15.4	0.86	0.98	41.3
3	R	151	0.0	0.454	22.2	LOS C	2.2	15.4	0.86	1.04	38.9
Approach		185	0.0	0.454	20.9	LOS C	2.2	15.4	0.86	1.03	39.3
East: Armadale Rd (E)											
4	L	175	0.0	0.637	5.8	LOS A	5.2	38.8	0.39	0.52	50.2
5	T	2446	10.0	0.637	4.5	LOS A	5.3	40.3	0.38	0.40	51.0
6	R	72	0.0	0.637	11.8	LOS B	5.2	39.1	0.39	0.82	46.9
Approach		2693	9.1	0.637	4.8	LOS A	5.3	40.3	0.38	0.42	50.8
North: DSP Access											
7	L	53	0.0	0.419	16.6	LOS B	2.0	14.2	0.89	0.99	41.0
8	T	36	0.0	0.419	15.7	LOS B	2.0	14.2	0.89	0.98	41.2
9	R	53	0.0	0.419	23.0	LOS C	2.0	14.2	0.89	1.04	38.8
Approach		141	0.0	0.419	18.8	LOS B	2.0	14.2	0.89	1.01	40.2
West: Armadale Rd (W)											
10	L	34	0.0	0.668	7.0	LOS A	5.5	41.3	0.58	0.64	49.2
11	T	2474	10.0	0.668	5.6	LOS A	5.5	41.4	0.57	0.51	49.5
12	R	11	0.0	0.668	12.9	LOS B	5.5	41.4	0.58	0.87	46.7
Approach		2518	9.8	0.668	5.6	LOS A	5.5	41.4	0.57	0.52	49.5
All Vehicles		5537	8.9	0.668	6.1	LOS A	5.5	41.4	0.50	0.50	49.3

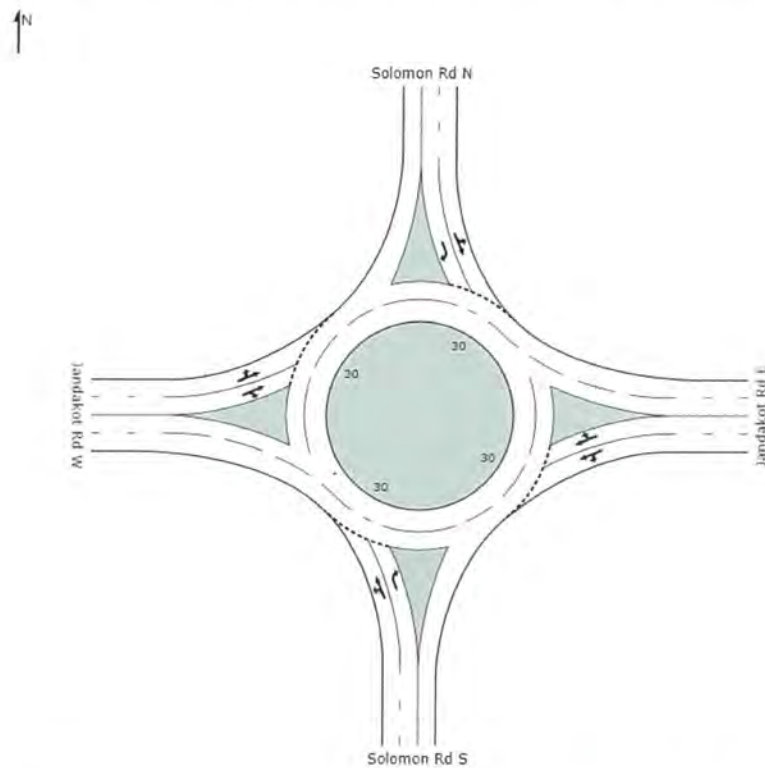
**Figure B2: Proposed Roundabout at Jandakot Road/N-S Spine Road**



**Table B2: SIDRA result for the Jandakot Road/N-S Spine Road intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: N-S Spine Rd											
1	L	232	0.0	0.548	13.9	LOS B	3.1	21.9	0.82	0.99	43.3
3	R	53	0.0	0.548	18.7	LOS B	3.1	21.9	0.82	1.04	40.8
Approach		284	0.0	0.548	14.8	LOS B	3.1	21.9	0.82	1.00	42.8
East: Jandakot Rd E											
4	L	21	0.0	0.535	7.8	LOS A	4.4	32.4	0.53	0.63	48.4
5	T	1393	6.0	0.535	6.9	LOS A	4.4	32.4	0.55	0.58	48.5
Approach		1414	5.9	0.535	6.9	LOS A	4.4	32.4	0.55	0.58	48.5
West: Jandakot Rd W											
11	T	1495	6.0	0.550	5.9	LOS A	5.7	41.9	0.32	0.44	50.0
12	R	211	0.0	0.550	11.5	LOS B	5.6	40.8	0.34	0.73	46.1
Approach		1705	5.3	0.550	6.6	LOS A	5.7	41.9	0.32	0.48	49.4
All Vehicles		3403	5.1	0.550	7.4	LOS A	5.7	41.9	0.46	0.56	48.4

**Figure B3: Proposed Roundabout at Jandakot Road/Solomon Road**

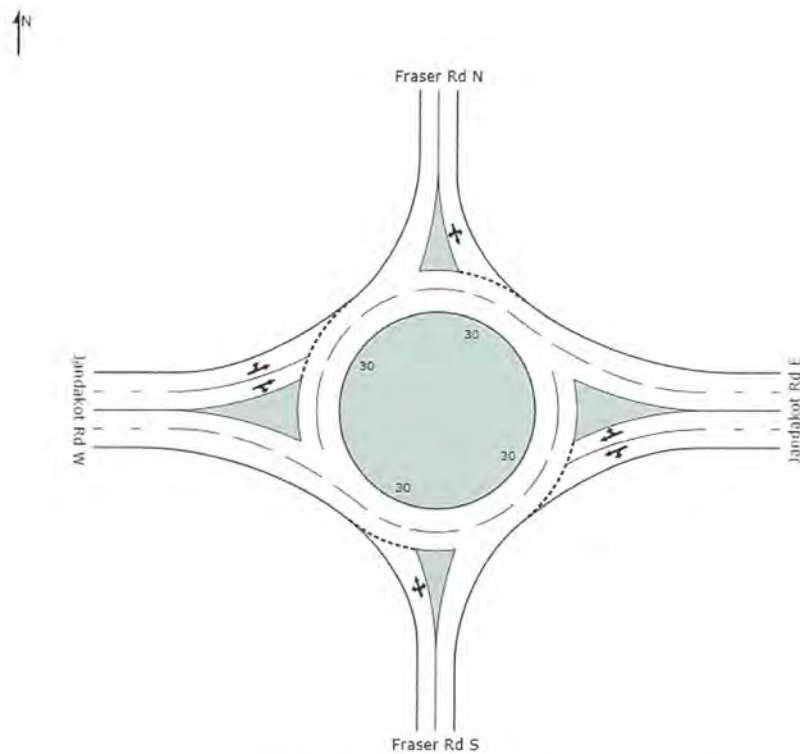


**Table B3: SIDRA result for the Jandakot Road/Solomon Road intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Solomon Rd S											
1	L	145	0.0	0.349	11.1	LOS B	1.7	12.2	0.79	0.92	46.2
2	T	37	0.0	0.349	9.9	LOS A	1.7	12.2	0.79	0.89	46.5
3	R	358	0.0	0.492	16.4	LOS B	3.1	22.0	0.84	1.01	42.4
Approach		540	0.0	0.492	14.5	LOS B	3.1	22.0	0.82	0.98	43.6
East: Jandakot Rd E											
4	L	238	0.0	0.645	6.8	LOS A	5.4	39.5	0.57	0.60	48.7
5	T	1389	6.0	0.645	5.9	LOS A	5.4	39.6	0.59	0.52	48.9
6	R	26	0.0	0.645	12.7	LOS B	5.4	39.6	0.60	0.83	46.6
Approach		1654	5.0	0.645	6.1	LOS A	5.4	39.6	0.59	0.54	48.8
North: Solomon Rd N											
7	L	26	0.0	0.129	12.0	LOS B	0.8	5.4	0.89	0.92	45.7
8	T	38	0.0	0.129	10.8	LOS B	0.8	5.4	0.89	0.90	46.0
9	R	35	0.0	0.100	19.6	LOS B	0.5	3.6	0.85	0.95	40.1
Approach		99	0.0	0.129	14.2	LOS B	0.8	5.4	0.88	0.92	43.6
West: Jandakot Rd W											
10	L	35	0.0	0.717	9.4	LOS A	7.7	56.7	0.81	0.86	47.8
11	T	1347	6.0	0.717	8.6	LOS A	7.7	56.7	0.81	0.84	47.2
12	R	142	0.0	0.717	15.8	LOS B	7.5	54.8	0.82	0.98	44.1
Approach		1524	5.3	0.717	9.3	LOS A	7.7	56.7	0.81	0.86	46.9
All Vehicles		3817	4.3	0.717	8.8	LOS A	7.7	56.7	0.72	0.74	47.1



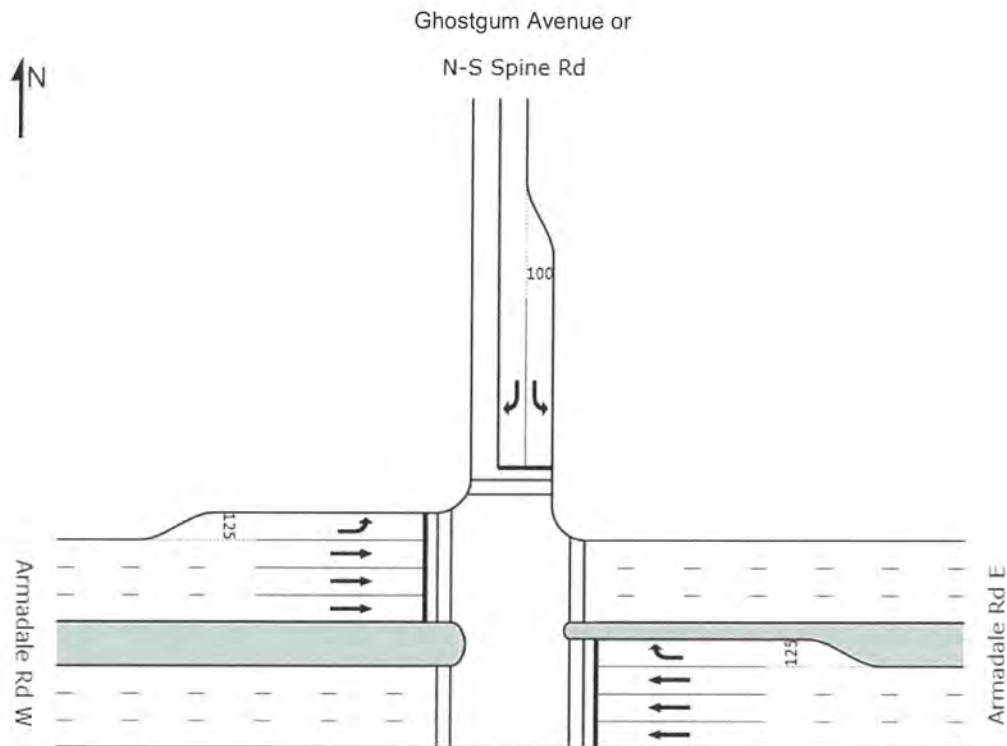
**Figure B4: Proposed Roundabout at Jandakot Road/Fraser Road**



**Table B4: SIDRA result for the Jandakot Road/Fraser Road intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Fraser Rd S											
1	L	118	0.0	0.484	11.9	LOS B	2.9	20.2	0.83	0.97	44.9
2	T	54	0.0	0.484	11.0	LOS B	2.9	20.2	0.83	0.95	45.1
3	R	101	0.0	0.484	17.8	LOS B	2.9	20.2	0.83	1.03	42.0
Approach		273	0.0	0.484	13.9	LOS B	2.9	20.2	0.83	0.99	43.8
East: Jandakot Rd E											
4	L	89	0.0	0.552	8.1	LOS A	4.4	32.3	0.70	0.73	48.2
5	T	1053	6.0	0.552	7.3	LOS A	4.4	32.3	0.70	0.67	48.1
6	R	26	0.0	0.552	14.3	LOS B	4.3	31.9	0.71	0.92	45.4
Approach		1168	5.4	0.552	7.5	LOS A	4.4	32.3	0.70	0.68	48.0
North: Fraser Rd N											
7	L	53	0.0	0.594	13.4	LOS B	4.0	28.2	0.85	1.02	43.3
8	T	57	0.0	0.594	12.4	LOS B	4.0	28.2	0.85	1.00	43.5
9	R	252	0.0	0.594	19.3	LOS B	4.0	28.2	0.85	1.06	40.7
Approach		361	0.0	0.594	17.3	LOS B	4.0	28.2	0.85	1.05	41.4
West: Jandakot Rd W											
10	L	360	0.0	0.581	6.5	LOS A	4.8	34.7	0.51	0.58	48.9
11	T	1053	6.0	0.581	5.6	LOS A	4.8	34.7	0.53	0.50	49.2
12	R	107	0.0	0.581	12.4	LOS B	4.7	34.3	0.54	0.79	46.5
Approach		1520	4.2	0.581	6.3	LOS A	4.8	34.7	0.52	0.54	48.9
All Vehicles		3322	3.8	0.594	8.5	LOS A	4.8	34.7	0.65	0.68	47.2

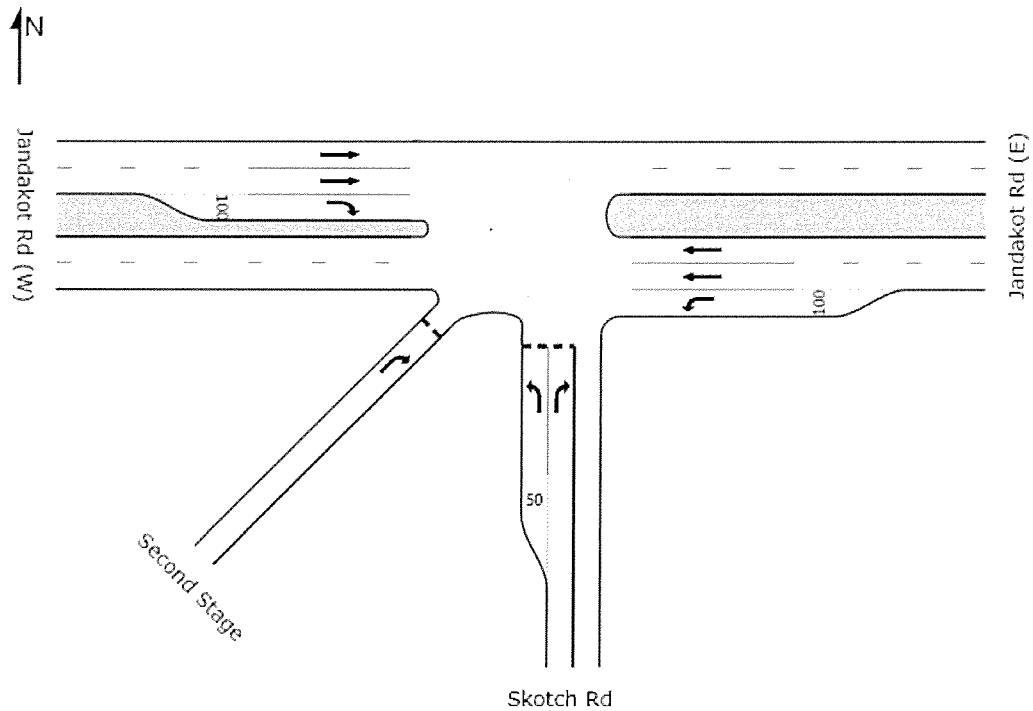
**Figure B5: Proposed Traffic Lights at Armadale Road/Ghostgum Avenue  
(N-S Spine Rd)**



**Table B5: SIDRA result for the Armadale Road/Ghostgum Avenue (N-S Spine Rd) intersection**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Armadale Rd E											
5	T	2632	4.0	0.705	12.9	LOS B	29.7	215.4	0.70	0.64	42.2
6	R	53	0.0	0.554	67.3	LOS E	3.0	20.9	1.00	0.76	21.1
Approach		2684	3.9	0.705	14.0	LOS B	29.7	215.4	0.70	0.65	41.3
North: N-S Spine Rd											
7	L	53	0.0	0.120	43.7	LOS D	2.2	15.5	0.82	0.75	27.2
9	R	211	0.0	0.480	47.3	LOS D	9.8	68.9	0.91	0.81	26.1
Approach		263	0.0	0.480	46.6	LOS D	9.8	68.9	0.89	0.80	26.3
West: Armadale Rd W											
10	L	211	0.0	0.134	8.6	LOS A	0.7	4.8	0.13	0.69	48.4
11	T	2632	4.0	0.846	26.1	LOS C	42.1	305.0	0.92	0.88	33.2
Approach		2842	3.7	0.846	24.8	LOS C	42.1	305.0	0.86	0.87	34.0
All Vehicles		5789	3.6	0.846	20.8	LOS C	42.1	305.0	0.79	0.76	36.5

**Figure B6: Proposed priority controlled T-intersection at Jandakot Road/Skotsch Road**

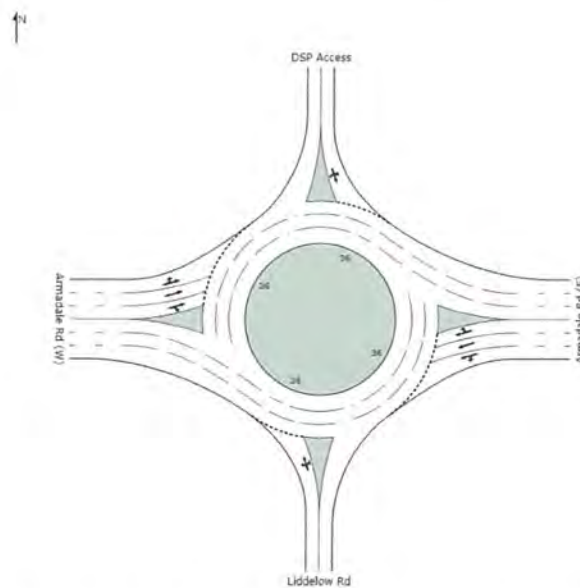


*Note: The diagonal link is not a physical traffic lane at this intersection. This is just a technique to represent the second stage of the Skotsch Road right turn movement from the median to Jandakot Road eastbound.*

**Table B6: SIDRA result for controlled T-intersection at Jandakot Road/Skotsch Road**

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Skotch Rd											
1	L	11	0.0	0.032	17.3	LOS C	0.1	0.7	0.73	0.91	40.6
3	R	26	0.0	0.080	17.6	LOS C	0.3	1.8	0.74	0.91	40.4
Approach		37	0.0	0.080	17.5	LOS C	0.3	1.8	0.74	0.91	40.5
East: Jandakot Rd (E)											
4	L	37	0.0	0.020	8.2	LOS A	0.0	0.0	0.00	0.67	49.0
5	T	1053	0.0	0.270	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1089	0.0	0.270	0.3	NA	0.0	0.0	0.00	0.02	59.5
West: Jandakot Rd (W)											
11	T	1053	0.0	0.270	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	11	0.0	0.024	15.1	LOS C	0.1	0.6	0.70	0.85	42.4
Approach		1063	0.0	0.270	0.1	NA	0.1	0.6	0.01	0.01	59.8
South West: Second Stage											
32	R	26	0.0	0.046	14.9	LOS B	0.2	1.2	0.69	0.88	42.5
Approach		26	0.0	0.046	14.9	LOS B	0.2	1.2	0.69	0.88	42.5
All Vehicles		2216	0.0	0.270	0.7	NA	0.3	1.8	0.02	0.04	58.9

**Figure B7: Proposed roundabout Intersection on Armadale Road/ Liddelow Road/ DSP Road (based on Main Roads WA access arrangements along Armadale Road)**



**Table B7: SIDRA result for roundabout Intersection on Armadale Road/ Liddelow Road/ DSP Road (based on Main Roads WA access arrangements along Armadale Road)**



Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Liddelow Rd											
1	L	11	0.0	0.700	24.3	LOS C	4.3	29.8	0.93	1.14	35.4
2	T	37	0.0	0.700	23.3	LOS C	4.3	29.8	0.93	1.13	35.6
3	R	195	0.0	0.700	30.7	LOS C	4.3	29.8	0.93	1.16	34.3
Approach		242	0.0	0.700	29.3	LOS C	4.3	29.8	0.93	1.16	34.5
East: Armadale Rd (E)											
4	L	172	0.0	0.677	6.3	LOS A	5.7	43.0	0.55	0.56	49.3
5	T	2398	10.0	0.677	4.9	LOS A	5.9	45.1	0.54	0.44	49.7
6	R	106	0.0	0.677	12.2	LOS B	5.7	43.2	0.55	0.80	46.8
Approach		2676	9.0	0.677	5.3	LOS A	5.9	45.1	0.54	0.46	49.5
North: DSP Access											
7	L	72	0.0	0.735	26.3	LOS C	4.6	32.2	0.95	1.16	34.6
8	T	56	0.0	0.735	25.4	LOS C	4.6	32.2	0.95	1.15	34.7
9	R	107	0.0	0.735	32.8	LOS C	4.6	32.2	0.95	1.18	33.6
Approach		235	0.0	0.735	29.1	LOS C	4.6	32.2	0.95	1.17	34.1
West: Armadale Rd (W)											
10	L	51	0.0	0.685	8.1	LOS A	6.2	46.5	0.68	0.76	48.7
11	T	2349	10.0	0.685	6.6	LOS A	6.3	47.7	0.67	0.64	48.8
12	R	11	0.0	0.685	14.0	LOS B	6.2	46.7	0.68	0.92	46.0
Approach		2411	9.7	0.685	6.7	LOS A	6.3	47.7	0.67	0.64	48.7
All Vehicles		5563	8.5	0.735	8.0	LOS A	6.3	47.7	0.63	0.60	47.3

### Appendix 3

#### District Water Management Strategy (JDA Consultant Hydrologist)

Perron Developments Pty Ltd

## **Treeby (Banjup) Strategic District Water Management Strategy**

September 2016



## DISCLAIMER

This document is published in accordance with and subject to an agreement between JDA Consultant Hydrologists ("JDA") and the client for whom it has been prepared ("Client"), and is restricted to those issues that have been raised by the Client in its engagement of JDA. It has been prepared using the skill and care ordinarily exercised by Consultant Hydrologists in the preparation of such documents.

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JDA does not take responsibility for checking landscape and engineering plans attached to this report for accuracy or consistency with this report.

This Report is based on the current edition of Australian Rainfall & Runoff – A Guide to Flood Estimation (Engineers Australia, 1987) referred to as ARR.

Engineers Australia released a partial update to ARR in December 2015. The completed version of ARR may include different design methods and data for flood estimation in Australia including rainfall intensity, rainfall temporal patterns, rainfall runoff coefficients as well as a guideline for taking into account the effect of climate change on design rainfall and hence design floods depending on projected design life of land development. The revised version of ARR may include information which may require this Report to be revised.

Front page image from Google Earth (2016)

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	Name	Signature	Date
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## EXECUTIVE SUMMARY

Lots 1, 2, 4, 140, 820 and 9004 Armadale Rd; Lot 1 Ghostgum Avenue; Lots 131, 132, 467, 500 and 9002 Jandakot Road; Lots 62 to 75 Skotsch Rd; and Lots 139, 468, 533, 614 and 800 Warton Road, Banjup have historically supported several rural and quarrying land uses including sand extraction and brick manufacturing with considerable clearing of vegetation and substantial quantities of sand removed. The area is hydrologically unconstrained with free draining sandy soils, clearance to groundwater, moderate to low risk of Acid Sulphate Soils (ASS), and no regional surface water features.

The primary constraint to rezoning is the P1 and P2 water protection zone which covers a portion of the Study Area. Urban development is listed as an incompatible land use within P1 or P2 areas. With certain controls in place, development is compatible with a P3 classification. The DoW is the lead agency in protecting catchments for water supply in WA.

The reclassification of the land from a P2 to P3 water protection zone (with retention of P1 as undeveloped bushland), will be subject to a favourable determination to rezone the Study Area to Urban. With the implementation of best practice water sensitive urban design the Study Area represents an important and likely site for progression to an Urban zoning given:

- Identification of a Study Area within the Draft South Metropolitan Peel Sub Regional Framework and classification of this land within short to medium term development timeframes.
- The proximity of the site to a high order activity centre, railway station and freeway interchange.
- The site represents a logical extension of development east of the developing Calleya Estate.
- A large portion of the site has been cleared and disturbed for sand quarrying operations.
- Service infrastructure within the area can accommodate the additional development.
- Compliance with the criteria for urbanisation included within draft State Planning Policy 2.3 – Jandakot Groundwater Protection.

A number of initiatives will be applied to limit any potential groundwater impacts associated with urban development, including:

- Extension of deep sewer to all lots;
- Application of water sensitive urban design principles including at-source stormwater infiltration, rain gardens and water harvesting;
- Appropriate road design and treatments to minimise the risk of high speed car collisions (which might result in oil or petrol spillage);
- Provision of lot types which maximise land use efficiency and reduce excessive garden area and hence fertiliser and pesticide use;
- Encourage home purchasers to use native plants for landscaping (which will also reduce fertiliser and pesticide use);
- Use of promotional information to land purchasers aimed at raising awareness of water issues;
- An on-going monitoring programme;
- Exclusion of high risk land uses from the development area (e.g. service station).

The information provided in the Strategic District Water Management Strategy (SDWMS) demonstrates that the Study Area can support urban development and best practice urban water management.

## SUMMARY OF SDWMS DESIGN OBJECTIVES

### Key Guiding Principles

- Provide a framework for the preparation of future LWMS
- Facilitate implementation of sustainable best practice urban water management
- Provide integration with planning processes and clarity for agencies involved with implementation
- To minimise public risk, including risk of injury or loss of life
- Protection of infrastructure and assets from flooding and inundation
- Encourage environmentally responsible development

Category	SDWMS Objectives
Stormwater Management	<ul style="list-style-type: none"> <li>• Non-structural measures to reduce applied nutrient loads</li> <li>• At source retention of 1yr 1hr ARI events</li> <li>• On site infiltration of all stormwater runoff of at least 5yr ARI.</li> <li>• Water quality treatment systems and water sensitive urban design structures designed in accordance with the Stormwater Management Manual for Western Australia (DoW, 2009) Chapter 9 (Structural Controls) and Australian Runoff Quality (Engineers Australia, 1997).</li> </ul>
Groundwater Management	<ul style="list-style-type: none"> <li>• No management of groundwater levels is proposed (subsoil drainage)</li> <li>• Finished levels to provide sufficient separation to groundwater to allow infiltration of stormwater on-site to enhance recharge to the Jandakot Mound.</li> <li>• Limit impacts to Bush Forever and wetland sites.</li> <li>• Limit groundwater abstraction.</li> <li>• Manage fertiliser and pesticide application in streetscapes and POS areas using soil amendments, appropriate plant selection, limiting turf areas and maintenance management plans.</li> </ul>
Water Conservation and Sustainability	<ul style="list-style-type: none"> <li>• Ensure that non-potable water supply systems are considered as part of an integrated water supply;</li> <li>• Household target water use of 100 kL/person/year;</li> <li>• Scheme water target use of 40-60 kL/person/year</li> <li>• Use of waterwise landscaping practices both at development and lot scale.</li> </ul>
Water Quality	<ul style="list-style-type: none"> <li>• Adopt nutrient load reduction design objectives for stormwater runoff</li> <li>• Use of amended soils and ephemeral bio-retention systems to treat stormwater.</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• Pre-development monitoring to inform decisions at LWMS stage</li> <li>• Post-development programme to ensure water quality targets are met.</li> </ul>



# 1. INTRODUCTION

This Strategic District Water Management Strategy (SDWMS) has been prepared by JDA Consultant Hydrologists on behalf of Perron Developments Pty Ltd. The SDWMS area comprises Lots 1, 2, 4, 140, 820 and 9004 Armadale Rd; Lot 1 Ghostgum Avenue; Lots 131, 132, 467, 500 and 9002 Jandakot Road; Lots 62 to 75 Skotsch Rd; and Lots 139, 468, 533, 614 and 800 Warton Road, Banjup comprising a total area of approximately 461 ha (Figure 1), herein referred to as the Study Area.

The Study Area is located within the City of Cockburn, approximately 19 km south of Perth and 2.5 km from Cockburn Central and the Kwinana Freeway.

This SDWMS has been prepared to provide a coordinating framework and to guide the key requirements for water sensitive urban design. The preparation of this SDWMS has been prepared in consultation with relevant stakeholders.

## 1.1 Planning Context

### 1.1.1 Drinking Water Source Protection Areas

The site is located in the Jandakot Underground Water Pollution Control Area (JUWPCA) (DoW, 2013c).

The JUWPCA occupies a total area of 7400 ha, including more than 4000 ha within the City of Cockburn. The JUWPCA was proclaimed in 1975 under the Metropolitan Water Supply Sewerage and Drainage Act 1909. Water from the mound is extracted by the Water Corporation as part of the Perth Metropolitan integrated water supply system (IWSS) (WAPC, 2003).

The DoW is the lead agency in protecting catchments for water supply in Western Australia. The Department supports the Australian Drinking Water Quality Guidelines (ADWQG) barrier approach to water quality protection, with catchment management the first barrier of protection. Subsequent barriers are water storage, treatment and disinfection. The catchment management measures are also supported by Wellhead Protection Zones (WPZ) around public water supply wells. Two public water supply production wells are located within the Study Area, one on the western boundary (P2, UWPCA) and one on the eastern boundary (P1, UWPCA); see Figure 2. These production wells (located in the UWPCA) currently require a WPZ of 300 m radius around each production well. Wellhead protection zones are generally circular (unless information is available to determine a different shape or size) (DoW, 2009a).

Water Quality Protection Note 36 (WQPN) (DoW, 2009a) sets out the groundwater catchment priority classification system. Water Quality Protection Note 25 (DoW, 2016) sets out land use compatible with public water source priority areas.

**Priority 1 (P1)** – P1 source protection areas are defined to ensure no degradation of the water source. P1 areas are declared over land where the high quality drinking water is the prime beneficial land use protected in accordance with the objective of risk avoidance.

**Priority 2 (P2)** – P2 source protection areas are defined to ensure there is no increased risk to the water source. P2 areas are generally declared over land with low intensity development such as pasture which already exists. Public water supply protection is of a high priority relative to other land use values protected in accordance with the objective of risk minimisation.

**Priority 3 (P3)** – P3 source protection areas are defined where it is necessary to manage the risk of pollution to the water source where other land use such as residential areas occur. P3 areas generally have the requirement of using best management practices and connection to deep sewerage. P3 areas are protected in accordance with the objective of risk management.

Other information provided in the WQPN includes (DoW, 2009a):

- DoW's advice on land and water based activities in proclaimed Public Drinking Water Source Areas (PDWSA);
- Best Management Practices (BMPs) guidance used to protect water quality in PDWSAs;
- Overview of legislation, policies and processes used to protect PDWSAs; and
- The development of a multi-agency guideline designed to balance views of community, industry and government, in order to maintain a reliable safe public drinking water supply.

### 1.1.2 Land Use Zoning

Lots 131, 500 Jandakot Road, 62 to 75 Skotsch Road, and Lots 2 and 4 Armadale Road are currently zoned 'Rural – Water Protection'; Lots 140 Armadale Rd and 139, 468, 533, 614 and 800 Warton Road are zoned 'Parks and Recreation' and; Lots 467 Jandakot Rd and 139 Warton Road are zoned 'Public Purpose (Special Uses)' under the Metropolitan Region Scheme (MRS) (Figure 2). Implementation of the DSP would see Lots 2, 4 and 131 as 'Urban'.

Lots 1, 132, 9002 and 9004 were rezoned 'Urban' under Metropolitan Region Scheme Amendment 1221/4, 1 gazetted in January 2013. The site is currently undergoing subdivision in line with water management plans prepared for the site. The plans include an approved District Water Management Strategy (DWMS, Emerson Stewart, 2011), Local Water Management Strategy (LWMS, PDC, 2013) and Urban Water Management Plan (UWMP).

Lot 1 Ghostgum Avenue has recently been rezoned to 'Urban' under the MRS and includes a DWMS (Hyd2o, 2013).

Lots 2, 4 and 131 have been identified as 'Urban Investigation' within Perth and Peel at 3.5 Million Draft Sub-Regional Spatial Framework (Structure Plan). An MRS rezoning application is currently being considered by WAPC for Lots 2 and 4, also supported by a DWMS (JDA, 2013).

This SDWMS supports the Treeby District Structure Plan as shown on Figure 3. This SDWMS consolidates background information and provides broad direction to inform preparation of Local Water Management Strategies to follow.

### 1.1.3 Land Use Rezoning

The primary constraint to rezoning is the P1 and P2 water protection zone which covers a portion of the Study Area. Urban development is not a compatible land use within P1 or P2 areas. With certain controls in place, development is compatible with a P3 classification.

The reclassification of the land from a P2 to P3 water protection zone (with retention of P1 as undeveloped bushland), will be subject to a favourable determination to rezone the Study Area to Urban. With the implementation of best practice water sensitive urban design, the Study Area represents an important and likely site for progression to an Urban zoning given:

- Identification of a Study Area within the Draft South Metropolitan Peel Sub Regional Framework and classification of this land within short to medium term development timeframes.
- The proximity of the site to a high order activity centre, railway station and freeway interchange.
- The site represents a logical extension of development east of the developing Calleya Estate.
- A large portion of the site has been cleared and disturbed for sand quarrying operations.

- Service infrastructure within the area can accommodate the additional development.
- Compliance with the criteria for urbanisation included within draft State Planning Policy 2.3 – Jandakot Groundwater Protection.

#### **1.1.4 Relevant Documents**

Key documents used to guide the SDWMS are:

- State Planning Policy No. 2.3: Jandakot Groundwater Protection Policy (WAPC, 1998)
- Better Urban Water Management (WAPC, 2008);
- Stormwater Management Manual for Western Australia (Department of Water, 2009b); and
- Liveable Neighbourhoods (WAPC, 2007).

## 2. SITE CHARACTERISTICS

### 2.1 Land Use

The Study Area includes old sand quarries and brick manufacturing sites, semi-rural residential lots, remnant native vegetation, Rose Shank Reserve, Banjup Memorial Reserve and Cockburn Fremantle Pistol Club. The sand extraction has resulted in gradual clearing of vegetation with substantial quantities of sand removed. Three surface expressions of groundwater exist as a result of sand extraction.

### 2.2 Rainfall

The long term average annual rainfall (1972 to 2016) at the closest Bureau of Meteorology's monitoring site, Jandakot Aero (Station No: 009172) located approximately 2.5 km to the north of the Study Area, is 824.3 mm. The short term (2003 to 2016) average annual rainfall is 726.9 mm, a decrease of approximately 12%, with most of the reduction occurring during the winter months.

### 2.3 Topography

Topographic mapping from Landgate (DoW, 2013d) shows a mixture of undulating and steep rises with elevations ranging from 28 to 42 mAHD (Figure 4). The steep rises are a result of the previous sand extraction carried out across the Study Area.

### 2.4 Acid Sulphate Soils

The WAPC *Planning Bulletin No. 64* (2009) classifies the Study Area as having moderate to low risk of actual acid sulphate soils (AASS) or potential acid sulphate soils (PASS) occurring at depths < 3m from the soil surface (DoW, 2013a) (Figure 5).

### 2.5 Surface Geology

Surface geology mapping by Gozzard (1986) is shown on Figure 4.

The surface geology of the Study Area is classified by Gozzard as Bassendean Sands (S8 and S10). S8 sand is described as very light grey at surface, yellow at depth, fine to medium grained, sub-rounded quartz, moderately well sorted, of eolian origin. S10 sand is described as S8 sands, but occurring as a thin veneer over clayey sands of the Guildford Formation.

### 2.6 Wetlands and Significant Vegetation

Geomorphic Wetland mapping (DoW, 2013b) shows a Resource Enhancement Wetland (REW) within Lots 131 and 467 Jandakot Road, 62 to 75 Skotsch Rd and Lot 4 Armadale Road; and Conservation Category Wetland (CCW) within Lot 467 Warton Rd. Both wetlands are located within Bush Forever site 390 and will be maintained as part of the DSP (Figure 6).

Bush Forever site 390 currently occupies 172 ha of the Study Area. The final boundary is subject to a negotiated planning solution in order to manage the integration of the Bush Forever with the planning and design of the urban development.

### 2.7 Surface Water Hydrology

No natural surface water features are present across the Study Area. Groundwater expressions are found in three locations and are the result of previous sand extraction (Figure 6).



## 2.8 Hydrogeology

### 2.8.1 Superficial Aquifer

The superficial aquifer in this region is referred to as the Jandakot Mound, and extends approximately 522 km<sup>2</sup>. The aquifer has a maximum thickness of 40 m and includes three formations which are, in order of increasing depth: Bassendean Sand, Gngangara Sand and Ascot Formation. Aquifer transmissivities range between 200 to 1000 m<sup>2</sup>/d (Davidson, 1995).

The formations are highly permeable with horizontal hydraulic conductivity ranging between 10 to 50 m/d. In the Jandakot area, where limonite cement (coffee rock) is present, horizontal hydraulic conductivity may reduce to less than 10 m/d (Davidson & Yu, 2008). Site specific investigations completed to date indicate limonite cement is more extensive than indicated on regional mapping. Given the extent of the limonite mapped over Calleya and Lot 4, we would expect the limonite to be present to some extent at Lot 131 and the other lots further east.

Vertical fluctuations in the water table may be several metres and generally occur seasonally, consistent with Perth's winter-dominated rainfall pattern. Groundwater levels from 1975 to 2015, captured from DoW JM bores series, show groundwater levels between 21.96 and 27.96 mAHD (Table 1). Maximum (DoW, 1997) and minimum (DoW, 2004) groundwater contours prepared by DoW are shown on Figure 7 and 8.

**TABLE 1: DOW GROUNDWATER MONITORING BORE DATA**

Bore	Period of Record	Minimum Recorded (mAHD)	Maximum Recorded (mAHD)
JM19	1975-2015	24.29	27.96
JM22	1975-2010	24.50	26.92
JM25	1975-1995	23.74	25.91
JM26	1975-2015	24.91	27.56
JM27	1975-2015	21.96	26.22
JM45	1975/2015	22.70	25.83

#### 2.8.1.1 Department of Water Ministerial Sites

Ministerial Statement 688 established in 1992 provides a framework for the management and abstraction of groundwater for public and private water supply from the Jandakot Mound, with provision for environmental requirements (EPA, 1992). As part of the conditions twenty-three sites across the Jandakot Mound have Ministerial water level criteria to ensure the protection of environmental assets.

For the 2008 to 2011 monitoring period thirteen out of the twenty-three sites breached the relevant criteria (DoW, 2012) as a direct result of declining rainfall and groundwater abstraction by existing users.

Seven Ministerial sites (8284/8284B, JM19, JM45, JM14, JM16, JM8 and JM7) located near the top of the Jandakot Mound are in close proximity to the Study Area. Three sites, JM19, JM45 and JM14, have all breached ministerial conditions with the latest breach in 2011.

#### 2.8.1.2 Groundwater Quality

Water quality is not measured in DoW monitoring bores. Water quality is measured by Water Corporation to inform treatment of public water supply abstracted from production bores across the mound.

Water quality information presented in Water Corporation (2006), states that the water quality of the Jandakot Mound has consistently been good, with the exception of iron and colour, and has generally met

Australian Drinking Water Quality Guideline (ADWQG) values. The absence of thermotolerant coliforms indicates that there has not been any pathogenic contamination of the wellfield, despite a large percentage of the UWPCA being privately owned (Water Corporation, 2006), which includes P3 urban areas.

Although there has been no evidence of contaminants reaching the groundwater, many activities throughout the Control Area, including irrigated parks and uncontrolled domestic activities on residential properties, are considered medium management priorities (major to significant risks) because of their potential to transmit contaminants to the groundwater. Controls currently in place have improved protection and there has been no observed increase in risk since the 1998 assessment (Water Corporation, 2006).

### 2.8.1.3 Non-Potable Supply for Land Development

The Study Area is located within the groundwater management sub-area of Canning Vale. As of 30<sup>th</sup> March 2016 Department of Water advised there was 310,000 kL/yr available for allocation in the Superficial Aquifer (Table 2).

**TABLE 2: GROUNDWATER AVAILABILITY**

Aquifer	Allocation Limit	Licensed Allocation	Total Allocated & Committed	% Committed & Additional Allocations
Perth - Superficial Swan	310,000 kL	68,352kL	163,575 kL	52.77%

The use of local groundwater resources for non-potable supply within the Study Area will be considered as part of future LWMS's. If considered appropriate, the implementation of the strategy should take into consideration bore design to ensure the installation of the wells do not create unwanted contaminant pathways through the aquifer.

## 2.8.2 Leederville Aquifer

The Leederville Aquifer is of Cretaceous age and consists of interbedded sandstone, siltstone and shales made up by the Mariginiup, Wanneroo and Pinjar Members and the Henley Sandstone Formation. It is separated from the overlying Superficial Aquifer by the Kardinya Shale, which acts as a confining bed between the two aquifers (Davidson & Yu, 2008).

The Leederville aquifer is a major regional water resource of good quality water. Underneath the Jandakot Mound, groundwater salinity is typically <500 mg/L. Jandakot production bore J105 screened in the Leederville Aquifer has the highest concentration of bicarbonate (compared to other Jandakot drinking water production bores) with a concentration of 200 mg/L. Dissolved iron concentrations from the production bores generally exceed Australian Drinking Water Guidelines (Davidson, 1995).

## 2.8.3 Yarragadee Aquifer

The South Perth Shale underlies the Leederville Aquifer and acts as the confining bed between the Leederville and Yarragadee aquifers (Davidson, 1995).

The Yarragadee aquifer is a major regional water resource of generally good quality water. South of Perth salinities vary between 1000 and 2000 mg/L. Dissolved iron levels are generally below Australian Drinking Water Quality Guidelines (Davidson, 1995).



## **3. DISTRICT WATER MANAGEMENT STRATEGY**

### **3.1 Groundwater Management**

#### **3.1.1 Existing Groundwater Expressions**

Sand extraction from the site has resulted in some areas where the groundwater is exposed at surface. Excavations are to be filled in as part of future development so that groundwater is no longer exposed.

#### **3.1.2 Fill and Groundwater Controls**

It is expected there is sufficient sand within the Study Area to allow development with adequate separation to groundwater without the need for subsoil drainage to manage groundwater levels. This will be confirmed by a more detailed analysis of earthworks at LWMS stage.

### **3.2 Stormwater Management**

For the Study Area the following key objectives will apply:

- Minimise changes in hydrology to prevent impacts on receiving environments.
- Manage water flows from major events to protect infrastructure and assets.
- Apply the principles of WSUD.

Due to the elevation and sandy soils that characterise the site, many of the best practice stormwater management strategies presented in the Stormwater Management Manual for Western Australia (DoW, 2009) are appropriate and can be implemented.

These strategies include;

- Retention of rainfall events up to the 1yr ARI 1 hour duration at source via infiltration.
- Retention of rainfall events up to the 5yr ARI high in the catchment using infiltration swales and underground infiltration devices.
- The use of vegetation and amended soils within infiltration swales to treat stormwater runoff and improve the quality of stormwater infiltrating to the groundwater table.
- Using road levels and grading to convey major storm events away from houses and other key infrastructure.
- Retention of rainfall events of at least 5yr ARI on site by integrating infiltration storages into Public Open Spaces.

With the exception of Lot 131, previous DWMS and LWMS documents prepared for existing and proposed MRS zoned 'Urban' lots have had stormwater modelling carried out. Results of these analysis are presented in Table 3 and shown on Figure 9.

Preliminary modelling of the 100yr ARI stormwater infiltration storage for Lot 131 (Catchment 3) was performed by JDA using the infiltration model MODRET.

**TABLE 3: STORAGE DATA FOR THE CRITICAL 100YR ARI RAINFALL EVENT**

Catchment	1 <sup>1</sup>	2 <sup>2</sup>	3	4 <sup>3</sup>
Catchment Area (ha)	153.0	20.5	64.7	61.9
Assumed Impervious Area (ha)	53.0	8.2	20.9	18.6
Top Water Level Area (m <sup>2</sup> )	36,545	4700	21,385	20,000
Stored Volume (m <sup>3</sup> )	21,870	3300	19,670	18,700

1- PDC (2013)

2- Hyd2o (2013)

3- JDA (2013)

More detailed analysis of the stormwater management system will be completed as part of future LWMS's based on additional site information and more refined analysis.

Catchment 5 (Figure 9) is not proposed for urban development and preliminary stormwater storage has not been assessed.

### 3.3 Water Source Planning & Conservation

#### 3.3.1 Water Supply

##### Residential Lots

In order to minimise any potential impact on the groundwater resource the development will aim to:

- Utilise scheme water as the main water supply for residents.
- Appropriately manage bore use through structure planning and community education.

##### Public Open Spaces

The use of local groundwater resources for non-potable supply within the Study Area will be considered in more detail as part of the LWMS. Based on the proposed 253 ha of residential development an indicative water demand for irrigation of approximately 25 ha of POS would be 187,500 kL/yr, based on an allocation of 7,500 kL/ha/yr. While there is only 146,425 kL/yr available for allocation (Table 2), urban Lots 1, 132, 9002 and 9004 currently have an allocation of 119,500 kL/yr (GWL 155669) for irrigation.

#### 3.3.2 Wastewater Management

The Water Corporation has advised that this site falls outside of a planned sewerage scheme and therefore a reticulated wastewater supply is not immediately available. An approved MRS amendment would facilitate sewer reticulation scheme planning by the Water Corporation.

The project engineers have indicated that wastewater servicing is likely to come from Armadale Rd, via a connection at Liddelow Rd, south-east of the site. Two pump stations will likely be required to meet demand for the Study Area. Pump stations are a compatible land use with conditions in P3 areas, as presented in WQPN 25, Table 3 (DoW, 2016)

#### 3.3.3 Water Conservation Measures

The objective for water conservation is to minimise use of water and maximise water use efficiency where possible. This objective can be achieved at both the development and lot scale and is identified in the State Water Plan (Government of Western Australia, 2007) as a priority item for potable water. The State Water Plan target for household water use is 100 kL/person/year (potable and non-potable water), with a consumption target for scheme water of 40-60 kL/person/year (potable water).



Consistent with the State Water Plan, the main objectives for the development are:

- Avoid use of potable water for irrigation in POS areas
- Reduce household water use to not more than 100 kL/person/year
- Minimise use of potable water where drinking water quality is not essential.
- Household consumption targets for in-house potable water use of 40-60 kL/person/yr.

#### Development Scale

Development scale water conservation measures appropriate for the site include:

- Strategic planning (orientation, shape, elevation etc.) of irrigation areas such as pocket parks, active and passive public open space areas, and road reserves to minimise long-term irrigation demand.
- Where possible co-locate facilities with significant irrigation demand.
- Within irrigation areas, the use of waterwise landscaping practices including hydrozoning, mulching, soil amendments, water retention products and installation of appropriate water efficient irrigation fixtures.
- Retain and where appropriate rehabilitate native bush areas.

#### Lot Scale

Lot scale water conservation measures appropriate for the site include;

- Increased residential density, including smaller lots with reduced ex-house irrigation areas.
- Buildings constructed to current Building Codes of Australia (BCA) water efficiency standards and the State Government 5 Star Plus Scheme. These include using AAA rated appliances such as toilets, washing machines, dishwashers, water saving showerheads, taps and toilets and sub-surface irrigation. The Water Corporation's Waterwise Rebate Program will also assist in encouraging the purchase of waterwise AAA rated appliances.
- Initiatives to encourage waterwise landscaping of residential lots including hydrozoning, mulching, soil amendments, water retention products and installation of appropriate irrigation fixtures.

## 4. IMPLEMENTATION FRAMEWORK

### 4.1 Local Structure Planning

The water management planning requirements for the various stages of land use planning are set out in Better Urban Water Management (WAPC, 2008) and include a Local Water Management Strategy (LWMS) in support of the Local Structure plan and an Urban Water Management Plan (UWMP) as a condition of subdivision approval. The design objectives outlined in this DSWMS form the basis for design criteria to be developed and reported in the LWMS. The design criteria of the LWMS are implemented through the final design concept presented in the UWMP.

### 4.2 Monitoring Requirements

Pre-development monitoring for a minimum two year period is required to support rezoning applications as outlined in BUWM. At the end of the two-year program the results should be submitted to the Department of Water and City of Cockburn and utilised to assist preparation of the LWMS's.

A post development monitoring program will be developed at the LWMS stage. The monitoring program will be designed to allow a quantitative assessment of the hydrological impacts of the proposed development within the Study Area. Post-development monitoring program will include measurement of groundwater levels and quality for comparison to pre-development levels.

### 4.3 Funding and Responsibilities

The key roles and responsibilities for the implementation of this SDWMS are presented in Table 4 below.

**TABLE 4: SUMMARY OF RESPONSIBILITIES OF FUNDING**

Management Issue	Responsibility and Funding		
	Developer	Department of Water	City of Cockburn
Pre-development monitoring	✓		
Preparation of LWMS	✓		
Approval of LWMS		✓	✓
Preparation of UWMP	✓		
Approval of UWMP		✓	✓
Construction of urban infrastructure	✓		
Long-term maintenance of stormwater management system			✓
Post-development monitoring	✓		

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## Figures

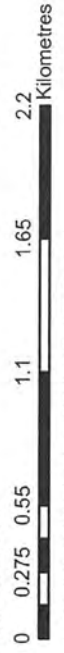


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Data Source: Nearmap (2016)



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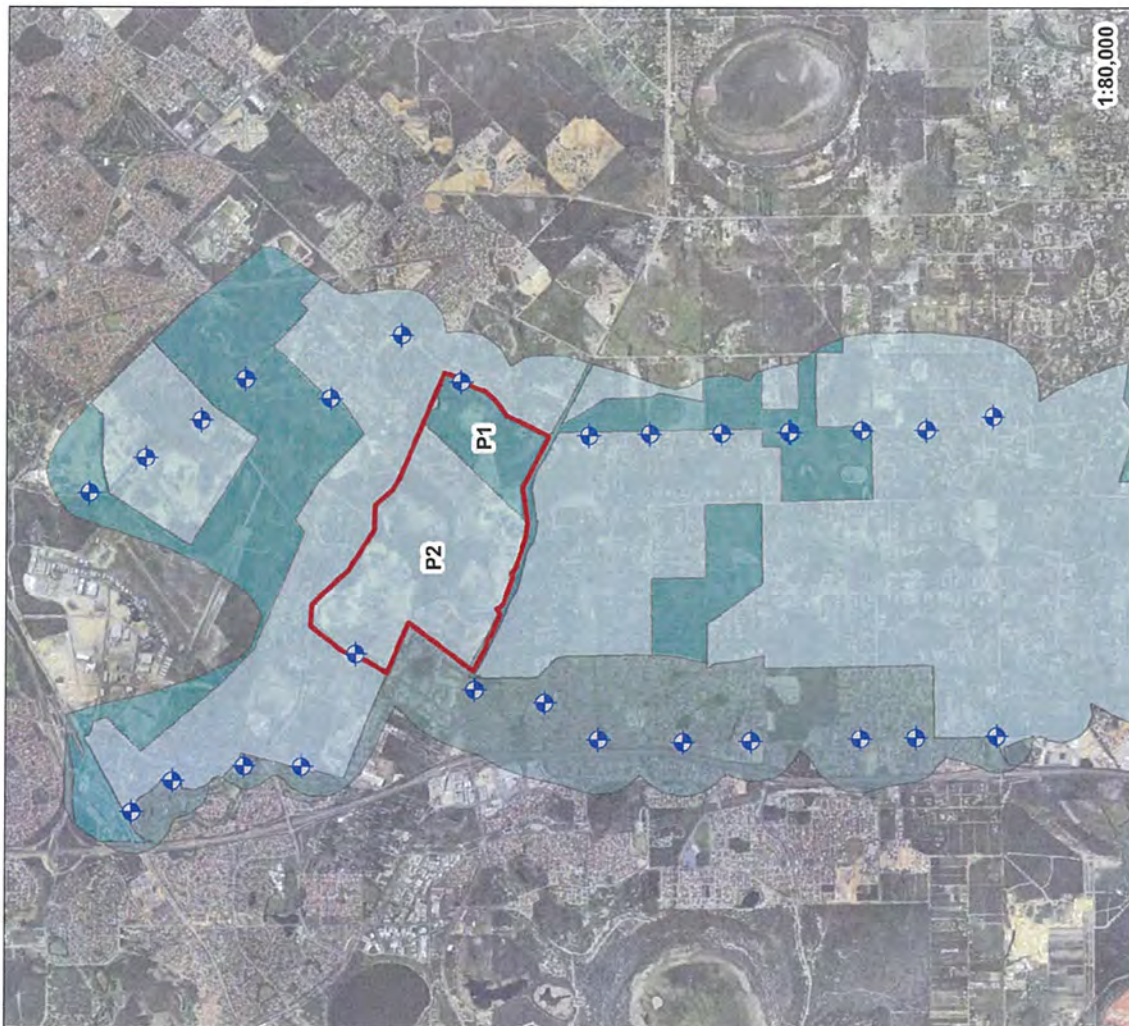
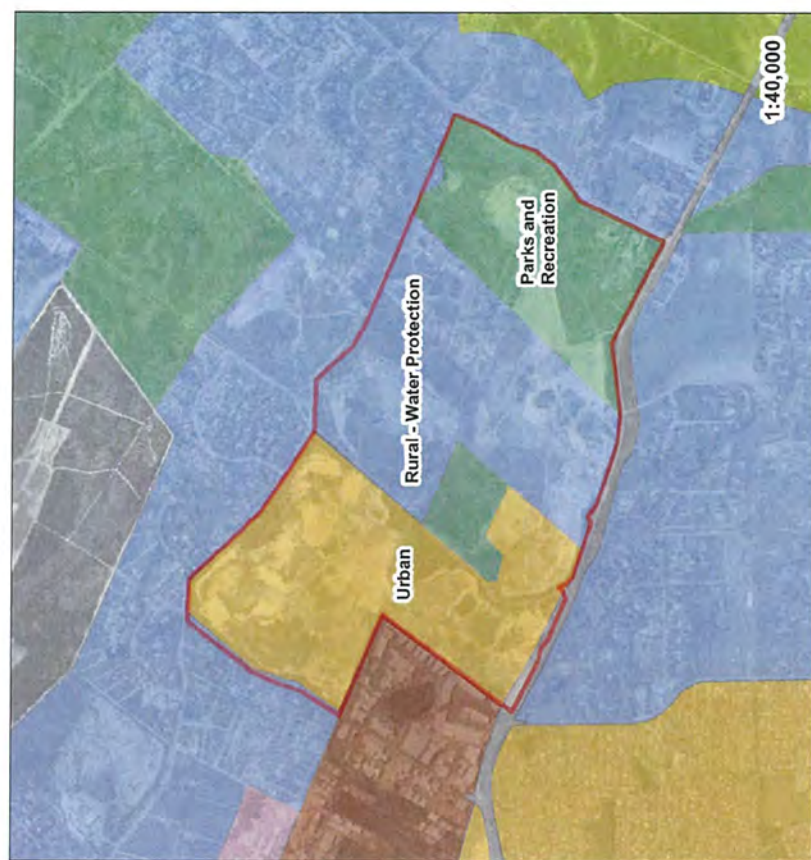


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 Treeby Strategic District Water Management Plan  
**Figure 1: Location Plan**





Study Area

Jandakot Mound Production Bores

Underground Water Pollution Control Areas

P1

P2

P3

MRS Land Zonings

Industrial

Parks & Recreation

Primary Regional Roads

Public Purposes (SECWA)

Public Purposes (Special Uses)

Rural

Rural - Water Protection

Urban

Coordinate System: GDA 94, Zone 50

**Figure 2: Underground Water Pollution Control Areas and Regional Planning**

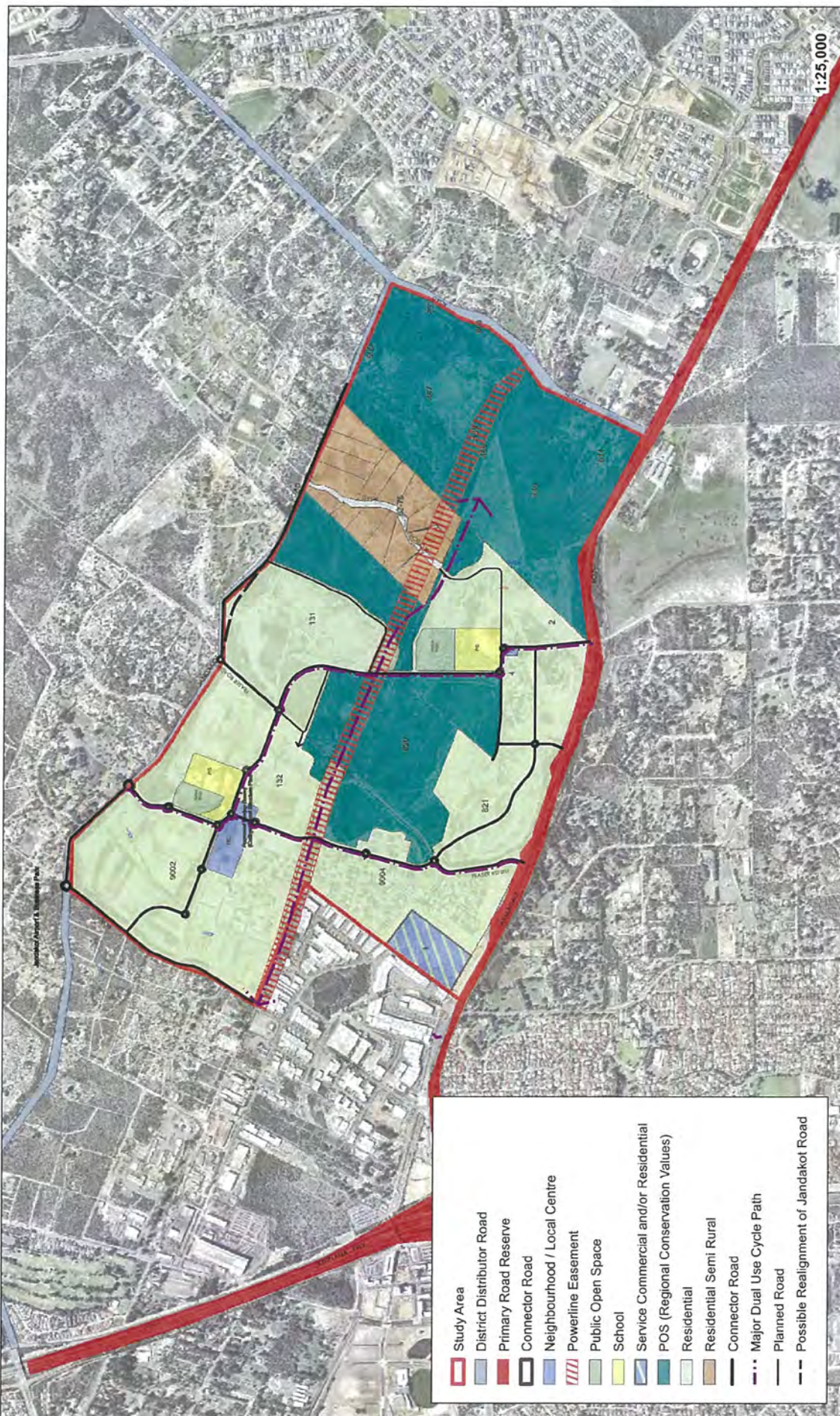


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Data Source: Nearmap (2016), CLE (2016)

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**Figure 3: Concept Plan**



# **Surface Geology**

**Ms5:** CLAYEY SILT - dark brownish grey silt, with disseminated fine-grained quartz sand, firm, variable clay content, of lacustrine origin

**S8:** SAND - very light grey at surface, yellow at depth, fine to medium grained, sub-rounded quartz, moderately well sorted, of eolian origin

**S10:** SAND - as S8 as relatively thin veneer over strong, blocky, brown silts and clays

**Sp1:** PEATY SAND - grey to black, fine to medium-grained, moderately sorted quartz sand, slightly peaty, of lacustrine origin

**Sp2:** PEAT-RICH SAND - fine to medium-grained quartz sand with much brown to black organic material, grades to peat, of lacustrine origin

**Study Area**

Topographic Contours (1.0m)

**Geology**

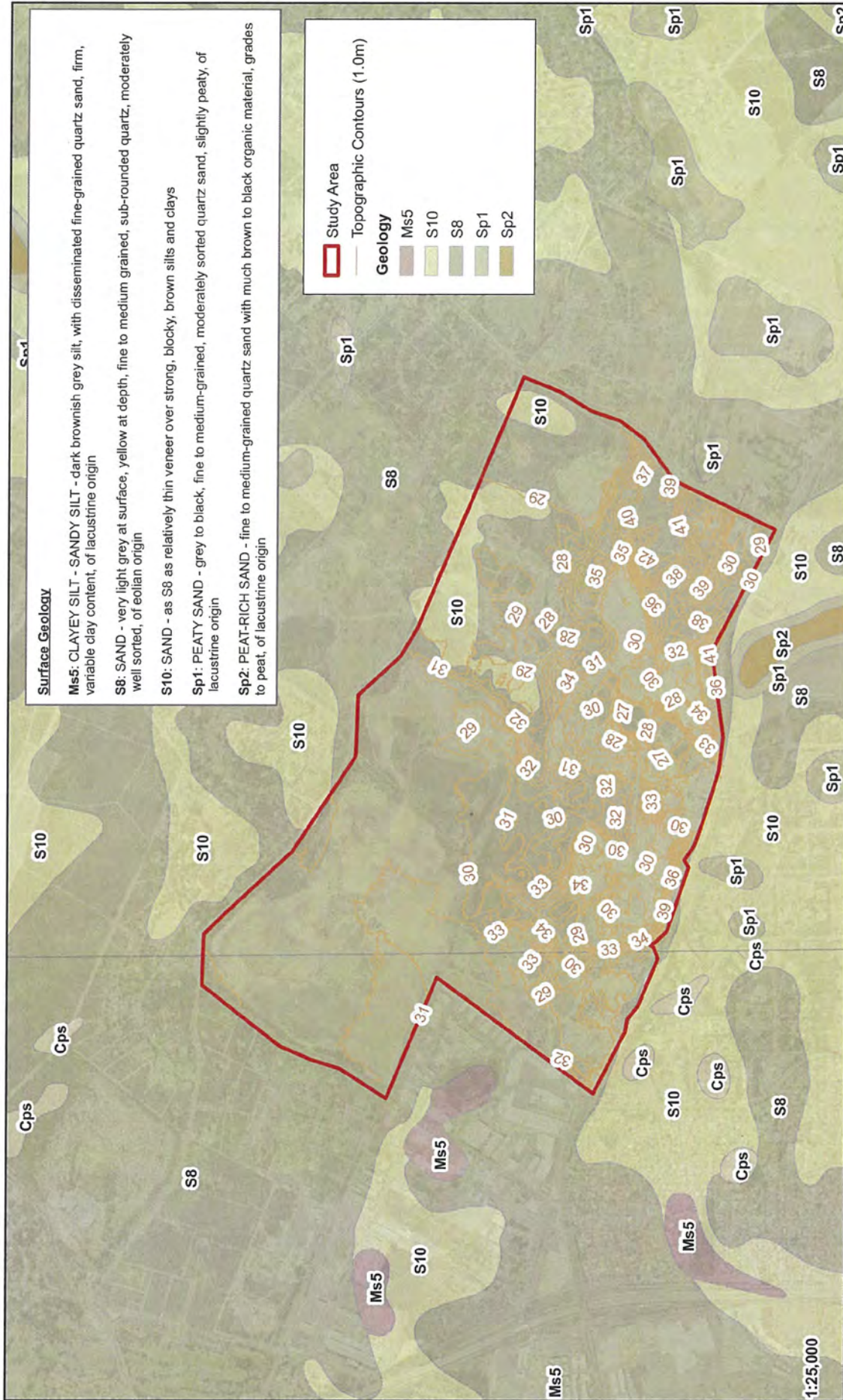
Ms5

S10

S8

Sp1

Sp2



Data Source: DoW (2013d), Gozzard (1986)

Job No. J6195

0 0.225 0.45 0.9 1.35 1.8 Kilometres

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Coordinate System: GDA 94, Zone 50

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**Figure 4: Topography and Surface Geology**






# **ACID SULPHATE SOILS - RISK DEFINITIONS:**


High to moderate risk of ASS occurring within 3m of natural soil surface that could be disturbed by most land development activities

**Moderate to low risk of ASS occurring within 3m of natural soil surface:**  
Where environments have not generally been suitable for ASS formation or ASS are highly localised or sporadic, they have been classed as having a moderate to low risk of occurrence. Where ASS is present, it may be close to the surface or buried by many metres of alluvium or windblown sand. Most of these landforms are not expected to contain ASS.

 Study Area

**ASS Risk Mapping (DoW, 2010)**

 High to moderate risk

 Moderate to low risk

1:25,000

Data Source: Nearmap (2016), DoW (2013a)

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Coordinate System: GDA 94, Zone 50



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**Figure 5: Acid Sulphate Soils**

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# WETLAND DEFINITIONS:

- Conservation Wetland:**  
Wetlands that support a high level of ecological attributes and functions.
- Resource Enhancement Wetland:**  
Wetlands which may have been partially modified but still support substantial ecological attributes and functions.
- Multiple Use Dampland:**  
Wetlands with few ecological attributes and functions remaining.



1:25,000

Coordinate System: GDA 94, Zone 50



0 0.225 0.45 0.9 1.35 1.8 Kilometres

Job No. J6195

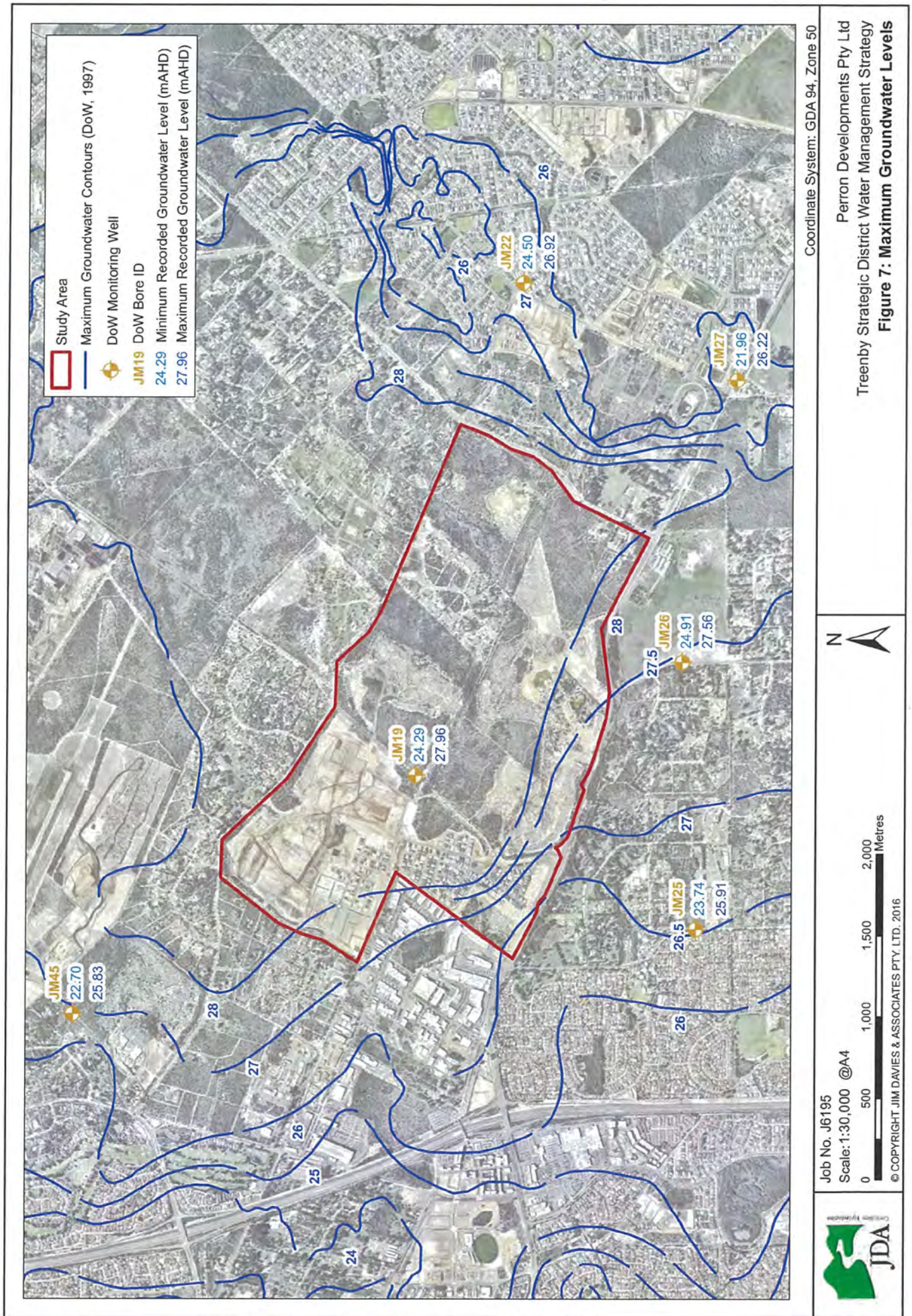
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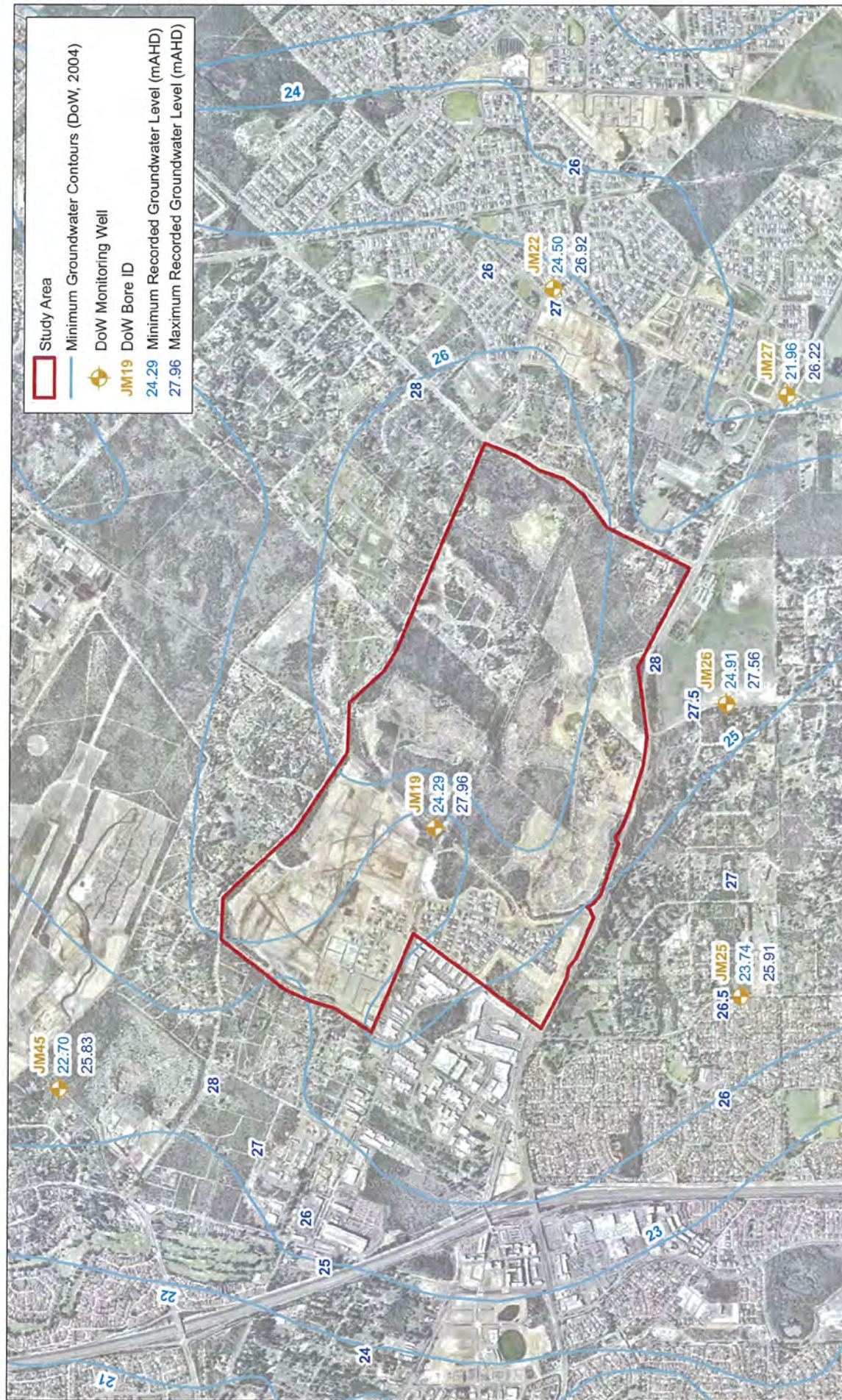


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**Figure 6: Wetlands**



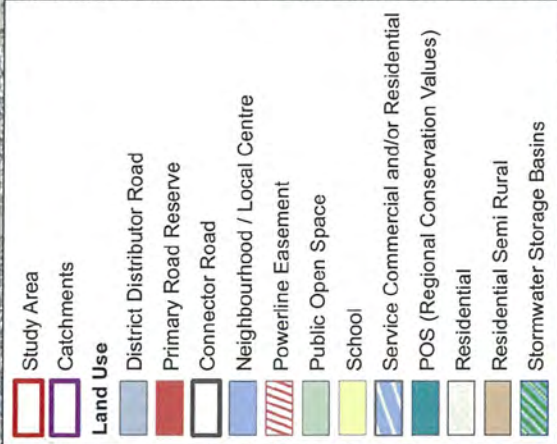
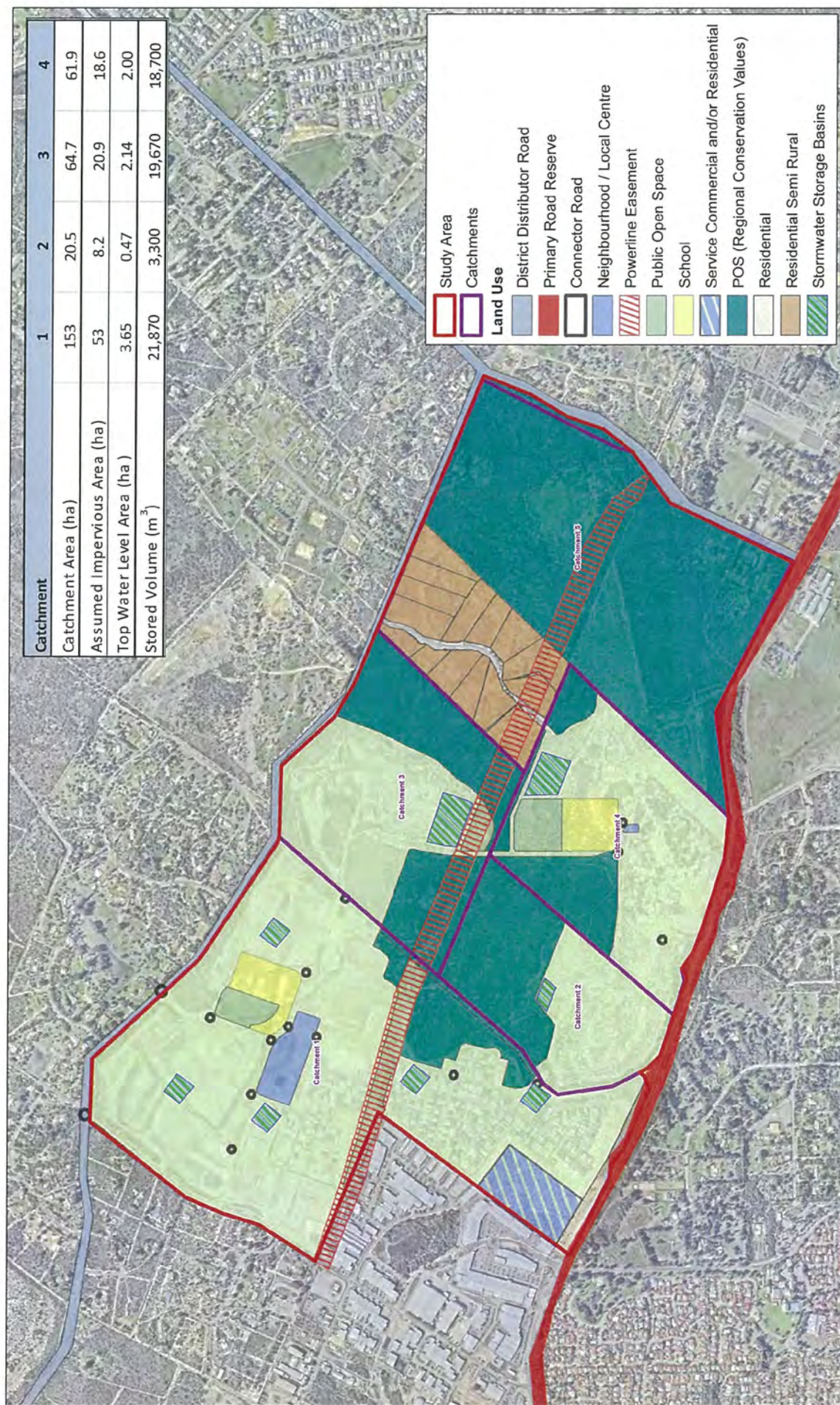








Catchment	1	2	3	4
Catchment Area (ha)	153	20.5	64.7	61.9
Assumed Impervious Area (ha)	53	8.2	20.9	18.6
Top Water Level Area (ha)	3.65	0.47	2.14	2.00
Stored Volume (m <sup>3</sup> )	21,870	3,300	19,670	18,700



Coordinate System: GDA 94, Zone 50



Data Source: Nearmap (2016), CLE (2016)

Job No. J6195

Scale: 1:20,000 @A4

0 400 800 1,200 1,600 Metres

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# **APPENDIX A**

## **Infiltration Basin Modelling Results**



# MODRET - Summary Results

Job: Lot 131 Jandakot Rd, SDWMS

Date : 19/05/2016 Performed by : RD

Basin: Catchment 3



Catchment Area 1	20.9 EIA	ha
Catchment Area 2		ha
Top Elevation	29.8	mAHD
Base Elevation	28.8	mAHD
Base Length	120	m
Base Width	150	m
Depth	1	m
Batter	1 in 6	
K <sub>u</sub>	5	m/day
K <sub>v</sub>	5	m/day
n	0.2	
Groundwater Level	26.8	mAHD
Base of Aquifer	-20	mAHD

Stage Volume relationship		
Stage (mAHD)	Volume (m <sup>3</sup> )	Area (m <sup>2</sup> )
28.8	0	18000
28.9	1815	18325
29.0	3665	18655
29.1	5547	18985
29.2	7460	19320
29.3	9410	19655
29.4	11395	19995
29.5	13410	20340
29.6	15460	20685
29.7	17545	21035
29.8	19670	21385

Duration	1 Yr ARI		5 Yr ARI		10 Yr ARI		100 Yr ARI		Total Runoff (m <sup>3</sup> )
	Peak Level (mAHD)	Volume (m <sup>3</sup> )	Total Runoff (m <sup>3</sup> )	Peak Level (mAHD)	Volume (m <sup>3</sup> )	Total Runoff (m <sup>3</sup> )	Peak Level (mAHD)	Volume (m <sup>3</sup> )	
0.5hr							28.84	18120	7950
1hr							28.94	18450	9905
3hr							29.10	18985	13795
6hr							29.19	19320	17055
12hr							29.32	19655	21770
24hr							29.50	20340	28740
48hr							29.70	21035	38420
72hr							29.80	21385	44090



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## Appendix 4

### Engineering Infrastructure Report (Wood & Grieve Engineers)

# Treeby (Banjup) District Structure Plan Engineering Infrastructure Report

Perron Developments Pty Ltd

30 June 2016

Revision No. 1

Project Number: 25421-PER-C

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## Revision

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REVISION	DATE	COMMENT	APPROVED BY
1	30 June 2016	Original Issue	J. Fabling



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## 1. Background

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Wood & Grieve Engineers have been engaged by Perron Developments Pty Ltd to undertake an assessment of civil infrastructure requirements for the development of land within the Treeby District Structure Plan (DSP).

The purpose of this report is to outline the servicing strategy for the purposes of the preparation of the Treeby District Structure Plan.

It is noted that the Stockland Calleya development (Lot 9004 Armadale Road and Lot 9002 & 132 Jandakot Road) is included within the District Structure Plan however as the development and servicing of this land parcel is significantly progressed we have not focussed on this area within our report.

In summary the DSP area can be serviced by the construction, upgrade and/or extension of regional service infrastructure to the site.

## 2. Earthworks

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The final earthworks levels for the site are a complex combination of geotechnical, hydrological, planning, environmental, engineering design and marketing factors.

The existing topography of the site varies in elevation from RL25 at the center of the site to RL46 near Warton Road, with undulation varying between these levels over the site. The gradient available provides the subject land with the flexibility to orientate the home sites to suit passive solar orientation and to obtain some cut material, together with imported fill material to achieve required lot levels to suit clearance to groundwater and storm event flood routing.

The DSP design has considered the need to match into existing ground levels to suit the preservation Bush Forever vegetation.

Detailed hydrological and geotechnical investigations have been undertaken over Lot 4 which have revealed a typical subsurface profile of a relatively thick 4.5m layer of Bassendean Sands overlaying cemented "coffee rock" at depth. It is anticipated that this surface profile would be indicative of the greater structure plan area. These results indicate that a site classification of Class A in accordance with AS2870-2011 would be anticipated.

Market forces presently dictate the provision of flat building sites with retaining walls to accommodate level differences. It is anticipated that lots will be designed with a maximum of 500mm front elevation from the verge level, with retaining walls installed for greater elevations.

Final earthwork levels will be designed to accommodate market requirements together to ensure adequate clearance to the 100 year flood level for the local and district drainage network, as well as providing adequate clearance to groundwater and ensuring roadway geometrical design incorporates flood routing constraints. Sufficient site levels will be required to be provided for the operation of gravity sewer connections.

## 3. Storm Water Drainage

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The Better Urban Water Management requirements for Western Australia prescribes that storm water drainage design ensures that the post development flows are maintained to the predevelopment levels specified, as well as incorporating best practice water sensitive urban design.

It is proposed that minor drainage events (typically less than 5year ARI) discharge via a piped drainage network to drainage treatment train systems with water quality structural controls.

Major storm events (those in excess of the 5 year event and up to the 100 year event) are to be conveyed via roadways to online detention storage systems within multiple use corridors. Discharge from these detention areas is to be controlled to retain existing outflow discharge rates and is to be conveyed offsite using swales and spillways. Seasonal fluctuations in the water table result in groundwater levels being close to the existing surface levels at the some portions of the site though the year. These areas will be filled to remove the expressions of groundwater at the



surface. Individual lot levels will need to have sufficient clearance to the average annual maximum groundwater level to achieve the desired site classification.

It is anticipated that the Local Structure Plans developed for the individual developments would incorporate storm water detention requirements of the individual Local Water Management Strategy, with POS locations selected to logically and sympathetically cater for proposed catchments.

## 4. Roadworks

The DSP is bounded by Jandakot Road (to the north), Warton Road (to the east), Armadale Road (to the south) and Solomon Road (to the west). It is proposed that Liddelow Road is extended north through the structure plan area and this together with Fraser Road south will provide two north south links from Armadale Road to Jandakot Road.

Roadways within the DSP area would be constructed in accordance with the configurations established as part of the traffic engineering requirements of this proposal and the City of Cockburn standard requirements. Road pavement configuration would be designed in accordance with specific geotechnical advice.

It is recommended that the upgrading of Armadale Road by Main Roads WA (MRWA) considers the intersection connections with the DSP area. These intersections will be required to be constructed to the standards of MRWA.

## 5. Wastewater

The DSP area is currently outside of the Water Corporations current formal sewer planning scheme, which will require review to accommodate the proposal. The Water Corporation have advised that an approved MRS Amendment would be the catalyst for the review of their wastewater planning scheme to establish the detailed requirements for servicing of the site. However, the Water Corporation have commenced conceptual wastewater supply planning about the subject site which is included as Appendix 1.

Disposal of wastewater within the subject land will be achieved via a network of gravity reticulation sewers gravitating to two wastewater pumping stations. One of the wastewater pump stations servicing the DSP area has already been constructed at the intersection of Clementine Boulevard and Ginger Loop within the Calleya development which discharges, via a pressure to existing infrastructure west of the DSP area. The balance of the DSP area discharges to a proposed Type 40 wastewater pumping station within Lot 4, which will discharge via a section of 100 diameter pressure main and 225 diameter gravity sewer to the existing pump station within the Calleya development. The structure plan would ultimately provide for suitable site to house the required Water Corporation infrastructure. It is anticipated a site in the order of 1000 m<sup>2</sup> would be required near the center of Lot 4.

Local structure plans for individual developments will be designed to have a layout sympathetic to the landform, while providing very direct links through the development to the wastewater pumping station to ensure minimisation of sewer extent and depth.

## 6. Water Supply

The Water Corporation have commenced conceptual water supply planning about the DSP area, as an extension of the Thomson Lake Gravity Supply Scheme, which is included as Appendix 2. This indicates that provision of a DN375 water main extension from the existing DN760 water distribution main crossing Liddelow Road south of Armadale Road and the provision of DN500 water main extension from the existing DN760 water distribution main to Armadale Road, becoming a DN375 within the DSP area.

This water supply arrangement to the site is conceptual and the approval of the MRS Amendment would provide the catalyst for review of the water supply scheme to suit the proposal.

Provision of a potable water supply to individual lots would be achieved the construction of a network of DN100 to DN250 throughout the internal road network of the landholding.

## 7. Underground Power

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Power supply to the DSP area can be achieved via expansion and/or upgrading of Western Power's network in the vicinity of the site. There are currently 22kV high voltage overhead power lines installed in Armadale Road and in the western portion of Jandakot Road adjacent to the DSP area. There is existing underground high voltage infrastructure that has been constructed as part of the Calleya development within the DSP area.

An underground network will be progressively constructed through the proposed subdivision with interconnected switchgear and transformers located about the site being reticulated as a low voltage underground network connecting to each lot.

It is anticipated that the existing overhead power lines located in Armadale Road and Jandakot Road would be removed and be replaced by underground power cables as part of the development works.

330kV transmission lines traverse the DSP area in a north west to south east alignment. The DSP has allowed for an easement about these transmission lines and land use within this easement will be required to conform with Western Power's requirements.

## 8. Telecommunications

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The current communications legislation details developments of greater than 100 premises National Broadband Network (NBN) are the Wholesale Provider of last resort, recent amendments to the Communications act has encouraged competition within the wholesale sector; as such the developer has the option to sign up with an alternative provider for a Broadband solution.

NBN has already been installed within the Calleya development and noting the relatively large landholdings within the DSP area, it is expected that the NBN network would be extended through the DSP area. An underground network of NBN cabling (in a common trench with underground power) would be progressively constructed through the proposed land parcel with fibre distribution hubs located about the site as required.

If a particular development was to be less than 100 lots then it is anticipated that telecommunication services would be provided by Telstra.

## 9. Gas

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The DSP area is currently serviced by an existing connection to Atco Gas's DN300 high-pressure steel gas main located in Armadale Road.

It is anticipated that ATCO Gas will service this development by the internal reticulation of natural gas about the subdivision, utilising a common trench with water reticulation being provided by the developer, connecting to the existing gas mains adjacent to the site.

It is anticipated that a pressure reducing valve will be required to reduce operating pressures at the site to that suitable for residential reticulation.

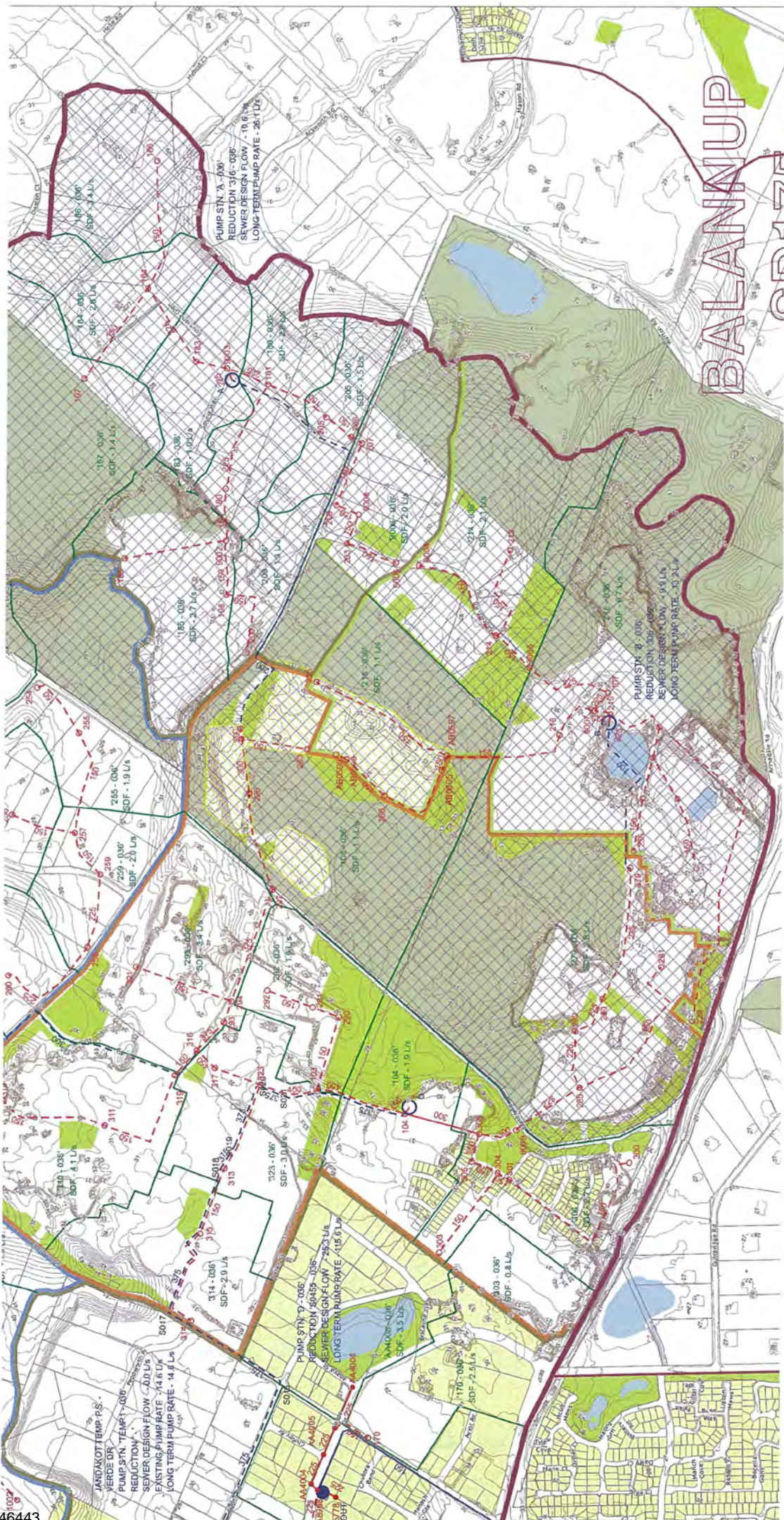


## Appendix 1 – Wastewater Supply Planning

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# BALANUP





## Appendix 2 – Water Supply Planning

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**SCHEDULE OF SUBMISSIONS**  
**PROPOSED STRUCTURE PLAN – TREEBY DISTRICT STRUCTURE PLAN**

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
1	Julien Seclier & Michelle Pedersen 22 Citrine Street TREEBY WA 6164	<p><b>SUPPORT</b>  100% in favour for the planning ideas. A shop and school will help bring and support the community, and is one of the reasons why we chose to live in this area.</p> <p>Left in/ left out of Ghostgum Avenue isn't ideal but I can understand why.</p> <p>Lastly, a secondary link over the freeway somewhere off Solomon Road or through Jandakot Road would be ideal as crossing the freeway from Armadale/Beeliar Drive is a nightmare.</p>	<p>Noted, the population proposed warrants the provision of the school and the commercial centre.</p> <p>Noted, this is unfortunately a matter which will be determined by Main Roads WA as it relates to access onto Armadale Road (in their control). The next comment directly relates.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Armadale Road (North Lake Rd bridge) project is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage:  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p>
2	Landowner	<p><b>SUPPORT</b>  I Agree with most of the proposals outlined within the documentation. I feel there is a few oversights in the plan however. Mainly the lack of Major dual use cycle / pedestrian footpaths along both Jandakot Road and Solomon Road. These are very busy stretches of roads with no pedestrian or cycling infrastructure that will result in a major incident (possible fatality) at some point, particularly considering there is little to no lighting at night.</p> <p>I would also like to see the details for the intersection of Solomon</p>	<p>The plan primarily deals with the land within the Treeby District Structure Plan area boundary and these roads are outside this. However, it is a standard subdivisional requirement to upgrade adjacent roads, which includes the need for a shared use path.</p> <p>Construction of a shared use path on Solomon Road (between Armadale Road and Dollier Road) is commencing mid-September</p> <p>This intersection will be rebuilt as part of the Armadale Road deviation project.</p> <p>The request for submissions relates to the Treeby District Structure Plan.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		Road and Armadale Road. at present this is a very busy intersection.	<p>This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Armadale Road (North Lake Rd bridge) project is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage:  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p>
3	Jamie De Palma 70 Wintergreen Crescent TREEBY WA 6164	<b>SUPPORT</b>	Noted
4	Amy Cowdell 24 Sapphire Drive TREEBY WA 6164	<p><b>SUPPORT</b></p> <p>Really like that this is a well thought out in-fill plan which considers local and regional impacts as well as community wellbeing. I support that you are proposing to keep a large area as "resource" and have corridors between the resource areas. Good to see the water catchment areas are within the resource code and much of the bush forever site will remain. Agree with the 500m resource buffer and protecting Jandakot airport (Figure 9).</p> <p>Road- The additional two roundabouts on Armadale Rd should help with traffic flow especially near train station car park. I assume due to maps reflecting it, once North Lake Rd upgrades occur this plan won't need to be updated?</p> <p>Water strategy- In this plan or the water strategy would you consider including a clause; no private domestic gardens bores can be installed on new lots under 500sqm? Similar wording as within contract for sale of land within Calleya? Due to protection of groundwater resources within the JUWPCA and to prevent excess water being used on gardens (surveys suggest garden bore users use more water than scheme for irrigating gardens/lawn).</p>	<p>Noted, the level of detail is still quite high level at this stage and the City looks forward to refining this detail as the land is eventually structure planned at a more localised level.</p> <p>This plan has had input from Main Roads, who would provide their advice mindful of their upcoming projects. The plan indicates three roundabouts, the first with Liddelow, then west at Solomon Road and Verde Drive. Updates are available on the Main Roads webpage:  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p> <p>The City has no influence in this matter, it is governed by the Department of Water and Environmental Regulation.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>Water supply- would you consider alternatives i.e. rainwater tanks for households and businesses. Using captured stormwater (so store during winter) to irrigate POS over hotter months.</p> <p>Bushfire- Does this plan need to review/revise the bushfire assessment level? If large areas of land is being changed to urban and small blocks (&lt;500sqm) perhaps a standard low rating can be applied to the urban blocks? Potential savings and affordability for future land holders.</p> <p>I think Figure 10/section 3.5.2 shows this, but just to be clear- the dual cycle path joins up along Solomon Rd between Armadale Rd and Dollier St and connects to the cycle path along the freeway. Is there a timeframe on this? This should increase the number of people waking/riding/running from Treeby area to train station. It may be outside boundary of this plan but an overpass for pedestrians over North Lake Rd would be a safe option for traffic management and creating an environment to encourage cycling.</p> <p>Bus transport- could the bus going through Calleya stop at eastern side of train station before going over FWY to shopping centre?</p> <p>Implementation &amp; Introduction- suggest including a proposed timeframe and maybe a few scenarios on how the drivers/scope/plan will be achieved at set milestones i.e. now, 2031 (Directions 2031)</p>	<p>The City would certainly encourage the use of rainwater tanks; however this is another matter we cannot mandate. Part of the issue is they are not part of the building and it is not something we could require when landowners build. It is a similar situation for solar panels.</p> <p>As developers move through the statutory process (rezonings and local structure plans and then subdivision) they will continually need to review the bushfire risk. In all likelihood, this will change for some areas over time (as some areas are cleared). Just because a lot is smaller, this alone does not mitigate the bushfire risk, developers will need to design the estate to reduce risk as much as possible (possibly by some clearing, as well as sensible location of roads between high/extreme risk areas). This will result in as few lots as possible being deemed to have some level of bush fire risk. For those lots, the landowners who build dwellings will need to apply additional measures to comply with the Australian Standard relating to bushfire prone dwellings. This does unfortunately apply some additional building costs. It is of course up to developers whether they recognise this and sell those lots at a cheaper price than an unaffected lot. While affordability is important, City officers respect that the protection of its future residents has a value which goes beyond this.</p> <p>It is outside the plan area; however, the path network will connect. The Solomon Rd path (between Armadale and Dollier Roads) will commence construction in mid-September 2017. The Armadale Road footpath is the responsibility of Main Roads and will be delivered as part of their upgrades.</p> <p>Updates are available on the Main Roads webpage:  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p> <p>The scope of this plan does not extent into looking at how the bus network will operate. These will be decisions for the responsible State Government agency.</p> <p>A timeframe is inappropriate at this point. The implementation of the Treeby DSP is reliant on a number of factors. Initially the finalisation of the Perth and Peel @ 3.5 million document (timing unknown). Following that, rezoning</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		and 2050 (Perth-Peel @ 3.5M).	under the Metropolitan Region Scheme would need to be initiated by the landowners. Given they are ultimately in control of when development occurs it would be misleading of Council to nominate a timeframe.
5	Suhani Shah 4 Pilgrim Place CURRAMBIN E WA 6028	<b>SUPPORT</b> Good for development of the area	Noted
6	Landowner	<b>SUPPORT</b>	Noted
7	Landowner	<b>OBJECT</b> I would like to make my property at 12 Peppworth Place, Jandakot develop to urban residence first. My property position is more close to the shopping centre and train station.	The request for submissions relates to the Treeby District Structure Plan. This submission relates to the submitter's own property outside that area. Accordingly, this submission is dismissed.
8	Hayden & Dylan Purnell 39 Greensand Promenade TREEBY WA 6164	<b>SUPPORT</b>	Noted
9	Landowner	<b>SUPPORT</b>	Noted
10	Adam & Mesha Steel 120 Jandakot Road JANDAKOT WA 6164	<b>OBJECT</b> <ul style="list-style-type: none"> <li>• Armadale road needs to be upgraded for this to happen!</li> <li>• Jandakot Road needs to be made safer by: <ul style="list-style-type: none"> <li>- Reducing speed limit</li> <li>- Adding slow points</li> <li>- Diverting traffic back to Armadale Road</li> </ul> </li> <li>• Implement a structure plan of the <u>whole</u> area not bit by bit</li> </ul>	<p>The request for submissions relates to the Treeby District Structure Plan. This submission relates to road upgrades, adjacent to, but outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p>



N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
			Considering the Treeby DSP contents and the submission lodged is different to 'implementing' a structure plan, which is done by landowners/developers. When developments are implemented they are always done 'bit by bit' as services progress. An example of this can be seen in the Calleya estate which has been released in 'stages'.
11	Ning Bi 215 Jandakot Road JANDAKOT WA 6164	<b>SUPPORT</b> Since there is already a large portion of land been developed into residential use, further development would benefit the district and surrounding communities more, by bringing in new infrastructure and public facilities.	Noted The plan includes community facilities which will also be accessible to the broader community.
12	Trevor Verran  5 Coonadoo Court JANDAKOT WA 6164	<b>OBJECT</b> Disappointed that the area north of Jandakot Road between Jandakot Road and Jandakot Airport is not been incorporated into this plan. We have been sandwiched in between all of this development with Treeby to the south and Jandakot Airport to the north. The lifestyle we had when moving here in 1991 has been obliterated and we are now being left out	This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.
13	Malcolm & Louise Dobson 139 Jandakot Road JANDAKOT WA 6164	<b>OBJECT</b> No structure should proceed until the land owners abutting Jandakot Road and Jandakot Airport fence are given immediate clarity on their land use. We by definition are no longer a rural area such as Banjup, Oakford and Wandi due to traffic numbers traversing Jandakot Road, Solomon Road etc. The road noise levels have destroyed our amenity of life. Do not complete the Treeby Structure Plan and ignore the Jandakot Precinct.  Upgrade Armadale Road first to have an alternate road with double lanes to take vehicular traffic off Jandakot Road.	This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.  The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.  Updates are available on the Main Roads webpage: <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>In 2015 the Council submitted a “meek suggestion” to WA Planning basically saying “what should Jandakot Precinct be”. We now need an answer for once and all, in or out of the Treeby Structure.</p>	<p>The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>This is refuted. Council took the opportunity to lodge a lengthy submission to the Perth and Peel @ 3.5 million document and question the basis of what was advertised for the a number of areas in our city, including the Jandakot and Treeby (then part of Banjup) areas. If Council had put forward a particular land use in this area, then we would have been criticised for not consulting with own community first. At the time, City officers make a point of presenting the local resident group what this plan noted for this area and asked them to contemplate the points we were to question in our submission and encourage the group to also lodge a submission on the document. The City would also like a response on the Perth and Peel @ 3.5 million documents but accepts this lies with the State Government.</p>
14	<p>Austro Asia Activities Pty Ltd 17 Falcon Place JANDAKOT WA 6164</p>	<p><b>OBJECT</b> Structure plan for whole of Jandakot, North of Armadale Road, to be completed since approved for Schaffer Corp or Urbanstone, then the rest of the areas should be similarly approved for zoning to commercial, warehouse and industrial.</p> <p>Armadale Road needs to be upgraded to major road linking Harrisdale, Piara Waters. Jandakot should be a minor road. Speed limit for Jandakot road to be at 70kph. Reduced from 80kph, traffic/speed humps, roundabouts to be introduced.</p> <p>Need to have input for local residents, views to be taken into consideration, not just views of Calleya.</p>	<p>This plan relates to a specific area as this responds to the State Government’s Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City’s requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project ‘Jandakot visioning’ which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage: <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>The Jandakot Road upgrade will be the subject of a report to Council later in the year. The Treeby DSP has been advertised to surrounding landowners, including those in the rural areas and industrial lots, not simply the developer and landowners within Calleya.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
15	Landowner	<b>SUPPORT</b>	Noted
16	Landowner	<p>- Firstly, I am concerned with the current roads surrounding the proposed plans. Armadale Road has already seen a significant increase in traffic since Calleya estate was built along with forever increasing traffic due to further housing estates further up Armadale Rd like Piara Waters. The 1 lane road each way is not able to hold the next increase in traffic as these new estates you propose will provide. I see proposals for 'left in, left out' entrances/exits but with the current flow of traffic on a 1 lane road, it will make it near impossible to exit onto Armadale Road safely as the cars continue to come when pushed into 1 lane. What is going to be done here?</p> <p>- Secondly, Jandakot Road is in the exact same boat as Armadale Road. I can see the proposed roundabouts for the road – 3 roundabouts in the space of a 1km stretch. This is ridiculous. It is an 80km speed limit on this road, and these roundabouts will force traffic to bank up at the several roundabouts, cause accidents as people round the bends and slam on breaks to traffic backed up. This needs to be reviewed. I would think that an upgrade to 4 lanes is necessary to allow for turning lanes instead of roundabouts.</p> <p>The timeframe of these works to improve the roads for the future is a huge concern. The roads need to be upgraded before any work on new estates can be done. Putting more people into the estates and then trying to upgrade the roads afterwards is ridiculous and will put more strain on all of the neighbouring areas and increase traffic wait times &amp; accidents.</p> <p>Please consider the upgrades of the roads FIRST to suit the future development proposals.</p>	<p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage:  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>Armadale Road is controlled by Main Roads WA and Council cannot mandate when those upgrades occur. The required upgrades for Jandakot and Solomon Roads have been agreed and provision timing has been secured via legal agreement. This is a normal part of how new estates are developed and it is unreasonable to expect road upgrades to be delivered well ahead of the development which (in part) warrants the upgrade. It must be recognised, it is not simply the Calleya estate which has contributed to the traffic demand. There are many growth areas developing the east in the adjacent City of Armadale as well. Timing however has been delayed to a degree due to the design process. Through the draft designs, impacts on other landowners have become apparent and this has led to the need to workshop these concerns with those landowners.</p> <p>See comments above. It is noted the submitter is from property within the Calleya estate which was allowed to proceed partially, in advance of these upgrades being carried out. If the submission was applied literally, then to this day there would still be no land released within the Calleya estate at all.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
			Instead we have a compromised position where half the estate is delivered and then the road upgrades need to occur before the estate is able to be completed.
17	Michael Trout & Karen Trout 25 Caraway Street TREEBY WA 6164	<b>SUPPORT</b>	Noted
18	Landowner	<b>SUPPORT</b> <ul style="list-style-type: none"> <li>I support use of land for educational/vocational/open space development</li> <li>I object if the land is developed for water management/movement networks or for industrial useage.</li> </ul>	<p>Noted</p> <p>It is not possible to develop any land use without accommodating water management or movement networks somewhere. The Treeby DSP will need to manage water (generally basins are located in parks) and its key roads (these are shown on the plan so it is clear where it will connect into the neighbouring estate. There is no industrial proposed in the Treeby DSP.</p>
19	Landowner	<b>SUPPORT</b> My objection is to the proposed changes to the Schaffer Corp property I'm not against the plan .But I consider that the zoning changes have to benefit everybody in the immediate area. If changes are not made to surrounding property's we could be left in a small enclave with no rights other than pay council rates .When i perched this it was to be for my retirement as things stand we consider we would have a lot of trouble selling it. I'm not against progress but it has to benefit the whole area not just a few With the widening of Jandakot road it will make living a quite rural life style impossible with traffic noise and congestion there for I think the only answer is zoning changes.	This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.
20	Landowner	<b>OBJECT</b> We understand that things in this area are changing but they are having a huge impact on residents on properties in the area that moved here for peace and quiet. If Skotsch Road is forced to stay as Resource zoning we will be closed in by residential. If our street opens into residential land behind us we will have continual traffic travelling past our once quiet homes as it is a no through road at present at	<p>Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them. This point was appreciated at the Community Forum and there has been no rationale provided by the State Government for why Skotsch Rd was left as rural. It is possibly because development there has been quite recent and the State has made an assumption these landowners would not look to redevelop. This of course, does not consider the alternative question, are they happy to</p>



N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>present it already takes up to 10 minutes to get onto Jandakot Road . We are also opposed to the bike and walk path that would go along the back of our block. Thirdly the school that is proposed for the residential land behind us will also impact us with noise and children cutting through our area to get home etc we have children ourselves but if I wanted to live near a school I would have moved near one. Finally I think if we are having these changes forced on us the zoning in the Skotsch Road area should be changed to residential as well so we can get out of here before all of this starts we should at least have this option, leaving one strip of Resource seems ridiculous I don't understand if most of the land in an area is residential why isn't it automatically changed with it.</p>	<p>remain, but feel surrounded by urbanisation? To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>
21	Landowner	<p><b>OBJECT</b></p> <p>Cockburn is the biggest traffic bottleneck in south corridor. There is no point in building more urban areas if there are no plans to build infrastructure to support it. The commuters have enough frustration on the roads around this area already!</p> <p>PS: You should fix your website to actually include the suburb Treeby so we can select it while putting down our address!</p>	<p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area.</p> <p>There are plans to upgrade road infrastructure. The City is certainly aware of the traffic concerns around Cockburn Central and has been lobbying the State Government for a number of years to prioritise upgrades. The Jandakot Road upgrade will be the subject of a report to Council later in the year. Armadale Road upgrading is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd): <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>North Lake Rd bridge <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p>

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			A new webpage was launched to host the community consultations. Initially the website (not hosted by the City) did not include the option to select 'Treeby'. This was also noted by City staff and was updated on 11 July.
22	Jra Ling Lin 4 Wintergreen Crescent BANJUP WA 6164	<b>SUPPORT</b>	Noted
23	Landowner	<b>SUPPORT</b> However, we live at ( <i>house number removed</i> ) Jandakot Road, Treeby and am disappointed that the area previously known as North Banjup has been completely left out. Development happening rapidly around us and no commitment as to the standing of our properties.	Noted This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.
24	Landowner	<b>SUPPORT</b>	Noted
25	Wayne & Julie Hall 12 Cessna Drive JANDAKOT WA 6164	<b>OBJECT</b> We will only support special rural subdivision of 1 hectare lots. Big businesses are doing what they want when they want. Small landholders get no consideration!	Noted This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.  One hectare lots would not be supported in a rural area; this is contrary to State Government policy which requires a minimum of 2ha lots where there is no mains water connected.
26	Chrismo Holdings Pty Ltd 5/21 Biscayne Way	<b>SUPPORT</b>	Noted

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	JANDAKOT WA 6164		
27	Natasha Merchant 15 Bauxite Road TREEBY WA 6164	<p><b>SUPPORT</b></p> <p>Happy to support anything to help Solomon Road become safer. Solomon and Armadale is very congested and dangerous as well, as is Solomon and Biscayne intersection/crossing.</p>	<p>The request for submissions relates to the Treeby District Structure Plan. This submission relates to road upgrades, adjacent to, but outside that area.</p> <p>There are plans to upgrade road infrastructure. The City is certainly aware of the traffic concerns and has been lobbying the State Government for a number of years to prioritise upgrades. The Jandakot Road upgrade will be the subject of a report to Council later in the year. Armadale Road upgrading is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd): <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>North Lake Rd bridge <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p>
28	Department of Water and Environment Regulation PO Box 332 MANDURAH WA 6210	<p>The Department of Water &amp; Environmental Regulation (DWER) has reviewed the information and provides the following advice.</p> <p>The land subject to this proposal is located within the Jandakot Underground Water Pollution Catchment Area (UWPCA), which has been declared for Priority 1 (P1) and Priority 2 (P2) source protection. P1 areas are defined and managed to ensure there is no degradation of the quality of the drinking water source with the objective of risk avoidance. P2 areas are defined and managed to maintain or improve the quality of the drinking water source with the objective of risk minimisation. P1 areas typically include Crown land, but may also include some private land. P2 areas occur within the Jandakot UWPCA where the land is zoned rural and the risks need to be minimised.</p> <p>The Jandakot UWPCA is managed in accordance with the Western</p>	<p>Noted – the City is aware of this catchment area and it is mentioned in the advertised documents</p> <p>Noted – the City is aware of what SPP2.3 includes and the advertised version of the Treeby DSP aligns to the draft Perth and Peel @ 3.5 million</p>

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		<p>Australian Planning Commission's (WAPC) Statement of Planning Policy No 2.3 <i>Jandakot groundwater protection policy</i> (SPP 2.3). Section 6.3 notes that amendments to the MRS will only be supported where land has been identified for development in the manner proposed through a strategic planning document approved or prepared by the WAPC.</p> <p>The <i>Draft South Metropolitan Peel Sub-Regional Planning Framework</i> (DoP, 2015) has been developed to inform future Metropolitan Region Scheme amendments. The DSP should be consistent with the framework and land-uses outlined in the <i>South Metropolitan Peel Subregional Planning Framework</i>. It should also be consistent with the policy objectives in SPP 2.3 and the State Planning Policy 2.8: <i>Bushland Policy for the Perth Metropolitan Region</i>.</p> <p>Land-use zoning proposed for part of lot 131 Jandakot Road in the DSP is inconsistent with the abovementioned documents. The DSP proposes to rezone part of the northern portion of Bush Forever 390 from its current Rural (Bush Forever) to Urban (residential). This site has not been identified within the <i>South Metropolitan Peel Sub-regional Planning Framework</i> for urban expansion or urban purposes and as such is not supported.</p> <p>The rezoning of part of the northern portion of Bush forever 390 is also contrary to the objectives of SPP2.3 in particular Section 6. 7</p>	<p>strategic planning document which has been prepared by the WAPC. This is not an amendment to the Metropolitan Region Scheme.</p> <p>Otherwise known as Perth and Peel @ 3.5 million, the submitter appears to take a very rigid view of what is shown on the maps. The text of this document must be read in conjunction with the plans. The implementation action section makes this clearer, reading:  <i>"The framework is the first step in the ongoing process of refining and detailing planning proposals for an area. This refinement will continue to be undertaken through the finalisation of the framework as a sub-regional structure plan, MRS/PRS, local planning schemes, structure planning, subdivision and/or development"</i>.</p> <p>The proposed retention and management of the majority (94%) of the Bush Forever site proposed by the Treeby DSP achieves alignment with the key precepts of SPP2.8. It is fairly common to find these areas are mapped on a desktop analysis and have not been 'ground truthed' properly by site inspection. The Treeby DSP acknowledges this may be the case here also given there are areas the State has mapped 'Bush Forever' which have been cleared and yet there are other bush areas outside the Bush Forever boundary. More detailed negotiation on the areas to be retained versus removed, and any applicable offsets package will occur through the rezoning and local structure planning stages. This will allow for further comment from the Department as more detailed analysis is able to be provided.</p> <p>The mapping generally aligns to Perth and Peel @ 3.5 million which as set out in that document <i>"will be taken into account when strategies, policies and plans that apply to the sub-region are prepared <u>or reviewed</u>"</i> (emphasis added).</p> <p>See comments above</p>



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		<p>Development Control Provision whereby existing vegetation is to be retained and rehabilitated. The <i>Treeby District Structure Plan: Environmental Assessment Report</i> (360 Environmental, September 2016) identifies this vegetation as being mostly of excellent quality.</p> <p>Within the City of Cockburn's Treeby District Structure Plan consultation process, the DWER has consistently advocated that any zoning amendments within the Banjup Quarry/Treeby area be consistent with the abovementioned planning documents.</p> <p>Given that the proposal to rezone a portion of Bush Forever 390 to urban would go against policy measures outlined in SPP 2.3 and is inconsistent with the <i>South Metropolitan Peel Subregional Planning Framework</i>, the Department cannot support the DSP.</p> <p><b>Urban Water Management - District Water Management Strategy Consistent with Better Urban Water Management</b> (WAPC, 2008) (BUWM) and the policy measures outlined in <i>State Planning Policy 2.9</i>:</p> <p><i>"Planning to guide water resources management should be integrated with land use planning decisions to achieve more sustainable development and protection of our water resources"</i>.</p> <p>The DWER considers that the proposal to rezone land at this site should be supported by a District Water Management Strategy (DWMS) prior to approval. The DWMS should demonstrate that the subject area can support the proposed changes in zoning. It should contain a level of information that reflects the site constraints and risk to water resources.</p> <p>The DWER reviewed the supporting document, <i>Treeby (Banjup), Strategic District Water Management Strategy</i>, (JDA, November 2016) and it was deemed unsatisfactory to the DWER as noted in correspondence to the City of Cockburn dated 12 July 2017 (please find attached). The DWER cannot support the DSP until the Department is satisfied with the DWMS. Accordingly, the proposed DSP should not be finalised prior to the endorsement of a satisfactory DWMS by the DWER and the City of Cockburn in accordance with BUWM (WAPC, 2008).</p>	<p>Noted, see comments above.</p> <p>See comments above. The proposal is not inconsistent with Perth and Peel @ 3.5 million or the proposed implementation of this document which, to reiterate is:</p> <p><i>"The framework is the first step in the ongoing process of refining and detailing planning proposals for an area. This refinement will continue to be undertaken through the finalisation of the framework as a sub-regional structure plan, MRS/PRS, local planning schemes, structure planning, subdivision and/or development"</i>.</p> <p>A DWMS has been advertised with the draft Treeby DSP (dated Sept 2016). It is understood a more updated version was reviewed by the Department (dated Nov 2016). Modifications (which are minor) are in the process of being made and the updated version will be required to be appended to the Treeby DSP.</p>

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29	Landowner	<b>SUPPORT</b>	Noted
30	Yachting Services Australia 2/6 Biscayne Way JANDAKOT WA 6164	<p>I do not object to the proposal but have concerns regarding the amount of increased traffic in the area and lack of appropriate infrastructure to support this. Our views on this were expressed to the council in another feedback request.</p> <p>Roundabouts are already desperately required along Solomon Road, particularly at the intersections of Cutler Rd, Jandakot Rd and where the train station traffic enters/exits. There are regular accidents at the Corner of Cutler and Solomon. The map provided seems to indicate that one may be planned for Jandakot intersection, but the symbol was not included in the map legend. The map does not seem to show a roundabout where the new proposed road within the Treeby District enters Solomon. Solomon Road is a ridiculously busy road for its size and will only get worse.</p> <p>All too often in Perth there is a lack of foresight when developing infrastructure and roads and we are forever playing catch up to deal with the increased traffic. The traffic along Solomon is the perfect example</p>	<p>Noted</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area.</p> <p>There are plans to upgrade road infrastructure, including Solomon Road. The City is certainly aware of the traffic concerns around Cockburn Central and has been lobbying the State Government for a number of years to prioritise upgrades. The Jandakot Road upgrade (which also includes the upgrade to Solomon Road) will be the subject of a report to Council later in the year. Armadale Road upgrading is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd): <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>North Lake Rd bridge <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p>
31	Kim Chuan Eng 36 Murdoch Way BANJUP WA 6164	<p><b>SUPPORT</b></p> <p>Support development of the Treeby district for its close proximity to all amenities. Should also consider development on property/land adjacent to the south of Armadale Road for "Perth and Peel @3.5 million" due to its close proximity to infrastructure and amenities.</p>	<p>Noted</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p>
32	Danielle Honore 73 Louisiana Glen TREEBY WA 6164	<p><b>OBJECT</b></p> <p>It is very frustrating to see that the tail end of Jandakot Road and the side roads off it are not being considered in this proposal.</p>	<p>Noted</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was</p>

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		<p>Our semi-rural lifestyle is already being impacted by the major increase in traffic and noise, this additional carve up of property will only make it worse.</p> <p>Why is it stopping at Fraser Road and not continuing down to Warton Road? Getting out of our street weekday afternoons is extremely dangerous and it will only be a matter of time before a young family on their way to school or sport is cleaned up. I have reported this already but been told that it is not on the radar within the next 10 years. The traffic gets clogged up at the Warton Road roundabout, usually down to the NLG sandpit and trying to turn right out of street is nothing short of a death trap. To simply leave a small number of semi-rural properties surrounded by residential properties and schools etc is not what we chose when we purchased this lifestyle. The extension of residential property should either include all of those down to Warton Road or not include any at all. It seems that because we are right at the end of the Cockburn Council cut off, we are forgotten, each and every time.</p>	<p>nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>The boundary of the 'Jandakot visioning' area was detailed in a Council resolution. However, at the Community Forum, Elected Members invited landowners outside this area to still put forth their views for their area.</p>
33	Public Transport Authority PO Box 8125, Perth Business Centre PERTH WA 6849	<p>With regard to the proposed bus route in Calleya Estate as denoted as the purple alignment in Figure 14 in the DSP part two, Transperth's intention would be to operate the bus route along the alternative alignment, via Clementine Boulevard, Sunstone Boulevard, Greensand Prom, Dollier Street and Solomon Road from the introduction of the service, as a result of MRWA's plans to convert the Ghostgum Avenue and Armadale Road intersection to Left-in-left-out (LILO) preventing the long term ability to operate the original bus route alignment.</p> <p>It is acknowledged that it may be some time after the bus service is introduced that the LILO configuration is implemented and that residents along the southern section of Clementine Boulevard and Ghostgum Avenue would benefit from the service in the interim, however introducing a service on an alignment that will ultimately be withdrawn will inevitably be contentious among residents that have</p>	<p>Noted</p> <p>Noted, it is appreciated that this approach will assist in managing community expectations.</p>

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		<p>established travels patterns on the withdrawn section of the route, despite the outcome being forced by factors beyond Transperth's control. It is also desirable to build and establish travel behaviour patterns based on the long term alignment.</p> <p>Regarding the suitability of the road network for a bus route on the alternative alignment, Transperth has undertaken a swept path survey (attached) which has identified issues with the dimensions of the intersections between Clementine Boulevard and Solomon Road which would hinder acceptable bus operations. The design speed of the survey was reduced to 5km/h to enable the template to traverse this section, with the intersection of Greensand Promenade and Dollier Street unable to accommodate the turn at all. Transperth typically requires road dimensions to allow turning manoeuvres at 15km/h, and four consecutive turning movements within one kilometre that must be negotiated at 5km/h or below would be beyond the scope of discretionary exceptions. As such it is likely modifications to relevant kerb lines would be required prior to the operation of bus services in Calleya Estate.</p> <p>The timeframe for the introduction of the proposed Calleya Estate bus route and the potential supplementary bus route will be dependent on the available resourcing, road network completion and sufficient residential development to provide viable passenger catchment.</p>	<p>Noted</p> <p>Noted</p>
34	Landowner	<p><b>OBJECT</b></p> <ol style="list-style-type: none"> <li>Jandakot Road needs to be made safer by : <ul style="list-style-type: none"> <li>- reducing speed limit</li> <li>- adding slow points like roundabouts</li> <li>- diverting traffic back to Armadale Road</li> <li>- limit heavy truck movement</li> </ul> </li> <li>Armadale Road needs to be upgraded first before any works</li> </ol>	<p>Noted</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.</p>



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		<p>done on Jandakot Road</p> <p>3. Implement a structure plan of the whole area, North of Jandakot Road, from Urbanstone to Warton Road and not a piecemeal. Object to just stopping at Fraser Road only.</p>	<p>Updates are available on the Main Roads webpage:  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p>
35	Landowner	<p><b>SUPPORT</b></p> <p>We also need Major dual path/ cycle path on Solomon road from Dollier street to knock place leading up to train station. There is lack of street light at night and no proper footpath, we have to walk on road with baby prams.</p>	<p>Noted</p> <p>The plan primarily deals with the land within the Treeby District Structure Plan area boundary and this road is outside this. However, it is a standard subdivisional requirement to upgrade adjacent roads, which includes the need for a shared use path.</p> <p>Construction of a shared use path on Solomon Road (between Armadale Road and Dollier Road) is commencing mid-September.</p>
36	CLE PO Box 796 SUBIACO WA 6904	<p>This submission has been prepared on behalf of Perron Developments Pty Ltd, contracted purchasers of Lot 4 Armadale Road, Treeby, and expresses strong support for the District Structure Plan, the identification of brownfields sites within the DSP area for urban development. and the balanced and coordinated outcomes achieved through the DSP Plan for the precinct.</p> <p><b>Background</b></p> <p>Perron Developments Pty Ltd has an option to purchase Lot 4 Armadale Road, Treeby from the current landowners Midland Brick Company Pty Ltd.</p> <p>Much of Lots 2, 4 and 131 within the DSP area are identified for 'Urban Investigation' within the Perth and Peel@ 3.5 Million draft South Metropolitan and Peel Sub-Regional Framework. This identification was made in recognition of the benefits of consolidating urban development around the Cockburn Central Railway Station and</p>	<p>Noted</p> <p>Noted</p> <p>Noted this is background information rather than a submission point and doesn't require officer comment.</p>

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		<p>Activity Centre, and utilising cleared brownfields sites to accommodate urban infill and projected population growth. Our previous submissions on the Framework further outline our position on and support for this.</p> <p>In considering a Metropolitan Region Scheme Amendment proposal to rezoning Lots 2 and 4 to 'Urban', the City of Cockburn identified the need for district level land use and infrastructure planning to occur to coordinate development within the precinct. Perron Developments has subsequently worked closely with the City and Stakeholder Reference Group to develop the Treeby District Structure Plan to fulfil this function.</p> <p><b>Submission Position</b>  Perron Developments Pty Ltd supports the District Structure Plan as advertised, and the proactive advancement of planning for the Precinct.  Key benefits of the Plan include that:</p> <ol style="list-style-type: none"> <li>1. It recognises the planning merit and strategic direction set by the Frameworks to consolidate urban development in this well serviced location, and to remediate and reutilise derelict sites;</li> <li>2. It preserves key areas of remnant vegetation and wetland areas for conservation totalling 177 ha and provides a rational and manageable boundary for this;</li> <li>3. It coordinates road access from Armadale and Jandakot Road and provides for interconnections between neighbourhoods within the Precinct;</li> <li>4. It accommodates (but does not generate the need for) future upgrades to the surrounding higher order road network;</li> </ol>	<p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Do not agree – this statement is misleading. There is nothing in the Traffic assessment which supports this. This development area has a projected total of 3,500 dwellings as well as other uses such as a town centre, and two primary schools. They will obviously part of the traffic growth for the surrounding road network which contributes to the need for future upgrades.</p> <p>Noted</p>

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		<p>5. It defines the placement of education, district recreation and commercial facilities required to service the areas needs;</p> <p>6. It extends the successful development of Calleya through to adjoining superlots to allow seamless masterplanning of adjoining land parcels;</p> <p>7. It reflects the position of State Planning Policy 2.3 in restricting urbanisation to consolidated landholdings but contains sufficient flexibility to allow extension in the event that adjoining landowners and the government consider at some stage in the future that there is merit to this.</p> <p>Overall, the Plan is considered to provide an intelligent and balanced outcome for the Precinct and demonstrates how, through early analysis of the areas attributes and strategic consideration of the multiple factors influencing land use planning, local and state government outcomes and overarching community benefits can be maximised.</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p>
37	Rowe Group L3, 369 Newcastle Street NORTHBRIDGE WA 6003	<p>We write further to the draft Treeby District Structure Plan ('draft DSP') currently being advertised by the City of Cockburn for public comment.</p> <p>Rowe Group acts on behalf of the Department of Communities (formerly the Housing Authority) (our 'Client'), the landowner of Lot 1 (east) Ghostgum Avenue, Treeby (the 'subject site').</p> <p>Please accept this correspondence as our formal submission on the draft DSP. Our Client generally supports the draft DSP, however notes the following comments for the City's consideration.</p> <p><b>1. Alignment of Neighbourhood Connector</b></p> <p>The draft DSP identifies a "Connector Road" which traverses through the subject site generally in an east-west direction, connecting from the existing roundabout at the intersection of Ghostgum Avenue and Clementine Boulevard through to Lot 4 Armadale Road.</p> <p>Whilst it is recognised that the draft DSP provides for the broad</p>	<p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted</p> <p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>The City is not in receipt of a draft concept plan at this stage and no plan has</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>overarching planning framework to be further refined at the more detailed structure plan and subdivision stages of development, it is noted that preliminary concept planning for the subject site indicates that the “Connector Road” may intersect with Lot 4 further north than the location presently shown on the draft DSP.</p> <p>It should also be noted that our Client is currently working through a two-phased procurement process to identify a preferred development proponent for the subject site. As a result of this process, the preferred proponent may have different development aspirations for the subject site than our Client which may result in a number of amendments to the preliminary designs.</p> <p>In this regard, it should be noted that the alignment of the “Connector Road” through the subject site will likely required further refinement as part of the detailed design process to be undertaken at the structure planning stage.</p> <p><b>2. Provision of a Local / Neighbourhood Centre</b></p> <p>As part of the Metropolitan Region Scheme Amendment request submitted by our Office on behalf of our Client in 2013, it is noted that a Neighbourhood or Local Centre with an anticipated retail floor space of 500m<sup>2</sup> was contemplated to provide for daily shopping needs and provide a focal point for activity and public transport access. It is noted that the draft DSP identifies the Neighbourhood / Local Centre within Lot 4 in close proximity to the future Primary School site. It is considered, however, that the location of the Neighbourhood / Local Centre may be more appropriate adjacent to the “Connector Road” within the subject site which is anticipated to accommodate a mix of medium and high density housing options. In this regard, provision should be included within the draft DSP to allow for the Neighbourhood / Local Centre to be accommodated within the subject site, should appropriate justification and reasoning be provided at the structure planning stage.</p>	<p>been approved for that lot. It is correct that refinement can occur through the more detailed stages. The road connection is reflective of an objective at this stage.</p> <p>The City is aware of this and are not recommending what is shown in the current draft DSP change in terms of road connection between these lots. It is sufficient to reflect the intent and inform more detailed planning.</p> <p>Noted, this has already been stated above several times.</p> <p>Do not agree – the intent of the DSP is to indicate where key features will be located. The location of the centres shown on the DSP have been strategically located in close proximity to the primary schools and ovals (and associated clubrooms).</p>



N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION						
		<p><b>3. City of Cockburn Local Planning Scheme No. 3 Zoning</b></p> <p>The draft DSP identifies the subject site as being zoned “Resource” under the City of Cockburn Local Planning Scheme No. 3 (‘LPS 3’). We note that the Minister for Planning recently approved Amendment No. 117 to LPS 3 which rezoned the site from the “Resource” Zone to the “Development” Zone on 20 June 2017, with the site to be identified as a new Development Area, being “Development Area 41 (DA41)”.</p> <p>Additional provisions were also inserted into “Table 9 – Development Areas” of LPS 3 as part of Amendment No. 117 as follows:</p> <table><tr><th>Ref No.</th><th>Area</th><th>Provisions</th></tr><tr><td>DA 41</td><td>Ghost gum Avenue</td><td><ol style="list-style-type: none"><li>1. An approved Structure Plan together with all approved amendments shall be given due regard in the assessment of applications for subdivision, land use and development in accordance with Clause 27 (1) of the Deemed Provisions.</li><li>2. The Structure Plan is to provide for an appropriate mix of residential and compatible land uses.</li><li>3. The Structure Plan is to be provided to the Office of the Environmental Protection Agency (OEPA) for consultation and comment as part of the advertising period.</li></ol></td></tr></table> <p>It is therefore considered that the draft DPS should be updated to ensure it reflects the most up to date referencing of LPS 3.</p> <p><b>Conclusion</b> Thank you for the opportunity to comment on the draft Treeby District</p>	Ref No.	Area	Provisions	DA 41	Ghost gum Avenue	<ol style="list-style-type: none"><li>1. An approved Structure Plan together with all approved amendments shall be given due regard in the assessment of applications for subdivision, land use and development in accordance with Clause 27 (1) of the Deemed Provisions.</li><li>2. The Structure Plan is to provide for an appropriate mix of residential and compatible land uses.</li><li>3. The Structure Plan is to be provided to the Office of the Environmental Protection Agency (OEPA) for consultation and comment as part of the advertising period.</li></ol>	<p>Noted, it is acknowledged this amendment has now gone through. There is now some text in the DSP which is not reflective of the current zone. As there are other modifications included in the officer recommendation to update the DSP document, this matter can also be updated.</p> <p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted as above</p>
Ref No.	Area	Provisions							
DA 41	Ghost gum Avenue	<ol style="list-style-type: none"><li>1. An approved Structure Plan together with all approved amendments shall be given due regard in the assessment of applications for subdivision, land use and development in accordance with Clause 27 (1) of the Deemed Provisions.</li><li>2. The Structure Plan is to provide for an appropriate mix of residential and compatible land uses.</li><li>3. The Structure Plan is to be provided to the Office of the Environmental Protection Agency (OEPA) for consultation and comment as part of the advertising period.</li></ol>							

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		Structure Plan. We reaffirm that overall, our Client supports the draft DSP, however suggests that a number minor amendments are made to ensure further flexibility at the structure planning stage and further, ensure references to the local zoning under the City of Cockburn Local Planning Scheme No. 3 are true and accurate.	
38	Department of Planning, Lands & Heritage PO Box 3153 EAST PERTH WA 6892	<p>A review of the Register of Places and Objects as well as the AHD's Aboriginal Heritage Database concludes that the boundary of the DRAFT Treeby District Structure Plan as supplied by the City of Cockburn intersects with Aboriginal heritage places ID 4108 (Readymix Sandpit 1) and ID 3300 (Readymix Sandpit 2).</p> <p>As there are Aboriginal heritage places within the DRAFT Treeby District Structure Plan, the proponents may have to submit a section 18 Notice under that Aboriginal Heritage Act 1972 (AHA). However, before an application is submitted, the AHO suggests that if the proponents have not already done so should contact the South West Aboriginal Land and Sea Council (SWALSC) who are the legal representatives of the Whadjuk Native Title claim group. The SWALSC and the Whadjuk Native Title claim group can assist the proponents in providing advice with regards to proposed impacts it may have to the significance of ID 4108 (Readymix Sandpit 1) and ID 3300 (Readymix Sandpit 2) which may result in no approvals required under the AHA.</p> <p>The AHD also recommends that proponents refer to the State's Aboriginal Heritage Due Diligence Guidelines (Guidelines). The Guidelines can be found on the DPLH website at the following link:  <a href="http://www.daa.wa.gov.au/heritage/land-use/">http://www.daa.wa.gov.au/heritage/land-use/</a>  The Guidelines allow proponents to undertake their own risk assessment regarding any proposal's potential impact on Aboriginal heritage</p>	<p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted</p> <p>Noted</p>
39	Western Power GPO Box L921 PERTH WA 6842	Following a review of the structure plan, Western Power provides the following comments which are relevant to the Draft DSP, local structure planning and future subdivision and development in the area:	This request for comments relates to the District Structure Plan only, not local structure planning, subdivision and development. It is counterproductive to the submission process to simply produce a list of points intended to apply to everything. This appears to often be the approach of Western Power which dilutes the impact and usefulness of their submissions.

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p><b>(i) Structure Plan Provisions:</b></p> <ul style="list-style-type: none"> <li>• All future development shall be designed and constructed to protect Western Power infrastructure and interests from potential land use conflict.</li> <li>• All transmission lines shall be protected by a Western Power easement established at the time of subdivision/development.</li> <li>• Subdivision and/or development (including fill, fencing, storage or parking) will not be permitted within Western Power line easements or restriction zones without the prior written approval of Western Power. Note: Further information on easement and restriction zone standard conditions are available from Western Power: <a href="http://www.westernpower.com.au/networkprojects/Easements.html">http://www.westernpower.com.au/networkprojects/Easements.html</a>. Western Power will need to review, assess and provide prior written consent to any subdivision or development proposal within the registered easement, in accordance with standard easement conditions, including: <ul style="list-style-type: none"> <li>○ Landscaping plans (including mature heights and location of species);</li> <li>○ Ground level changes;</li> <li>○ Permanent structures;</li> <li>○ Drainage plans;</li> <li>○ Conservation controls.</li> </ul> </li> <li>• New subdivision and development proposals shall be designed to a standard that mitigates perceived amenity issues associated with Western Power infrastructure and include, inter alia: <ul style="list-style-type: none"> <li>○ The orientation of buildings and windows to minimise visual impact;</li> <li>○ Hard and soft landscaping designs within the development that provide an effective visual buffer.</li> </ul> </li> </ul>	<p>This is not a local structure plan; it does not contain 'provisions'. Western Power appear to have misunderstood the intent of the document and its role in the planning process.</p> <p>This is not a subdivision or development approval; it does not contain 'conditions'. Western Power appear to have misunderstood the intent of the document and its role in the planning process.</p> <p>This is not a subdivision or development approval. Western Power appear to have misunderstood the intent of the document and its role in the planning process.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<ul style="list-style-type: none"> <li>○ Where development applications adjoin or affect Western Power interests they should be referred to this organisation for comment prior to approval by the City of Cockburn.</li> </ul> <p><b>(ii) Advice Notes:</b></p> <ul style="list-style-type: none"> <li>• A Danger Zone, Registered Easement, Restriction Zone or Minimum approach distance represent areas of high risk when building or working near the Western Power network. Before commencing any work it is essential that you complete a Dial Before You Dig enquiry to obtain the location and voltage of the Western Power network.</li> <li>• Areas of high risk include: <ul style="list-style-type: none"> <li>○ Danger Zone – Defined by regulation 3.64 of the Occupational Safety and Health Regulations 1996.</li> <li>○ Registered Easement - Western Power easements are registered on the Certificate of Title for the property. Easements and associated conditions are available from Landgate (<a href="http://www.landgate.wa.gov.au">www.landgate.wa.gov.au</a>).</li> <li>○ Restriction Zone –Are applied in the absence of a registered easement and are calculated in line with the Australian Standard for overhead line design (AS/NZS 7000:2010).</li> <li>○ Minimum approach distance.</li> </ul> </li> </ul> <p>It is recommended that persons planning to build or undertake works in high risk areas near transmission or communication assets (including those listed above) act in a safe manner at all times and in accordance with all applicable legal and safety requirements (including the 'duty of care' under the laws of negligence, Worksafe requirements and guidelines, Australian Standards and Western Power policies and procedures).</p> <p>Western Power provides services that may assist persons planning to build or work within high risk areas near transmission or</p>	<p>This is not a subdivision or development approval; it does not contain 'advice notes'. Western Power appear to have misunderstood the intent of the document and its role in the planning process.</p>



N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		communication assets (refer to your Dial Before You Dig enquiry for location and voltage). These services can be found by visiting the Transmission and communication assets section of the Western Power website ( <a href="https://www.westernpower.com.au/safety-access/working-near-our-network/">https://www.westernpower.com.au/safety-access/working-near-our-network/</a> ).	
40	Department of Education 151 Royal Street EAST PERTH WA 6004	<p>The Department has reviewed the document and wishes to make the following comments;</p> <ul style="list-style-type: none"> <li>• Within the proposed residential development area the anticipated student yield will be accommodated at the proposed two primary schools in Banjup.</li> <li>• It is expected that the catchment boundary for these schools will extend from east of the Kwinana Freeway to the Local Government boundary on Warton Road, the southern boundary along Armadale Road with the northern boundary yet to be confirmed.</li> <li>• The extent of the public open space within the Structure Plan area curtails any further residential development</li> <li>• Should any further residential development occur within the Structure Plan area this would place significant pressure on the proposed schools. These schools are each anticipated to have a large residential yield to cater for.</li> <li>• The Department is aware of the potential mixed used development in Cockburn Central East which may include residential development in the long term.</li> </ul> <p>Other than the above comments there are no objections to this Structure Plan.</p>	<p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted</p> <p>Noted</p> <p>Noted, this should be kept in mind if for example the Skotsch Road area was to be urbanised this could potentially generate several hundred lots (assuming various constraints could be mitigated such as bushfire risk and remnant vegetation). Should the State Government update Perth and Peel @ 3.5 million and should those landowners seek to rezone that precinct, then the school's capacity may not be sufficient. This would be an important consideration the landowners would need to address as part of any potential rezoning if it were contemplated.</p> <p>Noted, the development of this lot (lot 1 Armadale Road, west of Calleya estate) will be a useful consideration in the above issue also.</p>
41	Telstra,	At present, Telstra Corporation Limited has no objection. I have	Noted

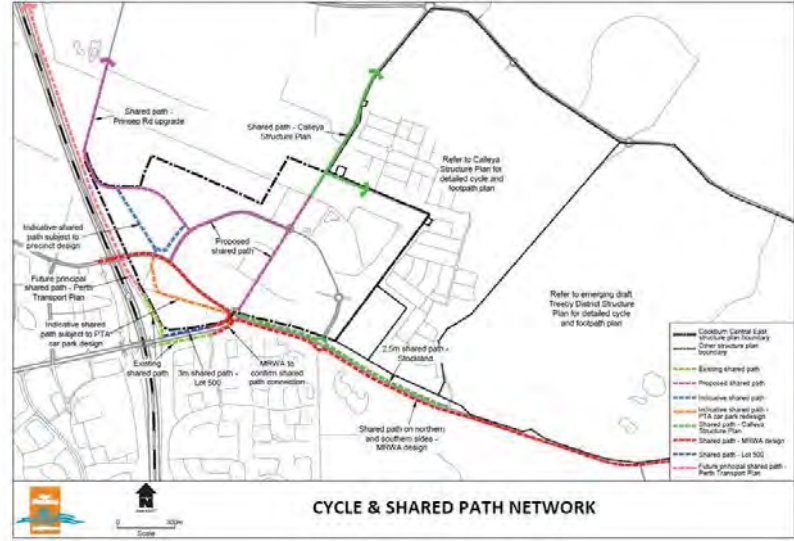
N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
	<p>Forecasting &amp; Area Planning</p> <p>Locked Bag 2525 PERTH 6001</p>	<p>recorded this in our Development database and look forward to further correspondence in the future.</p> <p>Should you require any more information regarding Telstra's new infrastructure policy, please read below or contact me.</p> <p><b>Latest Telecommunications Policy</b></p> <p>The Federal Government has deemed developers are now responsible for telecommunications infrastructure on all developments, i.e. conduits, pits and the cost of the cable installation by Telstra or other carrier. Telstra can provide a quote for the pit and pipe and/or cable. This is explained on the Telstra Smart Community website below. The owner/developer will have to submit an application before construction is due to start to Telstra (less than 100 lots or living units) or nbn™ network (for greater than 100 lots or living units in a 3 year period).</p> <p>Applications to Telstra can be made on the Telstra Smart Community website: <a href="http://www.telstra.com.au/smart-community">http://www.telstra.com.au/smart-community</a></p> <p>More information regarding nbn™ network can be found on their website <a href="http://www.nbnco.com.au/develop-or-plan-with-the-nbn.html">http://www.nbnco.com.au/develop-or-plan-with-the-nbn.html</a></p> <p>Please dial 1100 (Dial before You Dig) for location of existing services.</p> <p>Federal Government Telecommunications Infrastructure in New Developments Policy May 2015 <a href="https://www.communications.gov.au/policy/policy-listing/telecommunications-new-developments">https://www.communications.gov.au/policy/policy-listing/telecommunications-new-developments</a></p> <p>STATE PLANNING POLICY 5.2 Telecommunications Infrastructure August 2015 <a href="http://www.planning.wa.gov.au/dop_pub_pdf/Telecommunications_Infrastructure.pdf">http://www.planning.wa.gov.au/dop_pub_pdf/Telecommunications_Infrastructure.pdf</a></p> <p>Communications Alliance - G645:2011 Fibre Ready Pit and Pipe</p>	<p>Noted this is background information rather than a submission point and doesn't require officer comment.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		Specification for Real Estate Development Projects <a href="http://www.commsalliance.com.au/Documents/all/guidelines/g645">http://www.commsalliance.com.au/Documents/all/guidelines/g645</a>	
42	Landowner	<b>OBJECT</b> I would like to see less development and for the area to remain rural	Noted The area is indicated in draft State Government documents as 'urban expansion', not to remain rural.
43	Malcolm & Kay Wilcox 35 Boeing Way JANDAKOT WA 6164	<p>We would like you to consider the following aspects regarding the Draft Treeby Structure Plan:</p> <p>1) The impact on neighbouring properties and nearby areas should be better considered. The proposed developments would significantly increase traffic volumes along Jandakot Road. Along with other developments (e.g. Jandakot Airport commercial zones, Schaffer/Urbanstone commercial development, etc.) the Treeby urban/residential developments would further isolate and squeeze remaining "rural" areas. Our rural amenity has been continually eroded, leaving property owners in limbo – the properties have lost their "rural" nature, but cannot be used for any other purpose. Apart from the reduction in value, our properties are now becoming virtually impossible to sell. These surrounding development decisions, which are out of our control, are destroying our lifestyle. We are now stuck – we no longer want to live here under these imposed conditions, but are unable to sell and move on.</p> <p>For the surrounding areas (north along the length of Jandakot Road, and also areas south of Jandakot Road and west of Solomon Road), plans should be developed, approved and implemented <u>at the same time as</u> any Treeby developments. This would overcome the current uncertainty for owners and planning blight on the properties.</p> <p>2) No further development in Treeby should be approved until the Main Roads network has been fully upgraded including:</p> <ul style="list-style-type: none"> <li>- Armadale Road upgrade and improved junctions at Solomon Road and Verde / Tapper</li> </ul>	<p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p> <p>As above.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<ul style="list-style-type: none"> <li>- North Lake Road bridge and additional freeway entry and exit ramps</li> <li>- Additional lanes constructed on Kwinana Freeway northbound from Beeliar Drive to north of Roe Highway</li> </ul> <p>This would allow the heavy trucks moving sand and fill during construction to use the Main Roads, instead of further overloading Jandakot Road (as we have experienced with developments at Calleya, Piara Waters and Harrisdale and the sand excavation at Jandakot Airport). The additional traffic from the new residential areas would then be able to use the Main Roads instead of finding short-cuts through rural areas.</p> <p>3) Increased traffic will inevitably result in tail-backs during peak hours at the proposed roundabout at Solomon / Jandakot Roads. Measures and controls would need to be put in place to stop eastbound traffic trying to by-pass this congestion using Boeing Way and turning it into a “rat-run”.</p> <p>4) Roads in the Treeby Structure Plan appear to be designed to direct most traffic onto Jandakot Road, while discouraging traffic from using Armadale Road. There are 2 full access exits onto Jandakot Road and 2 full exits onto Solomon Road proposed, but only 1 full exit (at Liddelow) onto Armadale Road. Most traffic from the Treeby developments will be heading in north and west directions (towards Perth, Fremantle, Murdoch etc.) but the only full access planned to the main Armadale Road is at the south-east corner of Treeby, so it will be under-utilised. Nearly all the traffic would therefore end up at the Solomon / Jandakot Roads junction.</p> <p>The plans should be changed to encourage traffic onto the Main Road system, which is already funded for upgrading, and discourage traffic from minor roads, instead of the current plans which effectively create a new “main” road along Jandakot Road.</p>	<p>Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd):  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>North Lake Rd bridge  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>There is 10,800 vehicles per day (vpd) entering/exiting onto Jandakot Road, 6,000vpd onto Solomon Rd and 6,100vpd onto Armadale Road. This is reflective of the fact that the majority of the residential development is within the northern section of the Treeby DSP area.</p> <p>Main Roads WA control how many access points can be allowed onto Armadale Rd. There are also some constraints given the upgrades proposed on where access can be facilitated. The access points to the other roads are reasonable and do not simply accommodate day to day traffic flow. They also ensure that the properties within this urban area are reasonably</p>



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		<p>One of the two new exits onto Jandakot Road (at Clementine Bvd or Fraser Road) should be deleted. One of the two exits onto Solomon Road (the new road or the access via Dollier) should also be deleted. Instead, at Armadale Road, the full signalised intersection at Ghostgum should be retained, or upgraded to a large roundabout with future overpass like the other main intersections. The additional exit between Ghostgum and Liddelow should also be confirmed.</p> <p>These modifications should go some way towards equalising traffic flows and ensuring that the Main Roads system is being effectively utilised.</p> <p>5) While the Treeby plan talks of connectedness it should be integrated with the Cockburn Central East Structure Plan. This is needed in particular to come up with ways to encourage Treeby residents to walk or bike to Cockburn Central and the station. Solomon Road is currently totally unsuitable for bikes or pedestrians, and access along the north side of Armadale Road will be hampered by the major intersections at Verde and Solomon. I am thinking that some kind of priority dual use path is needed from the west of Calleya (near Biscayne) through to Verde at Solomon Road, as I understand that Verde will then loop from Solomon round to the station.</p>	<p>accessible in emergencies.</p> <p>This can be said for a number of plans across the City of Cockburn. This is why the City is required to have an overarching plan known as the Local Planning Strategy which gives a broader overview of the development intent for the City. A project plan has been initiated to undertake this project.</p> <p>Eventually a boundary needs to be drawn and in this case there is an existing structure plan boundary for the Cockburn Central East (CCE) Structure Plan. That plan is also a different level of plan in the planning hierarchy, it is a local structure plan, whereas this is a higher order plan (a district structure plan) reflective of where this land is in the development process, that is, it has not even been rezoned as yet. It is therefore not realistic to merge these together and this would also impinge unfairly on those CCE landowners who have been appropriately zoned for a number of years.</p> <p>Construction of a shared use path on Solomon Road (between Armadale Road and Dollier Road) is commencing mid-September. An overview of the path networks (including western boundary of the Treeby DSP) can be seen in Figure 10 of the CCE plan:</p>

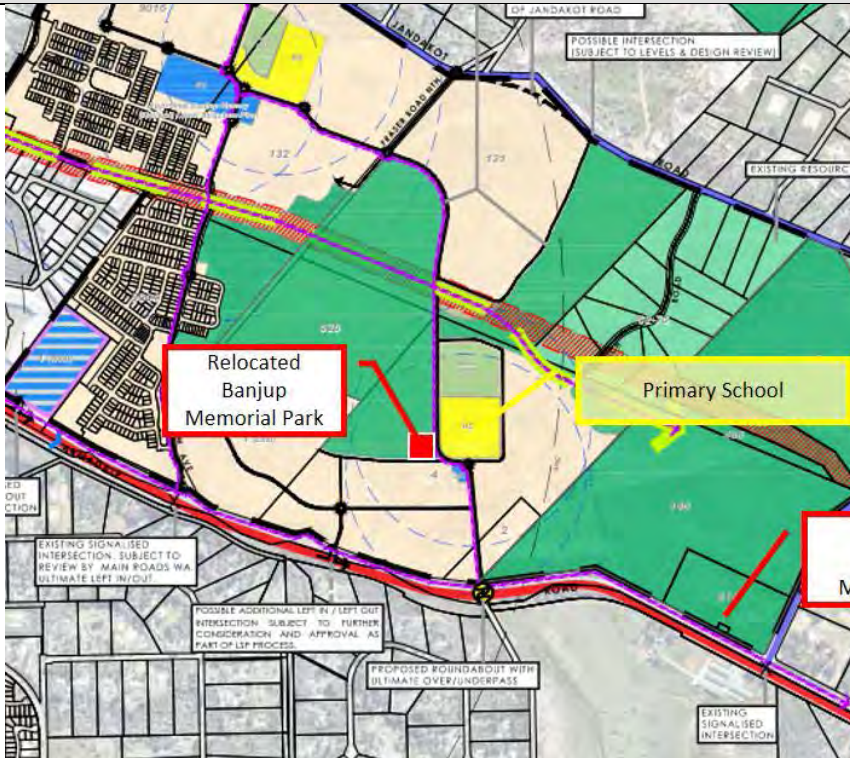
N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
			 <p>This document can be viewed on the following webpage:  <a href="http://comment.cockburn.wa.gov.au/27678/documents/57424">http://comment.cockburn.wa.gov.au/27678/documents/57424</a></p>
44	TPG + Place Match PO Box 7375, Cloisters Square PERTH WA 6850	<p><b>SUPPORT</b></p> <p>TPG+Place Match (TPG) has prepared this submission on behalf of Midland Brick Co Pty Ltd (MBC), the landowners of Lot 4 Armadale Road. Treeby (the subject site), in support of the Draft Treeby District Structure Plan (draft DSP). Our client is supportive of the proposed draft DSP.</p> <p>The subject site is generally bound by 'Bush Forever' and 'Water catchments' sites to the east. 'rural – water protection' to the north, 'Urban' to the west. and Armadale Road to the south, covering a total of 58.77 hectares. The subject site is owned by MBC and under contract to Perron Developments Pty Ltd (Perron).</p> <p>The Draft DSP identifies the subject site as one of four 'primary potential development sites' for the Draft DSP area. Specifically, the</p>	<p>Noted</p> <p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>draft DSP identifies approximately two-thirds of the site within a 'Residential' land use classification, with the balance identified for a combination of public open space and primary school purposes. The draft DSP also identifies a local centre on the site, which is intended to provide for a range of daily needs (such as deli, cafe, medical services, childcare and/or local offices). MBC supports the identification of the subject site as proposed under the draft DSP.</p> <p>MBC has been working closely with Perron and the City of Cockburn over a number of years to advance the planning for the subject site for urban development. It is acknowledged that a future local structure plan will be required, which will further refine and build upon the broad structure and principles outlined in the draft DSP.</p>	Noted
45	Landowner	<p><b>OBJECT</b></p> <ul style="list-style-type: none"> <li>Additional roundabouts placed along Jandakot Road will be useless as majority of traffic runs East-West along Jandakot Road prohibiting vehicles from turning left and right onto Jandakot Road, Suggest creating a turning pocket on Solomon Road to turn left. Also ultimately Jandakot Road should be dual lane as it is heavily trafficked by trucks which slows down traffic and causes congestion</li> <li>Similarly consider alternative to roundabouts on Armadale Road as majority traffic travels East-West. Armadale Road needs to be widened to accommodate the growing community in the area.</li> </ul>	<p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd): <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>North Lake Rd bridge <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/NorthLakeRoadBridge.aspx</a></p>
46	Banjup Residents	Thank you for the opportunity to comment on the proposed Treeby District Structure Plan. As you know, the Banjup Residents Group	Noted this is background information rather than a submission point and doesn't require officer comment.

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
	Group 176 Gibbs Road BANJUP WA 6164	<p>represents the owners of 240 properties in the rural areas of Banjup, Jandakot, and Treeby. We have consulted with all of our members about the Treeby Structure Plan and each has received a draft of this submission and their feedback has been included in this final draft.</p> <p>Residents make several comments, as below, that we request the City to consider before finalising the Plan.</p> <p><b>1. Treeby District Structure Plan to be adopted in parallel with the adoption of a Vision for rural Jandakot</b></p> <p>The development of Treeby over the coming decade will have a profound effect on the rural properties of Jandakot and at the eastern end of Jandakot Road near Warton Road that we note have been omitted from the structure plan, even though they are in the locality of Treeby. We request that the City prepare, in consultation with local landowners, a concise Vision of how the City would prefer the rural and urban areas north of Armadale Road and east of Berrigan Drive to be developed over the coming 10 to 20 years and to promote that Vision energetically to the WAPC and to Ministers. The Vision would provide a coherent context for the advertised Treeby District Structure Plan.</p> <p><b>2. No further development until Armadale Road duplication completed</b></p> <p>We request that no development of the DoH or Perron land in the old sand quarries commence until the duplication of Armadale Road in the vicinity of Treeby and Banjup has been completed. This is to prevent congestion on the already over-utilised adjacent road network.</p>	<p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.</p> <p>Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd): <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>North Lake Rd bridge <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pa">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pa</a></p>



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		<p><b>3. Traffic calming on Liddelow Road</b></p> <p>We note that the main southbound exit from Treeby will be through a roundabout at Armadale and Liddelow. The other exits are marked on the plans as eventually being left in, left out only. With Rowley Road designated as a major road to Latitude 32 and the outer harbour, Liddelow Road could well become a cut through for traffic not only from Treeby but also Piara Waters and Canning Vale. This would be at complete variance with Council's decision in 2015 to classify Liddelow Road as a 'Local Distributor' for which the predominant purpose is "movement of traffic within local areas" (MRWA 2011).</p> <p>We request that <u>before</u> the roundabout at its junction with Armadale Road is built several further and effective traffic calming measures be installed along Liddelow Road to prevent it being used as a rat run.</p> <p><b>4. Relocation of Banjup Memorial Park</b></p> <p>The existing Banjup Memorial Park at the corner of Armadale and Warton Roads is dedicated to the memory of the 14 men of Banjup who served their country in the Great War. As such, it is a vital part of the history of the area and of the European pioneers who developed the nearby lands. However, the Park is remote and largely unknown by the new urban community of Treeby. To improve the Memorial's recognition and its use and to guarantee its future relevance and maintenance, we propose relocating the Park to a central position in urban Treeby.</p> <p>We request that the City make provision in the District Structure Plan for a new Memorial Park located on the edge of bushland close to the proposed primary school east of Fraser Road, as below:</p>	<p><a href="#">ges/NorthLakeRoadBridge.aspx</a></p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading , including intersection control is by Main Roads.</p> <p>Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd):  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>There is some logic is relocating the memorial into the Treeby DSP area and certainly areas adjacent to schools or town centres would be well suited to include such an item. Specific designation on the draft DSP itself such as shown in the submission may prejudice the best location for the memorial and create unintended conflict. For example, indicating on this specific street corner where Bush Forever matters should be resolved first would not be prudent. Bush Forever is managed by a State Government agency who would not be best placed to manage a memorial. The logical management would be the local government and therefore a local reserve (rather than regional) is more appropriate. An annotation would be more acceptable on the DSP to indicate the need to incorporate provision for the war memorial to be factored in when local structure planning starts to plan out in more detail the public open space, including local reserves.</p>

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		 <p>We hope that the proposed primary school would adopt and care for it in coming years and make it a focus for teaching history of the area.</p> <p>We envisage that the new site would be similar to the current site. It would have 14 trees planted in two rows with the current memorial stone and plaque at the back with a flagpole alongside. We hope that fairly mature trees of the original species in the current park would be planted so that the new Park would immediately gain character and</p>	<p>It is not likely the Department of Education, or the school itself would officially care for the memorial. It would be nice to see the school develop a level of attachment to the memorial as several primary schools have been able to enjoy. The official asset management and maintenance of the memorial should remain with the City.</p> <p>These comments are jumping to detail of design which is not a matter for the Treeby DSP to deal with.</p> <p>As above.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>respect.</p> <p>Having the Memorial Park alongside the school and its adjacent football oval would provide adequate parking for ANZAC Day services.</p> <p>We trust that the current Memorial Park would still be preserved and maintained by the City of Cockburn but it would not be the focus of commemorating the men of Banjup who served in the Great War.</p> <p>The Banjup Residents Group has consulted with the Cockburn RSL and with Steve Treeby, the grandson of Ernest Treeby who is commemorated on the memorial plaque. All are content with our proposal.</p> <p>We trust that the City will agree with our proposals.</p>	<p>While a reserve is vested with the City of Cockburn, we would continue to have a maintenance obligation to look after it.</p> <p>Noted. Further consultation would be expected at a more detailed level in future.</p>
47	Fernando Bassi Gianico 12 Ginger Loop TREEBY WA 6164	<p><b>SUPPORT</b></p> <p>We agree with the plan proposed, however we would like to highlight our main concerns:</p> <ul style="list-style-type: none"> <li>- the level of security should be improved as the suburb grows.</li> <li>- public transport accessibility, as currently we need to cross Armadale road to catch a bus and there is no pedestrian pathways to the bus stop.</li> <li>- the plan must keep the preservation areas intact.</li> </ul>	<p>Noted</p> <p>As more people move into an area, this may assist with early residents feeling more secure.</p> <p>Noted pathways will ultimately be improved. Construction of a shared use path on Solomon Road (between Armadale Road and Dollier Road) is commencing mid-September. Armadale Road paths will be upgraded as part of the Main Road's upgrade. Updates are available on the Main Roads webpage Armadale Rd (Tapper to Anstey Rd): <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p> <p>A bus route may ultimately be brought into Calleya itself – see the Public Transport Authority submission 33 further above.</p> <p>The boundaries of Bush Forever sites will be considered by the relevant State agencies and this is a key principle of the Treeby DSP.</p>
48	DBP PO Box	Dampier Sunbury Pipeline (DBP) the owners and operators of the Dampier to Bunbury Natural Gas Pipeline (DBNGP) has reviewed the	Noted

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	Z5267 PERTH ST GEORGES TERRACE WA 6831	document and has no objections to the proposal. The DBNGP corridor which houses the pipeline is outside of the Structure Plan Area therefore, DBP has no further comments on the planning document	
49	Landowner	<p><b>SUPPORT</b></p> <p>Roundabout required (at least slip road) corner Solomon Road &amp; Jandakot Road – accidents have occurred.</p> <p>Street/road lighting required on Solomon Road between Dollier Road and Jandakot Road.</p> <p>Would like to see mix-used, in line with Cockburn Central theme to bring cosmopolitan vibe to the area. Let's make it special!!</p>	<p>Noted</p> <p>The plan primarily deals with the land within the Treeby District Structure Plan area boundary and these roads are outside this. However, it is a standard subdivisional requirement to upgrade adjacent roads, which includes the need for shared use paths and street lighting.</p> <p>The Jandakot Road (and Solomon Road) upgrade will be the subject of a report to Council later in the year.</p> <p>There is a level of density that supports mixed use development such as Cockburn Central and it is not appropriate everywhere. Cockburn Central is on the train line. The Treeby DSP is outside the typical 800m distance from a station where this level of density (eg. R100, R160) is often seen.</p>
50	Conrad Petit 37 Elderflower Street TREEBY WA 6164	<b>SUPPORT</b>	Noted
51	Landowner	<p><b>OBJECT</b></p> <p>I attended the meeting on 31st July re the draft rural vision. Below are the concerns that I have re the draft proposal.</p> <ul style="list-style-type: none"> <li>Plans for a major dual path to run at the end of Skotsch Road – our concerns are regarding more pedestrians and traffic in our street. We purchased the five acre property for the peace and tranquility. Our concern is if the Eastern Primary school is constructed as per the district structure plan then parents will use Skotsch Road as a “Drop off” and “Pick up” zone to avoid heavy traffic around the school area and merely get their children to walk through the dual pathway to and from school where they are dropped off and collected. We already struggle to exit our street due to the congested traffic on</li> </ul>	<p>Noted</p> <p>Noted. It is highly likely that parents will utilise a cul-de-sac as a ‘drop off’ zone and that would bring additional traffic regardless of whether Skotsch Rd was connected or not. It is not agreed that this would decrease the level of security to this street, instead would likely improve the level of surveillance from what there is now. Nevertheless, there is the ability for the City to look at parking restrictions on the street (possibly just for school start and finish periods). There is also an opportunity to look to fulfil a pedestrian connection as part of the adjacent reserves instead. This is a matter which could be refined at the local structure planning process.</p>



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		<p>Jandakot Road and we would not welcome extra traffic trying to take a short cut to the school and waiting on the sides of the roads and asking their children to walk through the dual pathway to Skotsch Road to avoid having to drive around to Armadale Road to access the school or to drive through Calleya. We would not welcome this dual pathway as it will no doubt lead to further traffic and congestion in our street and more pedestrians increasing the security risk to our properties and reducing the tranquil lifestyle.</p> <ul style="list-style-type: none"> <li>• If the new Calleya estate requires new schooling then all school access driveways and pathways to the school should be provided through the Calleya estate only and not impinge on the rural area of Skotsch Road that is not included in the urban vision. If Skotsch Road is not to be considered as part of the urban vision and rezoned accordingly then it would be grossly unfair of the planning of the urban vision to impact on our rural street in any way.</li> <li>• We were asked at the meeting for our thoughts on the bush forever zone concerning fire hazard concerns and whether or not a dual pathway should run through the centre of the bush area. My concerns regarding running a dual pathway through the centre of a large bush area is that it becomes an easily accessible area for undesirables to hang out unseen in the middle from the main roads. It would be much safer to have a cycle path / pedestrian path the whole way around the outside the area of this bushland (similar to Bibra Lake) I believe it would be safer for pedestrians to cycle, walk etc on a pathway in view of housing and traffic. I would not feel as safe walking through the centre of a bushland out of sight from the urban area. This I think could possibly lead to attacks on people and also a higher risk of undesirables having easy access to the</li> </ul>	<p>See above comments</p> <p>It would be unlikely formalised pathways would be provided through the middle of Bush Forever as this is not common practice in their management. Pathways around the edge are more commonplace. The pathway running east west would run within the powerline easement which would have less vegetation. These would be more detailed design issues worked through at the subsequent planning stages.</p>

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		<p>centre of the bush to light fires. Pathways for pedestrians are always safer for pedestrians when they are in view of passing traffic and housing and innocent pedestrians are less likely to be attacked if they can be seen. My suggestion therefore would not to have any form of pathways running through the centre of bushes but to keep them on the outer surrounds of the area. By having large outer pathways also opens up opportunities for fun run events such as held at Bibra Lake.</p> <ul style="list-style-type: none"> <li>The council needs to ensure developers and land owners maintain the fencing along Jandakot Road and Armadale Road. The rural bush area behind Skotsch Road and between Calleya has become a haven for 4WD goers and dirt bike riders. On the weekend, vehicles with trailers park along Jandakot Road with trailers that have dirt bikes and we have a constant flow of 4WDs and dirt bikes riding past the back line of our fence. The amount of undesirables has increased since the development of Calleya. We have people at the back of our fence and on our property at 2am in the morning. There hasn't been a single week for a long time where people have not accessed the back of our property in all hours of the night. If this fencing is not maintained, the 1000s of new residents in the new developing area of Treeby may think it is a great idea to purchase dirt bikes for their kids and families if they have these dirt tracks at their door step that can be so easily accessed. The fencing has to be maintained to reduce the security risk to the rural residents.</li> <li>Our other concerns that are well known to all at the meetings include increased dumping in our streets, increased undesirables at all hours in the morning on our properties, increased traffic congestion and decreased security. There seems to be an awful lot of impact to the rural land owners</li> </ul>	<p>It is important that issues of trespass or suspected illegal activity are reported to WA Police. Council is not able to force landowners to fence (or maintain a fence) to their property. Fencing is generally a matter between landowners (where a shared boundary) or for the boundary facing a road just a matter for that landowner. An instance where Council might be involved is to ensure pets or livestock were sufficiently contained in a property but otherwise fencing is not a requirement (other than where landowners require between their lots).</p> <p>Noted, this landowner, given the amenity impacts on their current rural area as adjacent land was urbanised, would prefer to the area to be urbanised as well.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>with little consideration for us. I was very disappointed at the meeting as the draft vision showed little concern for the rural land owners. Hence if the rural area is to be impacted by the Treeby draft vision then our area should be rezoned and become part of the urban area. It makes no sense whatsoever to have a small pocket of rural land in the centre of an urban area and proposed rezoning urban areas that will be at the bottom of Skotsch Road towards Armadale Road and also along Warton Road / Piara Waters. If the rural lifestyle of Skotsch Road cannot be maintained and saved from the impact and encroachment of this urbanization around us, it would be grossly unfair not to include Skostch Road in the rezoning from rural to urban.</p> <ul style="list-style-type: none"> <li>• Thanks for your time. These are our concerns.</li> </ul>	
52	Landowners	<p><b>OBJECT</b> Objections to the Proposal:</p> <ul style="list-style-type: none"> <li>• The plan favours the development of land owned by at least two major developers</li> <li>• The overall plan does not demonstrate natural justice to the 2 hectare land owners of Skotsch Rd.</li> </ul>	<p>Noted</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. That document advertised in 2015 would have likely attracted the interest of companies which undertake land development. The lots are currently owned by the resource companies which undertook sand quarrying. The developers referred to have what is known as an 'option' over the land.</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. That document was advertised by the State Government in 2015 in line with their role to set higher level guidance about the development of the Perth metropolitan area.</p> <p>The purpose of the Treeby District Structure Plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. This was seen as a proactive set to ensure if the area was to be urbanised, then development should occur in a cohesive and logical manner and interface/respect its surrounding</p>

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		<ul style="list-style-type: none"> <li>It is not reasonable to presume that the landowners on Skotsch Rd and surrounding areas will continue to enjoy the rural lifestyle that they chose from 2004 onwards, as approved then by the City of Cockburn.</li> <li>The rural lifestyle enjoyed by the current 2 hectare landowners in the area, has being eroded continuously since 2010, merely 6 years after the approval to develop this portion of Banjup as a rural residential development.</li> <li>Skotsch Rd in this proposed structure will be sandwiched between several developments to the west, south and east.</li> <li>The proposed development has financial disadvantage and impact on the residents of Skotsch Rd. Who would want to purchase a rural lifestyle in the future, amid the congestion of suburbia and a 4 lane highway?</li> <li>The character and rural aspect of Skotsch Rd and the surrounding rural area will be further eradicated.</li> <li>The residents of Skotsch Rd and surrounding areas will be adversely affected environmentally- noise, traffic, pollution, loss of wildlife and natural vegetation.</li> <li>It is unfair to impose an uncertain future on the residents who for the most part are retired or will retire in the next 5 – 10 years.</li> <li>The choice of a rural lifestyle is being taken away and strangulation by suburbia is being imposed and supported by</li> </ul>	<p>areas such as Skotsch Rd which is still shown as remaining rural.</p> <p>Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them. This point was appreciated at the Community Forum and there has been no rationale provided by the State Government for why Skotsch Rd was left as rural. It is possibly because development there has been quite recent and the State has made an assumption these landowners would not look to redevelop. This of course, does not consider the alternative question, are they happy to remain, but feel surrounded by urbanisation? To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p> <p>Council is obliged to follow the lead of the State Government in matters of rezoning. This is legislated within the Planning and Development Act 2005. Where the State rezones land, the City must reflect this in its own local</p>



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		<p>our local council.</p> <ul style="list-style-type: none"> <li>Insurance premiums will rise as suburbia and increased risk of crime infiltrate the neighbourhood.</li> <li>Skotsch Rd is likely to become a thoroughfare to serve the proposed development adjoining Skotsch Rd</li> <li>To ensure equity and natural justice for residents of the new suburb of Treeby, develop all of Treeby or no further development to proceed in the area.</li> </ul>	<p>planning scheme.</p> <p>Premiums are not a matter appropriate for officer comment. New urban areas are expected to adhere to Crime Prevention through Environmental Design principles. It is not agreed that this would decrease the level of security to this neighbourhood, instead would likely improve the level of surveillance from what there is now.</p> <p>If the Skotsch Road precinct was also urbanised, there would certainly be an expectation the road linked into the adjoining area. As noted, in an earlier submission, there is a likelihood, even if the area was not urban and road did not connect, parents dropping off and collecting children from the school may use the road.</p> <p>Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them. The area shown as Urban in the Treeby DSP appears to be supported by the State Government as it has been advertised in their draft Perth and Peel @ 3.5 million document. This would indicate that surrounding urbanisation is highly likely. With this in mind, it is noted this landowner would prefer to see Skotsch Road precinct included as urban as well.</p>
53	Mark Raayen 41 Peppworth Place JANDAKOT WA 6164	<p><b>OBJECT</b></p> <p>Treeby was exactly the same land (Sandpit) as mine, yet condensed housing has been built, and now it is being rezoned No documents for Special Rural, as I am led to believe my land is, in the consultations. Why is there a WASTE SORTING SITE on Cuttler Rd - surely this would affect the ground water, unless of course the map contours deviates conveniently around this</p>	<p>Noted</p> <p>Part of the Treeby District Structure Plan area has already been developed as the Calleya estate. That section already has the zoning to allow that. This was approved by the State Government several years ago.</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. This portion of the submission relates to a question on a site outside of this plan's area. The proposal at hand must be the focus of this report, however, it is noted such matters would have been reviewed as part of the development assessment process and any approvals issued often have stringent conditions attached to them.</p>

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			<p>The groundwater protection area can be viewed via this link:  <a href="https://www.planning.wa.gov.au/dop_pub_pdf/SPP_2_3_Figure_1_Jandakot_Groundwater_Protection_Area.pdf">https://www.planning.wa.gov.au/dop_pub_pdf/SPP_2_3_Figure_1_Jandakot_Groundwater_Protection_Area.pdf</a></p>
54	<p>City of Armadale          Locked Bag 2525          ARMADALE WA 6992</p>	<p>The City of Armadale shares a common boundary with the City of Cockburn at Warton Road abutting the Treeby District Structure Plan area and has the following comments:</p> <p>Armadale Road/Warton Road Signalised Intersection - Armadale Road is managed by Main Roads and is already 4 lanes around the intersection and when the road upgrades to 6 lanes modification to the intersection layout is likely to be required. The City of Armadale will need to be involved in the design process for Armadale Road upgrade and intersection upgrade and will liaise with Cockburn accordingly.</p> <p>Warton Road/Jandakot Road Roundabout - rear-end crashes at this intersection is currently 'significantly over-represented' compared to the network average. It is likely that modification will be required to the roundabout when Jandakot Road turns into 4 lanes and a Road Safety Audit will be required in the early stage of design. The traffic modelling which should be undertaken by the developers for this intersection will also require consideration of how Mason Road (between Warton Road and Southampton Drive) will be affected and if an upgrade is also required due to traffic increase.</p> <p>Projected future traffic volumes - the table below compares figures in different studies and documents with the Liveable Neighbourhood thresholds. It is noted that the projected future traffic volumes for Jandakot Road in the study reports are quite different but are still under the LN upper limit.</p>	<p>Noted</p> <p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading, including the Warton Road intersection is controlled by Main Roads.</p> <p>Noted, without reviewing the assumptions behind each it is difficult to comment on why there is a difference. However, the salient point as the City of Armadale observes, is they are still under the LN upper limit.</p>

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			LN Road Classification	LN Indicative upper volume	CoA's 2031 model (from Dough)	Transcore's traffic report for CoC	
		Armadale Road	Primary Distributor	50,000vpd	55,308vpd	Over 50,000vpd	
		Warton Road	Integrator A	35,000vpd	21,282vpd	22,00vpd	
		Jandakot Road	Integrator A	35,000vpd	32,270vpd	22,000vpd	
		Thank you for the opportunity to comment					
55	Planning Solutions GPO Box 2709 CLOISTERS SQUARE PO WA 6850	<p>Planning Solutions acts on behalf of South Central (WA) Pty Ltd, the centre managers of the 'South Central' commercial centre on Lot 403 (87) Armadale Road, Jandakot (subject site). We welcome the opportunity to make a submission on the City's draft Treeby District Structure Plan (TDSP) released for public comment until 12 August 2017.</p> <p>We note the draft TDSP is intended to be a strategic planning document to guide and coordinate more detailed planning (including preparation of Local Structure Plans) for individual sites within the District Structure Plan area.</p> <p>Having reviewed the TSDP in detail and attended the Community Information Forum on 31 July 2017, we wish to express our concerns with the draft TDSP, both in terms of its content and the process by which it is being progressed. Our key concerns are broadly dealt with under the following themes:</p> <ol style="list-style-type: none"> <li>1. Role and status of the structure plan.</li> <li>2. Contemplated zoning/land use.</li> <li>3. Access arrangements.</li> </ol> <p><b>Role and Status of the Structure Plan</b></p>					<p>Noted</p> <p>Noted this is background information rather than a submission point and doesn't require officer comment.</p> <p>Noted</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>The Planning and Development (Local Planning Scheme) Regulations 2015 (Regulations) govern the way in which local planning frameworks are prepared, consolidated and amended.</p> <p>The Regulations along with the Western Australian Planning Commission's (WAPC) Structure Plan Framework provide a consistent and common framework for the preparation, amendment and implementation of Structure Plans.</p> <p>According to the Structure Plan Framework, a district structure plan addresses 'fatal flaws' of a potential development area and provides for the major structural elements, including major roads, open space network, commercial and industrial areas, and environmental conditions. A district structure plan can provide a basis for zoning and lead to more detailed structure planning through the preparation of a local structure plan.</p> <p>Importantly, the Regulations do not distinguish between district or local level Structure Plans with respect to their preparation and adoption. All structure plans, either District or Local, need to be prepared and implemented in accordance with the Regulations.</p> <p>Under clause 18(1)(c) of Schedule 2 (Deemed Provisions) of the Regulations, the local government is required within 28 days of preparing a Structure Plan, to provide a copy of the proposed structure plan to the WAPC, together with any accompanying material and details of the advertising/consultation arrangements for the plan. Under clause 20(1) of the Deemed Provisions, following public advertising of the structure plan, the local government is to provide a copy of the structure plan to the WAPC, accompanied by a report on the outcomes of public advertising and a recommendation by the local government on whether the proposed structure plan should be approved by the WAPC.</p> <p>The approach advocated by the City and articulated in Part One, Section 3 of the draft TDSP is contrary to the requirements of the Regulations and WAPC Structure Plan Framework. Accordingly, its validity as a planning framework document reasonably informing the preparation of more detailed local structure plans, would be</p>	<p>Ultimately it would be proposed this plan be adopted by resolution of Council as a guiding document, but not under the Deemed Provisions of the Planning and Development (Local Planning Schemes) Regulations 2015), which refers to a 'structure plan' as:</p> <p><i>'Structure plan means a plan for the coordination of future subdivision and zoning of an area of land'.</i></p> <p>The WA Planning Commission's Structure Plan Framework mentions structure plans in the generic sense as well as district and local structure plans. While it mentions that generally a district structure plan address the 'fatal flaws' of a development and provides for major structural elements, it also mentions it can provide the basis for zoning.</p> <p>With the above in mind, it would prudent to maintain Council's practice with previous district structure plans, to only adopt them by resolution of Council and not under the relevant structure planning provisions. This acknowledges a degree of flexibility but also gives some clear guidance on matters which are best known early, such as the need for, and location of schools.</p> <p>The City's intention to prepare a plan in this manner was raised with the Department of Planning and they are aware the City is undertaking a District Structure Plan to be adopted 'by resolution' as a guiding document.</p>



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		<p>questioned.</p> <p>Any planning instrument contemplating changes to zoning/land use must be considered and ultimately approved by the WAPC to ensure integration of land-use planning and the coordinated provision of transport and infrastructure development, consistent with State Policy.</p> <p>We request the City give due consideration to the above concerns and ensure due process, in accordance with the Regulations, is correctly followed.</p> <p><b>Zoning/Land Use</b></p> <p>The draft TDSP area includes an 8.09 hectare vacant land parcel at Lot 1 on Diagram 20182 (Lot 1), immediately east of the 'South Central' commercial centre. The draft TDSP identifies the future zoning of Lot 1 as 'Mixed Business and/or Residential'. The stated intention of this classification is to provide an area for transition between the Calleya residential estate and the 'South Central' showroom precinct.</p> <p><i>State Planning Policy 4.2 – Activity Centres for Perth and Peel (SPP4.2)</i> applies throughout the Perth and Peel regions to guide the preparation and review of local planning strategies, local planning schemes, structure plans and development control. Key requirements for the preparation of a range of planning instruments to implement the policy are outlined in Figure 2 of SPP4.2. These include the preparation of a Retail Needs Assessment to guide district structure plans, and generally provide:</p> <ul style="list-style-type: none"> <li>the projected population and its socio-economic characteristics;</li> <li>household expenditure and required retail floorspace;</li> <li>changing shopping patterns and trends; and</li> <li>the needs of different retail sectors.</li> </ul>	<p>This lot is already included in the 'Development' zone and falls within "Development Area 37" which has the following provisions in the City's Town Planning Scheme No. 3:</p> <ol style="list-style-type: none"> <li><i>An approved Structure Plan together with all approved amendments shall be given due regard in the assessment of applications for subdivision, land use and development in accordance with clause 27(1) of the Deemed Provisions.</i></li> <li><i>The Structure Plan is to provide for an appropriate mix of residential and non-residential land uses, in order to support the objective for a mixed use neighbourhood. Non-residential land uses may include compatible commercial and industrial (light and service industry) land uses, as a means to provide an appropriate interface and transition to the western adjoining Solomon Road Development Area 20.</i></li> <li><i>The Structure Plan is to provide for safe and efficient pedestrian connections between DA37 and the Cockburn Central Railway Station.</i></li> </ol> <p>It is noted that there has been no local structure plan submitted by the landowner at this point in time, however, Provision 2 of DA37 makes it clear that non-residential land uses may be included to provide an interface to the existing showroom precinct adjacent. Importantly planning of the broader</p>

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		<p>The large size of land designated for future 'Mixed Use' zoning will potentially increase the amount of commercial floor space in the area. It is therefore vital that land requirements, based on demonstrated future floorspace needs, are considered prior to the identification of future zoning at the district level. We therefore recommend the City undertake a Retail Needs Assessment and consider its findings, prior to advancing any further zoning/land use planning for the TDSP area.</p> <p><b>Access Arrangements</b> We are concerned that there is a misalignment between the zoning/land uses contemplated by the draft TDSP for Lot 1 and regional road network planning currently being progressed. Main Roads WA (MRWA) is finalising its plans for the grade separation of Armadale Road, and creation of a 'duck and dive' bypass of the Solomon Road and Verde Drive intersections. Access to Armadale Road from Lot 1 is limited to a left in/left out access point, which is essentially located on the eastern Armadale Road 'off-ramp'. This significantly limits access to Lot 1, when travelling east along Armadale Road, and completely prevents access when travelling west along Armadale Road.</p> <p>Many of the land uses reasonably contemplated and capable of approval within the 'Mixed Business' zone require significant land area, car parking requirement and need for large service vehicle access. The limitations of access to/from the regional road network, via Armadale Road, risks the interference of potential land uses on Lot 1 with traffic flow and safety within the emerging residential area. Additionally, the securing of alternate access through the neighbouring large format retail site ('South Central') should not be presumed.</p> <p><b>Conclusion</b> We thank the City for the opportunity to provide comments in relation to its proposed TDSP.</p> <p>We acknowledge the City's desire for the long-term future development of the Treeby. However, we submit it is important to ensure the planning framework is fit for purpose and appropriately</p>	<p>Cockburn Regional Centre takes in to account more than just simply residential development occurring. Such planning has created a significant problem for Perth as a whole, in not adequately decentralising jobs and business activities to where people are living, especially in outer growth area. Lot 1 provides a prime opportunity to adding further business and employment opportunities to the regional centre. The City's adopted Local Commercial and Activities Centre Strategy provides the framework to demonstrate the further floorspace opportunities that are available now and in to the future for Cockburn Regional Centre.</p> <p>Any future local structure plans will of course need to address the relevant factors in the Structure Plan Framework.</p> <p>Access arrangements to Armadale Road will be determined by Main Roads.</p> <p>There is no connector road shown indicating access going into the 'South Central' development.</p> <p>Noted</p> <p>See comments above</p>

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		<p>prepared/implemented in accordance with the Planning and Development (Local Planning Scheme) Regulations 2015 and the WAPC's Structure Plan Framework.</p> <p>We look forward to your confirmation of receipt of this submission and request to be informed about the progress of the City's Treeby District Structure Plan and the opportunity to present at any Committee/Council meeting, at which the matter is considered.</p>	<p>Submission has been acknowledged. Submitters will all be advised in writing of the date of the Council meeting prior and have the opportunity to lodge a request to give any deputations to Council (as per standard procedure).</p>
56	On behalf of the landowner	<p>Our client holds concern regarding the potential for the proposed retail component of the DSP (1 x Neighbourhood Centre and 1 x Local Centre) to impact on the status of their landholding at Cockburn Gateway Shopping Centre.</p> <p>TPG + Place Match, on behalf of Perron Group the owners of Cockburn Gateway Shopping City, is pleased to provide the following submission on the Draft Treeby District Structure Plan (the DSP) which is currently being advertised for public comment. The submission seeks to outline our understanding of the proposal, whilst identifying our Client's position and specific concerns with regard to the proposed retail component of the DSP.</p> <p>Broadly, we understand that the DSP is intended to provide for the high-level spatial land use planning within the Treeby/Banjup Urban Development Area, which is a 460 hectare parcel of land that is generally bound by Jandakot Road to the north, Warton Road to the east, Armadale Road to the south and Solomon Road to the west. We understand the western periphery of the Structure Plan area is located approximately 1 kilometre to the east of Cockburn Gateway Shopping City.</p> <p>The DSP provides for 'Residential', 'Neighbourhood/Local Centre' and 'Mixed Business' land uses, in addition to the arrangement and distribution of public open space, school sites, civic uses, road and pedestrian networks, and other major infrastructure. The DSP also makes reference to a retail component comprising one 'Neighbourhood Centre' and one 'Local Centre'. The Structure Plan report indicates development on these sites will be subject to market</p>	<p>Noted</p> <p>There is no increase planned in floor space to the existing centre in the northern part of the Treeby DSP (approved as part of the Banjup Quarry – Calleya Local Structure Plan).</p>


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		<p>demand, however, potential uses may include a small supermarket, specialty retail, food and beverage (deli/café), medical services, childcare or local offices. We note that the DSP report does not include an estimated amount of total retail floor space for the 'Neighbourhood Centre' and 'Local Centre'.</p> <p>During the City of Cockburn's community workshop on the DSP held on 31 July 2017 at the City's offices, we were advised that the western portion of the DSP had been designed to reflect the approved Banjup Quarry (Calleya) Local Structure Plan (the LSP) including the proposed 'Neighbourhood Centre'. We note that the LSP was adopted by Council on 9 May 2013 and endorsed by the Western Australian Planning Commission (WAPC) on 22 October 2013, with an amended version (modifications to infrastructure, increase in residential density and reconfiguration of roads and public open space) being endorsed in early 2016.</p> <p>We understand that the LSP provides an overarching planning framework to guide and facilitate the development of 144 hectares within Treeby for urban purposes and that proposed land uses include 'Residential', 'Mixed Use', 'Local Centre', 'Public Purposes' (Civic, Primary School and Water Utility), as well as public open space, roadways and the like.</p> <p>In relation to proposed retail development, the LSP map indicates a 'Local Centre' located within the central northern portion of the LSP area. The explanatory document of the LSP further elaborates on this by stating that development of this site will be at a scale of a 'Neighbourhood Centre' with a total retail floor space of 2,800sqm and will provide for daily and weekly household shopping needs, community facilities and a small range of other convenience services. We understand that a retail analysis was undertaken by MacroPlan Dimasi to justify the retail component of LSP, and this broadly relied on the increase in catchment population arising from the densification of residential development in this location.</p> <p>Recent advice received from the City has indicated that despite the LSP's proposed 'Local/Neighbourhood Centre' designation of</p>	



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		<p>'Neighbourhood Centre' under the activity centres hierarchy of State Planning Policy 4.2 – Activity Centres for Perth and Peel, all centres classified as 'Neighbourhood' and 'Local' in the centre's hierarchy would be given the zoning designation of 'Local Centre' under the City's LPS3.</p> <p>Although the draft DSP does not provide a retail floor space allocation for the proposed 'Neighbourhood Centre', we appreciate that the western portion of the DSP is a reflection of the approved LSP and therefore it is our understanding that the 2,800sqm figure indicated through the LSP will be applicable to the site.</p> <p>On this basis, we hereby request that there is <b>no further increase</b> in the 2,800sqm retail floor space figure within the DSP/LSP area and that any retail development should be limited to daily/weekly household shopping needs. We believe that any further increase in retail floor space and diversification of retail offering will likely detract from the status of the Cockburn Central Secondary Centre given the close proximity and overlapping catchment of the centres and would therefore be contrary to the objectives of the relevant strategic and statutory planning framework</p>	
57	Landowner	<p><b>SUPPORT</b></p> <p>Inclusion of Skotsch Road should be highly considered instead of catering just to large scale developers</p>	<p>To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>
58	Mirko Hessel	<b>SUPPORT</b>	Noted

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	10 Chicory Street TREEBY WA 6164	Perhaps a underpass at Ghostgum Ave under the new Armadale road could solve the problem to allow Public Transport access in both directions. A left in left out intersection on the northern side of Armadale Rd/Ghostgum Ave would be still present and the underpass would still allow free flow on Armadale road and traffic entering or exiting on the southern site would go off or on a on/off ramp. Ghostgum Ave would end with a roundabout	<p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads, including how the intersection at Ghostgum is treated.</p> <p>Updates are available on the Main Roads webpage:  <a href="https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx">https://www.mainroads.wa.gov.au/BuildingRoads/Projects/UrbanProjects/Pages/armadalerd.aspx</a></p>
59	Landowner	<p><b>SUPPORT</b></p> <p>The area in question is more suitable for higher development as this area is no longer suitable for rural lifestyle due to encroaching residential and commercial development.</p> <p>Protection of the Jandakot water mound can be carried out as has been achieved with the recent Stockland &amp; Schaeffer group approvals.</p>	Noted
60	Taylor Burrell Barnett PO Box 8186 SUBIACO EAST PERTH WA 6008	<p>Taylor Burrell Barnett (TBB) makes this submission on behalf of Parcel who represents the owners of Lot 130 Jandakot Road, Banjup comprising 41.7ha in close proximity to the subject site.</p> <p>The purpose of this submission is to provide our support for the Treeby draft District Structure Plan and to request to also include Lot 130 (No 367) Jandakot Road (subject site) within the Treeby District Structure Plan area due to the similar site characteristics this lot has with the Treeby District Structure Plan land, and to produce a District Structure Plan which holistically considers the planning for the Banjup locality.</p> <p>The report also provides context on the balance of the Banjup urban cell north of the Treeby District Structure Plan area cell generally bound by Acourt Road to the north, Warton Road to the east and Solomon Road to the west which has potential for urbanisation and requires comprehensive planning to ensure consolidation of appropriate development in close proximity to the Cockburn Central Activity Centre.</p> <p>In support of the proposal to consider the broader precinct TBB has prepared the attached concept District Structure Plan for the Banjup</p>	<p>Noted</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p> <p>This submission relates to the submitter's own property outside that area. Accordingly, this submission is dismissed.</p>

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		<p>Urban Precinct.</p> <p>The associated submission identifies the characteristics of the subject site that support the case for urban development and therefore inclusion within the Treeby District Structure Plan and provides detailed conceptual planning for the development of low, medium and high density residential areas, a range of open space areas and school sites and a series of neighbourhood centres.</p> <p>In support of our submission, the following summary is provided</p> <table><tr><td>District Context</td><td>The subject site is strategically suited to urban development given its ready access to existing road and rail infrastructure in the form of the Kwinana Freeway (Via Armadale Road), Cockburn Central Railway Station, the Cockburn Activity Centre and the Jandakot Airport Specialised Activity Centre.</td></tr><tr><td>Consolidating Urban Form</td><td>The current rural designation of the subject site in Perth and Peel @ 3.5m is considered an anomaly and does not reflect the pattern of existing and planned urban development in and adjacent the precinct. The site is located adjacent Stockland's existing Calleya Estate and to a number of sites acknowledged within the Perth and Peel @ 3.5m for urban expansion and urban investigation, including:<ul style="list-style-type: none"><li>Lot 821, the subject of this MRS Amendment;</li><li>Lot 4 Armadale Road;</li></ul></td></tr></table>	District Context	The subject site is strategically suited to urban development given its ready access to existing road and rail infrastructure in the form of the Kwinana Freeway (Via Armadale Road), Cockburn Central Railway Station, the Cockburn Activity Centre and the Jandakot Airport Specialised Activity Centre.	Consolidating Urban Form	The current rural designation of the subject site in Perth and Peel @ 3.5m is considered an anomaly and does not reflect the pattern of existing and planned urban development in and adjacent the precinct. The site is located adjacent Stockland's existing Calleya Estate and to a number of sites acknowledged within the Perth and Peel @ 3.5m for urban expansion and urban investigation, including: <ul style="list-style-type: none"><li>Lot 821, the subject of this MRS Amendment;</li><li>Lot 4 Armadale Road;</li></ul>	
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Consolidating Urban Form	The current rural designation of the subject site in Perth and Peel @ 3.5m is considered an anomaly and does not reflect the pattern of existing and planned urban development in and adjacent the precinct. The site is located adjacent Stockland's existing Calleya Estate and to a number of sites acknowledged within the Perth and Peel @ 3.5m for urban expansion and urban investigation, including: <ul style="list-style-type: none"><li>Lot 821, the subject of this MRS Amendment;</li><li>Lot 4 Armadale Road;</li></ul>						

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		<ul style="list-style-type: none"> <li>• Lot 131 Jandakot Road; and</li> <li>• Various parcels east of Warton Road.</li> </ul> <p>The precinct shares the same physical site characteristics and is relatively unconstrained. In stark contrast to retaining the balance of the precinct as underutilised rural land, development will create a complete precinct representing a significant infill opportunity and efficient use of the transport networks, public transport system, servicing infrastructure, employment and community services which are all in such close proximity.</p>  <p>Figure 1 Extract from Perth and Peel @ 3.5m</p> <p>Protecting Areas of Environmental Significance</p> <p>The subject site has many similar characteristics as the land within the Treeby District Structure Plan. 360 Environmental has undertaken an environmental review for the site and found whilst the site has a number of anticipated environmental constraints and opportunities, and these have the potential to influence the form outcomes, they will not preclude urban development.</p>	



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		Maximising the Use of Infrastructure	<p>The subject site is conveniently located:</p> <ul style="list-style-type: none"> <li>• within close proximity to the Cockburn Central Railway station;</li> <li>• At the intersection of two major transport routes in the form of Armadale Road and Warton Road;</li> <li>• In proximity to a variety of existing and planned district and regional community facilities in close proximity to the precinct including regional and district sporting facilities at Cockburn Central, Fiona Stanley and St John of God Hospitals (within 8 kms); and</li> <li>• A number of other activity centres in close proximity offering excellent access to retail and commercial services including Cockburn Central and Fremantle City Centre.</li> </ul>	
		Integrating and Maximising Public Transport	Maximising patronage on the existing railway line, given proximity to the Cockburn Central Station.	
		Increasing the residential population to employment centres	The site is close to a number of existing and emerging employment centres including the Cockburn Activity Centre, Jandakot Specialised Activity Centre and the Canning Vale Industrial precinct.	
		Effective and Efficient Servicing	A Servicing Strategy has been considered for the precinct by PDC Group as follows:	

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			<ul style="list-style-type: none"><li>• The Banjup North precinct falls within the Jandakot Wastewater Scheme Planning Catchment and has already been accounted for in Water Corporations forward planning for the area.</li><li>• The precinct falls within two separate water servicing catchments.</li><li>• Power infrastructure is located nearby.</li><li>• Gas is available in Armadale Road.</li><li>• Jandakot Road is planned for a major upgrade to accommodate planned growth to 24,700 vehicles per day.</li></ul>	
		Land supply and affordability	This subject site is located in proximity to a number of major landholdings identified for urban development. In a more consolidated form the issues of significant land fragmentation and assembly which are common constraints elsewhere in the metropolitan area are removed. In contrast, many areas identified for future urbanisation are highly fragmented and cannot be relied upon to deliver the necessary land supply in the foreseeable future.	
		On the basis of the information outlined above, it is considered that there is sufficient rationale and justification for the subject area to be included within the Treeby District Structure Plan. Future planning of this precinct should have regard to the suitability of this entire precinct for urbanisation, due to its strategic location, proximity to services and infrastructure and its relatively unconstrained nature. TBB and Parcel would welcome the opportunity to meet with your officers and further discuss the opportunities of inclusion with the subject site within the Treeby District Structure Plan.		

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61	Government agency (details requested to be kept confidential)	<ul style="list-style-type: none"> <li>• (The agency) supports the proposal.</li> <li>• (The agency) has an operational interest in the City's progress towards accommodating its growing population and the TDDSP's contribution towards achieving the aspirational target of 30,119 dwellings and an estimated additional population of 66,957 residents.</li> <li>• (The agency) has an operational interest in the TDDSP's mooted staging and sequencing of land development for the short term (2015 - 2021) and over the medium term (2015 - 2031), with particular focus on the Calleya (Banjup Quarry) residential development estate which consists of around 145ha and the Department of Housing's Lot 1 (east) Ghostgum Avenue which represents approx. 20.35ha.</li> <li>• (The agency) has an operational interest in the proposed Movement Networks and its ability to provide good traffic circulation throughout the TDDSP and appropriate connectivity to the surrounding regional roads, including Armadale and Jandakot Roads.</li> <li>• (The agency) has an operational interest in Main Road's planning aspirations for the Armadale Rd as the proposed upgrades e.g. roundabout, traffic bridge, dual carriageway (short-medium term) and expansion to six lanes (long term) may hinder the delivery of (agency services) to the Treeby residents during their construction.</li> <li>• The TDDSP, at this early stage, provides on-ground service providers such as the (agency) with an appropriate level of advice for inclusion in strategic resource planning.</li> <li>• (The agency) looks forward to receiving further planning advice as this project matures.</li> </ul>	<p>Noted</p> <p>Noted, with these figures applying to the broader City of Cockburn area, this Treeby DSP area, given its size, would accommodate a significant share of these figures.</p> <p>Noted</p> <p>Noted, it is vital there are good movement networks to facilitate access, especially in the event of emergencies.</p> <p>This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads.</p> <p>Noted, this is part of the intent, to enable broader government agency engagement about future development (as foreshadowed in WAPC's Perth and Peel @ 3.5 million)</p> <p>Noted</p>
62	Rodney and Deborah Del Caro 51 Skotch	<p>We wish to formally submit our objection to the current District Structure Plan.</p> <p>As the area has drastically changed and evolved since purchasing our</p>	<p>Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them. This point was appreciated at the Community Forum and there has been no rationale provided by the State Government for why Skotsch Rd was left as rural. It is</p>

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	Road TREEBY WA 6164	property we wish to support option number 2: Rezoning to Urban to become part of the urban community.	<p>possibly because development there has been quite recent and the State has made an assumption these landowners would not look to redevelop. This of course, does not consider the alternative question, are they happy to remain, but feel surrounded by urbanisation?</p> <p>To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>
63	Doug and Lynne Smith 227 Jandakot Rd JANDAKOT WA 6164	<p>We believe that the development of this area makes sense considering major infrastructure already in place - ie: railway station, major shopping precinct, sporting facilities and road developments etc.</p> <p>These arguments apply equally to the land on both sides of Jandakot Rd and therefore we fully support rezoning north of Jandakot Rd to urban</p>	<p>Noted</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.</p>
64	Peter Hardie & Jacqueline Young 2 Platt Court BOOROOGO	<p><b>SUPPORT</b></p> <p>I support the proposal to (2) rezone to urban to come part of the future urban community.</p>	<p>To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban</li> </ol>



N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
	ON WA 6154		<p>area of Treeby); or</p> <p>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</p> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>
65	<p>Tonino &amp; Vincenzo Berlingieri</p> <p>46 Skotsch Road TREEBY WA 6164</p>	<p><b>OBJECT</b></p> <ul style="list-style-type: none"> <li>Rural lifestyle will be diminished.</li> <li>Increased crime in the area as a result of increased neighbouring population.</li> <li>Major bias in favour of large developers, very unfair to local ratepayers, all of Treeby should be treated the same,</li> <li>Increased traffic on proposed four lane highway (Jandakot Road). Will result in difficulty in existing and entering Skotsch Road and we will be sandwiched between developments.</li> <li>All our neighbours feel that our area should be rezoned to</li> </ul>	<p>Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them</p> <p>It is not agreed that this would decrease the level of security to this neighbourhood, instead would likely improve the level of surveillance from what there is now.</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. That document advertised in 2015 would have likely attracted the interest of companies which undertake land development. The lots are currently owned by the resource companies which undertook sand quarrying. The developers referred to have what is known as an 'option' over the land.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year.</p> <p>Each landowner in Skotsch Road has been written to individually and has the opportunity (and has been encouraged) to lodge their own comments with Council. The results of this are discussed in the Council Report. It is</p>

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		<p>urban.</p> <ul style="list-style-type: none"> <li>• Prevailing winds blow dust and sand from developments cross to our properties which depend on rain water collection from our roofs.</li> <li>• The plan favours the development of land owned by at least two major developers</li> <li>• The overall plan does not demonstrate natural justice to the 2 hectare land owners of Skotsch Rd.</li> <li>• It is not reasonable to presume that the landowners on Skotsch Rd and surrounding areas will continue to enjoy the rural lifestyle that they chose from 2004 onwards, as approved then by the City of Cockburn.</li> <li>• The rural lifestyle enjoyed by the current 2 hectare</li> </ul>	<p>better to let those landowners speak for themselves directly.</p> <p>Developers are required to take measures minimise construction dust. These are enforced by the City's Environmental Health team.</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. That document advertised in 2015 would have likely attracted the interest of companies which undertake land development. The lots are currently owned by the resource companies which undertook sand quarrying. The developers referred to have what is known as an 'option' over the land.</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. That document was advertised by the State Government in 2015 in line with their role to set higher level guidance about the development of the Perth metropolitan area.</p> <p>The purpose of the Treeby District Structure Plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. This was seen as a proactive set to ensure if the area was to be urbanised, then development should occur in a cohesive and logical manner and interface/respect its surrounding areas such as Skotsch Rd which is still shown as remaining rural.</p> <p>Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them. This point was appreciated at the Community Forum and there has been no rationale provided by the State Government for why Skotsch Rd was left as rural. It is possibly because development there has been quite recent and the State has made an assumption these landowners would not look to redevelop. This of course, does not consider the alternative question, are they happy to remain, but feel surrounded by urbanisation? To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd</p>

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		<p>landowners in the area, has being eroded continuously since 2010, merely 6 years after the approval to develop this portion of Banjup as a rural residential development.</p> <ul style="list-style-type: none"> <li>• Skotsch Rd in this proposed structure will be sandwiched between several developments to the west, south and east.</li> <li>• The proposed development has financial disadvantage and impact on the residents of Skotsch Rd. Who would want to purchase a rural lifestyle in the future, amid the congestion of suburbia and a 4 lane highway?</li> <li>• The character and rural aspect of Skotsch Rd and the surrounding rural area will be further eradicated.</li> <li>• The residents of Skotsch Rd and surrounding areas will be adversely affected environmentally - noise, traffic, pollution, loss of wildlife and natural vegetation.</li> <li>• It is unfair to impose an uncertain future on the residents who for the most part are retired or will retire in the next 5 - 10 years.</li> <li>• The choice of a rural lifestyle is being taken away and strangulation by suburbia is being imposed and supported by our local council.</li> <li>• Insurance premiums will rise as suburbia and increased risk of crime infiltrate the neighbourhood.</li> </ul>	<p>residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p> <p>Council is obliged to follow the lead of the State Government in matters of rezoning. This is legislated within the Planning and Development Act 2005. Where the State rezones land, the City must reflect this in its own local planning scheme.</p> <p>Premiums are not a matter appropriate for officer comment. New urban areas are expected to adhere to Crime Prevention through Environmental Design principles. It is not agreed that this would decrease the level of security to this neighbourhood, instead would likely improve the level of surveillance from what there is now.</p>

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		<ul style="list-style-type: none"> <li>Skotsch Rd is likely to become a thoroughfare to serve the proposed development adjoining Skotsch Rd</li> <li>To ensure equity and natural justice for residents of the new suburb of Treeby, develop all of Treeby or no further development to proceed in the area.</li> </ul>	<p>If the Skotsch Road precinct was also urbanised, there would certainly be an expectation the road linked into the adjoining area. As noted, in an earlier submission, there is a likelihood, even if the area was not urban and road did not connect, parents dropping off and collecting children from the school may use the road.</p> <p>Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them. The area shown as Urban in the Treeby DSP appears to be supported by the State Government as it has been advertised in their draft Perth and Peel @ 3.5 million document. This would indicate that surrounding urbanisation is highly likely. With this in mind, it is noted this landowner would prefer to see Skotsch Road precinct included as urban as well.</p>
66	Water Corporation PO Box 100 LEEDERVILLE WA 6902	<p>While it is noted that this area is identified in the WAPC's draft South Metropolitan and Peel Sub-Regional Planning Framework as an "Urban Investigation Area", the land proposed for urbanisation is located within the Jandakot UWPCA and is classified as 'Priority 2' under the Jandakot water source protection plan.</p> <p>Land uses within the Jandakot UWPCA, and more specifically within the wellhead protection zones (WPZs) around the Jandakot groundwater abstraction bores, are subject to restrictions aimed at minimizing the risk of contamination of the public drinking water source.</p> <p>The Water Corporation owns and operates several Jandakot production bores within and adjoining the area, which are used to source groundwater for the Metropolitan Integrated Water Supply Scheme.</p> <p>The draft DSP foreshadows rezoning of this land for urban subdivision and development. Urban development is an "incompatible" land use within the Priority 2 area of the Jandakot UWPCA. As a licensed user of the Jandakot groundwater resource, the Water Corporation therefore does not support the DSP.</p>	<p>Noted – this is background information and does not require officer comment.</p> <p>Noted – this is background information and does not require officer comment.</p> <p>Noted</p> <p>Noted. This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key</p>



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			matters such as school numbers and location.
67	Kevin & Marianne Burrows 429 Armadale Road PIARA WATERS WA 6112	<p><b>SUPPORT</b></p> <p>I support the Plan and the consolidation of urban development in the locality. Particular aspects I agree with include:</p> <ul style="list-style-type: none"> <li>• Expansion of the existing development in Calleya to adjoining sites to make best use of the areas infrastructure and access to transport, employment and services;</li> <li>• Coordination of development through a structure plan;</li> <li>• Extension of a road network through the area;</li> <li>• Coordination of access from Armadale Road and Jandakot Road;</li> <li>• Balanced provision of urban development, open space and conservation;</li> <li>• Best practice management of water to mitigate groundwater impacts.</li> </ul> <p>Perth's population growth needs to be accommodated in well planned localities and we support the initiative of the District Structure Plan to accommodate new residents in Treeby near the Cockburn Railway Station and Activity Centre.</p>	<p>Noted</p> <p>Noted</p> <p>Noted – there will be local structure plans also required.</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p>
68	Department of Water and Environmental Regulation (Environmental Planning Branch) Locked Bag 33, Cloisters Square	<p>The Environmental Planning Branch (EPB) of the Department of Water and Environmental Regulation (DWER) has reviewed the Treeby DSP and provides the following comments for your consideration. In providing the advice the EPB notes that the Treeby DSP has been prepared at the request of the City of Cockburn as a strategic document to guide the City's decision making and that endorsement by the Western Australian Planning Commission (WAPC) is not proposed to be sought.</p> <p>The Treeby DSP is located within the Draft South Metropolitan Peel</p>	<p>Noted</p> <p>Noted, it is understood this was the case in 2014 (i.e. prior to the Perth and</p>

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	PERTH WA 6850	<p>Sub Regional Framework (South Metropolitan Peel Framework) area as part of the Draft Perth and Peel @3.5 million. It is noted that a request to rezone Lots 2 and 4 Armadale Road from 'Rural - water protection' to 'Urban' has been lodged with the Western Australian Planning Commission (WAPC) in April 2014, however a decision has not been made on this matter.</p> <p>EPB has attended a number of meeting with the representatives from CLE Town Planning and Design regarding the draft Treeby DSP.</p> <p>The following matters were discussed:</p> <p><u>Bush Forever site</u>  Bush Forever site 390 exists over a large portion of the Treeby DSP area. The proposed areas for residential development as outlined in the Treeby DSP is classified as 'BFA - Urban, industrial or resource development' under State Planning Policy 2.8 Bushland Policy for the Perth Metropolitan Region. The EPB expects that Bush Forever areas proposed for residential development will be subject to review and refinement through the rezoning process in accordance with SPP 2.8 and in consultation with the Department of Planning, Lands and Heritage.</p> <p><u>Flora and Vegetation</u>  The spider orchid, Caladenia huegii, a conservation significant flora species occurs over the Treeby DSP area. Caladenia huegii is classified threatened in accordance with the Wildlife Conservation Act 1950 and the Environmental Protection and Biodiversity Conservation Act 1999. The EPB recommends that populations of Caladenia huegii are retained and protected where possible and in accordance with future scheme amendments requirements.  Other environmental considerations:</p> <p><u>Jandakot Groundwater Protection Area</u>  The Treeby DSP area occurs over the Jandakot Groundwater Protection Area and is identified as a Priority 1 (eastern portion) and Priority 2 (western portion) area under the State Planning Policy 2.3 Jandakot Groundwater Protection (SPP 2.3). The EPB notes the intention for areas identified as Priority 2 to be reclassified to Priority 3</p>	<p>Peel @ 3.5 million documents being advertised.</p> <p>Attendance and input has been appreciated.</p> <p>This is also the City's expectation.</p> <p>This is also the City's expectation, as has been the case in the Calleya development to date.</p> <p>Noted</p>

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		<p>to facilitate residential development.</p> <p>The EPB notes that recent advice from the then Department of Water (now DWER) has indicated that should the WAPC determine through the Draft Perth and Peel @3.5 million planning frameworks that development in this location is warranted, the DWER will re-classify rezoned areas to P3 which is compatible with urban development. The EPB supports the rezoning of the proposed areas for residential development to occur in accordance with DWER water advice and pending the finalisation of the Draft Perth and Peel @3.5 million planning frameworks.</p> <p><u>Terrestrial Fauna</u> The Treeby DSP had been assessed as containing suitable habitat for conservation significant fauna including Carnaby's, Baudin's and Forest Red-tailed Black Cockatoos. The EPB notes and supports that the proposed Treeby DSP to limit clearing of vegetation of fauna habitat.</p> <p><u>Resource Enhancement Wetland</u> A Resource Enhancement Wetland (REW) occurs on the eastern side of Lot 131 adjacent to proposed residential development. EPA Environmental Guidance for Planning and Development 33 recommends that reasonable measures are taken to minimise the potential impacts on REW and appropriate buffers. The EPB recommends that appropriate buffers are proposed where impacts to REW may occur.</p>	<p>Noted, this has been the City's understanding also.</p> <p>Noted</p> <p>Noted, the landowner should address this as part of any request for rezoning.</p>
69	<p>Department of Water and Environmental Regulation (Contaminated Sites) Locked Bag 33, Cloisters Square PERTH WA 6850</p>	<p>OWER notes that a portion of the subject land has already been developed as Calleya Residential Estate and the proposed structure plan represents further urban development of this area.</p> <p>Based on the available information, OWER has no objection to the proposed structure plan. However, OWER may further assess contamination and acid sulfate soils aspects of individual subdivision applications on referral from Western Australian Planning Commission.</p> <p>Please note that this advice relates to potential contamination and</p>	<p>Noted</p>

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70	<p>Creative Design + Planning PO Box 7655</p> <p>CLOISTERS SQUARE WA 6850</p>	<p>acid sulfate soil issues only.</p> <p>Creative Design and Planning has prepared this submission on the proposed Treeby District Structure Plan (DSP) on behalf of the Da Prato family, owners of Lot 41 Liddelow Road, Banjup. Lot 41 is situated immediately south of the proposed structure plan area on the corner of Liddelow and Armadale Roads.</p> <p>The proposed DSP is supported in principle as it is agreed that the area is suitable for urbanisation.</p> <p>Our client considers that its land (Lot 41) also has future urbanisation potential, and therefore considers that the proposed DSP is complementary to that aspiration. There are some matters relating to connectivity between the land north and south of Armadale Road, however, that the City is requested to consider prior to endorsement of the DSP:</p> <ol style="list-style-type: none"> <li>1. Potential for future urban development south of Armadale Road;</li> <li>2. Treatment of the intersection of Ghostgum Avenue and Armadale Road;</li> <li>3. North-south access across Armadale Road.</li> </ol> <p><b>1. Development Potential of Land South of Armadale Road</b></p> <p>The Da Prato family have previously documented the case for urbanisation of Lot 41 to government. In simple terms, expansion of urban development east of Atwell will provide for better use of existing transport and service infrastructure and will complement the functionality of Cockburn Central as an important activity centre. Proximity to other employment centres such as 'Jandakot City' Business Park, Fiona Stanley Hospital, Murdoch University etc. also contributes to the area's suitability for urban development.</p> <p>Lot 41 is 47ha in size, cleared, and vacant apart from an existing residence and a small warehouse complex fronting Armadale Road.</p>	<p>Noted</p> <p>Noted</p> <p>This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. This submission relates to the submitter's own property, outside that area. Accordingly, this submission is dismissed.</p>



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		<p>To its east, a Parks and Recreation reserve provides a logical eastern boundary for a future urban cell extending from Tapper Road to the west which would complement the development proposed in the DSP area.</p> <p>Recent innovations in urban water management have confirmed that protection of groundwater resources can be better achieved by urban development than by rural smallholdings or rural-residential development which presently make up much of this greater North Banjup locality. It is for these and other technical reasons that the Da Prato family is considers that its land has future urban potential.</p> <p>Whilst recognising that the case for urbanisation south of Armadale Road still needs to be made, early indications are that there are compelling reasons why it could be supported, and therefore planning for north of Armadale Road should not be dismissive in considering urbanisation to the south of Armadale Road.</p> <p><b>2. Intersection of Ghostgum Avenue and Armadale Road</b></p> <p>The DSP documentation indicates that the intersection of Ghostgum Avenue and Armada le Road would ultimately be converted to a left-in, left-out (LILO) configuration in response to a proposal to eventually 'grade-separate' the intersection of Armadale Road/Tapper RoadNerde Drive, to the west. Such a modification would significantly impact the ability of traffic access Armada le Road to travel west from within the DSP area, as well as prejudice access options for future development of land south of Armadale Road. Further, access to Cockburn Central activity centre and to a proposed future public transport node will be limited. We also note that it is likely to divert traffic into recently approved local road networks not designed to cope with the much higher volumes that would result.</p> <p>The City of Cockburn is requested to strongly resist the removal of the current 3-way signalised intersection and its replacement with a LILO configuration. Retention of the current intersection would allow for conversion to a 4-way intersection in future to serve potential</p>	<p>This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading, including the Ghostgum intersection is controlled by Main Roads.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>urbanisation south of Armadale Road.</p> <p><b>3. North-South Links across Armadale Road</b></p> <p>Item 2 above forms part of the wider issue of future connectivity between development on the north and south sides of Armadale Road. It is requested that the City of Cockburn carefully consider the likely need for a future north-south road, pedestrian and cycle links and insist that the opportunity for creation of such links not be lost in the design of Armadale Road.</p> <p>In summary, the proposed Treeby DSP is supported by our client, but the City is respectfully requested to take a longer term view to ensure that options for good connectivity with potential urbanisation of the land south of Armadale Road are not prejudiced by decisions taken as part of this DSP.</p>	<p>This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads. The City will of course refer to its adopted Functional Road Hierarchy and Bicycle Network Plan in liaisons with Main Roads.</p>
71	Limebrook Holding PO Box 796 SUBIACO WA 6904	<p>The purpose of this submission is to confirm our support, as the landowners of Lot 131 Jandakot Road, Treeby, for the advertised plan.</p> <p>Lot 131 Jandakot Road is a 64.75 ha land parcel located immediately south of Jandakot Road, adjoining the Calleya residential estate. The site has previously been mined for sand with around half of the site cleared or in very poor condition. As the Calleya development has been successfully delivered, and the government's strategic priorities on consolidating Perth's urban footprint, maximising access to jobs, transport and infrastructure, and reusing brownfields sites have strengthened, the imperative to expand the urban precinct to including adjoining consolidated landholdings has become apparent. As a consequence, Lot 131 and the adjoining Lots 4, 2 and 1 Armadale Road have been identified for 'Urban Investigation' and 'Urban Expansion' within the WAPC's draft South Metropolitan and Peel Sub-Regional Framework.</p> <p>Ahead of rezoning of the land, the City has identified a preference to review the location as a whole and coordinate its arrangement under an urbanisation scenario to ensure that future planning and delivery can occur under an this overarching framework. The district structure</p>	<p>Noted</p> <p>Noted – this is background information and does not require an officer response.</p> <p>Noted – this is background information and does not require an officer response.</p>

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		<p>planning process has also provided an opportunity to define the key issues each site and the precinct as a whole present, and appropriate responses to these. The outcome is a plan which:</p> <ul style="list-style-type: none"> <li>• Recognises the benefits in consolidating urban development around the Cockburn Central railway station;</li> <li>• Expands the masterplanned residential development already occurring in Calleya to the more logical boundary provided by major roads and reserves;</li> <li>• Accommodates approximately 1500 additional future homesites to the 2000 already planned within Calleya;</li> <li>• Consolidates vegetation retention and environmental protection within a substantial (177ha) reserve spanning the superlot property boundaries;</li> <li>• Allows for the interconnection of neighbourhoods through logical road connections between sites;</li> <li>• Identifies and spatially locates key infrastructure (including primary schools, commercial centres and District Open Space;</li> </ul> <p>The plan uses the boundaries provided by surrounding higher order roads and the direction set by State Planning Policy 2.3 for the identification of urban sites, but is structured with sufficient flexibility to allow the government to consider a range of scenarios for other sites. As such, the plan does not prejudice Councils future decision making for other sites: it simply illustrates (at a relatively high level) how development in this precinct might be coordinated upon finalisation of the Frameworks to avoid ad hoc decision making.</p> <p>Of key importance to Lot 131, the Plan reviews existing vegetation and the boundaries of the wetland within the east of the site and proposes a logical boundary which accommodates protection of these</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted – this is background information and does not require an officer response.</p> <p>Noted, this is the City's expectation also</p>

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		<p>within consolidated and manageable reserves. This will ultimately require an amendment to the mapped (but inaccurate) boundaries of the Bush Forever overlay within the Metropolitan Region Scheme to have formal effect; however the DSP establishes a logical strategic position from which to commence this process, and places each site within context. It also considers parallel planning factors such as neighbourhood integration and access to achieve the best overall plan for the precinct. Endorsement of the plan will not bind either the Council or the WAPC to formally approving the modifications proposed to Bush Forever (which will require further detailed documentation), but will provide strategic direction supporting:</p> <ul style="list-style-type: none"> <li>• Retention of the majority of the Bush Forever area within the Precinct;</li> <li>• Correlation of protection areas with actual ground conditions;</li> <li>• Consolidation of conservation areas within substantial and manageable blocks (in preference to fragmented areas), in accordance with Department of Parks and Wildlife preferences;</li> <li>• Functional interfaces between conservation areas and urban areas; and</li> <li>• Integration of neighbourhoods across property boundaries.</li> </ul> <p>Limebrook commend the City for taking the initiative to be pro-active in addressing these coordination issues ahead of individual site applications and support the Plan generated as a result. Overall, the Plan is considered to provide a rational and balanced outcome for the Precinct taking into account the range of planning issues applicable, and to provide a flexible strategy to guide subsequent planning processes following determination of the Frameworks.</p>	<p>As above</p> <p>As above</p> <p>As above</p> <p>As above</p> <p>As above</p> <p>Noted.</p>
72	Main Roads PO Box 6202	Main Roads has now completed its assessment and advises that the Draft Treeby Structure Plan is acceptable to Main Roads subject to the following:	Noted



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	EAST PERTH WA 6892	<ul style="list-style-type: none"> <li>The Draft Treeby District Structure Plan must be amended to remove reference to the left in/left out access between Ghostgum Avenue and Fraser/Liddelow Roads. (Main Roads has advised the consultant CLE Town Planning on a number of occasions that this additional connection will not be supported).</li> <li>The existing signalised intersection at Ghostgum Avenue/Armada Road will revert to a left in/left out intersection when Armada Road is operating at its ultimate design stage.</li> <li>The City of Cockburn has previously advised that it does not support a Commercial zoning for Lot 1. In the event that Lot 1 is redeveloped for "Residential", then connectivity must be achieved via the adjacent subdivision roads to Ghostgum Avenue. This will facilitate the removal of the proposed left in/left out intersection onto Armada Road which is the preferred outcome for Main Roads as it removes another conflict point on this dedicated freight route.</li> <li>It is understood that the City of Cockburn are currently investigating the intersection treatment at Jandakot and Solomon Roads (ie traffic signals vs roundabout). Main Roads Network Operations has previously provided the City of Cockburn with some micro simulation visualisation models which depicts that the roundabout treatment will provide better performance and provides an 85% reduction in KSI (killed or seriously injured) crashes.</li> </ul>	<p>Main Roads will obviously have the final say on whether an intersection at this point will be permitted. However, the DSP simply flags a 'possible' intersection with formal consideration to occur via the local structure planning process. As the DSP is a guiding document for Council, not Main Roads necessarily, there is no harm in leaving the annotation as shown.</p> <p>This is understood and is reflected on the DSP map.</p> <p>Incorrect, this is not the case. The City has expressed an openness to consider either proposal on its merit at the time. The City's position has continued to evolve, such that the City sees an important opportunity for mixed business type development on Lot 1. At this stage, nothing has been submitted. If the site becomes residential, it is also the City's expectation access to Lot 1 comes via the Calleya estate (and that subdivision approval facilitates this). The DSP does not emphasise residential, and would rather see maximum utility of this land, taking in to account the relevant factors of the planning framework. Lot 1 is a strategic site, and one of the final opportunities to attract a coordinated and significant mixed business development outcome that provides especially for further business investment and knowledge based jobs. It would be symptomatic of poor planning to continue to centralise jobs within the middle of Perth CBD, as this has created the very congestion issues that are plaguing the liveability of Perth as city. This is a root cause of congestion and loss productivity. It is a planning priority that in growth areas like Cockburn Regional Centre, that land availability for business and employment generation be coordinated with land made available for residential development.</p> <p>The request for submissions relates to the Treeby District Structure Plan. This portion of the submission relates to road upgrades, adjacent to, but</p>

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			outside that area. The Jandakot Road upgrade will be the subject of a report to Council later in the year. Main Road's participation in that project are appreciated.
73	EMBA Pty Ltd PO Box 3366 BROADWAY NEDLANDS WA 6004	<p><b>SUPPORT</b></p> <p>Having previously owned the entire acreages that now comprises the 14 x 2 hectare blocks that make up the Skotsch and Jandakot Road properties, the subject of this submission, I commend Council for its foresight in asking the current owners to express their views on the 2 alternatives available to them.</p> <p>Historically, we had owned this 71 acre block since about 1980 and were active members of the Banjup Urban Group which comprised a number of owners of relatively large blocks of land who agitated for our combined area of some 300+ hectares of land from Jandakot Road to Armadale Road and west towards Solomon Road to be rezoned in stages to allow residential development. In spite of providing the W.A. government agencies with all the appropriate information to justify a rezoning including protection of the underground water, native vegetation etc., our submission was obviously too advanced for the government of that time. Fast forward around 20 years and what we attempted to achieve in enhancing this land is now being achieved with all the benefits that will flow to the current and new residents to come.</p> <p>We subsequently, but reluctantly, converted our land to 14 x 2 hectare blocks because this was the only alternative left to us as we simply could not stop the continuous breaking/entering, stealing, dumping, burning of our sheds and other mayhem, in spite of the efforts of the Police.</p> <p>Whilst there are some advantages in living on a 2 hectare blocks, the lack of reticulated scheme water and sewage as well as the fire concerns in summer, ongoing vandalism and theft are still areas of concern. I also note Council's advice that rezoning to urban will ensure full vehicular access from Skotsch Road to the new urban areas of Treeby which will also be a substantial bonus.</p>	<p>Noted</p> <p>To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		We have retained 2 blocks in our subdivision for our grandchildren's use at a later date but I believe the opportunity to possible convert all these existing blocks to urban has nothing but upside for all the existing owners, future purchasers and the local authorities and I fully support this as a proposal.	
74	Grant Stevens Lot 64 Jandakot Road  TREEBY WA 6164	<b>SUPPORT</b> We are located at lot 64 Jandakot Road and also want to see us have the option of rezoning our land if wanted. With the ever increasing traffic and urban life enclosing in on us we believe it is only fair that we have this option made available from the council and state planning commission	Noted  This plan relates to a specific area as this responds to the State Government's Perth and Peel @ 3.5 million which indicates an area of urban expansion. The purpose of this plan was to set out clearly the City's requirements to connect into the existing Calleya urban area and key matters such as school numbers and location. There is a separate project 'Jandakot visioning' which deals with a broader area, outside of what was nominated by the State Government as an urban expansion area. This item will be the subject of a report to Council later in the year.
75	Landowner	We live at 24 Skotsch Road in Treeby and have been invited to make a submission as to two choices:  1. Remaining in the resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or  2. Rezoning to urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).  Due to the impact of the encroaching urban development, increased traffic congestion, decreased security and increased dumping we have lost the peace and tranquil lifestyle that we sought when purchasing five acres. Therefore we feel that we need to be allowed to rezone to urban option 2 - Rezoning to urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).	Noted, the landowner does not feel they will still be able to enjoy a rural lifestyle as the new urbanised area will essentially surround them. This point was appreciated at the Community Forum and there has been no rationale provided by the State Government for why Skotsch Rd was left as rural. It is possibly because development there has been quite recent and the State has made an assumption these landowners would not look to redevelop. This of course, does not consider the alternative question, are they happy to remain, but feel surrounded by urbanisation?  To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist: 1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or 2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).  The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The

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		<p>However, if the land owners are not allowed to rezone then it would be grossly unfair for Skotsch Road to be used as an access way for vehicles and pedestrians into any further urban development and our street should not be used as a thorough fare for future access. Our five acre lifestyle should be maintained with vehicle access only being for the land owners to properties in Skotsch Road.</p> <p>We also believe that these need to occur in conjunction with each other. In other words, vehicular access and connections should only be allowed to occur at the same time that urban rezoning is granted to the current land owners in the Skotsch Road vicinity. We should not have to endure vehicular connections with a delay in time for the processing of our urban rezoning. They need to occur respectively.</p>	<p>WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p> <p>Noted, the advertised version of the draft Treeby DSP (which indicated Skotsch Rd precinct remaining rural do not allow a vehicular connection through Skotsch. An earlier submission also raised concern with the pedestrian access that was proposed. There are alternative routes for pedestrian access which could be considered if the land remained rural, such as on the adjacent reserves.</p> <p>Urban rezoning does not mean any development happens straightaway. The actioning of the development process is driven by the landowners themselves and can take several years.</p> <p>It is impossible to give a proper timeframe when many of the times depend on a State Government agency as well as landowners themselves. Rather, below is a list of the major decisions which need to occur. Many of these do involve the landowners getting together and actioning these, the City does not undertake them as we have an 'assessment' role to provide:</p> <ol style="list-style-type: none"> <li>1. Finalisation of the Perth and Peel @ 3.5 million document by WA Planning Commission (was advertised in May 2015);</li> <li>2. Change to the zoning under the Metropolitan Region Scheme to reflect Perth and Peel document (initiated by landowner/s but ultimate consideration by WA Planning Commission and Minister for Planning) – estimate 1-2 years;</li> <li>3. Change to the zoning under the City's local planning scheme to reflect the Metropolitan Region Scheme (initiated by landowner/s, advertised by the City but ultimate consideration by WA Planning Commission and Minister for Planning) estimate – 12-18 mths;</li> <li>4. Preparation of structure plans – by landowners following the WAPC Structure Plan Framework;</li> <li>5. Consideration of structure plan (lodged by landowners, advertised by the City but ultimate consideration by WA Planning Commission) estimate 4-6 months;</li> <li>6. Preparation of subdivision applications – by landowners;</li> </ol>



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			<p>7. Consideration of subdivision applications (lodged by landowners, determined by WA Planning Commission); and</p> <p>8. Actioning of conditions of subdivision approval before titles can be created – up to landowners (approvals are valid several years).</p> <p>The first of these actions is still yet to occur, as mentioned at the community forum, our submission on the Perth and Peel @ 3.5 million document is still yet to be responded to by the State Government.</p>
76	Department of Health	<p>The DOH provides the following comment:</p> <p><b>1. Water Supply and Wastewater Disposal</b></p> <p>All developments are required to connect to scheme water and reticulated sewerage as required by the Government Sewerage Policy - Perth Metropolitan Region.</p> <p>The proponents should be advised that approval is required for any on-site recycled waste water treatment process with such proposals being in accordance with DOH publications which may be downloaded from:  <a href="http://www2.health.wa.gov.au/Articles/N_R/Recycled-water">http://www2.health.wa.gov.au/Articles/N_R/Recycled-water</a></p> <p><b>2. Public Health Impacts</b></p> <p>DOH has a document on 'Evidence supporting the creation of environments that encourage healthy active living' which may assist you with planning elements related to this structure plan. A copy is attached or may be downloaded from:  <a href="http://www.public.health.wa.gov.au/cprooU6111/2/140924_wahealth_evidence_statement_be_health.pdf">http://www.public.health.wa.gov.au/cprooU6111/2/140924_wahealth_evidence_statement_be_health.pdf</a></p> <p>The DOH notes the Treeby District Structure Plan allows urban residential infill into the areas bordering on Jandakot Road which is located approximately 1000M of the southernmost runway of the airport. Due to the persistent noise associated with busy airports, the DOH recommends that all prospective home buyers are made aware of the Air Services Australia "things to consider" web page:  <a href="http://www.airservicesaustralia.com/aircraftnoise/aircraft-">http://www.airservicesaustralia.com/aircraftnoise/aircraft-</a></p>	<p>Noted</p> <p>Noted, this will be useful when landowners submit their local structure plans to make themselves familiar with this.</p> <p>The City will expect the same memorials and built form mitigation as seen in the Calleya estate, our approach is beyond what the existing State Planning Policy requires but we firmly believe our future resident's amenity will be better for this approach.</p>

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		<p><a href="#">operations/consideringaircraft- noise-when-buying-a-home/</a></p> <p>Industrial Estates and Precincts Enclosed is a draft scoping tool that highlights public health issues that should be addressed and incorporated into the proposed industrial estate/precinct. A copy is attached.</p> <p>The structure plan is to acknowledge and incorporate appropriate separation distances in accordance with the EPA Environmental Assessment Guideline (EAG) 3 'Guidance for the Assessment of Environmental Factors No. 3 – Separation Distances between Industrial and Sensitive Land Uses'. Available for download from: <a href="http://epa.wa.gov.au/sites/default/files/Policies_and_Guidance/GS3-Separation-distances-270605.pdf">http://epa.wa.gov.au/sites/default/files/Policies_and_Guidance/GS3-Separation-distances-270605.pdf</a></p>	<p>There is no industrial proposed. There is adjacent light industrial which is existing.</p> <p>The EPA Guidance Statement was critical in informing the site and context analysis of the Treeby DSP. For example, this was how it was determined the existing kennel zone did not impinge on the area.</p>
77	City of Cockburn (Environmental Health Services) 9 Coleville Crescent SPEARWOOD WA 6163	<p>I have reviewed the Draft Treeby District Structure Plan (TDSP) as discussed, and would make the following comments:</p> <ol style="list-style-type: none"> <li>1. The TDSP makes no mention of the City of Cockburn's Noise Attenuation Local Planning Policy and Guidelines (LPP 1.12). The City's LPP specifically addresses the City's expectations in relation to noise attenuation, requirements for Noise Impact Assessments and how the requirements of the SPP 5.3 and 5.4 should be applied within the City. There are a number of areas where we have provided additional information or clarification on the City's requirements within the Guidelines, above the information provided within the SPPs (for instance the requirement for 6.38mm laminated glass and window seals in the Frame area).</li> <li>2. Part One of the TDSP identifies that Local Structure Plans should be accompanied by a "Transport Noise Assessment". This should perhaps read "Noise Impact Assessment", as there is potential for Lot 4 Armadale Road to be impacted by non-transport noise impacts.</li> </ol>	<p>Noted, a modification can be included.</p> <p>Noted, a modification can be included to clarify this point</p>

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		<p>3. Section 1.3.3.4 in Part Two addressing SPP5.3 Jandakot Airport Vicinity does not clearly identify that a Noise Management Plan addressing aircraft noise is required for all lots within the TDSP area, as is required by the City's LPP. This section identifies that the SPP identifies both a Core and Frame Area, and whilst it states that the TDSP is wholly located outside the 20ANEF contour (Core Area), there is no clear statement that the entire TDSP is within the Frame Area. Under the City's LPP a Noise Management Plan is required to address noise attenuation measures consistent with the requirements of the WAPC publication "aircraft Noise Insulation for Residential Development in the Vicinity of Perth Airport" 2004 (for which the recommendation is 6.38mm laminated glass and window seals).</p> <p>4. Section 1.3.3.5 in Part Two addressing SPP5.4 is one very large paragraph, which should be broken up. Once again there is no reference to the City's LPP.</p> <p>5. Section 2.6 in Part Two addressing Context Analysis and Opportunities and Constraints (Page 27) has a typing error, where reference is made to "The boundaries of the Jandakot Airport and associated ANEAF noise contour", this should be ANEF. Proximity to the Cockburn Fremantle Pistol Club is not included on the list.</p> <p>6. There is no clear mention of the Cockburn Fremantle Pistol Club as a source of noise emissions in the TDPS. Whilst the Pistol Club is shown on the Figure 9 Opportunities and Constraints Plan with an asterix on its location, it is not listed in the legend or in Section 2.6 and could be overlooked. Whilst Figure 9 indicates that Lot 140 will be retained as Parks and Recreation, the City has not information or modelling on</p>	<p>Noted, a modification can be included.</p> <p>Noted, a modification can be included.</p> <p>Noted, a modification can be included to clarify this point</p> <p>Noted, a modification can be included to clarify this point</p>

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		<p>whether this will provide an adequate buffer. Any Noise Management Plan for Lot 4 Armadale Road would need to address noise emissions from the Pistol Club as a pre-existing land use in their Noise Management Plan under the City's LPP.</p> <p>7. The Figure 9 Opportunities and Constraints Plan makes no mention of the Frame Area for Jandakot Airport.</p> <p>8. Whilst I have understood that the TDSP does not include any change to the zoning of the existing Resource Zone Lots on Skotsch Road and 458 Jandakot Road, we would suggest that the Figure 9 Opportunities and Constraints Plan also include the location of the Dog Kennels Buffer (in a similar manner as the 20 ANEF is shown to demonstrate that it is outside the buffer). Any proposal to rezone these lots would need to address proximity to the kennel zone.</p> <p>Appendices:</p> <ul style="list-style-type: none"> <li>• In Section 2.1.2 Relevant Legislation and Regulations, there are a number of items of legislation that need to be included: <ul style="list-style-type: none"> <li>○ SPP 5.3 Jandakot Airport Vicinity is not listed;</li> <li>○ The Environmental Protection (Noise) Regulations 1997 should be listed as any residential areas in the vicinity of the Pistol Club will need to be aware that the noise emissions from the Pistol Club are exempt from Regulation 7. Any Noise Impact Assessment for a Structure Plan in the vicinity of the Pistol Club will need to address the potential for land use conflict and amenity impact on the homes, and will be required under our LPP 1.12 to include noise attenuation for</li> </ul> </li> </ul>	<p>Noted, a modification can be included to clarify this point</p> <p>Noted, a modification can be included to clarify this point</p> <p>Noted, a modification can be included to clarify these points also in the Appendix – Environmental Assessment Report</p>



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		<p>any noise imissions from the Club that exceed the EPNRs.</p> <ul style="list-style-type: none"> <li>○ The Public Health Act 2016 should also be listed as this Act will (in future) require Public Health Assessments. At this time the Regulations are still being drafted, but the new legislation should be listed in anticipation of the old Health (Miscellaneous Provisions) Act 1911 being repealed.</li> <li>• It may be of value for Section 4.11.2 concerning Jandakot Airport, to include information on or a reference to the N Contours which are also included in the Jandakot Airport Master Plan, as these are a more easily understood representation of the noise level received by houses in the area.</li> </ul>	
78	Landowner	I choose choice two- Rezoning to urban	<p>To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>
79	Landowner	<p><b>SUPPORT</b></p> <p>For option two – the opportunity to have the area rezoned from Resource to Urban, regarding the Skotsch Road area precinct.</p>	<p>To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further</li> </ol>

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			<p>subdivision (this implies no vehicular connections into the new urban area of Treeby); or</p> <p>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</p> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>
80	Brandon Perreau, Michael Perreau & Sui P Lai 68 Skotsch Road TREEBY WA 6164	<b>SUPPORT</b> Rezoning to Urban (Choice No. 2)	<p>To attempt to inform the State Government, and Council better, a further letter was also sent to Skotsch Rd residents asking which scenario they preferred considering the two key choices that exist:</p> <ol style="list-style-type: none"> <li>1. Remaining in the Resource zone and not undertaking any further subdivision (this implies no vehicular connections into the new urban area of Treeby); or</li> <li>2. Rezoning to Urban to become part of the future urban community (this implies full vehicular connection and no separation from the new urban area of Treeby).</li> </ol> <p>The response to this letter is discussed in the Council Report. The outcome has informed the officer recommendation to Council on what the future of the Skotsch Rd precinct should be, according to the majority of landowners. The WA Planning Commission will also be advised of this so they may consider this in finalising the draft Perth and Peel @ 3.5 million.</p>
81	Department of Transport GPO Box C102 PERTH WA 6839	<p><b>LATE SUBMISSION</b></p> <p>The Department of Transport (DoT) has liaised with Main Roads WA (MRWA) and the Department of Planning, Lands and Heritage (DPLH) and provides the following comments. DoT notes that Main Roads WA (MRWA) and the Public Transport Authority (PTA) have provided a separate response and concurs with the comments provided.</p> <p>The subject site under this Treeby District Structure Plan (DSP) abuts Armadale Road and Warton Road, both of which are freight roads in the Metropolitan Freight Network and are identified as major freight roads in the Perth Freight Transport Network Plan for Transport @ 3.5</p>	<p>Noted – refer to those separate responses above.</p> <p>Noted – this is background information and does not require officer comment.</p>

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		<p>Million. Armadale Road is also a Primary Regional Road in the Metropolitan Region Scheme (MRS).</p> <p>The DSP consists of the existing primarily residential development of Calleya Estate, in addition to land designated by the Department of Planning as an 'urban investigation' area. Proposed DSP land uses include residential development, two Primary Schools, Recreation Facilities, Mixed Business Zone and a Neighbourhood Centre.</p> <p><b><u>Cycling and Pedestrian Connectivity</u></b></p> <p>The DSP identifies a network of higher order shared paths within the development areas, providing good connectivity from Jandakot Road and Armadale Road to the school sites, Neighbourhood Centre, and residential cells.</p> <p>The proposed ultimate Armadale Road cross-section, consisting of a 6-lane 'duck and dive' form, will limit the ability for pedestrians and cyclists to cross Armadale Road. In addition, the conversion of the Armadale Road/Ghostgum Avenue signalised intersection to priority left-in/left out will remove the existing controlled crossing opportunity. Grade separated crossing points along Armadale Road have been identified for the ultimate scenario, at Verde Drive and at Frasers Road/Liddlelow Road. The distance of 1.8km between these crossing points may not provide sufficient connectivity to support safe access to public transport along the Armadale Road corridor, or to future land uses south of Armadale Road.</p> <p><b><u>Public Transport</u></b></p> <p>The PTA has identified a preferred Transperth bus route within the Calleya Estate area. This route is constrained by the existing road geometry, which will require modification to support a bus service.</p> <p>The Calleya Estate bus route, and any supplementary bus route servicing the balance of Treeby Estate, would be subject to available resourcing, road network completion and sufficient residential development to provide viable passenger catchment.</p>	<p>Noted – this is background information and does not require officer comment.</p> <p>Noted – this is background information and does not require officer comment.</p> <p>This portion of the submission relates to road upgrades, adjacent to, but outside that area. Armadale Road upgrading is controlled by Main Roads. The City will of course refer to its adopted Bicycle Network Plan in liaisons with Main Roads. The Department's support in these liaisons would be appreciated to ensure the best outcome can be achieved.</p> <p>Refer to the response to PTA submission further above.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p><b><u>Access</u></b> The DoT understands that the proposed left-in/left-out intersection between Ghostgum Avenue and Frasers Road/Liddlelow Road is not supported by MRWA.</p> <p>A left-in/left-out access has been approved via Armadale Road to the Lot 1 'Mixed Business' zone. If Lot 1 were to be developed as 'Residential', this access would no longer be appropriate. In that event, the internal road layout should be modified to support alternative access via Ghostgum Avenue.</p> <p><b><u>Freight</u></b> The proximity of the freight corridor may result in a potential future noise issue for nearby residents. Hence, it is important to undertake a noise assessment at this stage of planning.</p> <p>No direct property access would be permitted to the development from Armadale Road or Warton Road.</p> <p><b><u>Recommendations</u></b> DoT therefore recommends the following:</p> <ul style="list-style-type: none"> <li>• That the requirements for pedestrian and cycling infrastructure along Armadale Road be determined in coordination with the DoT, MRWA, PTA and City of Cockburn.</li> <li>• That all traffic and access-related issues are resolved to the satisfaction of MRWA prior to approval of the Structure Plan.</li> <li>• That all issues related to road infrastructure and bus services are resolved to the satisfaction of PTA</li> <li>• That the proponent undertakes a noise assessment in accordance with State Planning Policy 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning (SPP 5.4) and considers mitigation measures as</li> </ul>	<p>Refer to the response to Main Roads WA submission further above.</p> <p>Noted. The Treeby DSP already notes the importance of this.</p> <p>Noted, this is the City's expectation also.</p> <p>Noted, this is the City's expectation also (where it relates to roads in Main Roads WA control).</p> <p>Noted, this is the City's expectation also (where they relate to public transport provision).</p> <p>Noted, this is the City's expectation also.</p>



N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION										
		<p>recommended in the noise assessment report.</p> <ul style="list-style-type: none"><li>That any future requirements for notifications on titles be clearly identified in the Structure Plan; to ensure that potential residents are aware of the likely noise levels generated from the nearby freight corridor.</li></ul>	<p>Noted, this is the City's expectation also as part of the future local structure plans.</p>										
82	Landowner	<p>LATE SUBMISSION</p> <p>As I have had a property in Canning Vale years ago, we had the same situation where the development came up to our fence. We had unwanted people coming onto our property (stealing-snooping).With a school out back and the road opening up to, it will come again. We all seem to want to move on in one way or another so why leave this parcel of land in the middle. Less work more play. Sounds good to me.</p>	<p>Note – this submission was received after the date requested and relates to the Skotsch Road precinct.</p> <p>This adds to the numbers given in the Council report for Skotsch Road which would now be:</p> <table><tr><td>Area</td><td>Remain Resource</td><td>Rezone to Urban</td><td>Did not respond</td><td>Total</td></tr><tr><td>All Resource zoned lots</td><td>0</td><td>13</td><td>2</td><td>15</td></tr></table> <p>A recommendation is included in the officer report to request the Skotsch Road precinct be included as urban.</p>	Area	Remain Resource	Rezone to Urban	Did not respond	Total	All Resource zoned lots	0	13	2	15
Area	Remain Resource	Rezone to Urban	Did not respond	Total									
All Resource zoned lots	0	13	2	15									
83	Department of Planning, Lands and Heritage – Policy team – Bush Forever	<p>LATE SUBMISSION</p> <p>Thank you for sending the draft Treeby District Structure Plan to the Policy team within the Department of Planning, Lands and Heritage for comment on Bush Forever. The following comments are provided for information only and do not provide support or a formal position of the draft Treeby District Structure Plan (DSP).</p> <p>Bush Forever area 390 - Fraser Road Bushland Banjup is within the draft DSP area. Some of the Bush Forever area is reserved Parks and</p>	<p>Noted, this is clarified later in the submission that this advice is in relation to State Planning Policy 2.8 – Bushland Policy.</p> <p>Noted – this is background information and does not require officer comment.</p>										

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		<p>Recreation and water catchment and the remainder zoned rural water protection. The draft DSP proposes residential development over some of the Bush Forever area classified as rural water protection. The draft South Metropolitan Peel Sub Regional Planning Framework identifies the Bush Forever area as open space and the rural water protection zoned land with no Bush Forever overlay as urban investigation.</p> <p>The draft DSP is inconsistent with the draft Framework. Residential development is shown over Bush Forever and the rural water protection zone, without proper and orderly planning being undertaken. A Metropolitan Region Scheme (MRS) amendment may be required to align with the final Framework. The draft DSP should be consistent with the final Framework and MRS. Until such time the Frameworks are finalised and a MRS amendment process has been undertaken and assessed on its merits the draft DSP is not supported.</p> <p>The draft DSP does not satisfactorily address State Planning Policy 2.8 - Bushland Policy for the Perth Metropolitan Region (SPP 2.8). The DSP report acknowledges this will be done through the MRS amendment process and local structure planning process. The following comments are provided on the draft DSP with regard to SPP 2.8 only.</p> <p>The DSP incorporates all of Bush Forever area 390. The Bush Forever area within Lots 139, 140, 467, 468, 614, 615 and 820 is reserved Parks and Recreation and area is proposed to remain as is, which is supported. The Bush Forever area within now Lots 2, 4, 131 and 820 was subject to a negotiated planning solution (Bush Forever Volume 1, 2000) as there was Basic Raw Materials (BRM) identified within these lots. A negotiated planning solution (NPS) was undertaken which resulted in the boundaries that are in place now on the MRS. The negotiations were undertaken through the development approvals for the mining and the mining tenements from 1995 to early 2000. The Bush Forever policy recognised the protection of all the bushland within Bush Forever area 390 was constrained by existing BRM commitments and the negotiated Bush Forever boundary was based on the required excavation area. The original NPS negotiated</p>	<p>Otherwise known as Perth and Peel @ 3.5 million, the submitter appears to take a very rigid view of what is shown on the framework maps. The text of this document must be read in conjunction with the plans. The implementation action section makes this clearer, reading:  "The framework is the first step in the ongoing process of refining and detailing planning proposals for an area. This refinement will continue to be undertaken through the finalisation of the framework as a sub-regional structure plan, MRS/PRS, local planning schemes, structure planning, subdivision and/or development".</p> <p>The proposed retention and management of the majority (94%) of the Bush Forever site proposed by the Treeby DSP achieves alignment with the key precepts of SPP2.8. It is fairly common to find these areas are mapped on a desktop analysis and have not been 'ground truthed' properly by site inspection. The Treeby DSP acknowledges this may be the case here also given there are areas the State has mapped 'Bush Forever' which have been cleared and yet there are other bush areas outside the Bush Forever boundary. More detailed negotiation on the areas to be retained versus removed, and any applicable offsets package will occur through the rezoning and local structure planning stages. This will allow for further comment from the Department as more detailed analysis is able to be provided.</p> <p>The mapping generally aligns to Perth and Peel @ 3.5 million which as set out in that document "will be taken into account when strategies, policies and plans that apply to the sub-region are prepared or reviewed" (emphasis added).</p>

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		<p>the Bush Forever area as outlined in Bush Forever volume 1 to provide for the sand extraction. No further negotiation planning solution is to occur (as suggested within the DSP) as the prior negotiation implemented the recommendations of Bush Forever.</p> <p>SPP 2.8 section 5.1.1 (iv) recommends proposals or decision making should recognise that once a site is negotiated and an outcome agreed in accordance with the policy measures there is a general presumption against the clearing of regionally significant bushland identified for protection, unless there is an improved environmental outcome.</p> <p>It is acknowledged the negotiations were undertaken 15-20 years ago and the Bush Forever boundary was set for a different purpose. The boundary as it is now is difficult to manage from a planning and on ground bushland management perspective because of the irregular shape. It could be considered reasonable to rationalise the Bush Forever boundary as a better planning and environmental outcome could be achieved which should provide for a net environmental gain (SPP 2.8 Appendix 2 (xii)).</p> <p>The draft DSP indicates an area of 10.5 ha of Bush Forever within Lot 131 is proposed to be developed for residential purposes. Of this area, 9.1 ha (as noted in the environmental assessment report) comprises of vegetation as completely degraded or previously cleared as a result of past sand quarrying activities and is poorly rehabilitated. The draft DSP states offsets will be negotiated through statutory approval process for the better quality vegetation. As the boundary has been previously negotiated, all of the 10.5 ha is to be appropriately offset regardless of the vegetation condition in accordance with SPP 2.8 section 5.1.1 and Appendix 4, if development of the Treeby DSP area is deemed feasible and approved.</p> <p>The subject site is known to contain Declared Rare Flora (<i>Caladenia huegelii</i>) and significant fauna species such as the three black cockatoos. The vegetation within the subject area is likely to be the Banksia Woodlands of the Swan Coastal Plain threatened ecological</p>	<p>Noted, this would be the City's expectation also that any environmental referrals are undertaken through the planning process.</p>

N O.	NAME/ADDRESS	SUBMISSION	RECOMMENDATION
		<p>community (TEC). The report only mentions part of the site has been referred to the now Federal Department of the Environment and Energy (DEE) in 2013, prior to the Banksia woodlands TEC listing. Referral to the Federal DEE may be required and liaison with the Department of Biodiversity, Conservation and attractions is recommended.</p> <p>It is noted the draft DSP is inconsistent with SPP 2.3 and consultation with the Department of Water and Environmental Regulation is recommended.</p> <p>It is also noted that the subject site is within a bushfire prone area. State Planning Policy 3.7 will apply. Bush Forever native vegetation should not be cleared as a result of any bushfire mitigation. The draft DSP does not satisfactory address SPP 2.8. A MRS amendment in accordance with the final South Metropolitan Peel Sub Regional Planning Framework should be undertaken in the first instance (if an MRS amendment is an outcome of the final Framework) for orderly and proper planning to take place. Then the DSP should be prepared in accordance with the final Framework and MRS.</p> <p>Please note this is advice on SPP 2.8 only and does not incorporated comments from other branches of the Department of Planning Lands and Heritage, nor does it provide a formal position of the Western Australian Planning Commission, which may need to be consulted.</p>	<p>The City has already consulted that Department – refer to submission 28 above. As with this submission, they have taken a very rigid view of what is shown on the framework maps and not given sufficient regard to the framework text.</p> <p>Noted, this would be the City's expectation also. The City never supports the loss of Bush Forever vegetation for bushfire mitigation.</p> <p>It is not necessarily the case that a MRS amendment is undertaken first. A structure plan is often used to inform the MRS amendment process in part, along with any detailed studies required. The District Structure Plan is flexible enough to respond to a number of matters which may still change such as exact boundaries of the various zones. The key role of the District Structure Plan is to provide a broad framework only for key matters. The implementation section of Perth and Peel @ 3.5 million mentions a number of actions for urban expansion areas such as this, including district structure plans (where appropriate). There is no sequencing specified in the implementation table though the district structure plan is listed first.</p> <p>Noted though comments have been made on SPP2.3 and SPP 3.7 as well. A number of agencies have been consulted including the (then) Department of Planning. They have been included in the working group of government agencies which were provided the opportunity for both early input into the document and formal comment.</p>



CITY OF COCKBURN  
MUNICIPAL BANK ACCOUNT

**OCM 14/9/2017 - Agenda Item 16.1**

<b>Cheque/ EFT</b>	<b>Account No.</b>	<b>Account/Payee</b>	<b>Date</b>	<b>Value</b>
EF103968	10152	<b>AUST SERVICES UNION</b> PAYROLL DEDUCTIONS	5/07/2017	1,392.10
EF103969	10154	<b>AUSTRALIAN TAXATION OFFICE</b> PAYROLL DEDUCTIONS	5/07/2017	397,809.00
EF103970	10244	<b>BUILDING &amp; CONST INDUSTRY TRAINING FUND</b> LEVY PAYMENT	5/07/2017	68,161.92
EF103971	10305	<b>CHILD SUPPORT AGENCY</b> PAYROLL DEDUCTIONS	5/07/2017	3,536.76
EF103972	10733	<b>HOSPITAL BENEFIT FUND</b> PAYROLL DEDUCTIONS	5/07/2017	317.80
EF103973	11001	<b>LOCAL GOVERNMENT RACING &amp; CEMETERIES E</b> PAYROLL DEDUCTIONS	5/07/2017	287.00
EF103974	11182	<b>PREMIUM BRAKE &amp; CLUTCH SERVICE</b> BRAKE SERVICES	5/07/2017	1,536.40
EF103975	11857	<b>CHAMPAGNE SOCIAL CLUB</b> PAYROLL DEDUCTIONS	5/07/2017	550.80
EF103976	11860	<b>45S CLUB</b> PAYROLL DEDUCTIONS	5/07/2017	18.00
EF103977	12740	<b>MAYOR LOGAN HOWLETT</b> EXPENSES REIMBURSEMENT	5/07/2017	326.00
EF103978	18553	<b>SELECTUS PTY LTD</b> PAYROLL DEDUCTIONS	5/07/2017	13,468.24
EF103979	19726	<b>HEALTH INSURANCE FUND OF WA</b> PAYROLL DEDUCTIONS	5/07/2017	1,353.95
EF103980	20535	<b>HOME-GROWN THEATRE</b> DRAMA CLASSES	5/07/2017	2,310.00
EF103981	23302	<b>BUILDING SERVIC</b> BUILDING SERVICES LEVIES	5/07/2017	71,805.65
EF103982	25987	<b>TOYOTA FLEET MANAGEMENT</b> PAYROLL DEDUCTIONS - NOVATED LEASE	5/07/2017	608.14
EF103983	26696	<b>CHAMONIX TERBLANCHE</b> EXPENSES REIMBURSEMENT	5/07/2017	131.18
EF103984	26735	<b>SHANE MCMASTER SURVEYS</b> SURVEY SERVICES	5/07/2017	3,630.00
EF103985	99997	<b>R J &amp; C F DOREY</b> REIMBURSEMENT FOR UNIFORM - RAY DOREY	5/07/2017	70.00
EF103986	99997	<b>CHRIS FERREIRA</b> BETTER TOMORROW GRANT	5/07/2017	4,125.00
EF103987	99997	<b>LYNNE STEELE</b> BETTER TOMORROW GRANT	5/07/2017	1,000.00
EF103988	99997	<b>CAROLYN ODGERS</b> CAT STERILISATION - STRANGER	5/07/2017	50.00
EF103989	99997	<b>FLORA JIA</b> REIMBURSEMENT OF FEES - FLORA	5/07/2017	535.00
EF103990	99997	<b>GARY SINGH</b> REIMBURSEMENT OF FEES - GARY SINGH	5/07/2017	900.00
EF103991	11741	<b>WESTERN AUSTRALIAN TREASURY CORPORATIO</b> LOAN REPAYMENTS	24/07/2017	84,531.54
EF103992	10152	<b>AUST SERVICES UNION</b> PAYROLL DEDUCTIONS	17/07/2017	1,533.85
EF103993	10154	<b>AUSTRALIAN TAXATION OFFICE</b> PAYROLL DEDUCTIONS	17/07/2017	424,395.00
EF103994	10305	<b>CHILD SUPPORT AGENCY</b> PAYROLL DEDUCTIONS	17/07/2017	3,536.76
EF103995	10733	<b>HOSPITAL BENEFIT FUND</b> PAYROLL DEDUCTIONS	17/07/2017	317.80
EF103996	10888	<b>LJ CATERERS</b> CATERING SERVICES	17/07/2017	6,222.15

CITY OF COCKBURN  
MUNICIPAL BANK ACCOUNT

Cheque/ EFT	Account No.	Account/Payee	Date	Value
EF103997	11001	<b>LOCAL GOVERNMENT RACING &amp; CEMETERIES</b> PAYROLL DEDUCTIONS	17/07/2017	266.50
EF103998	11857	<b>CHAMPAGNE SOCIAL CLUB</b> PAYROLL DEDUCTIONS	17/07/2017	545.20
EF103999	11860	<b>45S CLUB</b> PAYROLL DEDUCTIONS	17/07/2017	18.00
EF104000	12565	<b>SOUTHERN METRO REGIONAL COUNCIL - LOANS</b> LOAN REPAYMENT	17/07/2017	28,103.98
EF104001	18553	<b>SELECTUS PTY LTD</b> PAYROLL DEDUCTIONS	17/07/2017	12,942.74
EF104002	19726	<b>HEALTH INSURANCE FUND OF WA</b> PAYROLL DEDUCTIONS	17/07/2017	1,353.95
EF104003	25987	<b>TOYOTA FLEET MANAGEMENT</b> PAYROLL DEDUCTIONS - NOVATED LEASE	17/07/2017	608.14
EF104004	27186	<b>DIVERSE IT PTY LTD</b> SOFTWARE LICENCES	17/07/2017	86,478.92
EF104005	99997	<b>SUSAN LIMBERT</b> SLLC REFUND REQUEST - S LIMBERT	17/07/2017	65.21
EF104006	99997	<b>EMMA LIMBERT</b> SLLC REFUND REQUEST - E LIMBERT	17/07/2017	67.07
EF104007	99997	<b>EZRA KAYE</b> LGACS9 - JUNIOR SPORT TRAVEL ASSISTANCE	17/07/2017	400.00
EF104008	26517	<b>CLICKSUPER</b> PAYROLL DEDUCTIONS	14/07/2017	561,857.44
EF104009	11753	<b>WASTE MANAGEMENT &amp; RECYCLING FUND</b> QUARTERLY LANDFILL LEVY PAYMENT	28/07/2017	573,909.53
EF104010	99997	<b>ROBERT COLIN WOODS</b> LGACS9 - JUNIOR SPORT TRAVEL ASSISTANCE	28/07/2017	400.00
EF104011	99997	<b>LORNA SKELLORN</b> HOME CARE CLIENT REFUND - KEITH SKELLORN	28/07/2017	695.00
EF104012	11867	<b>KEVIN JOHN ALLEN</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104013	12740	<b>MAYOR LOGAN HOWLETT</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	11,325.83
EF104014	19059	<b>CAROL REEVE-FOWKES</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	4,465.00
EF104015	20634	<b>LEE-ANNE SMITH</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104016	21185	<b>BART HOUWEN</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104017	23338	<b>STEVE PORTELLI</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104018	23339	<b>STEPHEN PRATT</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104019	25352	<b>LYNDSEY SWEETMAN</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104020	25353	<b>PHILIP EVA</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104021	26696	<b>CHAMONIX TERBLANCHE</b> MONTHLY COUNCILLOR ALLOWANCE	31/07/2017	2,613.67
EF104022	10152	<b>AUST SERVICES UNION</b> PAYROLL DEDUCTIONS	31/07/2017	1,396.60
EF104023	10154	<b>AUSTRALIAN TAXATION OFFICE</b> PAYROLL DEDUCTIONS	31/07/2017	442,265.00
EF104024	10305	<b>CHILD SUPPORT AGENCY</b> PAYROLL DEDUCTIONS	31/07/2017	3,971.80
EF104025	10733	<b>HOSPITAL BENEFIT FUND</b> PAYROLL DEDUCTIONS	31/07/2017	317.80

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Cheque/ EFT	Account No.	Account/Payee	Date	Value
EF104026	11001	<b>LOCAL GOVERNMENT RACING &amp; CEMETERIES</b> E	31/07/2017	225.50
EF104027	11857	PAYROLL DEDUCTIONS <b>CHAMPAGNE SOCIAL CLUB</b>	31/07/2017	544.00
EF104028	11860	PAYROLL DEDUCTIONS <b>45S CLUB</b>	31/07/2017	18.00
EF104029	18553	PAYROLL DEDUCTIONS <b>SELECTUS PTY LTD</b>	31/07/2017	12,495.52
EF104030	19726	PAYROLL DEDUCTIONS <b>HEALTH INSURANCE FUND OF WA</b>	31/07/2017	1,223.75
EF104031	25987	PAYROLL DEDUCTIONS <b>TOYOTA FLEET MANAGEMENT</b>	31/07/2017	608.14
EF104032	99996	PAYROLL DEDUCTIONS - NOVATED LEASE <b>AUDHU PTY LTD T/AS NUCHANGE BUILDING</b>	31/07/2017	209.00
EF104033	99996	RATE REFUNDS <b>NICOLE MOSQUEDA</b>	31/07/2017	15.00
EF104034	99996	RATE REFUNDS <b>JESSICA LANZA</b>	31/07/2017	150.00
EF104035	99996	RATE REFUNDS <b>HUGH ROGER DANIELL</b>	31/07/2017	30.00
EF104036	99996	RATE REFUNDS <b>ANN JACQUELINE HOAD</b>	31/07/2017	15.00
EF104037	99996	RATE REFUNDS <b>WANDA KEIGHTLEY</b>	31/07/2017	2,319.21
EF104038	99996	RATE REFUNDS <b>SACHA PANTALL</b>	31/07/2017	1,000.00
EF104039	99996	RATE REFUNDS <b>GEMMA COMINELLI</b>	31/07/2017	1,626.58
EF104040	99996	RATE REFUNDS <b>SPORTLINE HOLDINGS PTY LTD</b>	31/07/2017	938.12
EF104041	99996	RATE REFUNDS <b>JESSICA LANZA</b>	31/07/2017	150.00
EF104042	99996	RATE REFUNDS <b>MAGERETHA MYBURGH</b>	31/07/2017	30.00
EF104043	99996	RATE REFUNDS <b>REBECCA THOMPSON</b>	31/07/2017	147.00
EF104044	99996	RATE REFUNDS <b>LOIS BINKS</b>	31/07/2017	147.00
EF104045	99996	RATE REFUNDS <b>INFILL TWO PTY LTD</b>	31/07/2017	6,778.88
EF104046	99996	RATE REFUNDS <b>INFILL FOUR PTY LTD</b>	31/07/2017	6,778.88
EF104047	99996	RATE REFUNDS <b>JACKSON MAY</b>	31/07/2017	150.00
EF104092	10047	RATE REFUNDS <b>ALINTA ENERGY</b>	31/07/2017	70,937.47
EF104093	11794	NATURAL GAS & ELECTRICITY SUPPLY <b>SYNERGY</b>	31/07/2017	297,351.45
EF104094	12025	ELECTRICITY USAGE/SUPPLIES <b>TELSTRA CORPORATION</b>	31/07/2017	18,006.53
EF104095	10032	COMMUNICATIONS SERVICES <b>ADVANCED TRAFFIC MANAGEMENT (WA) PTY LT</b>	31/07/2017	2,204.40
EF104096	10058	CONTROLLERS AND SIGNS <b>ALSCO PTY LTD</b>	31/07/2017	3,880.25
EF104097	10071	HYGIENE SERVICES/SUPPLIES <b>AUSTRALASIAN PERFORMING RIGHT ASSOC. LT</b>	31/07/2017	10,939.96
EF104098	10086	LICENCE - PERFORMING RIGHTS <b>ARTEIL WA PTY LTD</b>	31/07/2017	1,923.90
		ERGONOMIC CHAIRS		

CITY OF COCKBURN  
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<b>Cheque/ EFT</b>	<b>Account No.</b>	<b>Account/Payee</b>	<b>Date</b>	<b>Value</b>
EF104099	10091	<b>ASLAB PTY LTD</b> ASPHALTING SERVICES/SUPPLIES	31/07/2017	1,917.75
EF104100	10110	<b>AUSRECORD</b> STATIONERY SUPPLIES	31/07/2017	170.50
EF104101	10118	<b>AUSTRALIA POST</b> POSTAGE CHARGES	31/07/2017	32,374.07
EF104102	10160	<b>DORMA AUSTRALIA PTY LTD</b> AUTOMATIC DOOR SERVICES	31/07/2017	10,177.31
EF104103	10170	<b>MACRI PARTNERS</b> AUDITING SERVICES	31/07/2017	15,400.00
EF104104	10184	<b>BENARA NURSERIES</b> PLANTS	31/07/2017	3,627.89
EF104105	10201	<b>BIG W DISCOUNT STORES</b> VARIOUS SUPPLIES	31/07/2017	157.00
EF104106	10207	<b>BOC GASES</b> GAS SUPPLIES	31/07/2017	2,919.95
EF104107	10221	<b>BP AUSTRALIA LIMITED</b> DIESEL/PETROL SUPPLIES	31/07/2017	22,558.79
EF104108	10226	<b>BRIDGESTONE AUSTRALIA LTD</b> TYRE SERVICES	31/07/2017	39,890.26
EF104109	10239	<b>BUDGET RENT A CAR - PERTH</b> MOTOR VEHICLE HIRE	31/07/2017	643.57
EF104110	10246	<b>BUNNINGS BUILDING SUPPLIES PTY LTD</b> HARDWARE SUPPLIES	31/07/2017	2,547.76
EF104111	10247	<b>BUNZL AUSTRALIA LTD</b> PAPER/PLASTIC/CLEANING SUPPLIES	31/07/2017	707.64
EF104112	10255	<b>CABCHARGE AUSTRALIA PTY LTD</b> CABCHARGES	31/07/2017	476.61
EF104113	10287	<b>CENTRELINE MARKINGS</b> LINEMARKING SERVICES	31/07/2017	660.00
EF104114	10292	<b>CHADSON ENGINEERING PTY LTD</b> MEDICAL SUPPLIES	31/07/2017	109.45
EF104115	10307	<b>CHILDRENS BOOK COUNCIL WA</b> CHILDRENS BOOKS	31/07/2017	502.25
EF104116	10329	<b>CITY OF ROCKINGHAM</b> TIP FEES	31/07/2017	86.67
EF104117	10333	<b>CJD EQUIPMENT PTY LTD</b> HARDWARE SUPPLIES	31/07/2017	2,522.01
EF104118	10346	<b>COATES HIRE OPERATIONS PTY LTD</b> EQUIPMENT HIRING SERVICES	31/07/2017	229.02
EF104119	10353	<b>COCKBURN CEMENT LTD</b> RATES REFUND	31/07/2017	707.52
EF104120	10357	<b>COCKBURN ICE ARENA PTY LTD</b> ENTERTAINMENT SERVICES	31/07/2017	360.00
EF104121	10359	<b>COCKBURN PAINTING SERVICE</b> PAINTING SUPPLIES/SERVICES	31/07/2017	12,881.00
EF104122	10368	<b>COCKBURN WETLANDS EDUCATION CENTRE</b> COMMUNITY GRANT	31/07/2017	11,246.00
EF104123	10375	<b>VEOLIA ENVIRONMENTAL SERVICES</b> WASTE SERVICES	31/07/2017	7,200.58
EF104124	10384	<b>PROGILITY PTY LTD</b> COMMUNICATION SERVICES	31/07/2017	13,576.97
EF104125	10386	<b>COMMUNITY NEWSPAPER GROUP</b> ADVERTISING SERVICES	31/07/2017	10,245.24
EF104126	10459	<b>DAVID GRAY &amp; CO</b> MOBILE GARBAGE BINS	31/07/2017	294.14
EF104127	10483	<b>LANDGATE</b> MAPPING/LAND TITLE SEARCHES	31/07/2017	8,599.63



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Cheque/ EFT	Account No.	Account/Payee	Date	Value
EF104128	10526	<b>E &amp; MJ ROSHER PTY LTD</b> MOWER PARTS	31/07/2017	3,093.20
EF104129	10528	<b>EASIFLEET MANAGEMENT</b> VEHICLE LEASE	31/07/2017	1,706.70
EF104130	10535	<b>WORKPOWER INCORPORATED</b> EMPLOYMENT SERVICES - PLANTING	31/07/2017	18,092.40
EF104131	10580	<b>FC COURIERS</b> COURIER SERVICES	31/07/2017	2,278.46
EF104132	10590	<b>DEPARTMENT OF FIRE AND EMERGENCY SERVI</b> ESL LEVY & RELATED COSTS	31/07/2017	17,788.44
EF104133	10597	<b>FLEXI STAFF PTY LTD</b> EMPLOYMENT SERVICES	31/07/2017	78,394.75
EF104134	10609	<b>FORESTVALE TREES P/L</b> PLANTS - TREES/SHRUBS	31/07/2017	4,356.00
EF104135	10611	<b>FORPARK AUSTRALIA</b> PLAYGROUND EQUIPMENT	31/07/2017	60,179.90
EF104136	10636	<b>FUJI XEROX AUSTRALIA PTY LTD</b> PHOTOCOPY CHARGES	31/07/2017	12,473.38
EF104137	10679	<b>GRASSTREES AUSTRALIA</b> PLANTS & PLANTING SERVICES	31/07/2017	577.50
EF104138	10708	<b>HEAVY AUTOMATICS PTY LTD</b> EQUIPMENT MAINTENANCE SERVICES	31/07/2017	619.36
EF104139	10709	<b>HECS FIRE</b> FIRE SYSTEM MAINTENANCE	31/07/2017	33,737.00
EF104140	10711	<b>HERALD PUBLISHING COMPANY PTY LTD</b> ADVERTISING SERVICES	31/07/2017	609.40
EF104141	10726	<b>HOLTON CONNOR ARCHITECTS &amp; PLANNERS</b> ARCHITECTURAL SERVICES	31/07/2017	12,408.00
EF104142	10757	<b>INDOOR KART HIRE O'CONNOR</b> ENTERTAINMENT SERVICES	31/07/2017	1,600.00
EF104143	10767	<b>INST OF PUBLIC WORKS ENG AUST - NSW</b> TRAINING SERVICES	31/07/2017	1,320.00
EF104144	10779	<b>J F COVICH &amp; CO PTY LTD</b> ELECTRICAL SERVICES	31/07/2017	107,441.39
EF104145	10783	<b>JANDAKOT METAL INDUSTRIES</b> METAL SUPPLIES	31/07/2017	1,062.60
EF104146	10787	<b>JANDAKOT ACCIDENT REPAIR CENTRE</b> PANEL BEATING SERVICES	31/07/2017	3,169.47
EF104147	10794	<b>JASON SIGNMAKERS</b> SIGNS	31/07/2017	18,440.07
EF104148	10814	<b>JR &amp; A HERSEY PTY LTD</b> SAFETY CLOTHING SUPPLIES	31/07/2017	3,635.72
EF104149	10879	<b>LES MILLS AEROBICS</b> INSTRUCTION/TRAINING SERVICES	31/07/2017	1,674.17
EF104150	10906	<b>AUSTRALIAN PLANT WHOLESALERS</b> VARIOUS PLANTS	31/07/2017	704.00
EF104151	10912	<b>M2 TECHNOLOGY PTY LTD</b> MESSAGING SERVICES	31/07/2017	396.00
EF104152	10913	<b>BUCHER MUNICIPAL PTY LTD</b> PURCHASE OF NEW PLANT / REPAIR SERVICES	31/07/2017	4,819.33
EF104153	10923	<b>MAJOR MOTORS PTY LTD</b> REPAIRS/MAINTENANCE SERVICES	31/07/2017	31,375.28
EF104154	10944	<b>MCLEODS</b> LEGAL SERVICES	31/07/2017	22,615.66
EF104155	10991	<b>BEACON EQUIPMENT</b> MOWING EQUIPMENT	31/07/2017	1,423.20
EF104156	11004	<b>MURDOCH UNIVERSITY OFFICE OF FINANCE, PL</b> ANALYSING SERVICES	31/07/2017	132.00

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Cheque/ EFT	Account No.	Account/Payee	Date	Value
EF104157	11022	<b>NATIVE ARC</b> GRANTS & DONATIONS	31/07/2017	1,200.00
EF104158	11028	<b>NEVERFAIL SPRINGWATER LTD</b> BOTTLED WATER SUPPLIES	31/07/2017	506.55
EF104159	11029	<b>NEWCASTLE WEIGHING SERVICES PTY LTD</b> SOFTWARE SUPPORT	31/07/2017	1,622.50
EF104160	11032	<b>NOISE &amp; VIBRATION MEASUREMENT SYSTEMS</b> MEASURING EQUIPMENT/SERVICES	31/07/2017	466.96
EF104161	11036	<b>NORTHLAKE ELECTRICAL</b> ELECTRICAL SERVICES	31/07/2017	69,104.89
EF104162	11068	<b>VODAFONE HUTCHISON AUSTRALIA PTY LTD</b> PAGING SERVICES	31/07/2017	665.50
EF104163	11077	<b>P &amp; G BODY BUILDERS PTY LTD</b> PLANT BODY BUILDING SERVICES	31/07/2017	1,729.75
EF104164	11177	<b>PITNEY BOWES AUSTRALIA PTY LTD</b> GIS SOFTWARE	31/07/2017	49,396.60
EF104165	11182	<b>PREMIUM BRAKE &amp; CLUTCH SERVICE</b> BRAKE SERVICES	31/07/2017	10,766.80
EF104166	11205	<b>QUALITY TRAFFIC MANAGEMENT PTY LTD</b> TRAFFIC CONTROL SERVICES	31/07/2017	46,577.82
EF104167	11208	<b>QUICK CORPORATE AUSTRALIA PTY LTD</b> STATIONERY/CONSUMABLES	31/07/2017	5,361.54
EF104168	11244	<b>RESEARCH SOLUTIONS PTY LTD</b> RESEARCH SERVICES	31/07/2017	4,508.12
EF104169	11307	<b>SATELLITE SECURITY SERVICES PTY LTD</b> SECURITY SERVICES	31/07/2017	10,171.91
EF104170	11308	<b>BOSS INDUSTRIAL FORMALLY SBA SUPPLIES</b> HARDWARE SUPPLIES	31/07/2017	3,204.76
EF104171	11331	<b>SHAWMAC PTY LTD</b> CONSULTANCY SERVICES - CIVIL	31/07/2017	3,425.00
EF104172	11333	<b>SHELFORD CONSTRUCTIONS PTY LTD</b> CONSTRUCTION SERVICES	31/07/2017	423.50
EF104173	11337	<b>SHERIDANS FOR BADGES</b> NAME BADGES & ENGRAVING	31/07/2017	261.64
EF104174	11361	<b>SIGMA CHEMICALS PTY LTD</b> CHEMICAL SUPPLIES	31/07/2017	3,897.56
EF104175	11373	<b>SKIPPER TRUCK PARTS</b> SPARE PARTS & MAINTENANCE SERVICES	31/07/2017	599.72
EF104176	11375	<b>SLATER-GARTRELL SPORTS</b> SPORT SUPPLIES	31/07/2017	220.00
EF104177	11387	<b>BIBRA LAKE SOILS</b> SOIL & LIMESTONE SUPPLIES	31/07/2017	95.00
EF104178	11425	<b>SOUTHERN METROPOLITAN REGIONAL COUNCIL</b> WASTE DISPOSAL GATE FEES	31/07/2017	641,651.74
EF104179	11459	<b>SPEARWOOD VETERINARY HOSPITAL</b> VETERINARY SERVICES	31/07/2017	600.00
EF104180	11469	<b>SPORTS TURF TECHNOLOGY</b> TURF CONSULTANCY SERVICES	31/07/2017	8,866.00
EF104181	11483	<b>ST JOHN AMBULANCE AUST WA OPERATIONS</b> FIRST AID COURSES	31/07/2017	5,438.89
EF104182	11493	<b>SAI GLOBAL LTD</b> PUBLICATIONS - STANDARDS	31/07/2017	9,582.95
EF104183	11496	<b>STANLEE WA LTD</b> CATERING EQUIPMENT/SUPPLIES	31/07/2017	381.15
EF104184	11502	<b>STATE LAW PUBLISHER</b> ADVERTISING SERVICES	31/07/2017	158.40
EF104185	11505	<b>STATE LIBRARY OF WESTERN AUSTRALIA</b> BOOK SUPPLIES	31/07/2017	11,016.50

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EF104186	11511	<b>STATEWIDE BEARINGS</b> BEARING SUPPLIES	31/07/2017	93.76
EF104187	11512	<b>STATEWIDE CLEANING SUPPLIES PTY LTD</b> CLEANING SUPPLIES/SERVICE	31/07/2017	193.11
EF104188	11533	<b>SUPERBOWL MELVILLE</b> ENTERTAINMENT SERVICES	31/07/2017	315.40
EF104189	11546	<b>T FAULKNER &amp; CO</b> INSTALLATIONS/SUPPLY OF HAND RAILS	31/07/2017	3,340.00
EF104190	11557	<b>TECHNOLOGY ONE LTD</b> SOFTWARE LICENCES	31/07/2017	128,870.23
EF104191	11597	<b>THE PERTH MINT</b> PURCHASE OF CITIZENSHIP COINS	31/07/2017	2,991.95
EF104192	11625	<b>TOTAL EDEN PTY LTD</b> RETICULATION SUPPLIES	31/07/2017	158,696.53
EF104193	11642	<b>TRAILER PARTS PTY LTD</b> TRAILER PARTS	31/07/2017	401.70
EF104194	11651	<b>TREE WATERING SERVICES</b> TREE WATERING SERVICES	31/07/2017	8,304.00
EF104195	11657	<b>TRUCKLINE PARTS CENTRES</b> AUTOMOTIVE SPARE PARTS	31/07/2017	2,038.77
EF104196	11667	<b>TURFMASTER FACILITY MANAGEMENT</b> TURFING SERVICES	31/07/2017	3,460.79
EF104197	11699	<b>VERNON DESIGN GROUP</b> ARCHITECTURAL SERVICES	31/07/2017	8,024.50
EF104198	11701	<b>VIBRA INDUSTRIA</b> FILTER SUPPLIES	31/07/2017	1,384.90
EF104199	11708	<b>VITAL PACKAGING PTY LTD</b> PACKAGING SUPPLIES	31/07/2017	4,636.50
EF104200	11715	<b>WA BLUEMETAL</b> ROADBASE SUPPLIES	31/07/2017	29,705.52
EF104201	11722	<b>WA HINO SALES &amp; SERVICE</b> PURCHASE OF NEW TRUCKS / MAINTENANCE	31/07/2017	2,404.82
EF104202	11726	<b>WA LIMESTONE</b> LIMESTONE SUPPLIES	31/07/2017	5,007.33
EF104203	11738	<b>WA RANGERS ASSOCIATION INC</b> CONFERENCES/SEMINARS	31/07/2017	25.00
EF104204	11739	<b>WA SPIT ROAST COMPANY</b> CATERING SERVICES	31/07/2017	7,190.90
EF104205	11742	<b>WACKER NEUSON PTY LTD</b> HARDWARE/EQUIPMENT SUPPLIES	31/07/2017	205.33
EF104206	11786	<b>WESTCARE INDUSTRIES</b> STATIONERY/SAFETY VESTS	31/07/2017	389.47
EF104207	11787	<b>DEPT OF TRANSPORT</b> VEHICLE SEARCH FEES	31/07/2017	42,295.00
EF104208	11789	<b>WALGA</b> ADVERTISING/TRAINING SERVICES	31/07/2017	93,410.37
EF104209	11793	<b>WESTERN IRRIGATION PTY LTD</b> IRRIGATION SERVICES/SUPPLIES	31/07/2017	39,614.15
EF104210	11795	<b>WESTERN POWER</b> ELECTRICAL SERVICES	31/07/2017	3,415.00
EF104211	11828	<b>WORLDWIDE ONLINE PRINTING - O'CONNOR</b> PRINTING SERVICES	31/07/2017	7,830.37
EF104212	11835	<b>WURTH AUSTRALIA PTY LTD</b> HARDWARE SUPPLIES	31/07/2017	1,098.99
EF104213	11841	<b>YANGEBUP FAMILY CENTRE INC</b> VENUE HIRE / GRANTS & DONATIONS	31/07/2017	510.00
EF104214	11985	<b>IVO GRUBELICH</b> BUS HIRE	31/07/2017	5,390.00

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EF104215	11990	<b>EARTHCARE (AUSTRALIA) P/L</b> LANDSCAPING SERVICES	31/07/2017	2,894.10
EF104216	12014	<b>TUTT BRYANT EQUIPMENT BT EQUIPMENT PTY</b> EXCAVATING/EARTHMOVING EQUIPMENT	31/07/2017	208.08
EF104217	12018	<b>O'CONNOR LAWMOWER &amp; CHAINSAW CENTRE</b> MOWING EQUIPMENT/PARTS/SERVICES	31/07/2017	205.40
EF104218	12024	<b>ACCESS OFFICE INDUSTRIES</b> FURNITURE - STORAGE	31/07/2017	7,583.84
EF104219	12028	<b>CITY OF ARMADALE</b> ANIMAL DISPOSAL SERVICES	31/07/2017	112.43
EF104220	12153	<b>HAYS PERSONNEL SERVICES PTY LTD</b> EMPLOYMENT SERVICES	31/07/2017	10,151.86
EF104221	12174	<b>MATTING SOLUTIONS</b> SAFEWORK MAT SYSTEM	31/07/2017	2,225.93
EF104222	12295	<b>STEWART &amp; HEATON CLOTHING CO. PTY LTD</b> CLOTHING SUPPLIES	31/07/2017	929.15
EF104223	12320	<b>MUNDARING GARDEN CENTRE</b> PLANT SUPPLIES	31/07/2017	10,766.50
EF104224	12542	<b>SEALIN GARLETT</b> CEREMONIAL SERVICES	31/07/2017	400.00
EF104225	12589	<b>AUSTRALIAN INSTITUTE OF MANAGEMENT</b> TRAINING SERVICES	31/07/2017	4,832.00
EF104226	12621	<b>SETON AUSTRALIA</b> SIGN SUPPLIES	31/07/2017	2,411.20
EF104227	12656	<b>COOGEE BEACH SURF LIFESAVING CLUB INC</b> POORE GROVE SLSC DEVELOPMENT COSTS	31/07/2017	837.50
EF104228	12796	<b>ISENTIA PTY LIMITED</b> MEDIA MONITORING SERVICES	31/07/2017	1,353.68
EF104229	12883	<b>CONSERVATION VOLUNTEERS AUSTRALIA</b> ENVIRONMENTAL SERVICES	31/07/2017	1,650.00
EF104230	13037	<b>PPCA LTD</b> LICENCE FEE - SOUND & MUSIC	31/07/2017	3,393.00
EF104231	13056	<b>CLEANDUSTRIAL SERVICES PTY LTD</b> CLEANING SERVICES	31/07/2017	77,700.23
EF104232	13102	<b>MICHAEL PAGE INTERNATIONAL</b> EMPLOYMENT SERVICES	31/07/2017	1,526.44
EF104233	13111	<b>OCE-AUSTRALIA LIMITED</b> COPIERS/PRINTERS	31/07/2017	184.98
EF104234	13238	<b>SPINELESS WONDERS</b> INSECT WORKSHOP	31/07/2017	520.00
EF104235	13325	<b>MARTINS ENVIRONMENTAL SERVICES</b> WEED SPRAYING SERVICES	31/07/2017	8,343.50
EF104236	13462	<b>ATI-MIRAGE PTY LTD</b> TRAINING SERVICES	31/07/2017	397.38
EF104237	13563	<b>GREEN SKILLS INC</b> EMPLOYMENT SERVICES	31/07/2017	21,355.95
EF104238	13670	<b>HISCO PTY LTD</b> HOSPITALITY SUPPLIES	31/07/2017	2,931.50
EF104239	13779	<b>PORTER CONSULTING ENGINEERS</b> ENGINEERING CONSULTANCY SERVICES	31/07/2017	1,320.00
EF104240	13825	<b>JACKSON MCDONALD</b> LEGAL SERVICES	31/07/2017	2,271.28
EF104241	13873	<b>COCKBURN SES</b> TRAFFIC MANAGEMENT SERVICES	31/07/2017	1,500.00
EF104242	13937	<b>HIND'S TRANSPORT SERVICES</b> TRANSPORT SERVICES	31/07/2017	965.80
EF104243	14258	<b>WARP GROUP PTY LTD</b> ROAD CONSTRUCTION MATERIALS	31/07/2017	8,257.16



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EF104244	14476	<b>COCKBURN PLEASURE BOAT STORAGE</b> STORAGE SERVICES	31/07/2017	990.00
EF104245	14593	<b>AUSTREND INTERNATIONAL PTY LTD</b> ALUMINIUM SUPPLIES	31/07/2017	1,063.53
EF104246	14631	<b>WASTE GAS RESOURCES PTY LTD</b> POWER GENERATION	31/07/2017	2,780.21
EF104247	14667	<b>APPEALING SIGNS</b> SIGNS	31/07/2017	324.50
EF104248	14777	<b>LGIS INSURANCE BROKING</b> INSURANCE PREMIUMS	31/07/2017	321,148.38
EF104249	14831	<b>ANGLICARE WA</b> TRAINING SERVICES	31/07/2017	1,150.00
EF104250	15134	<b>DMD SHELVING SYSTEMS</b> SHELVING/STORAGE SYSTEMS	31/07/2017	2,262.91
EF104251	15271	<b>PLE COMPUTERS PTY LTD PLE CORPORATE IT</b> COMPUTER HARDWARE	31/07/2017	634.23
EF104252	15393	<b>STRATAGREEN</b> HARDWARE SUPPLIES	31/07/2017	2,690.72
EF104253	15550	<b>APACE AID</b> PLANTS & LANDSCAPING SERVICES	31/07/2017	240.00
EF104254	15588	<b>NATURAL AREA HOLDINGS PTY LTD</b> WEED SPRAYING	31/07/2017	5,213.73
EF104255	15678	<b>A2Z PEST CONTROL THE TRUSTEE FOR CALDOV</b> PEST CONTROL	31/07/2017	4,004.00
EF104256	15746	<b>WESTERN AUSTRALIA POLICE SERVICE</b> POLICE CLEARANCES	31/07/2017	29.80
EF104257	15850	<b>ECOSCAPE</b> ENVIRONMENTAL CONSULTANCY	31/07/2017	7,012.50
EF104258	15868	<b>CARDNO (WA) PTY LTD</b> CONSULTANCY SERVICES - ENGINEERING	31/07/2017	51,733.01
EF104259	15914	<b>T-QUIP</b> MOWING EQUIPMENT	31/07/2017	1,950.25
EF104260	15916	<b>1SPATIAL AUSTRALIA</b> ANNUAL SOFTWARE SUBSCRIPTION	31/07/2017	2,420.00
EF104261	16064	<b>CMS ENGINEERING PTY LTD</b> AIRCONDITIONING SERVICES	31/07/2017	33,456.71
EF104262	16107	<b>WREN OIL</b> WASTE DISPOSAL SERVICES	31/07/2017	111.10
EF104263	16108	<b>ALTIFORM PTY LTD</b> OUTDOOR FURNITURE	31/07/2017	2,700.50
EF104264	16132	<b>HASELL PTY LTD</b> CONSULTANCY SERVICE	31/07/2017	1,265.00
EF104265	16257	<b>THE FINISHING TOUCH GALLERY</b> FRAMING SERVICES	31/07/2017	1,033.00
EF104266	16294	<b>CAVAL LIMITED T/A BOOKERY</b> CONFERENCE	31/07/2017	1,155.00
EF104267	16396	<b>MAYDAY EARTHMOVING</b> ROAD CONSTRUCTION MACHINE HIRE	31/07/2017	43,035.30
EF104268	16432	<b>SCARVACI'S IGA</b> GROCERIES	31/07/2017	345.00
EF104269	16510	<b>LLOYD GEORGE ACOUSTICS PTY LTD</b> CONSULTANCY SERVICES - ACOUSTIC	31/07/2017	6,600.00
EF104270	16704	<b>ACCIDENTAL FIRST AID SUPPLIES - PERTH SOU</b> MEDICAL SUPPLIES	31/07/2017	3,250.00
EF104271	16894	<b>TREBLEX INDUSTRIAL PTY LTD</b> CHEMICALS - AUTOMOTIVE	31/07/2017	1,067.00
EF104272	16985	<b>WA PREMIX</b> CONCRETE SUPPLIES	31/07/2017	11,436.48

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EF104273	16997	<b>AUS SECURE</b> SECURITY SERVICES/PRODUCTS	31/07/2017	300.00
EF104274	17097	<b>VALUE TISSUE</b> PAPER PRODUCTS	31/07/2017	122.76
EF104275	17178	<b>THE CLEAN UP COMPANY</b> WASTE DISPOSAL SERVICES	31/07/2017	5,504.20
EF104276	17279	<b>AUSSIE COOL SHADES</b> SHADE SAILS & AWNINGS	31/07/2017	10,923.00
EF104277	17471	<b>PIRTEK (FREMANTLE) PTY LTD</b> HOSES & FITTINGS	31/07/2017	591.10
EF104278	17550	<b>THE IRRIGATION ASSOCIATION OF AUST</b> SUBSCRIPTION	31/07/2017	649.00
EF104279	17555	<b>ALLEASING PTY LTD</b> LEASE REPAYMENTS	31/07/2017	10,985.70
EF104280	17600	<b>ERECTIONS (WA)</b> GUARD RAILS	31/07/2017	6,093.45
EF104281	17827	<b>NILSEN (WA) PTY LTD</b> ELECTRICAL SERVICES	31/07/2017	6,246.11
EF104282	17887	<b>RED SAND SUPPLIES PTY LTD</b> MACHINERY HIRE	31/07/2017	2,323.20
EF104283	17927	<b>SHARYN EGAN</b> ARTISTIC SERVICES	31/07/2017	800.00
EF104284	18126	<b>DELL AUSTRALIA PTY LTD</b> COMPUTER HARDWARE	31/07/2017	2,339.98
EF104285	18147	<b>AURECON AUSTRALASIA PTY LTD</b> CONSULTANCY - CIVIL ENGINEERING	31/07/2017	7,070.53
EF104286	18216	<b>REGEN4 ENVIRONMENTAL SERVICES</b> CONSULTANCY - ENVIRONMENTAL	31/07/2017	3,482.60
EF104287	18272	<b>AUSTRACLEAR LIMITED</b> INVESTMENT SERVICES	31/07/2017	57.55
EF104288	18494	<b>DEPARTMENT OF PARKS &amp; WILDLIFE</b> LICENCE RENEWAL	31/07/2017	312.00
EF104289	18508	<b>JOHN TURNER</b> BRICK LAYING SERVICES	31/07/2017	3,146.00
EF104290	18522	<b>J &amp; K HOPKINS</b> FURNITURE	31/07/2017	2,126.00
EF104291	18625	<b>PEDERSENS HIRE &amp; STRUCTURES PTY LTD</b> FUNCTION EQUIPMENT HIRE	31/07/2017	8,360.10
EF104292	18695	<b>MYAREE CRANE HIRE</b> CRANE HIRE	31/07/2017	231.00
EF104293	18731	<b>OCCMEDIC</b> MEDICAL SERVICES	31/07/2017	528.15
EF104294	18734	<b>P &amp; R EDWARDS</b> ENTERTAINMENT SERVICES	31/07/2017	565.00
EF104295	18764	<b>AFFIRMATIVE GROUP</b> BRICK PAVING SERVICES	31/07/2017	2,986.50
EF104296	18799	<b>DOWN TO EARTH TRAINING &amp; ASSESSING</b> TRAINING SERVICES	31/07/2017	350.00
EF104297	18801	<b>FREMANTLE BIN HIRE</b> BIN HIRE - SKIP BINS	31/07/2017	590.00
EF104298	18962	<b>SEALANES (1985) P/L</b> CATERING SUPPLIES	31/07/2017	2,523.77
EF104299	18997	<b>GISSA INTERNATIONAL PTY LTD</b> TRAINING SERVICES	31/07/2017	3,345.30
EF104300	19107	<b>FOREVER SHINING</b> MONUMENT	31/07/2017	16,467.45
EF104301	19436	<b>WHITCHURCH REFRIGERATION &amp; AIRCONDITIO</b> AIR CONDITIONING SERVICES	31/07/2017	1,571.90

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EF104302	19533	<b>WOOLWORTHS LTD</b> GROCERIES	31/07/2017	3,817.63
EF104303	19541	<b>TURF CARE WA PTY LTD</b> TURF SERVICES	31/07/2017	2,153.25
EF104304	19657	<b>BIGMATE MONITORING SERVICES PTY LTD</b> COMPUTER HARDWARE/SOFTWARE	31/07/2017	1,185.80
EF104305	19718	<b>SIFTING SANDS</b> CLEANING SERVICES - SAND	31/07/2017	9,649.76
EF104306	19731	<b>IPDAT COMMUNICATIONS CONSULTATION</b> CONSULTANCY SERVICES - COMMUNICATIONS	31/07/2017	3,080.00
EF104307	20000	<b>AUST WEST AUTO ELECTRICAL P/L</b> AUTO ELECTRICAL SERVICES	31/07/2017	27,215.87
EF104308	20146	<b>DATA#3 LIMITED</b> CONTRACT IT PERSONNEL & SOFTWARE	31/07/2017	32,827.77
EF104309	20215	<b>POWERVAC</b> CLEANING EQUIPMENT	31/07/2017	4,228.50
EF104310	20307	<b>OCTAGON-BKG LIFTS</b> MAINTENANCE SERVICES	31/07/2017	1,422.84
EF104311	20313	<b>FUSION BUILDING SURVEYING</b> CONSULTANCY SERVICES - BUILDING	31/07/2017	495.00
EF104312	20321	<b>RIVERJET P/L</b> EDUCTING-CLEANING SERVICES	31/07/2017	21,450.00
EF104313	20341	<b>WILHELMINA MARIA HOUWEN</b> GARDENING SERVICES	31/07/2017	1,470.00
EF104314	20549	<b>A1 CARPET, TILE &amp; GROUT CLEANING</b> CLEANING SERVICES - TILES/CARPET	31/07/2017	1,375.00
EF104315	20786	<b>THE BUTCHER SHOP</b> ARTISTIC SUPPLIES	31/07/2017	120.00
EF104316	21005	<b>BRAIN TEASERS OZ PTY LTD</b> EDUCATIONAL PRODUCTS	31/07/2017	66.00
EF104317	21127	<b>JOANNA AYCKBOURN (VOICES IN SINC)</b> INSTRUCTION - SINGING	31/07/2017	500.00
EF104318	21139	<b>AUSTRAFFIC WA PTY LTD</b> TRAFFIC SURVEYS	31/07/2017	3,146.00
EF104319	21193	<b>SPM CONSULTANTS PTY LTD</b> CONSULTANCY SERVICES	31/07/2017	2,050.29
EF104320	21287	<b>T.J.DEPIAZZI &amp; SONS</b> SOIL & MULCH SUPPLIES	31/07/2017	3,160.30
EF104321	21291	<b>CHITTERING VALLEY WORM FARM</b> ENVIRONMENTAL EDUCATION	31/07/2017	4,624.00
EF104322	21294	<b>CAT HAVEN</b> ANIMAL SERVICES	31/07/2017	4,039.00
EF104323	21364	<b>OFFICINO OFFICE FURNITURE</b> OFFICE FURNITURE	31/07/2017	634.70
EF104324	21371	<b>LD TOTAL SANPOINT PTY LTD</b> LANDSCAPING WORKS/SERVICES	31/07/2017	52,221.05
EF104325	21463	<b>CAPITAL FINANCE AUSTRALIA LTD</b> FINANCIAL SERVICES - LEASE FINANCES	31/07/2017	4,114.63
EF104326	21529	<b>BRAND SUCCESS</b> PROMOTIONAL PRODUCTS	31/07/2017	3,720.20
EF104327	21556	<b>VITAL INTERPRETING PERSONNEL</b> CONSULTANCY - EDUCATION	31/07/2017	207.90
EF104328	21627	<b>MANHEIM PTY LTD</b> IMPOUNDED VEHICLES	31/07/2017	5,656.75
EF104329	21665	<b>MMJ REAL ESTATE (WA) PTY LTD</b> PROPERTY MANAGEMENT SERVICES	31/07/2017	537.84
EF104330	21672	<b>MEGA MUSIC AUSTRALIA</b> MUSICAL INSTRUMENTS/SOUND EQUIPMENT	31/07/2017	2,269.00

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EF104331	21697	<b>ICT EXPRESS PTY LTD</b> CONSULTANCY SERVICES - IT	31/07/2017	27,383.18
EF104332	21744	<b>JB HI FI - COMMERCIAL</b> ELECTRONIC EQUIPMENT	31/07/2017	8,219.00
EF104333	21747	<b>UNICARE HEALTH</b> WHEELCHAIR HIRE	31/07/2017	249.00
EF104334	21748	<b>SUPER A-MART PTY LTD</b> SUPPLY OF FURNITURE	31/07/2017	2,755.00
EF104335	21778	<b>HILTON SQUASH AND FITNESS</b> SPORTING SERVICES	31/07/2017	200.00
EF104336	21855	<b>COCKBURN HAWKS ICE HOCKEY CLUB INC</b> ICE HOCKEY REGISTRATION FEES	31/07/2017	220.00
EF104337	21909	<b>DIEBACK WORKING GROUP</b> TRAINING SERVICES	31/07/2017	180.00
EF104338	21946	<b>RYAN'S QUALITY MEATS</b> MEAT SUPPLIES	31/07/2017	2,178.19
EF104339	22106	<b>INTELLIFE GROUP</b> SERVICES - DAIP	31/07/2017	8,834.10
EF104340	22119	<b>BINDI BINDI DREAMING MARISSA VERMA</b> CONSULT - ABORIGINAL EDUCATION/ENT	31/07/2017	2,530.00
EF104341	22337	<b>SEGAFREDO ZANETTI AUSTRALIA PTY LTD</b> COFFEE & COFFEE MACHINES	31/07/2017	7,166.00
EF104342	22376	<b>BCI SALES PTY LTD</b> BUS SALES, REPAIRS, MAINTENANCE	31/07/2017	2,347.68
EF104343	22400	<b>FIRE &amp; SAFETY WA PTY LTD</b> FIRE SAFETY EQUIPMENT	31/07/2017	5,270.50
EF104344	22448	<b>CAKES WEST PTY LTD</b> CATERING	31/07/2017	100.06
EF104345	22553	<b>BROWNES FOOD OPERATIONS</b> CATERING SUPPLIES	31/07/2017	742.45
EF104346	22569	<b>SONIC HEALTH PLUS PTY LTD</b> MEDICAL SERVICES	31/07/2017	3,622.30
EF104347	22589	<b>JB HI FI - COCKBURN</b> ELECTRICAL EQUIPMENT	31/07/2017	672.00
EF104348	22613	<b>VICKI ROYANS</b> ARTISTIC SERVICES	31/07/2017	450.00
EF104349	22619	<b>KSC TRAINING</b> TRAINING SERVICES	31/07/2017	330.00
EF104350	22624	<b>AUSSIE EARTHWORKS PTY LTD</b> EARTHWORKS	31/07/2017	38,016.00
EF104351	22639	<b>SHATISH CHAUHAN</b> TRAINING SERVICES - YOGA	31/07/2017	880.00
EF104352	22680	<b>LEONARD THORN</b> CULTURAL PRESENTATION SERVICES	31/07/2017	1,100.00
EF104353	22681	<b>ABBEY BLINDS PTY LTD</b> BLINDS	31/07/2017	1,411.30
EF104354	22682	<b>BEAVER TREE SERVICES PTY LTD</b> TREE PRUNING SERVICES	31/07/2017	57,137.58
EF104355	22805	<b>COVS PARTS PTY LTD</b> MOTOR PARTS	31/07/2017	4,514.46
EF104356	22806	<b>PUMA ENERGY (AUSTRALIA) FUELS PTY LTD</b> FUEL SUPPLIES	31/07/2017	68,304.17
EF104357	22854	<b>LGISWA</b> INSURANCE PREMIUMS	31/07/2017	718,531.59
EF104358	22903	<b>UNIQUE INTERNATIONAL RECOVERIES LLC</b> DEBT COLLECTORS	31/07/2017	819.20
EF104359	22913	<b>AUSTRALIAN OFFICE LEADING BRANDS.COM.AU</b> ENVELOPES	31/07/2017	2,911.73



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EF104360	23348	<b>ZUMBA WITH HONEY</b> FITNESS CLASSES	31/07/2017	704.00
EF104361	23351	<b>COCKBURN GP SUPER CLINIC LIMITED T/A COC</b> HEALTH PROGRAMS & LEASING FEES	31/07/2017	23,216.51
EF104362	23409	<b>GLOBAL SYNTHETICS PTY LTD</b> DRAINAGE, GEOTEXTILES	31/07/2017	17,561.68
EF104363	23457	<b>TOTALLY WORK WEAR FREMANTLE</b> CLOTHING - UNIFORMS	31/07/2017	16,631.33
EF104364	23570	<b>A PROUD LANDMARK PTY LTD</b> LANDSCAPE CONTRUCTION SERVICES	31/07/2017	31,560.76
EF104365	23579	<b>DAIMLER TRUCKS PERTH</b> PURCHASE OF NEW TRUCK	31/07/2017	142,006.25
EF104366	23685	<b>ASTRO SYNTHETIC TURF PTY LTD</b> SITE INSPECTIONS	31/07/2017	8,277.50
EF104367	23694	<b>TIGER FITNESS (WA) PTY LTD</b> GYM EQUIPMENT/SERVICE	31/07/2017	1,716.00
EF104368	23733	<b>ABOUT BIKE HIRE</b> HIRE - BICYCLE	31/07/2017	192.00
EF104369	23849	<b>JCB CONSTRUCTION EQUIPMENT AUSTRALIA</b> PLANT/MACHINERY	31/07/2017	7,824.80
EF104370	23858	<b>SPECIALISED SECURITY SHREDDING</b> DOCUMENT DESTRUCTION SERVICES	31/07/2017	80.96
EF104371	23971	<b>FIND WISE LOCATION SERVICES</b> LOCATING SERVICES - UNDERGROUND	31/07/2017	481.80
EF104372	23974	<b>CONCEPT AUDIO VISUAL (NSW) TRUST</b> AUDIO VISUAL PRODUCTION SERVICES	31/07/2017	132.00
EF104373	24128	<b>BANG THE TABLE PTY LTD</b> WEBSITE DESIGN	31/07/2017	22,550.00
EF104374	24156	<b>MASTEC AUSTRALIA PTY LTD</b> PURCHASE OF NEW BINS	31/07/2017	70,647.10
EF104375	24183	<b>WELLARD GLASS</b> GLASS REPAIR SERVICES	31/07/2017	2,018.50
EF104376	24189	<b>COMMUNITY TRANSFORMATIONS INC</b> TRAINING SERVICES	31/07/2017	1,500.00
EF104377	24198	<b>RICOCHET CIRCUS</b> ENTERTAINMENT SERVICES	31/07/2017	800.00
EF104378	24272	<b>AFLEX</b> AQUATIC SUPPLIES	31/07/2017	1,177.00
EF104379	24275	<b>TRUCK CENTRE WA PTY LTD</b> PURCHASE OF NEW TRUCK	31/07/2017	698,716.50
EF104380	24506	<b>AMARANTI'S PERSONAL TRAINING</b> PERSONAL TRAINING SERVICES	31/07/2017	225.00
EF104381	24524	<b>CALO HEALTH</b> HEARTMOVE CLASSES	31/07/2017	1,552.50
EF104382	24595	<b>CONTEMPORARY IMAGE PHOTOGRAPHY PTY LT</b> PHOTOGRAPHY SERVICES	31/07/2017	4,180.00
EF104383	24599	<b>POOLWERX SPEARWOOD</b> ANALYTICAL SERVICES	31/07/2017	1,702.30
EF104384	24610	<b>ALL FLAGS SIGNS &amp; BANNERS</b> SIGNS, FLAGS, BANNERS	31/07/2017	6,138.00
EF104385	24655	<b>AUTOMASTERS SPEARWOOD</b> VEHICLE SERVICING	31/07/2017	3,258.00
EF104386	24734	<b>MYRIAD IMAGES</b> PHOTOGRAPHY SERVICES	31/07/2017	7,425.00
EF104387	24736	<b>ZENIEN</b> CCTV CAMERA LICENCES	31/07/2017	146,029.38
EF104388	24748	<b>PEARMANS ELECTRICAL &amp; MECHANICAL SERVI</b> ELECTRICAL SERVICES	31/07/2017	5,228.49

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EF104389	24862	<b>BEARDS SECURITY</b> SECURITY SERVICES	31/07/2017	200.00
EF104390	24864	<b>FREMANTLE FOOTBALL CLUB</b> REIMBURSEMENT - DEVELOPMENT COSTS	31/07/2017	13,075.27
EF104391	24945	<b>NS PROJECTS PTY LTD</b> PROJECT MANAGEMENT SERVICES	31/07/2017	4,400.00
EF104392	24949	<b>BITUMEN SURFACING THE TRUSTEE FOR COMP</b> BITUMEN SUPPLIES	31/07/2017	6,690.75
EF104393	24974	<b>SCOTT PRINT</b> PRINTING SERVICES	31/07/2017	11,056.10
EF104394	24976	<b>SNAP PRINTING - COCKBURN CENTRAL</b> PRINTING SERVICES	31/07/2017	1,440.51
EF104395	25060	<b>DFP RECRUITMENT SERVICES</b> EMPLOYMENT SERVICES	31/07/2017	5,756.37
EF104396	25063	<b>SUPERIOR PAK PTY LTD</b> VEHICLE MAINTENANCE	31/07/2017	5,658.75
EF104397	25092	<b>LINKS MODULAR SOLUTIONS PTY LTD</b> COMPUTER SOFTWARE	31/07/2017	2,997.50
EF104398	25102	<b>FREMANTLE MOBILE WELDING</b> WELDING SERVICES	31/07/2017	13,645.50
EF104399	25115	<b>FIIG</b> INVESTMENT MANAGEMENT SERVICES	31/07/2017	2,750.00
EF104400	25121	<b>IMAGESOURCE DIGITAL SOLUTIONS</b> BILLBOARDS	31/07/2017	1,149.50
EF104401	25158	<b>MPIRE SECURITY</b> SECURITY SERVICES	31/07/2017	47,592.20
EF104402	25201	<b>J TAGZ PTY LTD</b> WRISTSTRAPS	31/07/2017	1,749.00
EF104403	25264	<b>ACURIX NETWORKS PTY LTD</b> WIFI ACCESS SERVICE	31/07/2017	5,677.10
EF104404	25333	<b>INTELLIGENZ SOLUTIONS</b> COMPUTER SOFTWARE	31/07/2017	4,668.97
EF104405	25415	<b>JANDAKOT STOCK &amp; PET SUPPLIES</b> PET SUPPLIES	31/07/2017	140.85
EF104406	25418	<b>CS LEGAL</b> LEGAL SERVICES	31/07/2017	23,350.80
EF104407	25586	<b>ENVIROVAP PTY LTD</b> HIRE OF LEACHATE UNITS	31/07/2017	2,777.50
EF104408	25644	<b>DYMOCKS GARDEN CITY</b> PURCHASE OF BOOKS	31/07/2017	2,665.86
EF104409	25645	<b>YELAKITJ MOORT NYUNGAR ASSOCIATION INC</b> WELCOME TO THE COUNTRY PERFORMANCES	31/07/2017	600.00
EF104410	25657	<b>LOCK JOINT AUSTRALIA THE TRUSTEE FOR TH</b> LOCKSMITH SERVICES	31/07/2017	3,212.00
EF104411	25713	<b>DISCUS ON DEMAND THE TRUSTEE FOR DISCUS</b> PRINTING SERVICES	31/07/2017	1,484.23
EF104412	25733	<b>MIRACLE RECREATION EQUIPMENT</b> PLAYGROUND INSTALLATION / REPAIRS	31/07/2017	14,806.00
EF104413	25813	<b>LGCONNECT PTY LTD</b> DEVELOPMENT CONSULTANCY	31/07/2017	15,757.50
EF104414	25819	<b>BRAJKOVICH DEMOLITION &amp; SALVAGE (WA) PTY</b> DEMOLITION SERVICES	31/07/2017	1,980.00
EF104415	25832	<b>EXTERIA</b> STREET AND PARK INFRASTRUCTURE	31/07/2017	4,941.20
EF104416	25874	<b>BRIGHTSKY AUSTRALIA</b> HEALTHCARE PRODUCTS	31/07/2017	147.77
EF104417	25897	<b>COMMON GROUND TRAILS PTY LTD</b> CONSULTANCY SERVICES	31/07/2017	8,525.00

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EF104418	25940	<b>LEAF BEAN MACHINE</b> COFFEE BEAN SUPPLY	31/07/2017	1,000.00
EF104419	25962	<b>ALL LINES</b> LINEMARKING SERVICES	31/07/2017	1,848.00
EF104420	26029	<b>AUTOSWEEP WA</b> SWEEPING SERVICES	31/07/2017	4,103.00
EF104421	26067	<b>SPRAYKING WA PTY LTD</b> CHEMICAL WEED CONTROL SERVICES	31/07/2017	9,453.16
EF104422	26090	<b>FREMANTLE MILK DISTRIBUTORS</b> MILK DISTRIBUTORS	31/07/2017	459.65
EF104423	26110	<b>DASH CIVIL CONTRACTING</b> CONCRETING SERVICES	31/07/2017	86,462.55
EF104424	26112	<b>BROOKE BOBRIDGE</b> GRAPHIC DESIGN SERVICES	31/07/2017	360.00
EF104425	26114	<b>GRACE RECORDS MANAGEMENT</b> RECORDS MANAGEMENT SERVICES	31/07/2017	6,315.79
EF104426	26120	<b>ECOBURBIA</b> ENVIRONMENTAL WASTE WORKSHOPS	31/07/2017	6,500.00
EF104427	26173	<b>SOUTHSIDE PLUMBING</b> PLUMBING SERVICES	31/07/2017	12,106.60
EF104428	26211	<b>AMCOM PTY LTD</b> INTERNET/DATA SERVICES	31/07/2017	13,942.72
EF104429	26257	<b>PAPERBARK TECHNOLOGIES</b> ARBORICULTURAL CONSULTANCY SERVICES	31/07/2017	1,240.00
EF104430	26303	<b>GECKO CONTRACTING TURF &amp; LANDSCAPE MAINT</b> TURF & LANDSCAPE MAINTENANCE	31/07/2017	50,440.50
EF104431	26314	<b>CPE GROUP</b> TEMPORARY EMPLOYMENT SERVICES	31/07/2017	7,274.40
EF104432	26323	<b>AT THE KITCHEN</b> CATERING SERVICES	31/07/2017	830.00
EF104433	26357	<b>DESIGNFARM (AUST) PTY LTD</b> FURNITURE	31/07/2017	5,929.00
EF104434	26359	<b>WILSON SECURITY</b> SECURITY SERVICES	31/07/2017	190,803.80
EF104435	26369	<b>ALL RETAINING SYSTEMS</b> CONSTRUCTION SERVICES	31/07/2017	3,685.00
EF104436	26399	<b>PAPERSCOUT THE TRUSTEE FOR PETERS MORE</b> GRAPHIC DESIGN SERVICES	31/07/2017	10,615.00
EF104437	26403	<b>CHES POWER GROUP</b> ENGINEERING SOLUTIONS / BACK UP GENERATOR	31/07/2017	320.85
EF104438	26418	<b>INTEGRANET TECHNOLOGY GROUP PTY LTD</b> ICT CONSULTANCY SERVICES	31/07/2017	2,552.00
EF104439	26442	<b>BULLANT SECURITY PTY LTD KEY WEST LOCK S</b> LOCKSMITH & SECURITY SERVICES	31/07/2017	15,356.87
EF104440	26460	<b>KISS PHOTOBOOTH</b> PHOTOBOOTH HIRE	31/07/2017	825.00
EF104441	26470	<b>SCP CONSERVATION AND LAND MANAGEMENT</b> FENCING SERVICES	31/07/2017	21,387.70
EF104442	26480	<b>MATTRESS REMOVAL WA</b> MATTRESS REMOVAL SERVICES	31/07/2017	3,468.00
EF104443	26535	<b>JUANETTA ROSE KNAPP AND BRUCE REGINALD</b> PURCHASE OF ARTWORK	31/07/2017	300.00
EF104444	26536	<b>SKYLINE LANDSCAPE SERVICES (WA)</b> LANDSCAPING SERVICES	31/07/2017	27,567.84
EF104445	26549	<b>SHARON GREGORY (KOORT-KADAK CONSULTAN</b> CONSULTANCY SERVICES	31/07/2017	50.00
EF104446	26550	<b>GAME VAULT PTY LTD</b> AMUSEMENT SERVICES	31/07/2017	1,200.00

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EF104447	26551	<b>THE SIMULATION CENTRE</b> ENTRY FEES - SCHOOL HOLIDAY PROGRAM	31/07/2017	165.00
EF104448	26568	<b>UNITED DIAMOND TOOLS</b> DIAMOND CUTTING TOOLS	31/07/2017	2,700.00
EF104449	26571	<b>MARK IT</b> PRINTING SERVICES/PROMOTIOANL	31/07/2017	7,004.25
EF104450	26574	<b>EVA BELLYDANCE</b> ENTERTAINMENT - BELLY DANCING	31/07/2017	525.00
EF104451	26586	<b>WA TEMPORARY FENCING SUPPLIES</b> FENCING - TEMPORARY	31/07/2017	313.50
EF104452	26595	<b>STATE 28 INTERIORS</b> INTERIOR DESIGN	31/07/2017	2,376.00
EF104453	26597	<b>WEST COAST SHADE PTY LTD</b> SHADE STRUCTURES	31/07/2017	16,170.00
EF104454	26606	<b>ENVIRO INFRASTRUCTURE PTY LTD</b> CONSTRUCTION& FABRICATION	31/07/2017	1,824.21
EF104455	26609	<b>BASICS APPROVAL SERVICES</b> BUILDING SURVEYING	31/07/2017	275.00
EF104456	26613	<b>AVE BIN AND BBQ CLEANING PTY LTD</b> CLENAING SERVICES (BBQ - BINS)	31/07/2017	3,084.50
EF104457	26614	<b>MARKETFORCE PTY LTD</b> ADVERTISING	31/07/2017	5,189.39
EF104458	26619	<b>SPEARWOOD NEWS DELIVERY</b> NEWSPAPER DELIVERY	31/07/2017	498.31
EF104459	26625	<b>ANDOVER DETAILERS</b> CAR DETAILING SERVICES	31/07/2017	532.49
EF104460	26628	<b>THE ESCAPEHUNT EXPERIENCE (PERTH)</b> TEAM BUILDING ACTIVITIES	31/07/2017	625.00
EF104461	26639	<b>SAFEGUARD INDUSTRIES</b> SECURITY DOORS, SCREENS AND ROLLER SHUTT	31/07/2017	1,000.00
EF104462	26648	<b>EMC SOLAR CONSTRUCTION PTY LTD</b> SUPPLY & INSTALL SOLAR PV	31/07/2017	119,533.70
EF104463	26655	<b>WORLDWIDE PRINTING SOLUTIONS EAST PERTH</b> PRINTING SERVICES	31/07/2017	2,234.00
EF104464	26677	<b>AUSTRALIA AND NEW ZEALAND RECYCLING PLA</b> NOT- FOR-PROFIT MEMBER SERVICES BODY	31/07/2017	479.49
EF104465	26686	<b>WORKMETRICS PTY LTD</b> ONLINE SOFTWARE	31/07/2017	1,320.00
EF104466	26707	<b>A1 MARIO COTELLESA</b> ENTERTAINMENT SERVICES	31/07/2017	880.00
EF104467	26709	<b>TALIS CONSULTANTS PTY LTD</b> WASTE CONSULTANCY	31/07/2017	41,925.40
EF104468	26721	<b>QUAD SERVICES PTY LTD</b> CLEANING SERVICES	31/07/2017	18,260.63
EF104469	26732	<b>AMARE SAFETY</b> CLOTHING UNIFORMS	31/07/2017	644.56
EF104470	26735	<b>SHANE MCMASTER SURVEYS</b> SURVEY SERVICES	31/07/2017	9,405.00
EF104471	26739	<b>KERB DOCTOR</b> KERB MAINTENANCE	31/07/2017	36,238.24
EF104472	26746	<b>MOWER CITY</b> LAWN MAINTENANCE	31/07/2017	1,716.00
EF104473	26747	<b>BELL-VISTA FRUIT &amp; VEG</b> FRUIT AND VEGETABLES.	31/07/2017	1,465.13
EF104474	26750	<b>KLEENIT PTY LTD</b> GRAFFITTI REMOVAL	31/07/2017	440.00
EF104475	26752	<b>MG GROUP WA</b> CONSTRUCTION	31/07/2017	49,969.15



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EF104476	26754	<b>INSIGHT CALL CENTRE SERVICES</b> CALL CENTRE SERVICES	31/07/2017	21,423.89
EF104477	26759	<b>METRO FILTERS</b> CANOPY, FLUE AND FANS CLEANIND AND FILTE	31/07/2017	682.24
EF104478	26770	<b>LAKESIDE MOWERS &amp; MOTORCYCLES</b> REPAIRS/MAINTENANCE SERVICES	31/07/2017	30.00
EF104479	26772	<b>DEVELOPING SKILLS</b> TRAINING SERVICES	31/07/2017	429.00
EF104480	26773	<b>LASER CORPS COMBAT ADVENTRUES</b> ENTRY FEES	31/07/2017	950.00
EF104481	26774	<b>NATURALISTE LAND SURVEYS</b> SURVEYING SERVICES	31/07/2017	12,650.00
EF104482	26780	<b>METROPOLITAN OMNIBUS COMPANY</b> BUS HIRE	31/07/2017	803.00
EF104483	26782	<b>SOFT LANDING</b> RECYCLING SERVICES	31/07/2017	5,900.00
EF104484	26789	<b>RAECO</b> SUPPLIER OF LIBRARY SHELVING AND FURNITU	31/07/2017	1,363.40
EF104485	26791	<b>MONSTERBALL AMUSEMENT &amp; HIRE</b> AMUSEMENT HIRE	31/07/2017	1,490.00
EF104486	26795	<b>OPUS INTERNATIONAL CONSULTANTS (AUSTRALIA)</b> ENGINEERING CONSULTANCY	31/07/2017	19,349.00
EF104487	26811	<b>ROMERI MOTOR TRIMMERS</b> UPHOLSTERY REPAIR	31/07/2017	200.00
EF104488	26812	<b>BROOKS CHOICE REMOVALS</b> REMOVALISTS	31/07/2017	1,408.00
EF104489	26819	<b>JANDAKOT EARTHMOVING &amp; RURAL CONTRACTORS</b> HIRE SERVICES - EARTHMOVING EQUIPMENT	31/07/2017	605.00
EF104490	26822	<b>CSE CROSSCOM PTY LTD</b> COMMUNICATION EQUIPMENT	31/07/2017	3,373.70
EF104491	26824	<b>WEB KEY IT PTY LTD</b> WEBSITE CONSULTANCY	31/07/2017	6,847.50
EF104492	26825	<b>ZANZARA</b> MOSQUITO TRAP SUPPLIES	31/07/2017	224.00
EF104493	26826	<b>PINDAN CONTRACTING PTY LTD</b> BUILDING CONSTRUCTION SERVICES	31/07/2017	102,106.27
EF104494	26829	<b>PARAQUAD INDUSTRIES</b> GENERAL PACKAGING, INDUSTRIAL CLOTH CUTT	31/07/2017	11,187.00
EF104495	26830	<b>ECO EATS CATERING</b> CATERING	31/07/2017	1,493.00
EF104496	26831	<b>AFL SPORTS READY LTD</b> EDUCATION & TRAINING	31/07/2017	1,730.26
EF104497	26839	<b>BOKASHI COMPOSTING AUSTRALIA PTY LTD</b> COMPOSTING SYSTEMS	31/07/2017	1,903.57
EF104498	26843	<b>ERGOLINK</b> ERGONOMIC OFFICE FURNITURE	31/07/2017	4,925.89
EF104499	26854	<b>IFAP</b> TRAINING	31/07/2017	1,335.00
EF104500	26864	<b>GUARDIAN TACTILE SYSTEMS P/L</b> TACTILES,STAIRNOSING,WHEEL STOPS	31/07/2017	9,321.32
EF104501	26869	<b>ACTORS MANAGEMENT INTERNATIONAL</b> ACTING AGENCY	31/07/2017	1,237.50
EF104502	26882	<b>SLICKER STICKERS PTY LTD</b> STICKERS/LABELS	31/07/2017	1,061.50
EF104503	26888	<b>MEDIA ENGINE</b> GRAPHIC DESIGN, MARKETING, VIDEO PRODUCT	31/07/2017	3,770.00
EF104504	26898	<b>SPANDEX ASIA PACIFIC PTY LTD</b> SIGNAGE SUPPLIER	31/07/2017	10,393.03

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EF104505	26900	<b>BG &amp; E PTY LTD</b> CONSULTING ENGINEERING	31/07/2017	6,767.75
EF104506	26901	<b>ALYKA PTY LTD</b> DIGITAL CONSULTANCY AND WEB DEVELOPMENT	31/07/2017	38,535.49
EF104507	26902	<b>KEOGH BAY TRAINING PTY LTD</b> CULTURAL AND TEAM LEADERSHIP TRAINING PR	31/07/2017	4,840.00
EF104508	26909	<b>WEST COAST PROFILERS PTY LTD</b> ROAD PLANING COLD SERVICES	31/07/2017	16,819.00
EF104509	26913	<b>MIRANDA KISSELL CONTRACTING</b> CARPENTRY SERVICES	31/07/2017	4,607.90
EF104510	26917	<b>CIRRUS NETWORKS PTY LTD</b> IT SERVICES	31/07/2017	868.20
EF104511	26919	<b>HALE GROUP INTERNATIONAL PTY LTD</b> ENTERTAINMENT	31/07/2017	2,179.00
EF104512	26921	<b>JULIET COGHLAN - PHOTOGRAPHER</b> PHOTOGRAPHY SERVCIES	31/07/2017	320.00
EF104513	26923	<b>WOODLANDS DISTRIBUTORS &amp; AGENCIES PTY L</b> RUBBISH COLLECTION EQUIPMENT	31/07/2017	5,015.61
EF104514	26925	<b>DISC GOLF PARK</b> DESIGN SERVICES - GOLF COURSES	31/07/2017	128.15
EF104515	26928	<b>PATHTECH PTY LTD</b> SCIENTIFIC & DRUG TESTING EQUIPMENT	31/07/2017	4,950.00
EF104516	26929	<b>ELAN ENERGY MATRIX PTY LTD</b> RECYCLING SERVICES	31/07/2017	821.00
EF104517	26934	<b>VULTURE CULTURE</b> EVENTS MANAGEMENT	31/07/2017	13,750.00
EF104518	26938	<b>MAJESTIC PLUMBING</b> PLUMBING	31/07/2017	36,597.59
EF104519	26940	<b>FLOORWEST</b> FLOOR COVERINGS	31/07/2017	5,175.50
EF104520	26946	<b>AV TRUCK SERVICES PTY LTD</b> TRUCK PURCHASES	31/07/2017	1,184,259.88
EF104521	26980	<b>KARLA HART ENTERPRISES PTY LTD</b> ENTERTAINMENT	31/07/2017	1,650.00
EF104522	26982	<b>PLANTRITE</b> PLANTS	31/07/2017	947.93
EF104523	26983	<b>HITECH SPORTS PTY LTD</b> SPORTING EQUIPMENT	31/07/2017	4,433.00
EF104524	26985	<b>ACCESS ICON PTY LTD</b> DRAINAGE PRODUCTS	31/07/2017	10,788.80
EF104525	26986	<b>AHA CONSULTING</b> CONSULTANCY	31/07/2017	1,320.00
EF104526	26987	<b>CTI RISK MANAGEMENT</b> SECURITY - CASH COLLECTION	31/07/2017	1,306.80
EF104527	26998	<b>PEROCIN PTY LTD (T/AS LANGE CONSULTING &amp;</b> CONSULTANCY - SOFTWARE	31/07/2017	330.00
EF104528	27002	<b>COCKBURN PARTY HIRE</b> HIRE SERVICES	31/07/2017	123.05
EF104529	27010	<b>QUANTUM BUILDING SERVICES PTY LTD</b> BUILDING MAINTENANCE	31/07/2017	10,252.12
EF104530	27012	<b>SPECIALTY CURTAINS &amp; BLINDS</b> CURTAINS/BLINDS	31/07/2017	23,997.40
EF104531	27015	<b>INTELLI TRAC</b> GPS TRACKING	31/07/2017	86,220.20
EF104532	27020	<b>TENDERLINK.COM</b> INTERNET ACESS SERVICES	31/07/2017	330.00
EF104533	27023	<b>SOLARGAIN PV PTY LTD</b> SOLAR ENERGY PROVIDER	31/07/2017	18,260.00

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EF104534	27026	<b>FIRST ACTION PTY LTD</b> EMERGENCY MANAGEMENT SOLUTIONS	31/07/2017	709.50
EF104535	27028	<b>TECHNOGYM AUSTRALIA PTY LTD</b> FITNESS EQUIPMENT	31/07/2017	13,728.00
EF104536	27031	<b>DOWNER EDI WORKS PTY LTD</b> ASPHALT SERVICES	31/07/2017	21,280.12
EF104537	27032	<b>WTP AUSTRALIA PTY LTD</b> QUANTITY SURVEYORS	31/07/2017	10,010.00
EF104538	27034	<b>ADELBY PTY LTD</b> FIREBREAK CONSTRUCTION	31/07/2017	26,774.00
EF104539	27036	<b>PRECISION BADGES CONNOLLY</b> BADGES, LANYARDS	31/07/2017	1,386.55
EF104540	27044	<b>GRAFFITI SYSTEMS AUSTRALIA</b> GRAFFITI REMOVAL & ANTI-GRAFFITI COATING	31/07/2017	8,261.94
EF104541	27045	<b>GANTNER ELECTRONICS PTY LTD</b> ELECTRICAL	31/07/2017	25,575.00
EF104542	27052	<b>EVENT MARQUEES</b> MARQUEE HIRE	31/07/2017	3,256.00
EF104543	27053	<b>READSPEAKER</b> SOFTWARE	31/07/2017	4,669.50
EF104544	27054	<b>VOCUS PTY LTD</b> TELECOMMUNICATIONS	31/07/2017	1,097.80
EF104545	27060	<b>CANTERBURY GROUP PTY LTD</b> OFFICE FURNITURE	31/07/2017	2,189.00
EF104546	27061	<b>BON LEISURE</b> CONSULTANCY	31/07/2017	18,425.00
EF104547	27063	<b>NATURE PLAY SOLUTIONS</b> PLAYGROUND DESIGN/CONSULTANCY	31/07/2017	26,763.42
EF104548	27064	<b>COMMUNITY FIRST INTERNATIONAL</b> DISABILITY SERVICES	31/07/2017	2,651.00
EF104549	27065	<b>WESTBOOKS</b> BOOKS	31/07/2017	2,118.21
EF104550	27068	<b>AUSTRAL POOL SOLUTIONS</b> POOL EQUIPMENT/SUPPLIES	31/07/2017	20,852.65
EF104551	27069	<b>HART SPORT</b> SPORTS EQUIPMENT	31/07/2017	1,621.80
EF104552	27075	<b>COLLEAGUES NAGELS</b> PRINTING SERVICES	31/07/2017	5,293.50
EF104553	27076	<b>PROLUDIC PTY LTD</b> PLAYGROUND DESIGN/EQUIPMENT	31/07/2017	95,582.19
EF104554	27082	<b>KULBARDI PTY LTD</b> STATIONERY SUPPLIES	31/07/2017	2,210.18
EF104555	27085	<b>SAVILLS PROJECT MANAGEMENT PTY LTD</b> PROJECT MANAGEMENT	31/07/2017	12,408.00
EF104556	27093	<b>MAGNETIC AUTOMATION PTY LTD</b> GATES/BARRIERS	31/07/2017	2,851.00
EF104557	27098	<b>Q2 (Q-SQUARED)</b> DIGITAL DATA SERVICE	31/07/2017	66.00
EF104558	27113	<b>COLE WORKWEAR PTY LTD</b> CLOTHING PROTECTIVE/INDUSTRIAL	31/07/2017	12,927.44
EF104559	27117	<b>SIGNCRAFT WA PTY LTD</b> SIGNAGE	31/07/2017	68,612.50
EF104560	27119	<b>MONITORED SECURITY SYSTEMS PTY LTD</b> SECURITY	31/07/2017	10,033.38
EF104561	27122	<b>STYLECRAFT AUSTRALIA PTY LTD</b> FURNITURE OFFICE	31/07/2017	14,357.70
EF104562	27124	<b>LYCOPodium INFRASTRUCTURE PTY LTD</b> ENGINEERING SERVICES	31/07/2017	4,283.40

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EF104563	27126	<b>LINDSAY MILES</b> EDUCATION (SUSTAINABILITY)	31/07/2017	600.00
EF104564	27127	<b>BILLI PTY LTD</b> SERVICE & MAINTENACE URN'S	31/07/2017	1,953.60
EF104565	27129	<b>ATA ENGINEERING PTY LTD</b> ENGINEERING SERVICES	31/07/2017	770.00
EF104566	27130	<b>OOH MEDIA SOCIAL SPORTS PTY LTD</b> DIGITAL MARKETING & SOFTWARE SERVICE PRO	31/07/2017	682.00
EF104567	27136	<b>LAUGHTER 2 U</b> LAUGHTER YOGA	31/07/2017	400.00
EF104568	27137	<b>QUALITY SPIRITUAL CARE</b> SPIRITUAL CONSULTANCY, TRAINING	31/07/2017	750.00
EF104569	27142	<b>FRONTLINE INTERIORS</b> CABINET MAKING & SHOP FITTING	31/07/2017	5,923.50
EF104570	27149	<b>PLAYTEC PTY LTD</b> PLAYGROUND EQUIPMENT	31/07/2017	7,241.30
EF104571	27150	<b>ALUMINIUM SEATING SPECIALISTS</b> MANUFACTURING & SUPPLYING ALUMINIUM FURNI	31/07/2017	5,582.50
EF104572	27151	<b>DAVID PIGRAM</b> ENTERTAINMENT - MUSICAL PERFORMANCE	31/07/2017	1,300.00
EF104573	27152	<b>THE KILPATRICK GDOWSKI TRUST</b> ARCHITECTURE, DESIGN, MASTERPLANNING	31/07/2017	893.75
EF104574	27161	<b>NEXT POWER</b> SOLAR PANEL	31/07/2017	6,380.00
EF104575	27166	<b>TJS SERVICES (WA) PTY LTD</b> FACILITY SERVICES	31/07/2017	79,492.02
EF104576	27167	<b>SKILL MATTERS</b> CONSULTANCY SERVICES	31/07/2017	5,060.00
EF104577	27168	<b>NIGHTLIFE MUSIC PTY LTD</b> MUSIC MANAGEMENT	31/07/2017	506.00
EF104578	27169	<b>NATURAL POWER SOLUTIONS PTY LTD</b> POWER PROTECTION PRODUCTS	31/07/2017	2,530.00
EF104579	27172	<b>ARTERY MEDIA SOLUTIONS</b> ARTWORK DESIGN	31/07/2017	4,757.50
EF104580	27174	<b>PERTH GEOTECHNICS</b> ENGINEERING AND GEOTECHNICAL CONSULTANT	31/07/2017	8,379.80
EF104581	27182	<b>LAZER BLAZE</b> LASER TAG	31/07/2017	585.00
EF104582	27185	<b>STONECRAFT MASONRY SOLUTIONS</b> STONE MASON	31/07/2017	2,981.00
EF104583	27188	<b>PARA MOBILITY</b> DISABILITY EQUIPMENT	31/07/2017	6,817.03
EF104584	27190	<b>OFFICEWORKS</b> STATIONERY SUPPLIES	31/07/2017	1,553.90
EF104585	27194	<b>ANIMAL CARE EQUIPMENT &amp; SERVICES AUSTRA</b> ANIMAL HANDLING & CATCHING EQUIPMENT	31/07/2017	157.80
EF104586	27195	<b>ALLFLOW INDUSTRIAL</b> OIL WATER SEPARATORS	31/07/2017	435.55
EF104587	27196	<b>RIVIERA WA</b> HORSE FLOATS	31/07/2017	19,780.00
EF104588	27197	<b>TURFCARE AUSTRALIA PTY LTD</b> CHEMICAL SUPPLIES	31/07/2017	693.00
EF104589	27198	<b>GREEN PROMOTIONS PTY LTD</b> PROMOTIONAL SUPPLIES	31/07/2017	2,035.00
EF104590	27199	<b>SITEIMPROVE AUSTRALIA PTY LTD</b> SOFTWARE	31/07/2017	6,545.00
EF104591	27203	<b>EDGYX PTY LTD</b> STEM WORKSHOPS	31/07/2017	1,500.00



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EF104592	27204	<b>COHERA-TECH PTY LTD</b> PEOPLE COUNTING SYSTEMS	31/07/2017	13,401.44
EF104593	27209	<b>AXIS PLUMBING WA (SMALL WORKS) PTY LTD</b> PLUMBING	31/07/2017	3,569.50
EF104594	27210	<b>URBAN DESIGN LAB</b> LANDSCAPE DESIGN	31/07/2017	780.00
EF104595	27211	<b>CHRIS MELSOM</b> URBAN PLANNING AND DESIGN	31/07/2017	780.00
EF104596	27212	<b>A&amp;L SAUNA &amp; STEAM WA</b> CARPENTRY - SAUNA	31/07/2017	2,670.80
EF104597	27213	<b>K AND J CONSULTANCY</b> INDIGENOUS CONSULTANCY	31/07/2017	2,530.00
EF104598	27214	<b>GONDWANA LINK LTD</b> CONSERVATION - NATURE	31/07/2017	4,000.00
EF104599	27218	<b>DELOITTE RISK ADVISORY PTY LTD</b> AUDITING & RISK ADVISORY SERVICES	31/07/2017	95,090.00
EF104600	27220	<b>SPACECHAMELEON ADSVENTURE CO</b> OUTDOOR ACTIVITIES	31/07/2017	1,100.00
EF104601	27225	<b>WSP AUSTRALIA PTY LTD</b> ENGINEERING	31/07/2017	16,115.95
EF104602	27229	<b>REPCO</b> AUTOMOTIVE PARTS	31/07/2017	331.55
EF104603	27231	<b>CIVIL SURVEY SOLUTIONS PTY LTD</b> CONSULTANCY - ENGINEERING	31/07/2017	9,857.10
EF104604	27232	<b>ADVANTA COMMERCIAL FURNITURE</b> OFFICE FURNITURE	31/07/2017	7,178.60
EF104605	27236	<b>INTERSKILL</b> TRAINING	31/07/2017	2,365.00
EF104606	88888	<b>SHANE AND SALLY WORMALL</b> BOAT PEN BOND REFUND	31/07/2017	382.49
EF104607	88888	<b>DON DIXON</b> BOAT PEN BOND REFUND	31/07/2017	328.14
EF104608	88888	<b>JARDIM HOLDINGS PTY LTD</b> BOND REFUND	31/07/2017	13,935.54
EF104609	99997	<b>JANDAKOT VOLUNTEER BUSHFIRE BRIGADE</b> EXPENSES REIMBURSEMENT	31/07/2017	1,337.16
EF104610	99997	<b>SOUTH COOGEE VOL BUSH FIRE BRIGADE</b> EXPENSES REIMBURSEMENT	31/07/2017	2,070.00
EF104611	99997	<b>COCKBURN STATE EMERGENCY SERVICE UNIT</b> EXPENSES REIMBURSEMENT	31/07/2017	2,378.74
EF104612	99997	<b>SOUTHERN STAR TRAMPOLINE AND GYMNASTICS</b> KIDSPORT INVOICE: KS011638	31/07/2017	440.00
EF104613	99997	<b>NICKI KITCHEN</b> CAT STERILISATION - BUCKY	31/07/2017	50.00
EF104614	99997	<b>REBECCA CLARK</b> CAT STERILISATION - SINATRA	31/07/2017	50.00
EF104615	99997	<b>PETER RATTIGAN</b> USE OF BUNGEE TOWER FOR CCTV EQUIPMENT	31/07/2017	2,915.00
EF104616	99997	<b>GIRL GUIDES WESTERN AUSTRALIA INC</b> KIDSPORT INVOICE: KS011706	31/07/2017	176.00
EF104617	99997	<b>DEBBIE PELHAM</b> SLLC MEMBERSHIP REFUND	31/07/2017	75.60
EF104618	99997	<b>LOUISA LEWIS</b> SLLC MEMBERSHIP REFUND	31/07/2017	237.38
EF104619	99997	<b>KARIN VON ARX</b> SLLC MEMBERSHIP REFUND	31/07/2017	50.40
EF104620	99997	<b>COCKBURN JUNIOR FOOTBALL CLUB</b> KIDSPORT INV KS011779 - GROVER-BOYLE	31/07/2017	200.00

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EF104621	99997	<b>ANNE MARLIAC &amp; JOHNATHAN WARD</b> COMPOST BIN REBATE - MARLIAC	31/07/2017	50.00
EF104622	99997	<b>KALAMUNDA DISTRICTS RUGBY UNION CLUB</b> KIDSPORT INV KS011851 - REYNOLDS	31/07/2017	220.00
EF104623	99997	<b>COCKBURN JUNIOR FOOTBALL CLUB</b> KIDS SPORT KS011743 - CLINCH & FULLER	31/07/2017	400.00
EF104624	99997	<b>WEIJIE LI</b> COMPOST BIN REBATE - WEIJIE LI	31/07/2017	50.00
EF104625	99997	<b>E R SMITH</b> COMPOST BIN REBATE- EDWARD R SMITH	31/07/2017	50.00
EF104626	99997	<b>GILLIAN F SAUNDERS</b> COMPOST BIN REBATE	31/07/2017	50.00
EF104627	99997	<b>ADELENE MIRABELLA</b> COMPOST BIN REBATE - A MIRABELLA	31/07/2017	40.00
EF104628	99997	<b>PAULINE HARRIS</b> FLU VACCINATION REIMBURSEMENT	31/07/2017	14.95
EF104629	99997	<b>DANIEL CONNOLLY</b> TIP PASS REFUND PETER TONKIN	31/07/2017	110.00
EF104630	99997	<b>ST JEROMES</b> DONATION DA LGACS2	31/07/2017	200.00
EF104631	99997	<b>HARVEST LAKES RESIDENTS ASSOCIATION</b> NEWSLETTER SUBSIDY	31/07/2017	1,800.00
EF104632	99997	<b>C.GRAHAM &amp; M.MCKINLAY</b> COMPOST BIN REBATE - MEGAN MCKINLAY	31/07/2017	50.00
EF104633	99997	<b>KYLA EASTCOTT</b> SLLC MEMBERSHIP REFUND	31/07/2017	359.10
EF104634	99997	<b>MARILYN J BURNS</b> CAT STERILISATION SUBSIDY - M BURNS	31/07/2017	50.00
EF104635	99997	<b>CHONG, PANG SHAUN</b> BIRD BATH REBATE	31/07/2017	14.99
EF104636	99997	<b>ROBERTA BUNCE</b> REIMBURSEMENT FOR CLIENT LUNCH	31/07/2017	85.80
EF104637	99997	<b>KEVIN HUGHES</b> REIMBURSEMENT OF MILEAGE	31/07/2017	39.75
EF104638	99997	<b>JANET WELLS</b> REIMBURSEMENT OF MILEAGE	31/07/2017	53.25
EF104639	99997	<b>CHLOE PATERSON</b> SLLC MEMBERSHIP REFUND	31/07/2017	42.12
EF104640	99997	<b>YASAMAN SABERI-REZVANI</b> PAINTING WORKSHOP (WOMEN OF THE WORLD)	31/07/2017	100.00
EF104641	99997	<b>FREMANTLE CITY DOCKERS</b> KID SPORT INV KS012020	31/07/2017	790.00
EF104642	99997	<b>KA HUEY TAN</b> CROSSOVER CONTRIBUTION PERIDOT ST TREEBY	31/07/2017	300.00
EF104643	99997	<b>RAMIL BALANAG</b> CROSSOVER CONTRIBUTION STARFLOWER GROVE	31/07/2017	300.00
EF104644	99997	<b>ROBERT ROBERSON</b> CROSSOVER CONTRIBUTION 8 BENEDICK RD	31/07/2017	300.00
EF104645	99997	<b>ZHI HOONG LIM</b> CROSSOVER CONTRIBUTION 51 TIMBERCREST RD	31/07/2017	300.00
EF104646	99997	<b>NARESH GOORDEEN</b> CROSSOVER CONTRIBUTION 17 GREENLINK BLVD	31/07/2017	300.00
EF104647	99997	<b>DANIEL RUSIN</b> CROSSOVER CONTRIBUTION 21 RAVELLO VISTA	31/07/2017	300.00
EF104648	99997	<b>MURDOCH UNIVERSITY</b> REPAYMENT GRADUATE CERT HR MANAGEMENT	31/07/2017	2,970.00
EF104649	99997	<b>MAUREEN ARMSTRONG</b> SLLC REIMBURSEMENT OF FEES	31/07/2017	47.52

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EF104650	99997	<b>AUSTRALIAN HOME CHILDEARE ASSOCIATION</b> IN HOME CHILD CARE SERVICE MEMBERSHIP	31/07/2017	200.00
EF104651	99997	<b>MARY JANE BELLEZA</b> CROSSOVER CONTRIBUTION 141 TINDAL AVENUE	31/07/2017	300.00
EF104652	99997	<b>JANDAKOT JETS JUNIOR FOOTBALL CLUB</b> KID SPORT INV KS012043	31/07/2017	200.00
EF104653	99997	<b>BALDIVIS FOOTBALL CLUB</b> KIDSSPORT KS012054 - J CATALANO	31/07/2017	220.00
EF104654	99997	<b>FJ DELL'AUGOSTINO</b> CROSS-OVER CONTRIB - FJ DELL'AUGOSTINO	31/07/2017	300.00
EF104655	99997	<b>DW &amp; JM CLARKE</b> BIRD BATH REBATE - CLARKE	31/07/2017	30.00
EF104656	99997	<b>A &amp; J CORONA</b> BIRD BATH REBATE - CORONA	31/07/2017	35.00
EF104657	99997	<b>AN &amp; S ELEZOVICH</b> BIRD BATH REBATE - ELEZOVICH	31/07/2017	49.50
EF104658	99997	<b>MARIA HARBEN</b> BIRD BATH REBATE	31/07/2017	50.00
EF104659	99997	<b>SARAH SUTTON-MATTOCKS</b> BIRD BATH REBATE - S KNAPE	31/07/2017	19.00
EF104660	99997	<b>J J REGAN</b> BIRD BATH REBATE - REGAN	31/07/2017	49.50
EF104661	99997	<b>A. &amp; A NATALE</b> MOBILE PHONE REPAIR REIMBURSEMENT - TONY NATALE	31/07/2017	189.00
EF104662	99997	<b>COOGEE BEACH PROGRESS ASSOCIATION</b> NEWSLETTER SUBSIDY	31/07/2017	605.00
EF104663	99997	<b>COOGEE BEACH CARAVAN RESORT SOCIAL CLUB</b> BUS SUBSIDY	31/07/2017	65.00
EF104664	99997	<b>CENTREPOINT CHURCH</b> COMMUNITY GRANT - CHRISTMAS BREAKFAST 20	31/07/2017	2,200.00
EF104665	99997	<b>WOOLKABUNNING KIAKA</b> COMMUNITY GRANT - OUTBACK ACADEMY ROLLIN	31/07/2017	14,300.00
EF104666	99997	<b>ST JEROMES SENIORS CENTRE</b> BUS SUBSIDY	31/07/2017	65.00
EF104667	99997	<b>COCKBURN WATER POLO CLUB NATALIE TURNER</b> SPORTS EQUIPMENT GRANT #82	31/07/2017	575.17
EF104668	99997	<b>SALLY PARMENTER</b> 50% CONTRIBUTION - S.PARMENTER	31/07/2017	396.50
EF104669	99997	<b>NATHAN SHARP</b> 50% CONTRIBUTION - N.SHARP	31/07/2017	565.50
EF104670	99997	<b>ADAM CARTER HARRIS</b> 50% STUDY CONTRIBUTION - ADAM HARRIS	31/07/2017	396.50
EF104671	99997	<b>ALAN J BROOKS</b> COMPOST BIN REBATE - A BROOKS	31/07/2017	50.00
EF104672	99997	<b>RODNEY HALL</b> COMPOST BIN REBATE - R HALL	31/07/2017	50.00
EF104673	99997	<b>JANETTE WALTON</b> REFUND REQUEST - WALTON	31/07/2017	86.42
EF104674	99997	<b>CLIFF MCKINLEY</b> STUDY FEE REIMBURSEMENT	31/07/2017	2,262.00
EF104675	99997	<b>SPEARWOOD HAWKS JUNIOR BASKETBALL CLUB</b> KID SPORT INV KS012128	31/07/2017	200.00
EF104676	99997	<b>CLARENCE TONG</b> FLU VACCINATION REFUND	31/07/2017	14.95
EF104677	99997	<b>MORENA LAMBARDI</b> CAT STERILISATION SUBSIDY	31/07/2017	50.00
EF104678	99997	<b>ROCHELLE JAQUES</b> CAT STERILISATION SUBSIDY	31/07/2017	50.00

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EF104679	99997	<b>GEMMA MCDONALD</b> F LICENCE REIMBURSEMENT	31/07/2017	241.10
EF104680	99997	<b>REBECCA DRUCE</b> SLLC REFUND - REBECCA DRUCE	31/07/2017	113.40
EF104681	99997	<b>PHOENIX LACROSSE CLUB</b> KIDSPORT KS012167 - 2 STUDENTS	31/07/2017	400.00
EF104682	99997	<b>PHOENIX LACROSSE CLUB INC.</b> KIDSSPORT KS012166 - 5 STUDENTS	31/07/2017	990.00
EF104683	99997	<b>CHRISTOPHER MARTIN MCENIER</b> FEE REIMBURSEMENT CHRISTOPHER MCENIRY	31/07/2017	1,131.00
EF104684	99997	<b>ANDREA CALLAGHAN</b> SEEREEF: REEF ECOLOGY EDUCATION	31/07/2017	1,200.00
EF104685	99997	<b>DOLORES FRASER</b> PAYMENT 4 DOLORES FRASER PAINTING	31/07/2017	50.00
EF104686	99997	<b>WARREN JONES</b> PAYMENT 4 DOLPHINS BY WARREN JONES	31/07/2017	280.00
EF104687	99997	<b>MONICA SEEGER</b> COMPOST BIN REBATE - MONICA SEEGER	31/07/2017	50.00
EF104688	99997	<b>MELVIN ROSE</b> COMPOST BIN REBATE - MELVIN ROSE	31/07/2017	50.00
EF104689	99997	<b>SCOTT JAMES</b> COMPOST BIN REBATE - SCOTT JAMES	31/07/2017	50.00
EF104690	99997	<b>JONATHAN HUNTER</b> COMPOST BIN REBATE - JONATHAN HUNTER	31/07/2017	50.00
EF104691	99997	<b>SAINTS NETBALL CLUB - ROCKINGHAM</b> KIDSPORT INVOCIE KS012267	31/07/2017	200.00
EF104692	99997	<b>SOUTH FREMANTLE WOMEN'S FOOTBALL CLUB</b> KIDSPORT INVOICE KS012255	31/07/2017	200.00
EF104693	99997	<b>COCKBURN CITY SOCCER CLUB INC</b> KIDSPORT INVOICE KS012282	31/07/2017	220.00
EF104694	99997	<b>SUGEESH ARIYARATNA</b> SLLC MEMBERSHIP REFUND	31/07/2017	256.99
EF104695	99997	<b>SUSHRA ARYAL GAUTAM</b> CROSSOVER CONTRIBUTION	31/07/2017	300.00
EF104696	99997	<b>MICHAEL KAIN</b> CROSSOVER CONTRIBUTION	31/07/2017	300.00
EF104697	99997	<b>PHOENIX LACROSSE CLUB INC</b> KIDSPORT KS012230 - J,LARSEN-EMBLING	31/07/2017	200.00
EF104698	99997	<b>DISCO CANTITO ASSOCIATION ( INC )</b> KIDSPORT KS012310 - LACHLIN BLACK	31/07/2017	200.00
027022	26987	<b>CTI RISK MANAGEMENT</b> SECURITY - CASH COLLECTION	6/07/2017	5,173.35
027023	26987	<b>CTI RISK MANAGEMENT</b> SECURITY - CASH COLLECTION	12/07/2017	1,967.00
027024	26987	<b>CTI RISK MANAGEMENT</b> SECURITY - CASH COLLECTION	19/07/2017	1,179.50
027025	26987	<b>CTI RISK MANAGEMENT</b> SECURITY - CASH COLLECTION	20/07/2017	1,179.50
027026	26987	<b>CTI RISK MANAGEMENT</b> SECURITY - CASH COLLECTION	26/07/2017	1,637.40
027027	99999	<b>FRAN GILBERTSON</b> HALL BOND REFUND	31/07/2017	150.00
027028	99999	<b>THE LODGE</b> HALL BOND REFUND	31/07/2017	500.00
027029	99999	<b>HORIZON WEST LANDSCAPE MAINTENANCE</b> RETENTION BOND REFUND	31/07/2017	3,405.18
027030	99999	<b>WEST CHURCHILL 90 PTY LTD</b> BOND REFUND	31/07/2017	27,951.70



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Cheque/ EFT	Account No.	Account/Payee	Date	Value
027031	99999	<b>ELSIE GITTOS</b> BUS BOND REFUND	31/07/2017	200.00
027032	99999	<b>COCKBURN PRIME TIMERS</b> BUS BOND REFUND	31/07/2017	200.00
027033	99999	<b>KEVIN SNNOK</b> BUS BOND REFUND	31/07/2017	80.00
027034	99999	<b>KEVIN SNOOK</b> BUS BOND REFUND	31/07/2017	60.00
027035	99999	<b>DIANE MUNROW</b> BUS BOND REFUND	31/07/2017	150.00
027036	99999	<b>LAKESIDE VILLAGE SOCIAL CLUB</b> BUS BOND REFUND	31/07/2017	200.00
027037	99999	<b>JANET JONES</b> BUS BOND REFUND	31/07/2017	200.00
027038	99999	<b>COCKBURN SENIOR CITIZENS ASSOCIATION (IN</b> BUS BOND REFUND	31/07/2017	180.00
027039	99999	<b>KIRBY MARINE</b> BOND REFUND	31/07/2017	500.00
027040	99995	<b>GREAT AUSSIE PATIOS</b> PROPERTY REFUND	31/07/2017	147.00
027041	10600	<b>FLICK PEST CONTROL SERVICES</b> PEST CONTROL	31/07/2017	385.00
027042	10747	<b>IINET LIMITED</b> INTERNET SERVICES	31/07/2017	811.68
027043	20751	<b>DEPARTMENT OF TRANSPORT - BULK BILL</b> VEHICLE LICENCING REGISTRATIONS	31/07/2017	156,524.50
027044	11758	<b>WATER CORP UTILITY ACCOUNT</b> WATER USAGE / SUNDRY CHARGES	31/07/2017	39,043.98
		ADD RETENTION HELD NIL		
		LESS PRIOR PERIOD CANCELLED CHEQUES/EFTS		
EF103394		CHRIS FERREIRA	5/07/2017	-4,125.00
EF103284		R J & C F DOREY	5/07/2017	-70.00
EF103396		LYNNE STEELE	5/07/2017	-1,000.00
EF103361		ROBERT COLIN WOODS	5/07/2017	-400.00
EF103281		STEPHEN ATHERTON	5/07/2017	-300.00
EF103947		ALUMINIUM SEATING SPECIALISTS	7/07/2017	-5,582.50
EF103372		EZRA KAYE	17/07/2017	-400.00
EF103323		SUSAN LIMBERT	17/07/2017	-65.21
EF103325		EMMA LIMBERT	17/07/2017	67.07-
027024		DOCUMENT BALANCE	42936	<b>1,179.50-</b>
		PAYMENT LIST TOTAL		11,880,429.99
		TOTAL AS PER AP SOURCE 18GLACT9991000		12,351,329.77
		ADDITIONAL DIRECT PAYMENTS		
		BANK FEES		
		MERCHANT FEES COC		
		MERCHANT FEES SLLC		
		MERCHANT FEES ARC		
		MERCHANT FEES VARIOUS OUT CENTRES		
		NATIONAL BPAY CHARGE		2,755.84
		RTGS/ACLR FEE		20.00
		NAB TRANSACT FEE		395.40

CITY OF COCKBURN  
MUNICIPAL BANK ACCOUNT

Cheque/ EFT	Account No.	Account/Payee	Date	Value
		MERCHANDISE / OTHER FEES CBA CREDIT CARD PAYMENT		81,358.69 <b>84,529.93</b>
		FAMILY DAY CARE AND IN HOME CARE PAYMENTS FDC PAYMENTS IHC PAYMENTS		82,406.69 151,141.44 <b>233,548.13</b>
		PAYROLL TRANSACTIONS		
		COC03/07/17 Pmt 000100082947 City of Cockburn	12/07/2017	139668.36
		COC11/07/17 Pmt 000100091478 City of Cockburn	12/07/2017	1253082.4
		COC14/07/17 Pmt 000100251140 City of Cockburn	14/07/2017	1749.14
		COC20/07/17 Pmt 000100621076 City of Cockburn	21/07/2017	78698.22
		COC25/07/17 Pmt 000100822387 City of Cockburn	26/07/2017	1282466.86
		COC27/07/17 Pmt 000100918930 City of Cockburn	27/07/2017	1580.87
		/ Pmt 000100960235 City of Cockburn	\$ 42,944.00	301.37
				<b>2,757,547.22</b>
		TOTAL PAYMENTS FOR JUNE		<b>15,426,955.05</b>

## **PAYMENT SUMMARY**

### **CHEQUE PAYMENTS**

027022 - 027044

### **ELECTRONIC FUNDS TRANSFER PAYMENT**

EF103968 – EF104698

### **CANCELLED PAYMENTS**

EF103394; EF103284; EF103396; EF103361; EF103281;  
EF103947; EF103372; EF103323; EF103325; 027024

# STATEMENT OF FINANCIAL ACTIVITY

for the period ended 31 July 2017

	Actuals	YTD Revised Budget	Variance to YTD Budget	\$ Variance to YTD Budget	Revised Budget	Adopted Budget
	\$	\$	%	\$	\$	\$
<b>Operating Revenue</b>						
Governance	96,979,708	96,772,177	0%	207,531 ✓	106,617,419	108,619,823
Financial Services	24,058	13,986	72%	10,072	662,100	662,100
Information Services	-	125	-100%	(125)	1,500	1,500
Human Resource Management	21,155	24,333	-13%	(3,177)	292,000	292,000
Library Services	5,234	4,429	18%	805	53,146	53,146
Recreation & Community Safety	834,432	898,189	-7%	(63,757)	9,197,863	9,197,863
Community Development & Services	1,325,452	1,171,198	13%	154,254	8,709,736	8,635,797
Corporate Communications	2,236	50	4373%	2,186	13,400	13,400
Statutory Planning	85,926	114,333	-25%	(28,407)	1,372,000	1,372,000
Strategic Planning	555,660	695,068	-20%	(139,408)	2,961,734	2,961,734
Building Services	342,077	354,195	-3%	(12,118)	1,460,650	1,460,650
Environmental Health	195,628	226,125	-13%	(30,497)	325,500	325,500
Waste Services	2,975,278	3,161,896	-6%	(186,618)	9,340,885	9,340,885
Parks & Environmental Services	6,310	852	641%	5,459	10,220	10,220
Engineering Services	57,444	20,677	178%	36,767	248,120	248,120
Infrastructure Services	172,702	19,417	789%	153,285	1,097,797	1,097,797
	103,583,300	103,477,048	0%	106,251	142,364,069	144,292,534
<b>Total Operating Revenue</b>	<b>103,583,300</b>	<b>103,477,048</b>	<b>0%</b>	<b>106,251</b>	<b>142,364,069</b>	<b>144,292,534</b>
<b>Operating Expenditure</b>						
Governance	(253,319)	(250,055)	1%	(3,263)	(4,413,512)	(4,416,012)
Strategy & Civic Support	(44,722)	(82,787)	-46%	38,065	(1,227,217)	(1,234,467)
Financial Services	(1,212,228)	(1,281,447)	-5%	69,219	(5,534,457)	(5,975,527)
Information Services	(336,990)	(829,839)	-59%	492,849 ✓	(5,283,717)	(5,266,526)
Human Resource Management	(264,242)	(193,669)	36%	(70,572)	(2,845,516)	(2,775,521)
Library Services	(289,024)	(308,005)	-6%	18,982	(3,758,725)	(3,683,813)
Recreation & Community Safety	(985,097)	(1,216,916)	-19%	231,819 ✓	(15,686,694)	(15,576,109)
Community Development & Services	(741,625)	(881,885)	-16%	140,260	(11,401,625)	(10,928,756)
Corporate Communications	(172,773)	(199,849)	-14%	27,076	(3,417,525)	(3,417,525)
Statutory Planning	(96,305)	(120,147)	-20%	23,842	(1,576,865)	(1,576,865)
Strategic Planning	(85,272)	(141,004)	-40%	55,732	(1,911,561)	(1,851,561)
Building Services	(74,389)	(126,877)	-41%	52,487	(1,670,771)	(1,670,771)
Environmental Health	(121,187)	(141,844)	-15%	20,657	(1,864,428)	(1,859,118)
Waste Services	(1,077,742)	(1,713,909)	-37%	636,168 ✓	(19,840,746)	(19,841,080)
Parks & Environmental Services	(524,755)	(1,056,555)	-50%	531,800 ✓	(13,429,993)	(13,330,993)
Engineering Services	(683,332)	(822,208)	-17%	138,876	(8,093,516)	(7,901,213)
Infrastructure Services	(592,243)	(823,801)	-28%	231,558 ✓	(10,077,850)	(9,916,832)
	(7,555,244)	(10,190,798)	-26%	2,635,554	(112,034,720)	(111,222,691)



# STATEMENT OF FINANCIAL ACTIVITY

for the period ended 31 July 2017

	Actuals	YTD Revised Budget	Variance to YTD Budget	\$ Variance to YTD Budget	Revised Budget	Adopted Budget
	\$	\$	%	\$	\$	\$
Less: Net Internal Recharging	123,498	109,645	13%	13,853	1,293,775	1,331,071
Add: Depreciation & Amortisation on Non-Current Assets						
Computer Equipment	(20,860)	(20,860)	0%	-	(250,320)	(250,320)
Furniture and Equipment	(25,517)	(16,947)	51%	(8,570)	(203,364)	(203,364)
Plant & Machinery	(249,203)	(249,203)	0%	-	(2,999,255)	(2,999,255)
Buildings	(475,369)	(445,836)	7%	(29,533)	(5,350,032)	(5,350,032)
Infrastructure - Roads	(923,959)	(923,959)	0%	-	(11,087,508)	(11,087,508)
Infrastructure - Drainage	(210,392)	(210,392)	0%	-	(2,524,704)	(2,524,704)
Infrastructure - Footpaths	(100,685)	(100,685)	0%	-	(1,208,220)	(1,208,220)
Infrastructure - Parks Equipment	(308,466)	(308,466)	0%	-	(3,701,592)	(3,701,592)
Landfill Infrastructure	(93,397)	(93,397)	0%	-	(1,120,764)	(1,120,764)
Marina Infrastructure	(81,182)	(81,182)	0%	-	(974,184)	(974,184)
	<b>(2,489,030)</b>	<b>(2,450,927)</b>	<b>2%</b>	<b>(38,103)</b>	<b>(29,419,943)</b>	<b>(29,419,943)</b>
<b>Total Operating Expenditure</b>	<b>(9,920,776)</b>	<b>(12,532,080)</b>	<b>-21%</b>	<b>2,611,304</b>	<b>(140,160,889)</b>	<b>(139,311,564)</b>
<b>Change in Net Assets Resulting from Operations</b>	<b>93,662,524</b>	<b>90,944,969</b>	<b>3%</b>	<b>2,717,555</b>	<b>2,203,180</b>	<b>4,980,970</b>
<b>Non-Operating Activities</b>						
<b>Profit/(Loss) on Assets Disposal</b>						
Plant and Machinery	152,859	22,551	578%	130,308	(96,888)	(201,388)
Freehold Land	-	125,000	-100%	(125,000)	2,513,103	1,763,103
Buildings	-	-	0%	-	-	-
	<b>152,859</b>	<b>147,551</b>	<b>4%</b>	<b>5,308</b>	<b>2,416,215</b>	<b>1,561,715</b>
<b>Capital Expenditure</b>						
Computer Equipment	(51,749)	(166,612)	-69%	114,862	(2,973,978)	(2,197,915)
Furniture and Equipment	(39,013)	(195,430)	-80%	156,417	(931,930)	(509,000)
Plant & Machinery	(16,982)	(472,943)	-96%	455,961	(4,217,982)	(3,992,000)
Land	-	(109,494)	-100%	109,494	(766,967)	(110,000)
Buildings	(282,011)	(2,617,695)	-89%	2,335,684	(20,360,542)	(17,664,000)
Infrastructure - Roads	(124,596)	(784,820)	-84%	660,224	(15,258,364)	(11,794,788)
Infrastructure - Drainage	(7,618)	(110,378)	-93%	102,760	(1,743,654)	(1,000,000)
Infrastructure - Footpaths	(51,852)	(74,750)	-31%	22,898	(1,344,096)	(1,180,440)
Infrastructure - Parks Equipment	(202,744)	(760,221)	-73%	557,477	(10,547,564)	(8,567,000)
Infrastructure - Parks Landscaping	(21,916)	(169,728)	-87%	147,812	(1,884,184)	(1,500,000)
Landfill Infrastructure	-	(162,231)	-100%	162,231	(1,103,385)	(190,000)
<b>Note 1.</b>	<b>(798,481)</b>	<b>(5,624,302)</b>	<b>-86%</b>	<b>4,825,821</b>	<b>(61,132,646)</b>	<b>(48,705,143)</b>
<b>Add: Gifted Subdivision Assets</b>	-	-	0%	-	-	-
<b>Add: Transfer to Reserves</b>	<b>(3,511,406)</b>	<b>(4,059,322)</b>	<b>-13%</b>	<b>547,916</b>	<b>(26,349,306)</b>	<b>(25,599,306)</b>

# STATEMENT OF FINANCIAL ACTIVITY

for the period ended 31 July 2017

	Actuals	YTD Revised Budget	Variance to YTD Budget	\$ Variance to YTD Budget	Revised Budget	Adopted Budget
	\$	\$	%	\$	\$	\$
<b>Add Funding from</b>						
Non-Operating Grants, Subsidies and Contributions	1,268,116	1,408,033	-10%	(139,917)	12,586,073	11,336,931
Developers Contributions Plans: Cash	63,396	501,478	-87%	(438,082) X	6,017,736	6,017,736
Proceeds on Sale of Assets	152,859	232,500	-34%	(79,641)	4,432,500	3,578,000
Reserves	3,087,035	4,731,271	-35%	(1,644,236) X	33,383,772	19,082,533
Gifted Subdivision Assets	-	-	0%	-	-	-
	<b>4,571,406</b>	<b>6,873,282</b>	<b>-33%</b>	<b>(2,301,876)</b>	<b>56,420,081</b>	<b>40,015,200</b>
<b>Non-Cash/Non-Current Item Adjustments</b>						
Depreciation on Assets	2,395,633	2,357,530	2%	38,103	28,299,179	28,299,179
Amortisation on Assets	93,397	93,397	0%	-	1,120,764	1,120,764
Profit/(Loss) on Assets Disposal	(152,859)	(147,551)	4%	(5,308)	(2,416,215)	(1,561,715)
Loan Repayments	-	-	0%	-	(2,597,176)	(2,597,176)
Non-Current Leave Provisions	(93,335)	-	0%	(93,335)	-	-
Deferred Pensioners Adjustment	481	-	0%	481	-	-
	<b>2,243,317</b>	<b>2,303,376</b>	<b>-3%</b>	<b>(60,059)</b>	<b>24,406,552</b>	<b>25,261,052</b>
Opening Funds	(125,233)	2,500,000	-105%	(2,625,233)	2,500,000	2,500,000
<b>Closing Funds</b>	<b>96,194,987</b>	<b>93,086,323</b>	<b>3%</b>	<b>3,108,664</b>	<b>464,075</b>	<b>14,487</b>
	-	-		-	-	-

## Notes to Statement of Financial Activity

### Note 1.

Additional information on the capital works program including committed orders at end of month:

	Actuals	Commitments at Month End	Commitments & Actuals YTD	YTD Revised Budget	Full Year Revised Budget	Uncommitted at Month End
	\$	\$			\$	\$
<b>Assets Classification</b>						
Computer Equipment	(51,749)	(49,182)	(100,931)	(166,612)	(2,973,978)	2,873,047
Furniture and Equipment	(39,013)	(125,967)	(164,980)	(195,430)	(931,930)	766,950
Plant & Machinery	(16,982)	(580,054)	(597,036)	(472,943)	(4,217,982)	3,620,946
Land	-	-	-	(109,494)	(766,967)	766,967
Buildings	(282,011)	(6,103,931)	(6,385,942)	(2,617,695)	(20,360,542)	13,974,600
Infrastructure - Roads	(124,596)	(1,571,687)	(1,696,284)	(784,820)	(15,258,364)	13,562,080
Infrastructure - Drainage	(7,618)	(34,991)	(42,609)	(110,378)	(1,743,654)	1,701,045
Infrastructure - Footpaths	(51,852)	(5,203)	(57,055)	(74,750)	(1,344,096)	1,287,041
Infrastructure - Parks Equipment	(202,744)	(944,098)	(1,146,842)	(760,221)	(10,547,564)	9,400,722
Infrastructure - Parks Landscaping	(21,916)	(300,818)	(322,733)	(169,728)	(1,884,184)	1,561,451
Landfill Infrastructure	-	(92,991)	(92,991)	(162,231)	(1,103,385)	1,010,394
	(798,481)	(9,808,922)	(10,607,402)	(5,624,302)	(61,132,646)	50,525,244

### Note 2.

Closing Funds in the Financial Activity Statement are represented by:

	Actuals	YTD Revised Budget	Full Year Revised Budget	Adopted Budget
	\$	\$	\$	\$
<b>Current Assets</b>				
Cash & Investments	113,084,832	211,896,271	113,947,104	115,497,141
Rates Outstanding	96,372,120	2,150,000	2,150,000	2,150,000
Rubbish Charges Outstanding	2,399,563	120,001	120,000	120,000
Sundry Debtors	16,660,804	4,000,000	4,000,000	4,000,000
GST Receivable	(74,815)	-	-	-
Prepayments	1,054,618	420,000	420,000	420,000
Accrued Debtors	743,622	-	-	-
Stock on Hand	21,701	14,000	14,000	14,000
	230,262,445	218,600,272	120,651,104	122,201,141
<b>Current Liabilities</b>				
Creditors	(18,193,812)	(11,302,735)	(11,260,049)	(11,260,049)
Income Received in Advance	(1,569,316)	(1,500,000)	(1,500,000)	(1,500,000)
GST Payable	(73,628)	-	-	-
Withholding Tax Payable	-	-	-	-
Provision for Annual Leave	(4,088,226)	(3,999,177)	(3,992,256)	(3,992,256)
Provision for Long Service Leave	(2,451,508)	(2,000,000)	(2,000,000)	(2,000,000)
	(26,376,489)	(18,801,911)	(18,752,305)	(18,752,305)
<b>Net Current Assets</b>	203,885,956	199,798,361	101,898,799	103,448,836
<b>Add: Non Current Investments</b>	4,942,389	4,825,000	4,825,000	4,825,000
	208,828,345	204,623,361	106,723,799	108,273,836
<b>Less: Restricted/Committed Assets</b>				
Cash Backed Reserves #	(112,633,359)	(111,537,038)	(105,174,521)	(108,259,348)
Deposits & Bonds Liability *	-	-	-	-
	96,194,987	93,086,323	1,549,278	14,487
<b>Closing Funds (as per Financial Activity Statement)</b>	<b>96,194,987</b>	<b>93,086,323</b>	<b>1,549,278</b>	<b>14,487</b>

# See attached Reserve Fund Statement

\* See attached Restricted Funds Analysis

**Note 3.**

Amendments to original budget since budget adoption. Surplus/(Deficit)

Ledger	Project/ Activity	Description	Council Resolution	Classification	Non Change (Non Cash Items) Adjust.	Increase in Available Cash	Decrease in Available Cash	Amended budget Running Balance
					\$	\$	\$	\$
<b>Budget Adoption</b>				<b>Closing Funds Surplus(Deficit)</b>				<b>14,487</b>
GL	131	Recovery of Multicultural Officer		Operating Income		140		<b>14,627</b>
GL	855	Reduction in Insurance charges		Operating Expenditure		490,416		<b>505,043</b>
GL	105	Reduction in FAGS grant		Operating Income			40,968	<b>464,075</b>
				<b>Closing Funds Surplus (Deficit)</b>	<b>0</b>	<b>490,556</b>	<b>40,968</b>	<b>464,075</b>



# Statement of Comprehensive Income *by Nature and Type*

for the period ended 31 July 2017

	Actual	Amended YTD Budget	\$ Variance to YTD Budget	Forecast	Amended Budget	Adopted Budget
	\$	\$	\$	\$	\$	\$
<b>OPERATING REVENUE</b>						
01 Rates	96,305,044	96,099,437	205,607	100,187,056	99,981,449	99,981,449
02 Specified Area Rates	371,049	330,000	41,049	371,049	330,000	330,000
05 Fees and Charges	Note 1 5,157,668	5,493,773	(336,105)	26,374,200	26,710,305	26,710,305
06 Service Charges	-	-	-	-	-	-
10 Grants and Subsidies	1,239,496	1,114,529	124,967	9,578,853	9,453,886	11,382,351
15 Contributions, Donations and Reimbursements	179,421	80,729	98,692	1,244,153	1,145,461	1,145,461
20 Interest Earnings	330,621	358,581	(27,959)	4,715,009	4,742,968	4,742,968
25 Other revenue and Income	-	-	-	-	-	-
<b>Total Operating Revenue</b>	<b>103,583,300</b>	<b>103,477,048</b>	<b>106,251</b>	<b>142,470,320</b>	<b>142,364,069</b>	<b>144,292,534</b>
<b>OPERATING EXPENDITURE</b>						
50 Employee Costs - Salaries & Direct Oncosts	Note 2 (3,545,272)	(4,202,415)	657,143	(51,947,035)	(52,604,178)	(52,284,525)
51 Employee Costs - Indirect Oncosts	(64,243)	(82,360)	18,117	(1,547,576)	(1,565,693)	(1,491,754)
55 Materials and Contracts	Note 3 (2,086,584)	(3,706,521)	1,619,936	(39,492,711)	(41,112,647)	(40,166,898)
65 Utilities	(306,019)	(457,105)	151,086	(5,077,132)	(5,228,218)	(5,227,818)
70 Interest Expenses	-	-	-	(816,699)	(816,699)	(816,699)
75 Insurances	(945,164)	(1,004,344)	59,180	(1,641,308)	(1,700,488)	(2,228,200)
80 Other Expenses	(607,963)	(738,054)	130,091	(8,876,707)	(9,006,798)	(9,006,798)
85 Depreciation on Non Current Assets	(2,395,633)	(2,357,530)	(38,103)	(28,337,282)	(28,299,179)	(28,299,179)
86 Amortisation on Non Current Assets	(93,397)	(93,397)	-	(93,397)	(1,120,764)	(1,120,764)
<b>Add Back: Indirect Costs Allocated to Capital Works</b>	123,498	109,645	13,853	1,307,628	1,293,775	1,331,071
<b>Total Operating Expenditure</b>	<b>(9,920,776)</b>	<b>(12,532,080)</b>	<b>2,611,304</b>	<b>(136,522,218)</b>	<b>(140,160,889)</b>	<b>(139,311,564)</b>
<b>CHANGE IN NET ASSETS RESULTING FROM OPERATING ACTIVITIES</b>	<b>93,662,524</b>	<b>90,944,969</b>	<b>2,717,555</b>	<b>5,948,102</b>	<b>2,203,180</b>	<b>4,980,970</b>
<b>NON-OPERATING ACTIVITIES</b>						
11, 16 Non-Operating Grants, Subsidies and Contributions	1,268,116	1,408,033	(139,917)	12,446,156	12,586,073	11,336,931
18 Developers Contributions Plans: Cash	63,396	501,478	(438,082)	5,579,654	6,017,736	6,017,736
17 Gifted Subdivision Assets	-	-	-	-	-	-
95 Profit/(Loss) on Sale of Assets	152,859	147,551	5,308	152,859	2,416,215	1,561,715
<b>Total Non-Operating Activities</b>	<b>1,484,371</b>	<b>2,057,062</b>	<b>(572,691)</b>	<b>18,178,669</b>	<b>21,020,024</b>	<b>18,916,382</b>
<b>NET RESULT</b>	<b>95,146,895</b>	<b>93,002,030</b>	<b>2,144,864</b>	<b>24,126,771</b>	<b>23,223,204</b>	<b>23,897,352</b>

## Notes to Statement of Comprehensive Income

### Note 1.

Additional information on main sources of revenue in fees & charges.

	Actual	Amended YTD Budget	Amended Budget	Adopted Budget
	\$	\$	\$	\$
<b><u>Recreation &amp; Community Safety</u></b>				
Recreational Services	17,391	49,257	591,080	591,080
Law and Public Safety	23,427	32,133	385,596	385,596
Cockburn ARC	735,802	711,039	7,253,485	7,253,485
	776,620	792,428	8,230,161	8,230,161
<b><u>Waste Services:</u></b>				
Waste Collection Services	2,534,599	2,616,822	2,800,000	2,800,000
Waste Disposal Services	440,388	545,074	6,540,885	6,540,885
	2,974,987	3,161,896	9,340,885	9,340,885
<b><u>Infrastructure Services:</u></b>				
Port Coogee Marina	74,305	19,225	1,095,500	1,095,500
	74,305	19,225	1,095,500	1,095,500
	3,825,912	3,973,550	18,666,545	18,666,545

### Note 2.

Additional information on Salaries and Direct On-Costs by each Division.

	Actual	Amended YTD Budget	Amended Budget	Adopted Budget
	\$	\$	\$	\$
Executive Services	(158,513)	(202,537)	(2,629,867)	(2,629,867)
Finance & Corporate Services Division	(576,677)	(558,071)	(7,508,795)	(7,358,795)
Governance & Community Services Division	(1,196,845)	(1,400,033)	(18,219,051)	(18,241,451)
Planning & Development Division	(305,327)	(450,052)	(5,869,626)	(5,869,626)
Engineering & Works Division	(1,307,910)	(1,591,723)	(18,376,839)	(18,184,786)
	(3,545,272)	(4,202,415)	(52,604,178)	(52,284,525)

### Note 3

Additional information on Materials and Contracts by each Division.

	Actual	Amended YTD Budget	Amended Budget	Adopted Budget
	\$	\$	\$	\$
Executive Services	(123,911)	(111,419)	(1,888,688)	(1,898,438)
Finance & Corporate Services Division	(238,316)	(673,837)	(3,520,204)	(3,496,376)
Governance & Community Services Division	(865,945)	(1,034,609)	(12,764,536)	(12,158,109)
Planning & Development Division	(68,515)	(73,949)	(1,000,597)	(935,287)
Engineering & Works Division	(789,897)	(1,812,706)	(21,938,622)	(21,678,688)
Not Applicable	0	0	0	0
	(2,086,584)	(3,706,521)	(41,112,647)	(40,166,898)



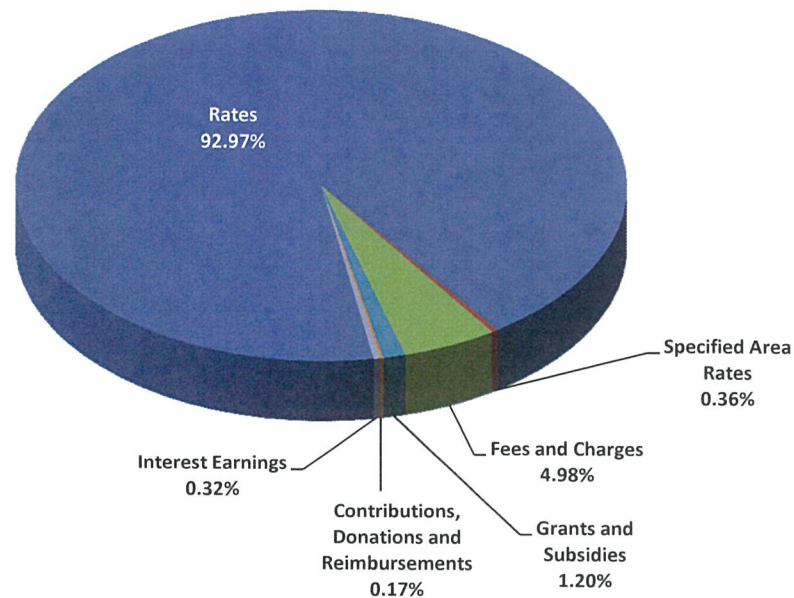
# City of Cockburn - Reserve Funds

Financial Statement for Period Ending 31 July 2017

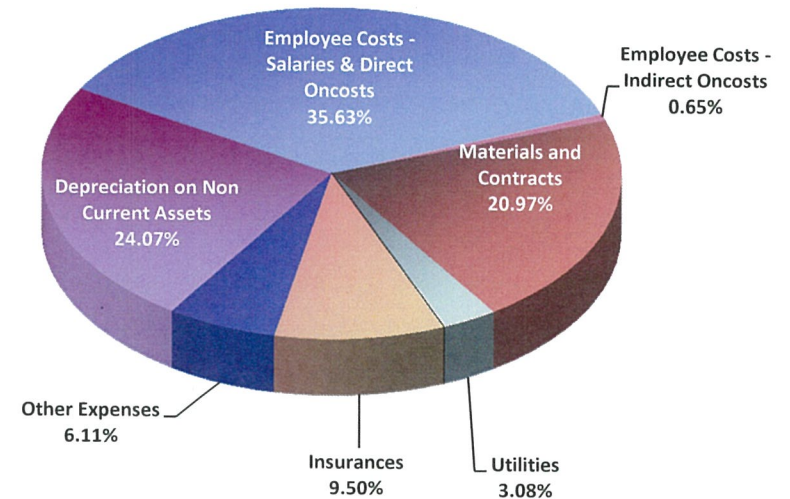
Account Details	Opening Balance		Interest Received		t/f's from Municipal		t/f's to Municipal		Closing Balance	
	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual
<b>Council Funded</b>										
Bibra Lake Management Plan Reserve	589,288	589,288	10,648	983	-	-	(25,000)	-	574,936	590,271
C/FWD Projects Reserve	9,474,600	9,474,600	-	-	-	-	(7,876,118)	-	1,598,482	9,474,600
CCW Development Fund	1,492,671	1,492,671	53,000	2,463	-	-	-	-	1,545,671	1,495,134
Community Infrastructure	13,495,449	13,495,449	109,782	20,979	3,632,000	2,484,333	(4,020,355)	-	13,216,876	16,000,761
Community Surveillance Levy Reserve	1,314,234	1,314,234	22,594	1,898	200,000	16,667	(509,633)	-	1,027,195	1,332,799
DCD Redundancies Reserve	41,748	41,748	797	69	-	-	-	-	42,545	41,817
Environmental Offset Reserve	298,185	298,185	7,691	492	-	-	-	-	305,876	298,677
Green House Emissions Reductions	349,919	349,919	10,330	858	200,000	16,667	(156,639)	-	403,610	367,443
HWRP Post Closure Management	2,359,654	2,359,654	47,780	3,894	-	-	-	-	2,407,434	2,363,548
Information Technology	189,836	189,836	8,082	417	100,000	8,333	(168,392)	-	129,526	198,586
Insurance	327,698	327,698	8,090	518	-	-	(50,000)	-	285,788	328,215
Land Development & Investment Fund Reserve	4,175,384	4,175,384	251,777	6,854	3,760,000	-	(1,219,967)	-	6,967,194	4,182,238
Major Buildings Refurbishment	11,573,486	11,573,486	133,850	19,099	1,500,000	125,000	-	-	13,207,336	11,717,584
Municipal Elections	155,198	155,198	2,681	256	120,000	120,000	(200,000)	-	77,879	275,454
Naval Base Shacks	1,072,113	1,072,113	22,969	1,769	75,363	-	(65,000)	-	1,105,445	1,073,882
Plant & Vehicle Replacement	7,416,058	7,416,058	105,975	12,462	3,038,000	253,167	(2,457,792)	-	8,102,241	7,681,687
Port Coogee Marina Assets Replcmt	-	-	-	-	-	-	(50,000)	-	-	-
Port Coogee Special Maintenance Reserve	1,246,841	1,246,841	26,794	2,181	274,000	-	-	-	1,547,635	1,249,022
Port Coogee Waterways Reserve	112,477	112,477	8,685	186	56,000	-	(79,742)	-	97,420	112,662
Port Coogee WEMP	1,933,584	1,933,584	40,372	3,191	-	-	(203,192)	-	1,770,764	1,936,775
Roads & Drainage Infrastructure	14,004,556	14,004,556	64,880	20,628	1,500,000	125,000	(2,452,598)	(6,390)	13,116,838	14,143,795
Staff Payments & Entitlements	1,947,631	1,947,631	45,068	3,214	125,000	10,417	(364,053)	(276,053)	1,753,646	1,685,209
Waste & Recycling	13,725,436	13,725,436	348,847	21,789	1,472,079	-	(1,265,893)	-	14,280,469	13,747,226
Waste Collection Levy	2,731,598	2,731,598	63,366	5,511	1,000,000	-	(621,200)	-	3,173,764	2,737,109
POS Cash in Lieu (Restricted Funds)	500	500	108,937	(29)	-	-	-	-	109,437	471
	<b>90,028,144</b>	<b>90,028,144</b>	<b>1,502,995</b>	<b>129,682</b>	<b>17,052,442</b>	<b>3,159,583</b>	<b>(21,785,574)</b>	<b>(282,443)</b>	<b>86,798,007</b>	<b>93,034,966</b>
<b>Grant Funded</b>										
Aged & Disabled Vehicle Expenses	248,193	248,193	8,628	309	-	-	(56,000)	-	200,821	248,502
CIHF Building Maintenance Resrv	4,497,350	4,497,350	-	7,433	1,450,000	120,833	(20,000)	-	5,927,350	4,625,616
Family Day Care Accumulation Fund	16,799	16,799	-	14	-	-	-	-	16,799	16,813
Naval Base Shack Removal Reserve	526,838	526,838	10,217	869	-	-	-	-	537,055	527,707
Restricted Grants & Contributions Reserv	2,685,102	2,685,102	-	-	-	-	(2,961,791)	(2,804,592)	(276,689)	(119,490)
UNDERGROUND POWER	227,532	227,532	-	375	-	-	-	-	227,532	227,908
Welfare Projects Employee Entitlements	470,402	470,402	9,223	800	-	-	-	-	479,625	471,203
	<b>8,672,216</b>	<b>8,672,216</b>	<b>28,068</b>	<b>9,801</b>	<b>1,450,000</b>	<b>120,833</b>	<b>(3,037,791)</b>	<b>(2,804,592)</b>	<b>7,112,493</b>	<b>5,998,258</b>
<b>Development Cont. Plans</b>										
Cockburn Coast DCP14	(109,448)	(109,448)	-	(114)	-	-	(40,177)	-	(149,625)	(109,562)
Community Infrastructure DCA 13	5,964,447	5,964,447	220,238	15,511	5,000,000	51,427	(8,463,452)	-	2,721,232	6,031,385
Hammond Park DCP	1,398,439	1,398,439	9,354	2,318	396,000	-	(6,559)	-	1,797,235	1,400,758
Munster Development	1,140,711	1,140,711	18,147	1,888	80,000	5,538	(8,045)	-	1,230,812	1,148,137
Muriel Court Development Contribution	(110,762)	(110,762)	-	(156)	100,000	-	(11,328)	-	(22,090)	(110,918)
Packham North - DCP 12	34,792	34,792	1,000	72	150,000	-	(9,019)	-	176,773	34,864
Solomon Road DCP	626,939	626,939	16,500	1,041	50,000	-	(5,235)	-	688,204	627,981
Success Nth Development Cont. Plans	2,684,263	2,684,263	15,311	4,434	11,700	-	(3,518)	-	2,707,757	2,688,697
Thomas St Development Cont. Plans	12,986	12,986	294	21	-	-	-	-	13,280	13,008
Wattleup DCP 10	91,140	91,140	2,000	161	100,000	-	(6,559)	-	186,582	91,302
Yangebup East Development Cont. Plans	1,347,473	1,347,473	6,026	2,225	130,036	-	(3,398)	-	1,480,137	1,349,698
Yangebup West Development Cont. Plans	427,648	427,648	9,195	707	-	6,431	(3,118)	-	433,725	434,786
	<b>13,508,629</b>	<b>13,508,629</b>	<b>298,065</b>	<b>28,110</b>	<b>6,017,736</b>	<b>63,396</b>	<b>(8,560,407)</b>	<b>-</b>	<b>11,264,023</b>	<b>13,600,134</b>
<b>Total Reserves</b>	<b>112,208,988</b>	<b>112,208,988</b>	<b>1,829,128</b>	<b>167,593</b>	<b>24,520,178</b>	<b>3,343,813</b>	<b>(33,383,772)</b>	<b>(3,087,035)</b>	<b>105,174,522</b>	<b>112,633,359</b>



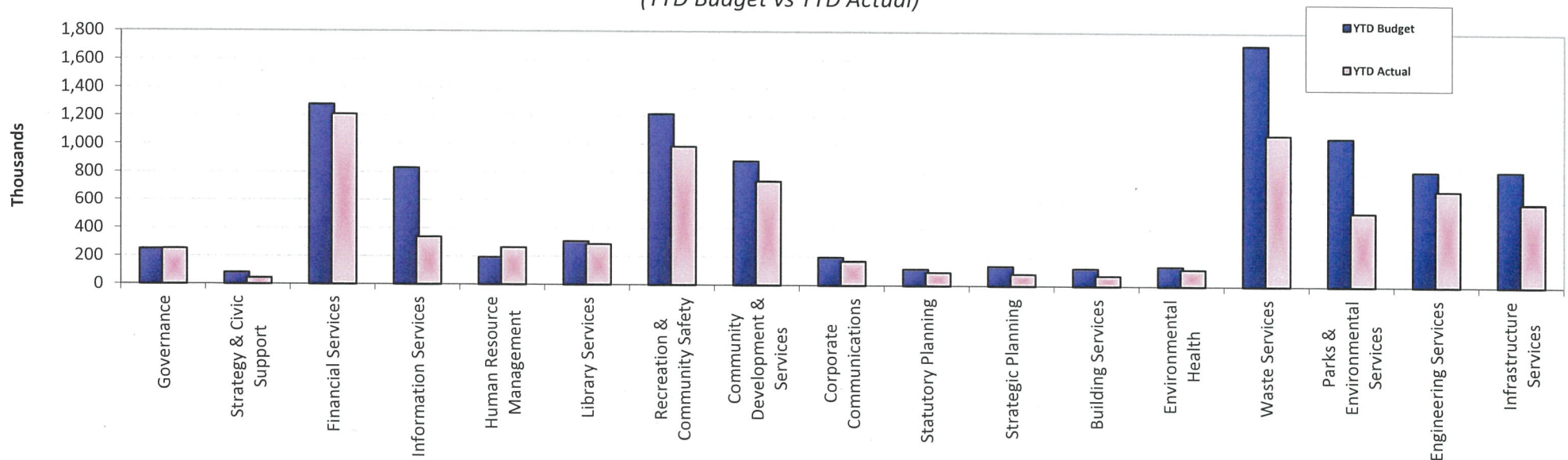
**Operating Income by Nature and Type**  
(YTD Actual)



**Operating Expenditure by Nature and Type**  
(YTD Actual)

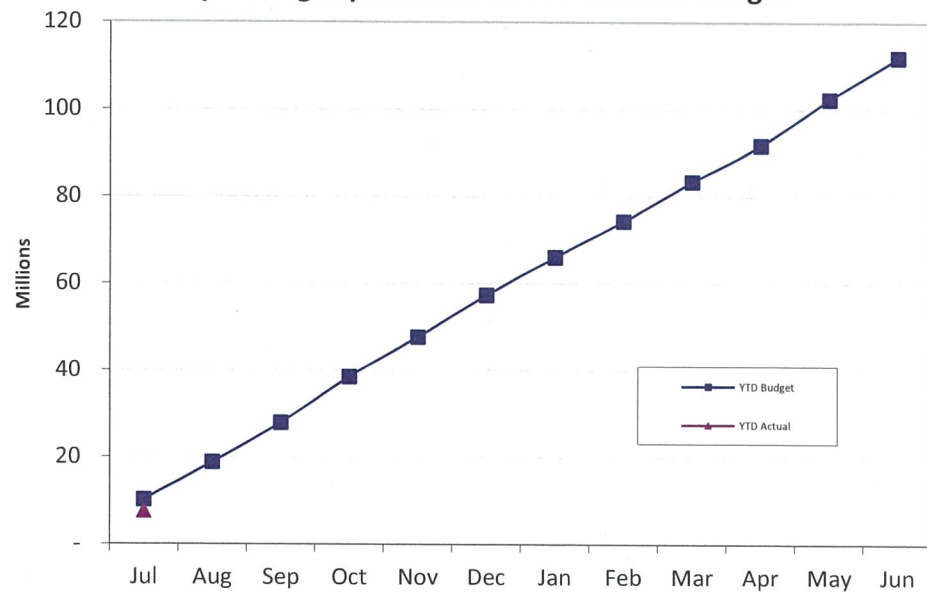


**Operating Expenditure by Business Unit**  
(YTD Budget vs YTD Actual)

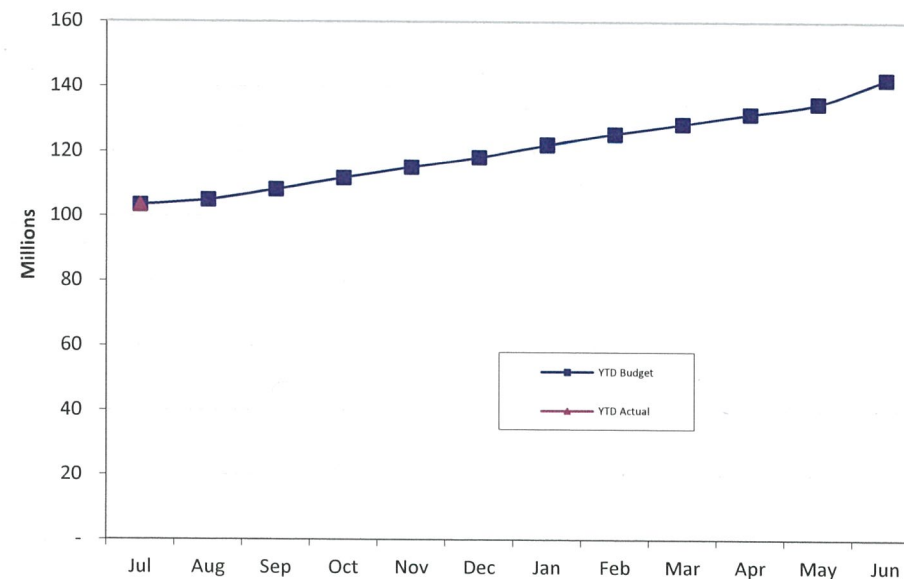




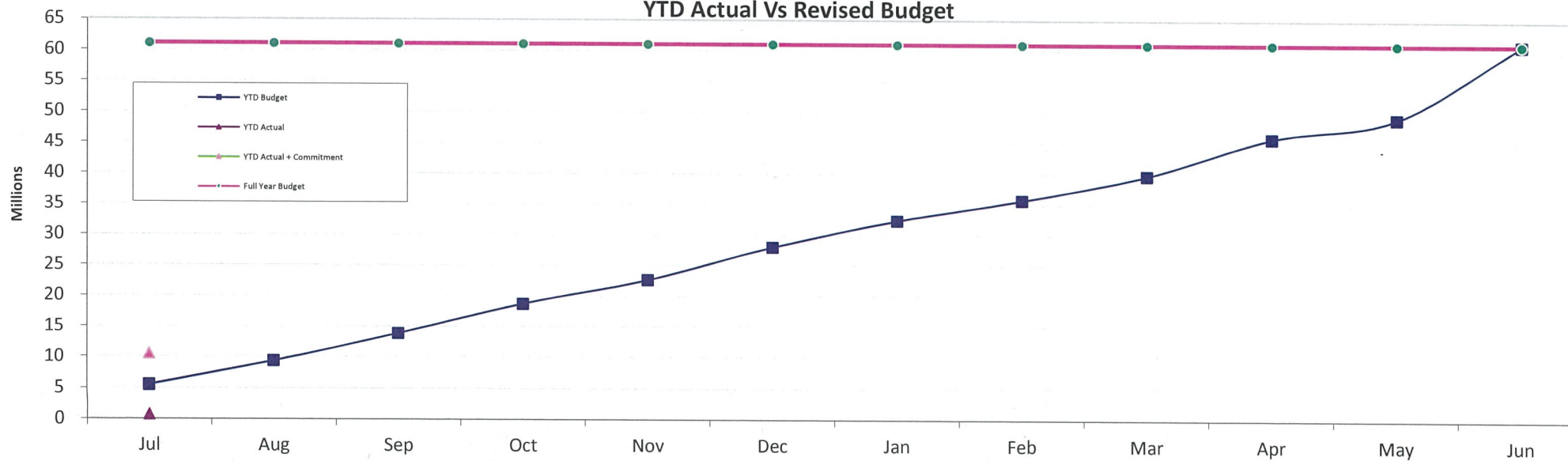
### YTD Operating Expenditure Vs YTD Revised Budget



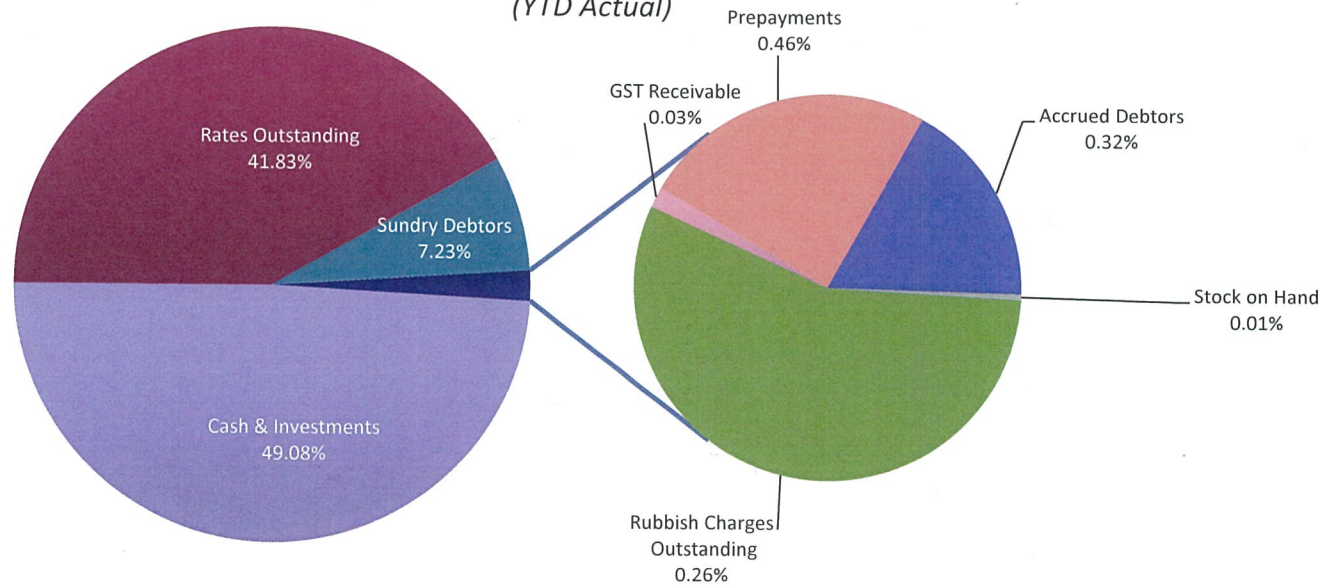
### YTD Operating Income Vs YTD Revised Budget



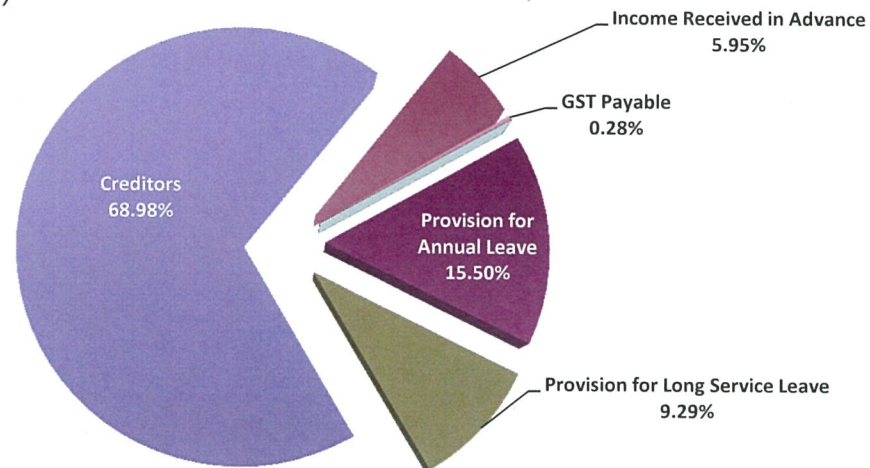
### Capital Expenditure YTD Actual Vs Revised Budget



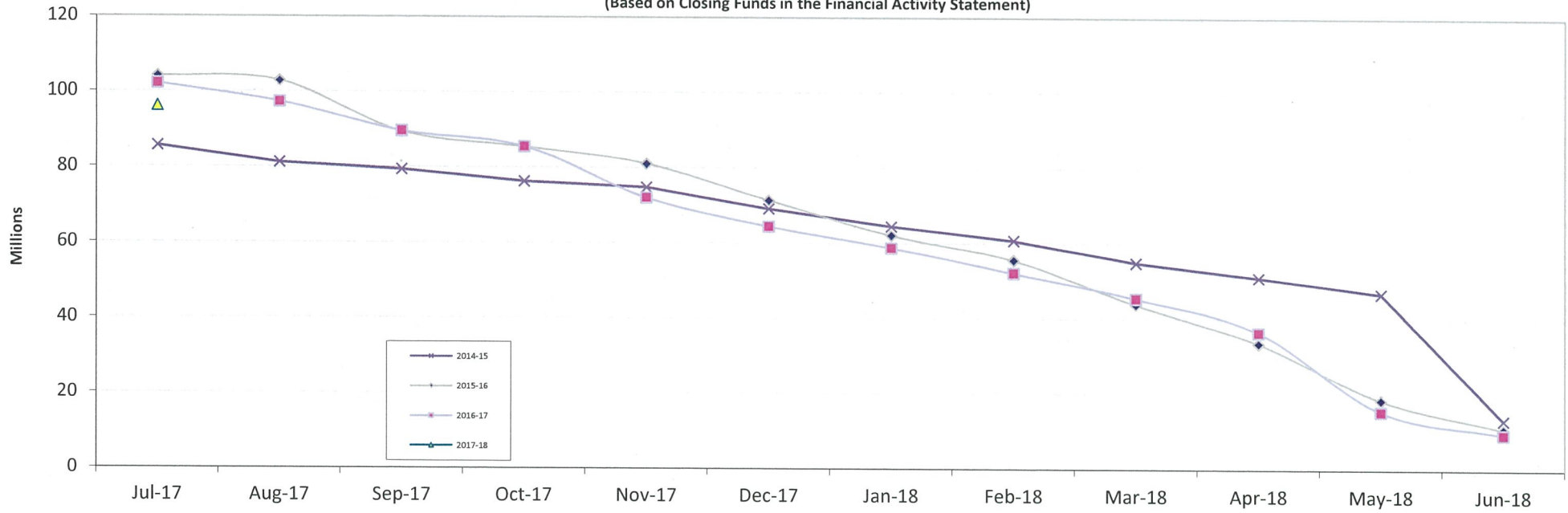
### Current Assets (YTD Actual)



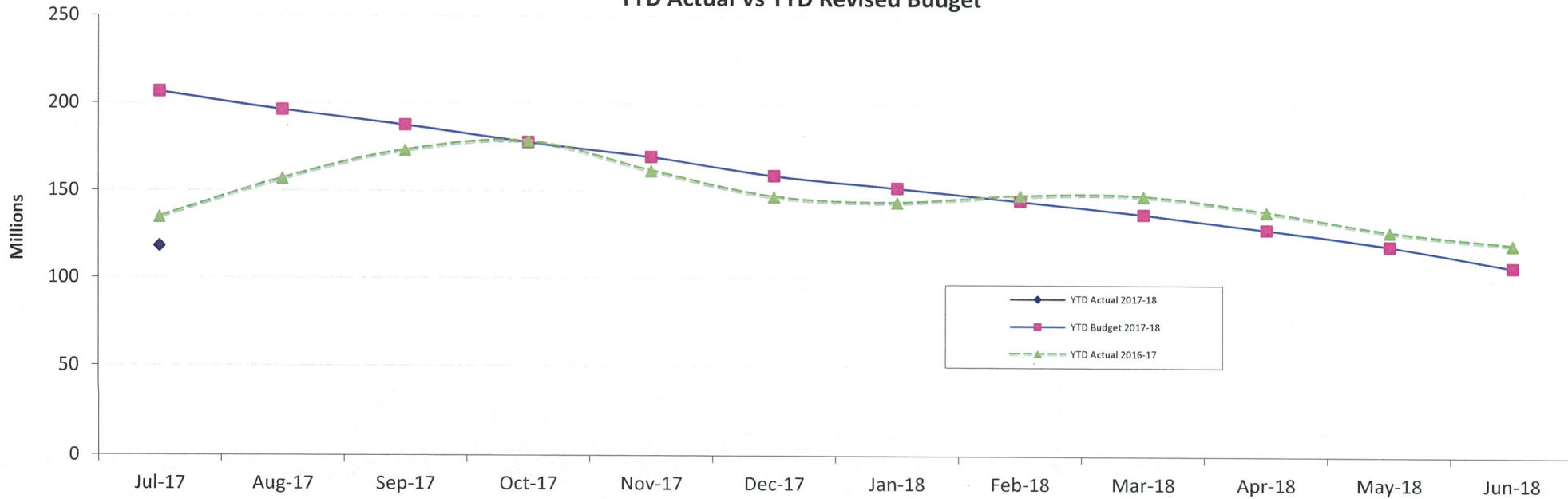
### Current Liabilities (YTD Actual)



**Municipal Liquidity Over the Year**  
(Based on Closing Funds in the Financial Activity Statement)



**Cash & Investments Positions**  
YTD Actual Vs YTD Revised Budget



# DETAILED BUDGET AMENDMENTS REPORT

for the period ended 31 July 2017

					FUNDING SOURCES			
PROJECT/ACTIVITY LIST		ADD/LESS	EXPENDITURE	TF TO RESERVE	RESERVE	EXTERNAL	MUNICIPAL	NON-CASH
GL 410	Received increased funding	ADD	73,939			(73,939)		
GL 135	Reversal of corporate photocopy charges	LESS	(140)					
GL 105	Reduction in FAGS grant	LESS				40,968		
GL 855	Reduction of insurance charges	LESS	(490,416)					
OP 9595	MCCC - End of year event funded from Contingency	ADD	2,500					
OP 8272	Funding MCCC - end of year event	LESS	(2,500)					
			(416,617)	0	0	(32,971)	0	0



## CONSULTATION ANALYSIS Eco Shark Barrier May/June 2017

### Overview

Three years ago, the City of Cockburn installed the State's first Eco Shark Barrier at Coogee Beach, allowing people to enjoy a safe swimming environment all year round. Now that the three-year trial is about to end in November 2017, the City sought community feedback about whether the barrier should stay or go.

### Background

The company Eco Shark Barrier Pty Ltd approached the City wanting to trial its new product. After an initial trial, the City agreed to lease the barrier for three years. The company regularly inspects the barrier, with divers repairing and modifying it as required in response to damage from the demanding ocean environment.

### Outcome:

**A high number of contributors to Comment on Cockburn voted 3,608 to 43 to retain the eco shark barrier.**

### Feedback:

Points in support of retaining the shark barrier:

- Perception of safety and security
- Drawcard for swimmers from Cockburn and from outside of Cockburn
- Some people do not swim anywhere else in Perth except at this location

*"Please keep the shark net, my family and I have been going there over the last three years and only there. It's the only place where we will swim in the sea. If you take it away, we will not enter the ocean again. I have even encouraged my friends from Cottesloe, Warwick and other areas to meet me at Coogee beach to swim. We love it, please don't take it away".*

*"Though the risk of shark attack is extremely low, giving people confidence and choice via low impact installations such as this is a good thing. Please keep the barrier."*

*"We have purchased vacant land in a new estate in Coogee believing the shark net was there to stay. We won't enter the water (along with our young boy) unless we're at Coogee Beach with the shark net."*

Concerns raised about the barrier:

- Cost to council and ratepayers - \$100,000 per year

*"Have you completed the lease v purchase options? I know you may be short of capital but the \$100k a year seems excessive."*

*"(I) find the lease cost shocking! How is that justified? Will Cockburn have to start charging for its use soon? It is good for business locally."*

*"Buy it - no brainer. It's a great asset for the community and social return on investment. I use it to swim laps once a week and it certainly differentiates our great beaches."*

### **Methodology:**

A survey was uploaded on Comment on Cockburn with publicity via Facebook, Cockburn Chat, the City's website and email newsletters. Contributors were invited to vote in an online poll and/or leave a comment by Friday 30 June.

### **Survey results:**

The Comment on Cockburn site was visited by people, with **3,651** voting on the issue. In total, 150 people contributed comments on the website.

**VOTE HERE**

**HAVE YOUR SAY**

**NEWS FEED**

**The shark barrier should remain at Coogee Beach until further notice**



Yes



No



Vote

Total Votes : 3651

**The shark barrier should remain at Coogee Beach until further notice**



☐ Yes

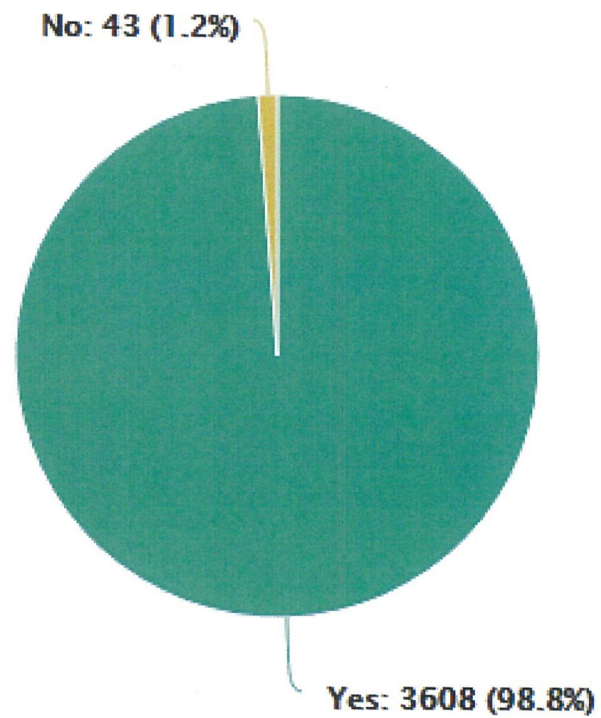
☐ No

**View Results**

Submit

Q1

The shark barrier should remain at Coogee Beach until further notice





**APPENDIX 1:**  
**Comments made on Comment on Cockburn – shared publicly**

**HAVE YOUR SAY**

**VOTE HERE**

Discussions: **All (1)** **Open (1)**

## **Shark barrier - should it stay?**

**145** Responses

22 days ago

The barrier was placed at Coogee Beach for a three-year trial which ends in November 2017. Please provide your views here about your experiences using this beach and whether you think the barrier should remain?

**Go to discussion**

**Quick Reply**

Alan73, 4 days ago

[Alert moderator](#)

No debate over this issue, the shark barrier needs to be a permanent fixture at Coogee beach.

**Reply**

Do you agree?  0  0 [Share](#)

Chez, 6 days ago

[Alert moderator](#)

We r from the SWest but travel to Perth regularly. Coogee is our beach of choice mostly due to the feeling of being able to swim without fear. Why would anyone even consider removing it????

**Reply**

Do you agree?  0  0 [Share](#)

Gwen McHugh, 11 days ago

[Alert moderator](#)

I hope the shark barrier will stay. I use it on a daily basis during summer and enjoy the feeling of being safe. It has certainly made Coogee Beach a popular place to be.

**Reply**

Do you agree?  0  0 [Share](#)

Annette McGovern, 15 days ago

[Alert moderator](#)

This shark net is an asset to what is the jewel in the Cockburn crown - the beautiful, usable, accessible coastline. It makes bringing international visitors who label WA as having a shark problem, to the beach to swim, much easier. It helps people with fears to have confidence in the water. It even provides more marine life as the biofouling accumulates on the barrier and attracts schools of fish into shallow waters. On top of that, at approximately \$100k per year I think its very affordable. Its benefits really outweigh the costs. Please keep the shark net

**Reply**

Do you agree?  1  0 [Hide reply \(1\) ^](#) [Share](#)

, 13 days ago

[Alert moderator](#)

I totally agree. This net has provided a tremendous community asset. So many people use it to enjoy the ocean and keep fit. It is six times the size of an Olympic pool at a fraction of the cost and is also an ecosystem for so much marine life. There is no way I would do my laps in the ocean without it. It has created so much enjoyment for so many people at so little cost. An absolute no brainer

**Reply**

Do you agree?  0  0 [Share](#)

shazzy047, about 16 hours ago

[Alert moderator](#)

who the hell voted no...lol.....absolutely should stay..safe for humans and sharks...it's a win-win..

[Reply](#)

Do you agree?  0  0 [Share](#)

Annette McGovern, 1 day ago

[Alert moderator](#)

This shark net is an asset to what is the jewel in the Cockburn crown - the beautiful, usable, accessible coastline. It makes bringing international visitors who label WA as having a shark problem, to the beach to swim, much easier. It helps people with fears to have confidence in the water. It even provides more marine life as the biofouling accumulates on the barrier and attracts schools of fish into shallow waters. On top of that, at approximately \$100k per year I think its very affordable. Its benefits really outweigh the costs. Please keep the shark net

[Reply](#)

Do you agree?  1  0 [Share](#)

LoZ, 1 day ago

Removed by moderator - the comment failed to respect other users. Please refer to moderation rules

Tara Bennett, 4 days ago

[Alert moderator](#)

Please keep the shark net, my family and I have been going there over the last three years and only there. It's the only place where we will swim in the sea. If you take it away, we will not enter the ocean again. I have even encouraged my friends from Cottesloe, Warwick and other areas to meet me at Coogee beach to swim. We love it, please don't take it away. I have also posted it on Instagram and Facebook and the feedback has been fantastic. Regards, the Bennett family from Winthrop. You can contact me on 0419785538 if you need any more support. Thank you

[Reply](#)

Do you agree?  1  0 [Share](#)

triple gees, 5 days ago

[Alert moderator](#)

it makes me feel safer

[Reply](#)

Do you agree?  0  0 [Share](#)

harcourt, 5 days ago

[Alert moderator](#)

Shark barrier should definitely stay it provides confidence for swimmers that they will not be attacked by sharks..Further there has been an increase in the number of sightings of Great White sharks and because no culling of these sharks, it is more important that the Barrier stays permanently.

[Reply](#)

Do you agree?  0  0 [Share](#)

CaptCol, 6 days ago

[Alert moderator](#)

The shark barrier has quickly become an attraction pulling more of the public to the beach from surrounding suburbs, which is positive. However more needs to be done to make the area a precinct with public/ private development along cockburn road, and lifestyle activities for kids and family on or near the beach.

[Reply](#)

Do you agree?  0  0 [Share](#)

Lifhendil, 6 days ago

[Alert moderator](#)

Though the risk of shark attack is extremely low, giving people confidence and choice via low impact installations such as this is a good thing. Please keep the barrier.

[Reply](#)

Do you agree?  1  0 [Share](#)

Chris Burton, 7 days ago

[Alert moderator](#)

The concept of the shark barrier is excellent, if the trial has been completed then the council should go to tender for either lease or purchase of a barrier. Now that there are two WA companies providing this product and one of those companies that is based in Bibra Lake and has its manufacturing plant in Yangebup should be given the opportunity as well as the original provider. All things being equal the Eco Barrier should be a very low cost option as they have received funding annually for it. Either way a commercial tender should be placed to keep this great part of the Coogee Beach

[Reply](#)

Do you agree?  1  0 [Share](#)

Deanna Raffa, 7 days ago

[Alert moderator](#)

Plse let it stay ...it protects us all swimming and using the barrier and fish and sharks wont get harmed ....their in their own environment thankyou for this service



Nelly, 7 days ago

[Alert moderator](#)

We have purchased vacant land in a new estate in Coogee believing the shark net was there to stay. We won't enter the water (along with our young boy) unless we're at Coogee Beach with the shark net. Keeping the net will continue to attract locals & others from afar that need the feeling of safety when swimming at our beautiful beaches.

[Reply](#)

Do you agree?  0  0 [Share](#)

southernpreacher, 7 days ago

[Alert moderator](#)

The shark barrier is now such an iconic part of Coogee beach and as a cousin of two youngsters, I strongly believe this safety net should stay for future years. 3 years ago when the shark net arrived I thought it was such a great idea and it was even more iconic as the south were the first to have it in WA. Please keep the shark net for the safety of our community and for the relaxation and comfort of others. :)

[Reply](#)

Do you agree?  0  0 [Share](#)

GazzaGlen, 7 days ago

[Alert moderator](#)

A definite yes. Coogee is a beautiful beach and it is awesome to see so many people enjoy being there.

[Reply](#)

Do you agree?  0  0 [Share](#)

Derek, 7 days ago

[Alert moderator](#)

My wife and I use the shark barrier regularly every summer and would not swim in the ocean without it. Please continue it!

[Reply](#)

Do you agree?  0  0 [Share](#)

mdoswell, 7 days ago

[Alert moderator](#)

This is a safety feature why remove it? Let's keep the beaches safe for all to enjoy. Prevention is best!

[Reply](#)

Do you agree?  0  0 [Share](#)

Bex1974, 7 days ago

[Alert moderator](#)

Coogee beach is the only place my family and I swim at in Perth purely because of the shark net. It seems like a no-brainer - keep the net and then install more in WA!

LizC, 7 days ago

[Alert moderator](#)

Please keep the shark barrier! I feel so much safer & regularly travel to Coogee to swim on this beach!

**Reply**

Do you agree?  0  0 [Share](#)

Bonnie Bigfoot, 7 days ago

[Alert moderator](#)

Dear Cockburn Council, the barrier is WONDERFUL. I have travelled from Vic Park every week since October to swim and plan to continue through winter as long as I can. It is a superb resource, and I echo many of the comments already posted. It is SO GOOD to feel safe in the water. I've had to get out of the water at Cottesloe during a race due to a shark sighting and that really "put the wind up me"..... I too would be very happy to contribute to crowd funding to maintain this fabulous facility. PLEASE don't let funding be a reason to remove it. I also believe it would be a very good state government investment.

**Reply**

Do you agree?  0  0 [Share](#)

Pam, 7 days ago

[Alert moderator](#)

Please keep the shark barrier.

**Reply**

Do you agree?  0  0 [Share](#)

WAM64, 7 days ago

[Alert moderator](#)

Although I swam there frequently in the 60s and 70s without any barrier, it was reassuring on a visit recently on an empty coogee, to use the barrier. We should be in harmony with our great ocean, not fighting it. Please keep the barrier!

**Reply**

Do you agree?  0  0 [Share](#)

Katie, 7 days ago

[Alert moderator](#)

Having just moved back from Darwin, where swimming in the ocean is not an option, the shark net is of great value to the city of cockburn. Beach life has changed since the loss of Ken Crew. Let our kids continue to enjoy beach life without having to be anxious.

Emma, 7 days ago

[Alert moderator](#)

I love it. I swim train all summer in the sharknet and feel safe doing so. The kids love it, and are also starting to train in the sharknet. Visiting the beach during the summer months it is very obvious that the shark barrier is very popular with families.

**Reply**

Do you agree?  0  0 [Share](#)

Duck, 7 days ago

[Alert moderator](#)

It should definitely stay and others should be looked at.

**Reply**

Do you agree?  0  0 [Share](#)

Joffa, 7 days ago

[Alert moderator](#)

No brainer. It is fantastic and should stay.

**Reply**

Do you agree?  0  0 [Share](#)

fran2444, 7 days ago

[Alert moderator](#)

I cannot think of one reason why it shouldn't stay. There should be more of them.

**Reply**

Do you agree?  0  0 [Share](#)

Sloane, 7 days ago

[Alert moderator](#)

Please keep our Shark Barrier at Coogee - use it, love it!!

**Reply**

Do you agree?  0  0 [Share](#)

Cuts, 7 days ago

[Alert moderator](#)

Yes, with 4 grandkids its a safer feeling having it, than not.

Mike23, 7 days ago

[Alert moderator](#)

Keep it, we use the beach all the time. We only go there with the kids.

[Reply](#)

Do you agree?  0  0 [Share](#)

CB, 7 days ago

[Alert moderator](#)

As a local resident, I think its a great facility. I'd use the beach less if it wasn't there.

[Reply](#)

Do you agree?  0  0 [Share](#)

Trev Sanders, 7 days ago

[Alert moderator](#)

It encourages people to swim in the ocean when otherwise they wouldn't..the health benefit of that to the community is priceless..

[Reply](#)

Do you agree?  0  0 [Share](#)

Marina, 8 days ago

[Alert moderator](#)

1000% must stay!!!please keep this at Coogee to provide safety.

[Reply](#)

Do you agree?  0  0 [Share](#)

DebG, 8 days ago

[Alert moderator](#)

Love itWe feel safe with the barrierExcellent for swim class too

[Reply](#)

Do you agree?  0  0 [Share](#)

Antonio, 8 days ago

[Alert moderator](#)

keep please it is great !



Marion Mc Manus, 8 days ago

[Alert moderator](#)

So many more people are coming to coogee due to the shark net as feel safer and able to swim with the children and feel at ease while enjoying ourselves please keep the shark net xx

[Reply](#) Do you agree?  0  0 [Share](#)

Karyn, 8 days ago

[Alert moderator](#)

I would really like the barrier to stay. Feels safe.

[Reply](#) Do you agree?  0  0 [Share](#)

R8chiekay, 8 days ago

[Alert moderator](#)

Yes please keep this at Coogee to provide safety for all thanks

[Reply](#) Do you agree?  0  0 [Share](#)

Olsson, 8 days ago

[Alert moderator](#)



Feel safe swimming here, if this wasn't in place I would not swim here.

[Reply](#) Do you agree?  0  0 [Share](#)

Maxi, 8 days ago

[Alert moderator](#)

The net is awesome, please keep it in place

[Reply](#) Do you agree?  0  0 [Share](#)

Blm, 8 days ago

[Alert moderator](#)

Stay please

Barbs Shackelford, 8 days ago

[Alert moderator](#)

I luv it, people and kids can swim there any time and feel and secure.

**Reply**

Do you agree?  0  0 [Share](#)

Vic, 8 days ago

[Alert moderator](#)

Keep the net please!

**Reply**

Do you agree?  0  0 [Share](#)

WickedWenchFan, 8 days ago

[Alert moderator](#)

Absolutely brilliant product. Love the fish it has attracted. All completely safe. My wife was terrified of going in the ocean, but now we drive down to Coogee every hot sunny day so she can swim in the ocean without having a panic attack

**Reply**

Do you agree?  0  0 [Share](#)

Nell, 8 days ago

[Alert moderator](#)

Absoloutley should stay. I love the ocean and the net makes me feel safe. Please keep it

**Reply**

Do you agree?  0  0 [Share](#)

Db, 8 days ago

[Alert moderator](#)

Yes yes yes! Barrier should stay then we can all enjoy the ocean in safety.

**Reply**

Do you agree?  0  0 [Share](#)

T.Power, 8 days ago

[Alert moderator](#)

Yes. The shark net is massively positive

Sophia Marie, 8 days ago

[Alert moderator](#)

Please keep the Eco Shark Barrier installed. People love swimming within the Barrier as it gives peace of mind. Marine life have made the Barrier their home. It also gives people an opportunity to snorkel and see the marine life that lives there. Seeing schools of fish and the big Bat Fish are my favourites. The Eco Shark Barrier is a tourist attraction and helps pump revenue into the area. Don't take that away for so many who benefit from the Barrier being there.

[Reply](#)

Do you agree?  0  0 [Share](#)

dal, 9 days ago

[Alert moderator](#)

We strongly support the retention of the shark net barrier. The system creates a safe and effective place to swim in the ocean unperturbed. I swim there whenever I can and have noted a progressive increase in its use for both swimmers as well as general beachgoers in the area. We need more of these along our coast.. Far cheaper and more effective than many other so called deterrents.

[Reply](#)

Do you agree?  0  0 [Share](#)

Penny Shaw, 9 days ago

[Alert moderator](#)

I love it. Great to swim in the ocean without the constant worry. Please keep it.

[Reply](#)

Do you agree?  0  0 [Share](#)

RobH, 10 days ago

[Alert moderator](#)

This is a no brainer. Lots of people, including me at a couple of times per week traveling to the beach to enjoy the security, the facility and the local businesses creates a much better environment than that with all the protests about alternative methods of protection for water users. The cost would be a fraction of that consumed with helicopter surveillance and I expect the effectiveness would be significantly higher. I'm not a ratepayer but would be willing to put my hand in my pocket for this. Time to lean on the State Government for funding.

[Reply](#)

Do you agree?  0  0 [Share](#)

Shark barrier supporter, 10 days ago

[Alert moderator](#)

Yes it should stay; it is safe, clean, it encourages families to enjoy the sunshine Perth has to offer in complete comfort and safety. if a petition is needed then send it out to the hundreds of people who enjoy their beach

JacquiR, 10 days ago

[Alert moderator](#)

Not only should it stay but we should have more of them at WA beaches. Best option currently available to offer a sense of safety and enjoyable swimming in the ocean - we love it! Please keep it.

[Reply](#)

Do you agree?  0  0 [Share](#)

susigal, 10 days ago

[Alert moderator](#)

I come from East Fremantle to swim safely in the ocean, please keep the barrier.

[Reply](#)

Do you agree?  0  0 [Share](#)

Kinja, 11 days ago

[Alert moderator](#)

I use and approve of the shark barrier & absolutely vote for it to stay. I hope additional shark barriers are introduced at other Perth beaches

[Reply](#)

Do you agree?  0  0 [Share](#)

Sharon, 12 days ago

[Alert moderator](#)

Absolutely to remain! My family, friends and I never ventured to the beach very often, however now with the added safety of the net we are weekly sometimes twice weekly visitors and I now use for my swim training and love it. A great way to share our beautiful ocean with nature but in a safe environment for all.

[Reply](#)

Do you agree?  0  0 [Share](#)

Dee, 12 days ago

[Alert moderator](#)

Best place to swim in Perth please keep it.

[Reply](#)

Do you agree?  0  0 [Share](#)



Thomas, 12 days ago

[Alert moderator](#)

The only place I'll swim around Perth, 100% support it remaining and great to see it becoming increasingly popular with families and kids.

[Reply](#)

Do you agree?  0  0 [Share](#)

Jadess, 12 days ago

[Alert moderator](#)

Absolutely, you only have to go down there once in summer to see how many people utilise the swimming space and what a success it is. Living locally and using the beach regularly, its always busy and a very popular place for families. With all the talk of safety measure and preventing shark attacks why wouldn't you keep this incredible structure that not only provides a safe swimming space but is also environmentally friendly and therefore doesn't have a negative effect on the marine environment as other options (drum lines) have. In fact why wouldn't the government look to funding more safe swimming spaces like this.

[Reply](#)

Do you agree?  0  0 [Share](#)

Belts1974, 12 days ago

[Alert moderator](#)

Definitely as it encourages more people to get out in the fresh air and go swimming. Our school held swimming lessons in the shark net and there were kids 9yrs + who had not been to the beach before able to experience it.

[Reply](#)

Do you agree?  0  0 [Share](#)

rob db, 12 days ago

[Alert moderator](#)

Yes it is a wonderful asset to the city. State government funding should also be sought. Also this area of the beach should have some sensitive development to allow some cafe/restaurants with direct access and views of the beach.

[Reply](#)

Do you agree?  0  0 [Share](#)

leslie, 12 days ago

[Alert moderator](#)

IF the Liberal government provided funding for 2 shark barriers north of the river when they were in office last year while rate payers of Cockburn pay for leasing theirs,will the labor government now fund Cockburns?

[Reply](#)

Do you agree?  0  0 [Share](#)

Sd123, 12 days ago

[Alert moderator](#)

Yes it definitely needs to stay in feel so safe now.

[Reply](#)

Do you agree?  0  0 [Share](#)

Fifi, 12 days ago

[Alert moderator](#)

Yes it should definitely stay especially as we have had a number of sharks coming into shore recently

[Reply](#)

Do you agree?  0  0 [Share](#)

Ash, 12 days ago

[Alert moderator](#)

I travel from Morley to meet a friend who travels from Rockingham to swim in the net . Coffee afterwards.  
Excellent safe environment for a swim .

[Reply](#)

Do you agree?  0  0 [Share](#)

Jo Brown, 12 days ago

[Alert moderator](#)

I travel to Perth a couple of times a year and I always swim in the Barrier!! I cannot believe the rest of Perth beaches don't do it and I cannot believe it may be going!! It is the answer for all West Australians to swim and enjoy your magnificent beaches!! Come on guys keep it going I take my hat off to you local council guys for putting it in!! Don't take the biggest enjoyment away from your people !!


[Reply](#)

Do you agree?  0  0 [Share](#)

Heather Ab, 12 days ago

[Alert moderator](#)



It's A fantastic use of resources that promotes health and wellbeing within the local community at the same time protecting the beautiful creatures of the ocean, allowing us to share the ocean without fear. You've created a sense of security for the less adventurous encouraged thousands to experience the joy of swimming freely in the ocean, would be unfear to take it away now. It was a brilliant idea that's been very successful.

[Reply](#)  0  0 [Share](#)

Janet Mears, 12 days ago

[Alert moderator](#)

Yes there is a lot more people in the area now, and if it keeps them safe, from just one shark, then it done its job. As most people know sharks like feeding in the early morning, and for most people in summer may only get time to swim before work. Also the same for the evening, Sharks also feed at night, people would be more confident to swim after work if the barrier is up, saying the city a lot more money, because we all know that swimming in the ocean is healthier for you than most other alternatives. Also small kiddies can learn to swim with confidence in the shark barrier. Not sure if it also helps with jelly fish stingers, cause they also hurt so much. If you have not already quested my sisters and I grew up swimming at Coogee Beach, we go there every Boxing Day for a family reunion. They have so many activities on this beach. Would like it to stay.

[Reply](#) Do you agree?  0  0 [Share](#)

Dmcgrath, 13 days ago

[Alert moderator](#)



It must stay. My family and I use it all year round.

[Reply](#) Do you agree?  0  0 [Share](#)

Tara Walsh, 13 days ago

[Alert moderator](#)



Yes most definetly please leave it in place

[Reply](#) Do you agree?  0  0 [Share](#)

Ann, 13 days ago

[Alert moderator](#)

Yes please keep the net. It is a great place to swim safely and myself and our triathlon group love using it.

[Reply](#) Do you agree?  0  0 [Share](#)

Mundi, 13 days ago

[Alert moderator](#)

Definitely stay. Whilst we don't have sharks at Coogee it offers fantastic peace of mind and not to mention the amount of additional visitors to our beach. Great place to be.

[Reply](#) Do you agree?  0  0 [Share](#)

suzy63, 13 days ago

[Alert moderator](#)

Yes please please leave it !! I only go swimming at the beach because of the Shark Barrier being there . I would be so disappointed if it was taken down as i won't be able to swim to at Coogee beach anymore as I will only swim with a barrier.

[Reply](#)

Do you agree?  0  0 [Share](#)

Leon, 13 days ago

[Alert moderator](#)

Yes stay please

[Reply](#)

Do you agree?  0  0 [Share](#)

ironmandreamer, 13 days ago

[Alert moderator](#)

The Eco-Barrier provides a safe swimming environment not just from the slim chance of a shark but for less competent and experienced swimmers the barrier keeps you within a safe distance from the shoreline whilst offering something to hold onto should someone find themselves in trouble. The money spent by Council is well spent.

[Reply](#)

Do you agree?  0  0 [Share](#)

Marleegem, 13 days ago

[Alert moderator](#)

I often bring visitors to snorkel the barrier.. it's become quite a marine attraction with peace of mind. Not only does it need to stay but the barrier system should be used to replace the destructive, pointless netting systems all over the country!

[Reply](#)

Do you agree?  0  0 [Share](#)

Marlene Anderson, 13 days ago

[Alert moderator](#)

Yes - this is a no brainier. Such a safe place to swim. As a regular swimmer at Coogee I believe it should stay. Surely the state government can contribute some cash to help cover costs.



Dale, 13 days ago

[Alert moderator](#)

Barrier is excellent keep it please

[Reply](#)

Do you agree?  0  0 [Share](#)

Dolsson, 13 days ago

[Alert moderator](#)

Since it's inception this has greatly improved our experience at Coogee beach, to the point that our swimming group of up to 10 people swims here over summer in the mornings instead of in a pool. With the barrier in place, we are confident swimming here in all conditions now, whereas previously we only swam at Coogee on the odd occasion and avoided salmon season. We regularly follow our swims with breakfast or coffee at either of the local cafes along with many others that use the net. We would like to see it remain

[Reply](#)

Do you agree?  0  0 [Share](#)

Rebekah17, 13 days ago

[Alert moderator](#)

Yes please it should stay. My family have used the beach more since this was installed. It provides peace of mind to us to enjoy the water and beach as a family. Thank you

[Reply](#)

Do you agree?  0  0 [Share](#)

Albís, 13 days ago

[Alert moderator](#)

I have swam in the shark barrier and many times when it is still dark. Most members of the Freo TriClub swim here as well (many members like myself are Cockburn residents), and many other people. It gives us confidence to go in the water at any time without having to worry about being attacked. And when you get closer to the barrier you can see the fish swimming around without issues so it looks safe for them. At the end of the day, is the life of a father, a mother or a child worth 100k? I want to think we all agree that we can't put a price to our lives and safety, so unless there is a much better option available a lower cost then there is no much to discuss, the barrier need to stay.

Mxcd, 13 days ago

[Alert moderator](#)

Cockburn resident (so I guess my rates go to this) and it's fantastic, actually a contributing factor of moving to Cockburn. As some have mentioned \$100k a year was a cost three years ago, has his changed, can it be bought? Trial has been a success.

**Reply**

Do you agree?  0  0 [Share](#)

Ron Richards, 13 days ago

[Alert moderator](#)

Coogee shark barrier is a precious part of my life now. I train for triathlons with EFS Triathlon squad and we swim there every Saturday throughout the year, as well as other days. Prior to your barrier we were severely restricted to pool swimming only which does not really prepare us for open water events.

**Reply**



Do you agree?  0  0 [Share](#)

Dani, 13 days ago

[Alert moderator](#)

My husband and I drive 40 minutes and pass many Perth beaches just to swim at Coogee for two reasons: The Shark Net and the protected beach (due to Garden Island). At times we will have something from the local café so I believe it increases traffic to Coogee and revenue for local business owners.

**Reply**

Do you agree?  0  0 [Share](#)

Naomi1, 13 days ago

[Alert moderator](#)

Please, please keep it! I love swimming in the ocean but only do so in a shark barrier due to the shark attacks

**Reply**



Do you agree?  0  0 [Share](#)

CFC, 13 days ago

[Alert moderator](#)

Stay, absolutely: a shining example

**Reply**

Do you agree?  0  0 [Share](#)

K, 13 days ago

[Alert moderator](#)

I have really enjoyed the use of the shark net for open water swim training for triathlon. I feel much more comfortable and safe swimming the 300m length there than anywhere else in the coast without a net. I only wish there was another closer to home! I come from Bicton to use it. Please keep it!!

**Reply**

Do you agree?  0  0 [Share](#)

Zdenka, 13 days ago

[Alert moderator](#)

Absolutely necessary! Cannot imagine the Coogee beach without it. We are enjoying swimming much more now, without being stressed out about possible danger of shark attacks. Every summer it has been attracting more and more swimmers, especially families with small children. It should be used at other Perth beaches.

**Reply**

Do you agree?  0  0 [Share](#)

Brendon, 13 days ago

[Alert moderator](#)

As a Cockburn resident, I am very happy for my rates to go towards keeping the barrier. I use it many times throughout summer, autumn a spring for swimming training.

**Reply**

Do you agree?  0  0 [Share](#)

Spongeanj, 13 days ago

[Alert moderator](#)

Please keep it, Coogee is the only beach I feel comfortable and safe to swim in open water around Perth. If possible, please install more of them in the greaterperth area.

**Reply**

Do you agree?  0  0 [Share](#)

Reed, 13 days ago

[Alert moderator](#)

We travel from Fremantle to Coogee every beach trip! I don't understand why we don't have this available at every popular beach along the coast!! Please keep it :)

**Reply**

Do you agree?  0  0 [Share](#)

Liminal, 13 days ago

[Alert moderator](#)

This shark barrier has started and kept me swimming in the ocean. Please vote to keep this amazing community resource

[Reply](#)

Do you agree?  0  0 [Share](#)

Jools, 13 days ago

[Alert moderator](#)

Absolutely it should stay

[Reply](#)

Do you agree?  0  0 [Share](#)

fraulemeow, 13 days ago

[Alert moderator](#)

As a new swimmer in the ocean I will purposely travel to Coogee beach so that I know I will be safe from sharks. It is their environment and creating separation between us and them is the responsible action. Without it I would be more hesitant to swim in the ocean.

[Reply](#)

Do you agree?  0  0 [Share](#)

Edward, 13 days ago

[Alert moderator](#)

Yes it should stay for good! I've been swimming in the barrier all summer and even on warm winter days. It gives the beachgoer an anxiety free safe environment especially for kids and parents

[Reply](#)

Do you agree?  0  0 [Share](#)

, 13 days ago

[Alert moderator](#)

Please keep- the net encourages more exercise in an aging population

[Reply](#)

Do you agree?  0  0 [Share](#)

Perth Triathlon Club, 13 days ago

[Alert moderator](#)

Being a triathlon group, we need to practice our open water swimming on a regular basis. We swim there as a group a number of times during the year, and our open water swims within the barrier are becoming more popular. Furthermore, we come from all over Perth (many from the northern / western suburbs) and then also visit one of the local cafes for coffee / breakfast - so it is also attracting non locals to the area..



freoishome, 13 days ago

[Alert moderator](#)

I have used the beach for many years. Since the installation I have seen the general usage of the whole beach increase. More regular swimmers wanting to be better swimmers, but also more families, more tourists, more walkers, more waders, lots of school groups. I think this is one the best things to happen at Coogee. Even better that a local family have risked everything with their invention, now being copied (unfortunately) by others.

**Reply**

Do you agree?  0  0 [Share](#)

Lelu, 13 days ago

[Alert moderator](#)

Definitely stay, my partner won't go in with kids without it as he can only get there at dusk

**Reply**

Do you agree?  0  0 [Share](#)

CMartin, 13 days ago

[Alert moderator](#)

I think it should stay. I swim there several times a week and drive specifically to Coogee because of the net. Would the council consider some form of crowdfunding where eager users can contribute a small amount each to help reduce the capital cost and make it a permanent fixture?

**Reply**

Do you agree?  0  0 [Share](#)

CHill, 13 days ago

[Alert moderator](#)

Have enjoyed swimming laps in the net many times and it makes coming to the beach more enjoyable for people who fear sharks and who have young children.

**Reply**

Do you agree?  0  0 [Share](#)

Julie Hopkins., 13 days ago

[Alert moderator](#)

I live at South Beach ,but drive to Coogee as I love feeling safe from sharks as I exercise in the Coogee barrier.Please keep the barrier .It is wonderful.My husband also uses it and we are also rate papers of the City of Cockburn

Damo, 13 days ago

[Alert moderator](#)

Please keep it. As a diver, shark conservationist and resident of the City of Cockburn, I welcome any non lethal method to keeping sharks out of public swimming areas.

[Reply](#)

Do you agree?  0  0 [Share](#)

Minty, 14 days ago

[Alert moderator](#)

Please keep it there forever! It's the the only beach we ever go too and the main reason why we built our home in the area.

[Reply](#)

Do you agree?  0  0 [Share](#)

DAVE FRANCIS, 14 days ago

[Alert moderator](#)

Have you completed the lease v purchase options? I know you maybe short of capital but the \$100k a year seems excessive.

[Reply](#)

Do you agree?  0  1 [Share](#)

WendyF, 14 days ago

[Alert moderator](#)

Please keep the shark net. It is the one beach where I feel safe enough to swim at. However, at \$100,000 a year there must be a more cost effective way to keep the net other than leasing it. Does the lease also include maintenance costs? How much would it cost to purchase and maintain it?

[Reply](#)

Do you agree?  0  0 [Share](#)

Ellen, 14 days ago

[Alert moderator](#)

This is fantastic addition to the beach, and is a great drawcard. Always packed in summer, people feel safe taking their kids there too. It should definetly stay!



[Reply](#)

Do you agree?  0  0 [Share](#)

LJB, 14 days ago

[Alert moderator](#)

Please keep it, it makes me feel secure about sending my 9yo son into the ocean for swimming lessons at coogee beach every summer. Fortunately for us we do not live far from this beach and go there for swimming just because it has the net. Otherwise we probably wouldn't go to the beach at all.

[Reply](#) Do you agree?  0  0 [Share](#)

Fazbow, 14 days ago

[Alert moderator](#)

Yes absolutely!! My family would never swim at the beach without it and the kids would not do beach swimming lessons. As a real estate agent I have found it to be a great selling feature for the City if Cockburn too.

[Reply](#) Do you agree?  0  0 [Share](#)

cd, 14 days ago

[Alert moderator](#)



Would have preferred a third voting option - Coogee Beach should continue to have a shark barrier but, given that the initial trial was set up 3 years ago, the Council should investigate if a more cost effective product is available.

[Reply](#) Do you agree?  1  0 [Hide replies \(2\) ^](#) [Share](#)

Lee-Anne Smith, 14 days ago

[Alert moderator](#)

Notes

[Reply](#) Do you agree?  0  0 [Share](#)

Lee-Anne Smith, 14 days ago

[Alert moderator](#)

I meant noted

[Reply](#) Do you agree?  0  0 [Share](#)

Lynne, 14 days ago

[Alert moderator](#)

My friend and i swim in the net all year round. We would be devastated if you remove it, particularly with that recent shark sighting adjacent to the net. Also recent footage of a shark a couple of metres from the shore line in Swanbourne is disconcerting.

Jay, 14 days ago

[Alert moderator](#)

I remember not too long ago going for a lap of the shark net one afternoon and returning home to a dorsal report of a shark just outside the net. It probably stopped me from an encounter and is worth its weight in gold.

[Reply](#) Do you agree?  0  0 [Share](#)

lachlan220, 14 days ago

[Alert moderator](#)

Great investment of the city and an absolute draw for visitors. Works really well and gives me a lot of confidence especially swimming in low light conditions and at dusk or dawn which are great times to swim especially around a busy schedule with work. One of the best pieces of infrastructure to have for leisure and really puts Cockburn on the map.

[Reply](#) Do you agree?  0  0 [Share](#)

Peter M, 14 days ago

[Alert moderator](#)



We swim all year at Coogee beach and during the colder months we swim in the shark barrier and feel safe. It would be a shame to remove as it has its own Eco system of sea life swimming around the barrier.

[Reply](#) Do you agree?  0  0 [Share](#)

JussyB, 14 days ago

[Alert moderator](#)

I agree that State Govt should assist with funding. I travel from Bayswater/Mt Lawey to swim in a very safe location. I will not swim at City Beach or Cottesloe ever again.

[Reply](#) Do you agree?  0  0 [Share](#)

SC, 14 days ago

[Alert moderator](#)

Stay please! Love the barrier



Nath, 14 days ago

[Alert moderator](#)

Great for families and swimmers alike. All City Beaches should have one of these installed.

**Reply**

Do you agree?  0  0 [Share](#)

Vang, 14 days ago

[Alert moderator](#)

Stay please !!! This is the only beach where I can swim with no worries of having sharks around.

**Reply**

Do you agree?  0  0 [Share](#)

Trisha Flintoff, 14 days ago

[Alert moderator](#)

Yes definitely it should stay everyone feels safe swimming there ALL YEAR ROUND !!!

**Reply**

Do you agree?  0  0 [Share](#)

nmmfg, 14 days ago

[Alert moderator](#)

Stay!!!!

**Reply**

Do you agree?  0  0 [Share](#)

Nat, 14 days ago

[Alert moderator](#)

I definitely think it should stay. My children and I have gone to the beach so much more than we usually do, as we feel safe having the shark net at Coogee Beach.

**Reply**

Do you agree?  1  0 [Share](#)

MATT, 14 days ago

[Alert moderator](#)

It should definitely stay. It's a great spot to swim without the thought of a great big white pointer taking a test bit of me, without the need to deploy drum lines or other silly ideas.

Ronda, 14 days ago

[Alert moderator](#)

Yes, it should stay. I am one of those people who travels from Carlisle to Coogee quite often just to swim within the barrier. I was never an ocean user before partly because I was afraid of sharks. Having the barrier has given me more confidence to swim in the ocean and this was where I had my very first snorkel.

**Reply**

Do you agree?  0  0 [Share](#)

Neetz, 14 days ago

[Alert moderator](#)

Yes, but find the lease cost shocking! How is that justified? Will Cockburn have to start charging for its use soon? It is bloody good for business locally.

**Reply**

Do you agree?  0  0 [Share](#)

Loopycow, 14 days ago

[Alert moderator](#)

Has there been consideration around who could support funding. E.g. state government. It is not just Cockburn residents that use it.

**Reply**

Do you agree?  0  0 [Share](#)

Trish, 14 days ago

[Alert moderator](#)

We would like it to stay great for us that like to walk in the water & for those doing laps.

**Reply**

Do you agree?  0  0 [Share](#)

Richo, 14 days ago

[Alert moderator](#)

This is a great asset in a good location which our club uses all year round to help prepare for local and international races.

Darren P, 14 days ago

[Alert moderator](#)

Buy it - no brainer. It's a great asset for the community and social return on investment. I use it to swim laps once a week and it certainly differentiates our great beaches.

[Reply](#)

Do you agree?  0  0 [Share](#)

CT, 14 days ago

[Alert moderator](#)

Absolutely. The government and council need to provide safe swimming areas for residents. This has been a huge success for families with small children, the beaches were packed within that area last summer. Giving people peace of mind and the ability to relax and enjoy our beautiful coastline is a must!

[Reply](#)

Do you agree?  1  0 [Share](#)

Cindy Goodwin, 14 days ago

[Alert moderator](#)

Yes! It has been so nice to be able to swim without any concerns for my safety. Without the barrier I stayed close to shore and paddled about. Now I snorkel the circumference admiring the amazing marine life that has now called it home. The barrier has become a nursery to small fish which in turn are growing in numbers due to being protected. Please keep the barrier! Create a bigger cafe and you will make your money back!

[Reply](#)

Do you agree?  0  0 [Share](#)

NC, 14 days ago

[Alert moderator](#)

Yes it should stay. Great for lap swimming with peace of mind, and also nice knowing the distance swum.

[Reply](#)

Do you agree?  0  0 [Share](#)

, 14 days ago


[Alert moderator](#)

I will be 70 next year and I drive there to use the barrier

Sharon Janssen, 14 days ago

[Alert moderator](#)

Definitely! In this day and age where the public are crying out for more shark protection measures, why would you even consider taking it away. This was one of the major considerations when we bought into the area. We wanted to be somewhere where the kids could enjoy the beach in a safe environment.

[Reply](#) Do you agree?  0  0 [Share](#)

lisa-jay, 14 days ago

[Alert moderator](#)

I travel with my children and all my family and friends visiting from overseas to swim at this beach. We are in Quinn's Rocks! Its a big day trip so we spend a small fortune at the local café while we are there. We have learnt to snorkel here and learnt to love the Ocean. Would be a great loss to so many people if it were removed.

[Reply](#) Do you agree?  1  0 [Share](#)

Gab, 14 days ago

[Alert moderator](#)



Peace of mind for children, elderly, visitors, everyone. Is it that hard for the city to own one or get one made seems a lot of money to just lease.

[Reply](#) Do you agree?  0  0 [Share](#)

Matt H, 14 days ago

[Alert moderator](#)

Don't lease it. Buy it and make it permanent. Possibly revise the location but not the existence of it.

[Reply](#) Do you agree?  1  0 [Share](#)

Correna, 14 days ago

[Alert moderator](#)

Please please please keep it. Its the only beach I will swim at now.

[Reply](#) Do you agree?  1  0 [Share](#)

hendo, 14 days ago

[Alert moderator](#)

why would you take it away when new barriers are being put in up and down the coast cockburn showed the way and now others are following



Damasxus, 14 days ago

[Alert moderator](#)

It should stay, but would it be more cost effective to buy it instead of leasing it?

[Reply](#)

Do you agree?  0  0 [Share](#)

JB, 14 days ago

[Alert moderator](#)

Yes it should definitely stay! My family and friends will drive to Coogee from Canning Vale just to use the shark net as it provides a safe area for people of all ages and swimming abilities. I think it's a great investment and that there should be more beaches with the eco shark nets in WA as they are safer for the sealife as well.

[Reply](#)

Do you agree?  1  0 [Share](#)

Claire Hall, 14 days ago

[Alert moderator](#)

This is an extremely popular beach and if you were to survey where most people swim or young children play, it is within the shark net. Surely this fact alone shows the majority of the public prefer using the ocean within the net, even if they are unable to share their views on a forum.

[Reply](#)

Do you agree?  1  0 [Share](#)

Marsbarqueen, 14 days ago

[Alert moderator](#)

Keep it.

[Reply](#)

Do you agree?  1  0 [Share](#)

Ebelio, 14 days ago

[Alert moderator](#)

I also urge the city council to keep the barrier. One of the reasons we go to Coogee Beach is because of the barrier.

Alex Green, 14 days ago

[Alert moderator](#)

I urge the City of Cockburn to keep the Eco Shark Barrier at Coogee Beach as it has brought the love of visiting the beach and swimming back to my family and I. Knowing that we can go into the water and be totally safe is extremely important. I love that the barrier is eco friendly not only to the environment, but also to the sea life and a much better alternative to drum lines and nets, which are not as financially sustainable and do so much harm to our marine ecosystems. The City are often ahead of the other Councils in WA and I hope that you continue the use of the barrier as other Councils may then follow your lead and also have the barriers installed so that more beaches are safely accessible to us all.

[Reply](#)

Do you agree?  1  0 [Share](#)

Amber, 14 days ago

[Alert moderator](#)

I drive to this beach specifically because of the shark barrier. It brings me into Cockburn, and I spend money at its local café and other shops on the way so I believe it is an asset to this council.

[Reply](#)

Do you agree?  1  0 [Share](#)



**Annette McGovern** shared City of Cockburn's photo to the group: Cockburn Chat.

May 31 at 4:37pm · 🌐

Who wants this to stay?! Me!!! 🐬🐬

CLICK ON THE LINK and tell Council if you want this to stay!! 🐬

<https://www.facebook.com/CityOfCockburn/posts/1418689398177167:0>



**City of Cockburn**

May 31 at 4:33pm · 🌐

Should the City's Eco Shark Barrier stay or go? The three-year trial at Coogee Beach will end in November 2017, and we need your feedback on whether it should stay or go. Comment here: <http://bit.ly/2r9xKzX>

👍 49

48 Comments

👍 Like

💬 Comment




**Robert Micklewright** Does it work? If it does then, YES, it should stay.. 😊

Like · Reply · May 31 at 4:38pm



**Annette McGovern** I haven't been bitten yet 😄

Like · Reply · May 31 at 4:40pm

 **Robert Micklewright** Well that's a 100% success rate! 😊

Like · Reply · 1 · May 31 at 4:40pm

 **Steven Summerell** It is definately worth the money if council can upgrade parking there for summer!


Like · Reply · May 31 at 5:41pm · Edited

 **Kevin Allen** Very good point Steve

Like · Reply · 1 · May 31 at 7:07pm

 Write a reply...




 **Lara Kirkwood** This is a must! Everyone please ensure you click the link and comment. Not on here.... as it won't count.

Like · Reply · 3 · May 31 at 4:39pm

 **Helen Vincent** Please stay

Like · Reply · May 31 at 4:43pm

 **Helen Vincent** Please access the link and say yes

Like · Reply · May 31 at 4:45pm

 **Paulette Bebek** Definitely stay

Like · Reply · May 31 at 4:52pm

 **Annette McGovern** Please vote

Like · Reply · May 31 at 5:01pm

 **Paulette Bebek** Annette McGovern done

Like · Reply · 1 · May 31 at 5:56pm

 Write a reply...



 **Marie Wall** Please stay 🙏

Like · Reply · May 31 at 4:58pm

 **Annette McGovern** Please vote

Like · Reply · May 31 at 5:01pm

 **Marie Wall** Done 🌹

Like · Reply · 1 · May 31 at 6:09pm

 Write a reply...



 **Jo'Ann Morrison** Yes

Like · Reply · May 31 at 4:59pm

 **Annette McGovern** Please vote

Like · Reply · May 31 at 5:01pm

 Write a reply...



 **Ginny Brown** Stay,stay,stay

Like · Reply · May 31 at 4:50pm





**Annette McGovern** Please vote

Like · Reply · 1 · May 31 at 5:01pm



**Ginny Brown** Yep, just went to the link, Ive also shared 😊

Like · Reply · May 31 at 5:02pm



Write a reply...



**Tina Fowler** Voted !!! Yes definately must stay.

Like · Reply · May 31 at 5:22pm



**Lynn Gluyas** Stay for sure !!!

Everyone's happy then

Like · Reply · May 31 at 5:23pm



**Steven Summerell** I see there is a new cafe opening up soon there... should be nice!

Like · Reply · 1 · May 31 at 6:00pm · Edited



**Vicki Alexander** There was a sighting a couple of years ago actually. Gave us a hooer of a fright.

Like · Reply · May 31 at 5:41pm



**Ginny Brown** You dont look like much of a swimmer , we who like to swim laps in the ocean like to feel safe.....bit like a seatbelt in a car for you

Like · Reply · May 31 at 5:59pm



**Steven Summerell** How do you do laps of the ocean Jenny? You don't look like much of a swimmer! Maybe grandkids?

Like · Reply · 1 · May 31 at 6:05pm · Edited



**Ginny Brown** Usually from groyne to groyne. Its been nice having the net there to feel safe and to judge your distance

Like · Reply · May 31 at 6:04pm



**Ginny Brown** I am a swimmer actually lol

Like · Reply · May 31 at 6:27pm



**Steven Summerell** Me too but I don't need nets. I use my arms and legs HAHA

Like · Reply · 1 · May 31 at 6:39pm · Edited



Write a reply...



**Milka Danilovic** Stay stay stay

Like · Reply · 1 · May 31 at 5:55pm



**Tracey Hackett** Stay

Like · Reply · 1 · May 31 at 6:03pm





**Kevin Allen** Thanks for the support Annette. Whilst it took me 3 attempts to get this through council, the results speak for themselves. It's made going to the beach day or night a far more pleasant experience to residents. Kevin Allen

Like · Reply · 6 · May 31 at 6:19pm

^ Hide 14 Replies



**Lara Kirkwood** Can't agree more!

Like · Reply · 1 · May 31 at 6:20pm



**Maria Barcello** Stay ....

Like · Reply · May 31 at 6:29pm



**Maria Barcello** Done

Like · Reply · May 31 at 6:30pm



**John Di Tullio** Stay

Like · Reply · May 31 at 6:30pm



**Jodee Pereira** Stayyyyyyy

Like · Reply · May 31 at 6:46pm



**Jodee Pereira** done

Like · Reply · May 31 at 6:47pm



**Sheryl Arkell** Please stay. Keep it.

Like · Reply · May 31 at 6:47pm



**Heather Patrick** Stay

Like · Reply · May 31 at 6:56pm



**Jodie Russell** Stay

Like · Reply · May 31 at 6:57pm



**Matilda Dropulic** STAY

Like · Reply · May 31 at 7:02pm



**Marie Jarvis** Stay

Like · Reply · May 31 at 7:04pm



**Chrissie Burns** Stayyyyyy

Like · Reply · 1 · May 31 at 7:14pm



**Paulette Bebek** Make sure you vote ppl

Like · Reply · May 31 at 7:15pm



**Carminda De Gois Jardim** Stay

Like · Reply · May 31 at 7:27pm



**Ana Zoric** Done! Make sure you all click on the link and vote, not just comment!

Like · Reply · 2 · May 31 at 7:36pm



**Lisa Wilkinson** Remember to go to the above link and vote. I'm not sure if comments here would be included 😊

Like · Reply · May 31 at 7:50pm



**Miguel Angel Villasevil** Stay. Great place to keep fit and healthy swimming laps in there. It's our little own Bronte baths.

Like · Reply · May 31 at 7:55pm



**Katherine Weir** That's a no brainer, of course it should stay. I would never swim in the ocean unless there was a [shark barrier](#). What will become of it if they take it away?

Like · Reply · 1 · May 31 at 8:17pm



**Kristy Blair** Stay!!

Like · Reply · May 31 at 8:19pm



**Annette McGovern** Did you vote?

Like · Reply · 1 · May 31 at 9:49pm



**Kristy Blair** Sure did Annette. Thanks

Like · Reply · 1 · June 1 at 8:07am



Write a reply...



**Annette McGovern** Three attempts??? Jeez! What were the others thinking?!

Like · Reply · May 31 at 8:19pm



**Steven Summerell** Why did you get so much opposition Kevin? Were they worried it would affect the outer harbour plans?

Like · Reply · May 31 at 8:21pm



Write a reply...



**Kevin Allen** Well the mayor said sharks could jump over the [Barrier](#). Others said there had never been an attack so why install them, can you believe that???? Let's wait for it to happen and then we'll install them was the argument. Go figure

Like · Reply · 2 · May 31 at 8:22pm

^ Hide 22 Replies



**Annette McGovern** They'll jump over? 🙄

Like · Reply · May 31 at 8:24pm



**Kevin Allen** Yep he had seen it happen before

Like · Reply · May 31 at 8:25pm



**Annette McGovern** Kevin Allen well I'm glad they finally got overturned and it went ahead. That coastline is the jewel of Cockburn. That is the area that will attract international and interstate visitors and financial investment

Like · Reply · 1 · May 31 at 8:27pm · Edited



**Kevin Allen** I guess you need to be a water user to understand. I've sailed offshore for 30 years with rarely seeing a [shark](#), perhaps 4 in that time. However, in the past 3 years of fishing and mooring off Rotto I've seen many, including in Thompson's bay. You don't gamble peoples lives????

Like · Reply · 1 · May 31 at 8:29pm



**Lara Kirkwood** Was it in the movies Jaws?

Like · Reply · May 31 at 8:58pm



**Kevin Allen** No one of the grand kids was about to go for a swim when your mate "jaws" swam past. ever since I haven't swam to shore or if you go swimming someone has to be on deck. Sad but true Lara. I'm at Rotto every time I can get there

Like · Reply · May 31 at 9:02pm



**Lara Kirkwood** Kevin it's their home. However coming from South Africa where great white attacks are common. I think it's important to have [shark](#) nets.

Like · Reply · 1 · May 31 at 9:07pm



**Kevin Allen** Not nets Lara, barriers

Like · Reply · 1 · May 31 at 9:08pm



**Lara Kirkwood** Kevin nets have worked over East and in many other countries perfectly fine. They too create jobs and help with research. But I support the Eco [barrier](#) as well. I voted yes to keeping it.

Like · Reply · May 31 at 9:12pm



**Kevin Allen** Thank you Lara

Like · Reply · May 31 at 9:13pm





**Lisa Orton** Stay

Like · Reply · May 31 at 10:08pm



**Stephanie Bullock** Stay

Like · Reply · June 1 at 10:27am



**Giorgina de Freitas** Stayyyyyyy

Like · Reply · June 1 at 11:20am



**Casey Weaire** Stay

Like · Reply · June 1 at 3:45pm



**Sharelle Lund-jackson** Stay

Like · Reply · June 1 at 4:24pm



**Steven Summerell** Stay but needs more parking and better bus service from Cockburn Central

Like · Reply · June 1 at 4:27pm · Edited



**Lara Kirkwood** Steven more parking is planned for the coastal areas.

Like · Reply · 1 · June 1 at 4:29pm



**Steven Summerell** Also bus from Cockburn

Like · Reply · June 1 at 4:30pm



**Annette McGovern** Please comment on the Council link, so they see your comment

Like · Reply · 2 · June 1 at 4:31pm



Write a reply...



**Stephen Knight** Stay please

Like · Reply · June 1 at 10:38pm



**Cole Smith** How much will it cost to keep it that is the question

Like · Reply · June 2 at 4:32am



**Annette McGovern** It's all in the link

Like · Reply · June 2 at 6:09am



Write a reply...



**Liana French** Definitely stay it's fabulous

Like · Reply · June 2 at 7:28am



## Appendix 3: News clipping

# Coogee Beach: hopes for Eco Shark Barrier to stay on after trial ends

June 14th, 2017, 01:00AM | Written by Bryce Luff | Cockburn Gazette **NEWS**



📷 Craig Moss and Cockburn Mayor Logan Howlett. Picture: Will Russell d444132



**THE shark barrier drawing thousands of extra visitors to Coogee Beach could be retained beyond November, with the City of Cockburn seeking feedback from residents and beach-goers about its three-year trial.**

The Eco Shark Barrier began its 36-month stay at the popular beach in late 2014 after the City agreed to lease the new technology from Kingsley inventor Craig Moss.

With the trial period lapsing in November, the City has gone to the community for its thoughts.

Comments so far have been positive, while an online poll run by the City has 99 per cent of respondents voting in favour of it staying.

While no shark attacks have been reported at the beach, a 3m unknown species of shark was spotted a few hundred metres out from the barrier in May and a tiger shark was spotted 150m off Woodman Point in April.

Cockburn environment manager Chris Beaton said the trial had been a success from the City's perspective.

"The trial has proven the ability of this type of shark mitigation device to withstand marine conditions over the longer term without adversely impacting marine species," he said.

"The City is most pleased that a Perth local product has proven to be a world class and viable shark mitigation device that does not harm sea life."

Mr Beaton said if the barrier would stay, it would likely remain in the water all year round and be leased from Mr Moss.

Mr Moss, who installed a similar barrier in Sorrento in December, said he hoped the City would consider continuing the partnership in the future.

"It's been a successful trial. The community loves it and we have lived and learnt a few things, but that's what a trial is all about," he said.

After an unsuccessful attempt to install his barrier in NSW in 2016, Mr Moss said he had not given up hope of trying again interstate.

To have your say, visit [comment.cockburn.wa.gov.au](http://comment.cockburn.wa.gov.au).

Public consultation will close at the end of the month.

A decision is expected closer to the end of the lease period in November.



## **Eco Barrier timeline**

July 2013: The City of Cockburn agrees to trial the Eco Shark Barrier at Coogee Beach.

December 2013: The Department of Lands approves the trial and the barrier is installed.

April 2014: The Eco Shark Barrier is pulled from the water.

May 2014: The City agrees to negotiate with the State Government over funding for a three-year trial.

June 2014: Former Premier Colin Barnett tells Parliament the State Government would not co-fund the trial.

October 2014: The City agrees to lease the barrier for three straight years, at \$85,000 per annum.

November 2014: The barrier begins its 36-months stay in the water.

November 2015: Besides some loose floats and two trapped rays, the barrier survives its first 12 months unscathed.

May 2016: The barrier's southern end is damaged during wild weather, with a stainless steel clip wearing through cables.

June 2017: The City of Cockburn calls on the public to provide feedback on the three year trial.

July – October 2017: The City will make a decision on whether the barrier remains.



## FIVE YEAR NET PRESENT VALUE CALCULATION

Option 1			Option 2			Option 3			Option 4			Option 5		
Year	Cash Flow	Present Value	Year	Cash Flow	Present Value	Year	Cash Flow	Present Value	Year	Cash Flow	Present Value	Year	Cash Flow	Present Value
0	-\$130,000	-\$130,000	0	-\$85,000	-\$85,000	0	-\$85,000	-\$85,000	0	-\$90,000	-\$90,000	0	-\$250,000	-\$250,000
1	-\$130,000	-\$125,957	1	-\$85,000	-\$82,356	1	-\$290,000	-\$280,981	1	-\$90,000	-\$87,201	1	-\$40,000	-\$38,756
2	-\$130,000	-\$122,039	2	-\$85,000	-\$79,795	2	-\$40,000	-\$37,551	2	-\$90,000	-\$84,489	2	-\$40,000	-\$37,551
3	-\$40,000	-\$36,383	3	-\$200,000	-\$181,913	3	-\$40,000	-\$36,383	3	-\$90,000	-\$81,861	3	-\$40,000	-\$36,383
4	-\$40,000	-\$35,251	4	-\$40,000	-\$35,251	4	-\$40,000	-\$35,251	4	-\$90,000	-\$79,315	4	-\$40,000	-\$35,251
NPV	-\$470,000	-\$449,630	NPV	-\$495,000	-\$464,316	NPV	-\$495,000	-\$475,165	NPV	-\$450,000	-\$422,866	NPV	-\$410,000	-\$397,940

Interest: 3.21%

CPI 1.5%

## **CURRENT AND EXPECTED**

### **ECO SHARK BARRIER CONDITION REPORT.**

#### **Current & End of Term (Additional 5 Years)**

- Chains & Anchors – Currently in very good condition after 3 years. Expected to remain in good condition for additional 2 years minimum.
- Pylons – Currently in very good condition after 3 years. Expected to remain in good condition for additional 2 years minimum.
- Navigation Lights – Currently in very good condition after 3 years. Expected to remain in good condition for additional 2 years minimum. (Mooring Chain recently replaced) It is expected that the mooring chain will be replaced again before the end of a 5 year term.
- Cross Members - Currently in very good condition after 3 years. Expected to remain in good condition for additional 2 years minimum. All cross members are in excellent condition with minimal signs of deterioration.
- Connection Rings – Currently in very good condition after 3 years (Recommend replacement after 5 years due to abrasive wear from sand movement & chain connection) Replacement plastic rings can be changed over whilst the ECO Shark Barrier remains in the water.
- Stainless Connection Rings – Currently in very good condition after 3 years. Replacement stainless steel rings if required in the future can be changed over whilst the ECO Shark Barrier remains in the water.
- Floats & Connectors - Currently in very good condition after 3 years. Floats & connectors are the most venerable to the environmental conditions & will require monthly inspections and maintenance as required.
- Stainless Wire / Beach to Pylon – Currently in very good condition after 3 years. The stainless wire from the beach connected to the pylons is not expected to deteriorate for an additional 2 years minimum.
- Stainless Wire / Pylon to Pylon – Currently in very good condition after 3 years. The stainless wire from pylon to pylon (North to South 300 LM) It is anticipated that after an additional 3 years in the water and due to the strain placed on the 300 LM section, it would be replaced as a precautionary measure.

Mr Charles Sullivan  
Director, Engineering and Works  
City of Cockburn,  
PO Box 1215, Bibra Lake DC,  
Western Australia, 6965  
27 June 2017

**RE: Replacement plantings to reverse loss of amenity along Socrates Parade, Port Coogee**

Dear Charles,

further to previous discussion and correspondence with Julie Reidy, and as requested by yourself, this letter forms a request by the undersigned rate-payers for Council to consider addressing considerable loss of amenity being caused by existing sheoaks in Socrates Parade.

The request is for Council to replace, not remove, these trees with others selected from the list of species recommended by Council officers, and agreed by respective affected ratepayers, as being consistent with both Council's position that

- *"Trees are regarded as highly desirable and integral to the urban landscape, providing a range of social, environmental and economic advantages. As such they are considered to be an integral part of the total public landscape amenity affecting and benefitting all residents within the locality, individually and collectively."*<sup>i</sup>

and with Council's street tree policy determination that such trees should be capable of:

- *" Providing pedestrians and cyclists with cooler and more attractive access ways throughout the City;*
- *Improving air quality;*
- *Improving property values;*
- *Providing habitat for native fauna;*
- *Reducing heat island effect;*
- *Enhancing the character and attractiveness of our suburbs."*<sup>ii</sup>

and with the stated developmental vision for Port Coogee to offer

- *"...a lifestyle like no other, but also, a wise and profitable investment for the future."*<sup>iii</sup>

Under the Port Coogee Design Guidelines ratepayers wishing to build a home here are required to

- *"Design, orientate and arrange the built form to take advantage of the outstanding views of the Indian Ocean, Woodman Point and the Port Coogee Marina;*
- *Be orientated towards public streets and open space to ensure casual surveillance over the public realm and perceived security for the community;"*
- *At least one indoor living area (not a bedroom) is to provide natural surveillance of the Primary Street (or Public Open Space for battle-axe lots);"*<sup>iv</sup>

The existing sheoaks significantly erode the effectiveness of these designs which have complied with the guidelines and been developed to take advantage of the views and provide the highly desirable capacity for casual surveillance.



Photographs, taken from a typically affected living area serves to illustrate the issue. Additional, younger, plantings of sheoaks, on Socrates Parade, not yet visible from this viewpoint, will eventually grow into the space on right of photograph.



In addition, the existing sheoaks :

- are extremely messy, and continuously litter the footpaths and grassed areas with hard, spherical, sharp seedpods which are extremely uncomfortable underfoot, and pose a risk for pedestrians and cyclists, as shown below. This is a loss of amenity raised by ratepayers, residents and visitors generally.





- in some places, the sheoaks are already extending roots that are lifting sections of kerbing, as shown below



- they have double the allergic pollen-production of other native coastal species such as bottle-brushes, and melaleucas.<sup>v</sup>
- attract very few native bird species by comparison with other flowering native coastal species.
- if not appropriately pruned grow to immense size.

In some cases the loss of amenity is exacerbated as a result of block boundaries being changed by the developers, after the streetscaping designs had been completed. Plantings of street trees were not adjusted to accommodate this. In some cases, placement of plantings on opposite sides of the road have compounded this problem.

Reflecting some ambiguity and inconsistency, Port Coogee Design Guidelines, included in Contracts of Sale for the blocks in Port Coogee contain recommended plant species for residents' gardens. Sheoaks are not listed amongst the recommended species of trees.<sup>vi</sup>

Further confusion and angst has been caused by Port Coogee Design Guidelines, included in Contracts of Sale for the blocks in Port Coogee, stipulating that

- *"Homeowners are responsible for the maintenance of verges, street trees and Estate fencing."*<sup>vii</sup>

This has led some residents, acting in good faith to maintain compliance with the guidelines, and to improve and protect the amenity of their properties, into conflict with Council as they have undertaken necessary private pruning.

Taking all these factors into account, rather than fostering community harmony, and enhancing the family-friendly sea-change lifestyle on which this community has been developed, the existing sheoaks are generating discord, frustration and anguish for residents, visitors, elected councillors, and Council officers alike. This is a far cry from both the Design Guidelines Vision for Port Coogee and Council's own commitment to highly amenable urban landscape.

From the undersigned's perspective, it is, however, an example of the potential circumstances Council foresaw in developing the guidelines for addressing loss of amenity, and accordingly we trust that Council will respond favourably to this request.

Sincerely,

- Wade and Robyn Hughes, 38 Socrates Parade
- Will Hawkes, 36 Socrates Parade
- Chad Milward & Shane O'Loughlin, 34 Socrates Parade
- Rod and Liz Walding, 44 Draper Street
- Pep (Joe) and Sandra Borgomastro, 30 Socrates Parade
- John and Christine Hickey, 32 Socrates Parade
- Trevor and Lynn Dunn, 24 Socrates Parade
- Zak and Nola Adizes, 40 Socrates Parade
- David and Meridee Stratton, 44 Socrates Parade
- Darryl Griffiths, 22 Socrates Parade
- Ken and Leonie Birch, 4 Draper Street
- Sandy Dinh, 26 Socrates Parade
- Len and Katherine Greenhalgh, 2 Madras Link
- Marianne and Frank McGinty, 11 Ceylon Turn

#### References:

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<sup>i</sup> *Council's Position Statement PSEW15 Version 4, p2*

<sup>ii</sup> *Council's policy document: Subdivision & Development-Street Trees LPP 5.18, p1.*

<sup>iii</sup> *Port Coogee Design Guidelines (2011, and October 2014), Vision Statement, p2*

<sup>iv</sup> *Port Coogee Design Guidelines (2011, and October 2014), General Guidelines, pp6/8*

<sup>v</sup> *Australasian Society of Clinical Immunology and Allergy, Pollen Calendar*

<sup>vi</sup> *Port Coogee Design Guidelines (2011, and October 2014), Appendix D, Recommended Plant Species, p27 (2011) and p37 (2014)*

<sup>vii</sup> *Port Coogee Design Guidelines (2011, and October 2014), Appendix C, Verges, Driveways and Crossovers, p23 (2011) and p26 (2014)*



City of Cockburn  
**STREET TREE MASTER PLAN**

[cockburn.wa.gov.au](http://cockburn.wa.gov.au)



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# 1. INTRODUCTION

The City of Cockburn is currently undergoing both infill and green field development to accommodate the rapidly growing population. This process is resulting in the removal of large amounts of the cities Urban Forest. This equates to a loss of asset to the city and amenity to the community and environment.

In response to this, the City is implementing a planting program for our streetscapes to ensure trees are provided to benefit the community and environment, now and for the future generations to come.

Through this process, an opportunity exists to support the environment and create or increase identity and character to the suburbs within the City of Cockburn by planting species that will not only survive the changing environmental conditions, but flourish.

A survey of all the street trees within the City of Cockburn was undertaken to inform this document. This survey identified that most streets within the City of Cockburn provide no street tree theme, with residential streets trees in these areas being a random mix of native and exotics species. Newer developments have provided avenue planting themes, as the desire to create pedestrian friendly neighbourhoods gains importance.

This document will act as a resource to be used by the City of Cockburn officers, developers and the community to provide a holistic vision for the City's streetscapes in the future. The tree palette has been selected for streetscapes and verges adjacent to residential or private lots.

Strategic objectives of the street tree master plan are to:

Increased Urban Forest	Increase the numbers of trees and in turn the percent of shade within the City.
Urban character	Provide a tree palette to guide the character of future development and improvements within the City.
Species suitability	Provide a selection criteria which guides appropriate species selection which will thrive and be appropriate for its location.
Street hierarchy	Define the street hierarchy and create landmark locations to aid navigating around the city through the use of selected species
Installation	Provide information on planting location to ensure utilities and the public are protected.







## 2. DOCUMENT FORMAT

This Master plan is divided into seven sections.

1. Analysis of the street tree
2. Maintenance
3. Selection criteria
4. Methodology
5. Tree zones
6. Suggested species
7. Species information and gallery



## 3. ANALYSIS OF THE STREET TREE

### 3.1 Benefits

Street trees which contribute to the Urban Forest have many, economic, environmental, social, physical and mental benefits.

#### Economic Benefits

- Reduces home energy demand and costs.
- Reduces deterioration to infrastructure from sun damage and weather.
- Increased real estate value of properties with tree lined streets.
- Increases the asset base of the City of Cockburn as the trees grow.

#### Environmental Benefits

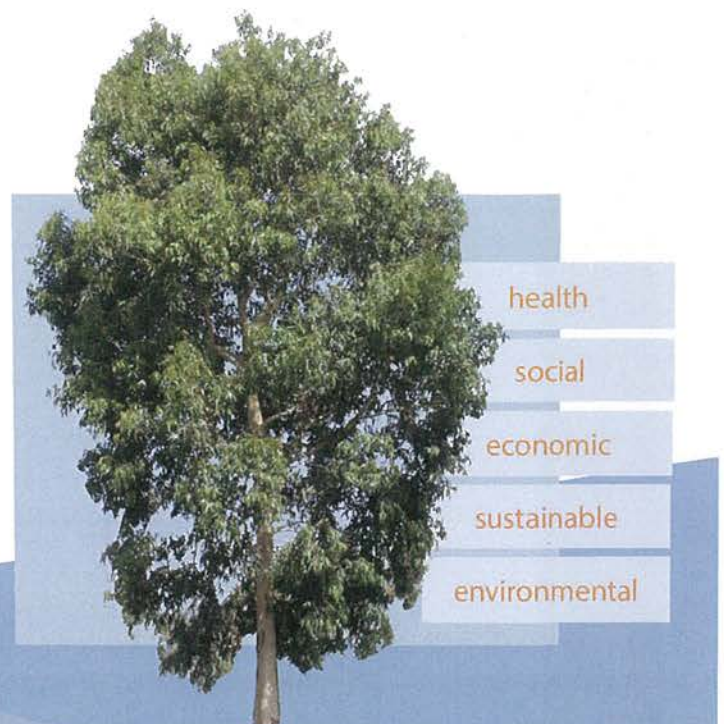
- Reduces greenhouse emissions by shading nearby buildings and paths from the sun.
- Cools the air through transpiration when the tree releases moisture in the form of vapour.
- Reduces the urban heat island effect in a time of climate change to improve liveability, safety and comfort.
- Improves air quality
- Improves water quality by filtering chemicals and nutrients stripping water runoff.
- Reduces soil erosion.
- Locks up carbon from the atmosphere to help prevent climate change.
- Increases habitat to birds and other wildlife and provide food.
- Screens objectionable views and reduce glare from street lights and car headlights.
- Supports biodiversity and ecological corridors.
- Reduces road noise to residents.
- Reduces the speed and damaging effects of strong winds.

#### Social Benefits

- Improves the character and visual amenity of streetscapes and neighbourhoods.
- Evokes community passion and pride, and create a sense of place.
- Reduces psychological precursors to crime.
- Street trees provide visual and physical separation between cars and pedestrian areas.
- Traffic calming

#### Physical / Mental Benefits

- Shaded, tree lined streets and paths are conducive to healthy activities, and therefore improve the health of residents.
- Pedestrians using shaded footpaths have reduced exposure to UV radiation.
- Improves our quality of life by providing a sense of peacefulness, restfulness, serenity and tranquillity as a result of creating a more natural and less artificial environment.
- Increases the mental health of residents by creating community cohesion and lowering stress levels.





### 3.2 Concerns regarding Street Trees

Street trees have the potential to create a number of problems. These main concerns include:

#### Infrastructure conflicts

- Tree roots lifting and breaking paths, driveways, fences, roads etc.
- Root invading utility infrastructure.
- Leaves clogging up drains and filling up building gutters.
- Potential tree or branch failure which may damage power lines, houses and harm people and animals.
- Trees may conflict sight-lines.
- Trees too large for the verge it is planted in may cause damage by growing into the house.
- Trees may shade solar panels of the adjacent house.

#### Concerns from Resident's

- Trees can be messy, dangerous and destructive with leaf and bark litter, branch, fruit and nut drops.
- Trees will conform to prevailing conditions and as such may not be a form and shape that the resident finds desirable.



- The tree encroaches over their boundary.
- Residents fear the tree will fall on their house, themselves or others.
- Residents fear the tree will catch on fire.
- The tree fails to grow or thrive and provides little amenity.
- Trees can be affected by disease and pests/
- Trees can be vandalised, especially when small and young.

### 3.3 Key Mitigating Strategies

A number of strategies can be used to reduce damage or problems created by trees. These include:

- Selection of the appropriate species for the site.
- Ensure adequate water for the first two years establishment period.
- Using root barriers when using a species with known invasive roots.
- Proper initial design to locate trees at correct distances from infrastructure or design infrastructure to fit the tree.
- Initial designs to map sight-line conflicts.
- Consider the use of unit paving where a risk of surface roots is high, as this allows for a more cost effective restoration of the path.
- Where street trees with invasive surface roots already exist: suspend walls and fences, using a pier and beam system.
- Underground power lines when possible to avoid power line conflict.
- Audit street trees on a schedule basis to check for potential limb failure and structural damage.
- Advise residents to use gutter guards to prevent leaves from clogging house gutters.
- Educate residents regarding the benefits of street trees and how to contribute to the care of their street tree



## Urban heat - Surface temperatures on a 42 degree day

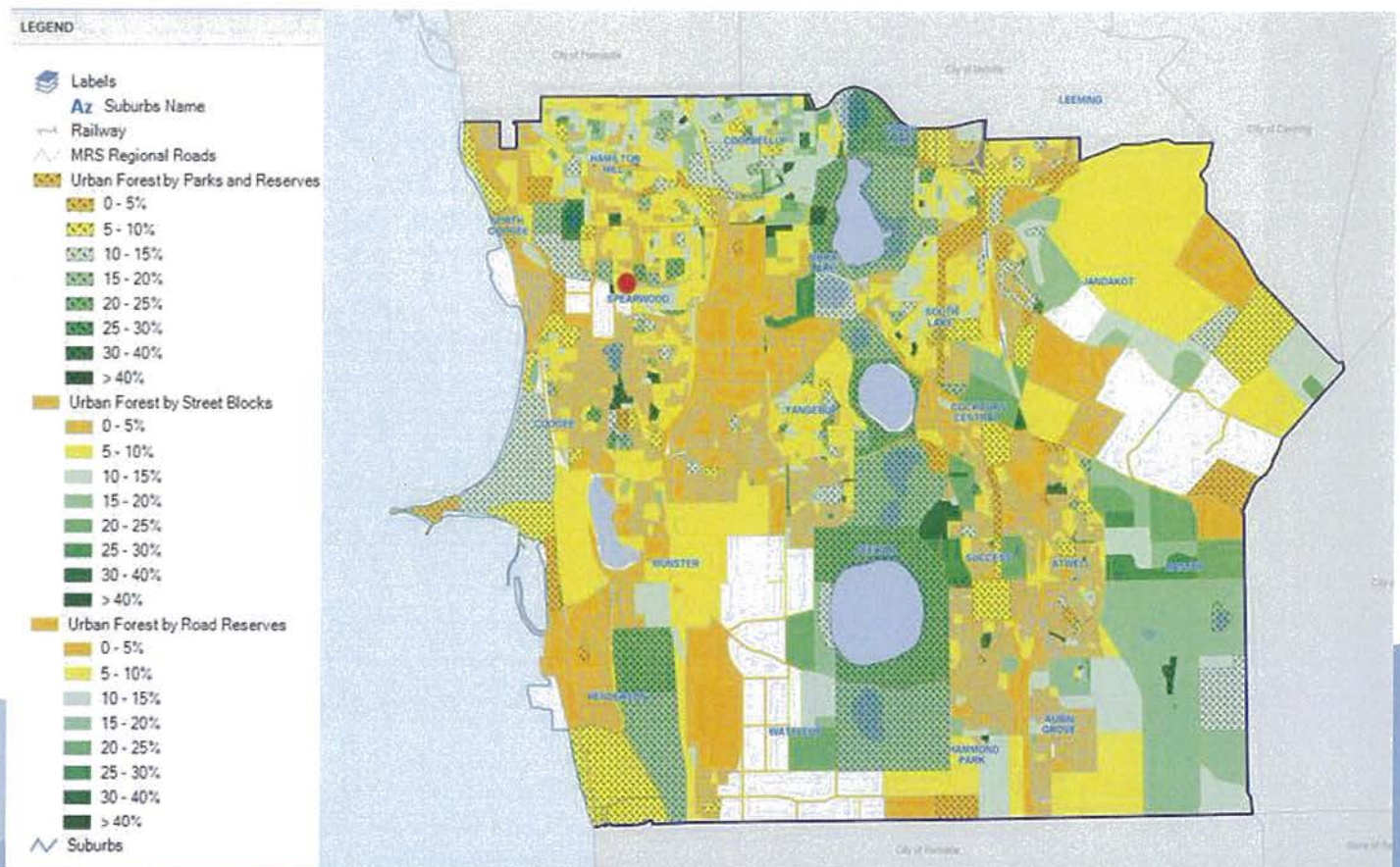


Bitumen in full sun= 65.8°C

Bitumen under tree canopy = 38.5°C

Rubber softfall around tree = 94°C

Increasing the street tree canopy is an opportunity to reduce the heat island effect across the City



Urban forest coverage in the the City of Cockburn



## 4. MAINTENANCE

### 4.1 Management - Arboriculture Inspections

The management of street trees is currently through officers in the Parks Service Unit with the engagement of a consulting arborist as required. The incorporation of a consulting arborist in the management program achieves a degree of independence in the decision making process. The assistance of a consultant is generally required when the request could be controversial, subject to the political process or escalate to involve the media in an attempt to garner community support for the removal of a tree or trees. In addition the consulting arborist can provide Quantified Tree Risk Assessments and reports to determine the potential risk of a tree.

### 4.2 Clearance from Power Lines

The Western Australian Office of Energy Safety sets out the regulations for the clearance of vegetation from power lines. The regulations list each power line classification and the clearance zones required to mitigate disruption to the network. In addition the regulations outline that management of naturally occurring vegetation is performed by the service provider whilst planted street trees are the responsibility of the local municipal authority.

Compliance with regulations is facilitated by the contracts issued by service providers that require inspection, issue notices of non-compliance, action works not completed and re-inspection.

Management of the clearance of vegetation from power lines will be facilitated through the street tree database. The database generates reports that list all trees under power lines orientated to each suburb, previous pruning history and a monetary value for the works. All street trees under power lines will be pruned on an annual basis, subject to growth habits and additional requirements by the regulators

### 4.3 Street tree and Utility Alignment

Street trees must be planted on a particular alignment within the road reserve. The location varying road reserve widths is outlined in the 'Utility Providers: Code of Practice for Western Australia'. This ensures trees are planted along

the power pole and street light alignment which will reduce the possibility of the tree being dug up in the future for repairs or amendments to the underground utilities. Generally the tree will be located between 2.4 and 3m from the front lot boundary and 1.5 to 2m from the edge of crossovers.





## 5. SELECTION CRITERIA

The City is a constructed cultural and urban landscape consisting of streets, buildings (residential, industrial and commercial), natural areas and POS. Trees play an important role in enriching the cultural experience of a location, therefore the aesthetic characteristics of the trees need to be an important selection consideration. The selection of species may also reinforce climatic, historical, cultural or natural associations that satisfy local requirements.

Tree selection criteria can be divided into three main categories which are listed in order of importance. These include:

1. Environmental considerations
2. Functional requirements
3. Aesthetic and design requirements.

### 5.1 Environmental Considerations

The following section shall outline some environmental factors that affect tree selection

#### Climate

Perth has a Mediterranean climate with hot, dry summers and mild, wet winters. It is the sunniest capital city in Australia with clear blue skies an incredible 70% of the year. Summer temperatures can rise above 40 degrees Celsius, accompanied by strong easterly and south westerly winds patterns which expose the coastal plants to salt spray. The further inland the lower the wind speed and the less salt burning is experienced. Selecting trees for these areas will need to take into account the distance from the coast, and wind and salt tolerance.

#### Geology and Soils

Five different soil associations can be found across the City of Cockburn. The types range from white limey sands to limestone outcrops with little soil cover, to deep yellow sand to black peaty sands, to loams and clay surrounding lakes and swamps. Limestone outcrops will require mechanical assistance to enable tree planting, and the Quindalup sandy soils are typically low nutrient, alkaline soils with good drainage, but will require soil building at the time of planting and a good fertilizing regime to ensure the new plant has sufficient nutrients to establish a root system.

It is also important to consider that in many developed areas within the City, the natural soil will have been stripped off and replaced with up to several meters of construction fill sand which is devoid of organic matter. This soil will require building with organic matter before planting into and whilst trees with large tap roots will eventually reach the natural soil, trees with shallower surface roots may never come into contact with natural soils.

#### Hydrology

The City of Cockburn has several strings of lakes and swamps running from the North to the South. These areas naturally host a range of riparian species of plants which tolerate seasonal to year round inundation of water.

Much of the swamp system has been filled in the development process however trees with large tap roots will access this ground water once enough growth has occurred.

Many areas of the City will require additional water to be provided to the Street tree during the dry months of the year.

#### Hardscapes

Higher density of housing in the City of Cockburn means a greater percentage of the ground is covered with paving, roads and hard surfacing. This leads to lower soil permeability, greater compaction, higher heat sink temperature and smaller planting areas. Selected trees for these areas will need to be tolerant of these conditions.

#### Atmospheric Pollution

Dense development areas and busy roads will have high air pollution from quantity of cars. Trees will need to be tolerant of this pollution with deciduous trees being more tolerant due to the leaf drop every year.





## Drought conditions

With the reduced rainfall it is expected that street trees will survive an average drought period in reasonable condition without irrigation or a reliance on scheme water after the initial two to three year establishment period.

## Pest and Disease

Tree species should be resistant to pests and disease. Planting a diverse species range shall ensure that any outbreaks of pests or disease will not devastate a large area.

## Wildlife Habitat

Trees provide shelter, food sources and corridors which our native fauna species can utilize. Trees along the city's ecological corridors and a 50m buffer either side, should be endemic or native tree species which benefit the ecology of those areas and help to maintain the natural biodiversity.

## 5. 2 Functional requirements

### Proven performance

When considering a species for a location there needs to be a proven history of that species thriving in the same conditions.

### Tree litter

The amount of leaf, bark, nut or fruit litter which sheds from a tree must be a consideration, especially for tree which will overhang a pedestrian path. The level of maintenance available must be equal to that which will be required of the species.

### Limb failure

All trees shed branches from time to time; however some trees are more prone to other for limb shedding and limb failure or branches heavy and large enough to cause injury. Such trees must not be planted along pedestrian paths or over play grounds and areas where people are likely to frequent. It is recommended that know limb shedding varieties only be used in ecological corridors wide primary distributor reserves or in large garden beds where people are not encouraged to be.

### Canopy size

The expected maximum canopy size must fit into the planting location without growing so large that it will require constant pruning. It is acceptable

for the canopy to overhang the road as long as its form will allow a height clearance underneath for the tallest vehicle to pass under.

## Tempering of climate

Research has shown that trees with larger broader canopies provide the greatest benefits to the city, however whilst small trees growing in large areas do not contribute to the visual quality or canopy cover of the street, very large trees in confined spaces can become problematic with high maintenance costs.

Tree species selection should therefore provide the broadest shade canopy within the context of the available space. Scale of the street, site constraints such as verge widths, overhead powerlines, building alignments and vehicular clearances much all is considerations when selecting an appropriate tree. In some instances a tree may not be suitable for an area at all.

## Root Damage

Tree selection must take into account the surrounding infrastructure. If paths, fences or building are within the potential root zone then a tree with non-invasive roots must be selected or effective root control provided. Large POS site with sufficient space surrounding the tree can afford trees with more invasive root systems.

## Longevity

Trees with long life spans are preferable over species which will require more frequent replacement.

## Crown pruning and leader removal

Trees to be planted under overhead power lines should have epicormic budding capabilities. This allows the crown to thicken in response to pruning such that although the crown height is continually reduced the remaining branches provide a dense sideways spreading canopy which still provides shade.

## Solar passive

Tree selection will also be cognisant of solar panels on adjacent residential homes in high density settings to ensure the penetration of sunlight during winter periods.



## 6. METHODOLOGY

### 6.1 Tree Species Selection

Trees have varying lifespans with some trees living up to 150 years. It is therefore imperative that our selection objective is to plant the correct species for the correct location, according to the local environmental conditions and constraints of the intended planting location.

Incorrect selection can incur a high ongoing maintenance cost to the City, fail to thrive or in some circumstances, require the removal of the tree after it has matured and proven to be problematic.

Most of the older established suburbs within the City of Cockburn are planted with established trees. This provides us with a valuable insight as to which species thrive in different areas of our city and inform us of what growth pattern we can expect from these species. We have overlayed this information with performance criteria such as environmental contributions, amenity, aesthetic and heritage values to create a 'Street Tree List'.

It is understood that trees are living organisms which will always create a degree of negative factors that cannot be controlled. The selection process aims to provide more positive than negative factors as an outcome.

### 6.2 Zoned Landscape Approach

The City of Cockburn has identified three different zones which require three different approaches to the planting theme within them.

The City of Cockburn's vision is to create avenue planting to its streets, with both sides of the road being planted with a consistent pattern of preferably one variety of tree (Avenue planting). All planting to new developments will be based on an avenue planting approach where species selection and location of planting will reinforce the distinct physical character of each area and where possible be responsive to its unique environmental conditions. A number of key species will be identified suitable for the use at strategic entrances or key intersection as well as the streets throughout the various suburbs within City of Cockburn. The Street Tree Master Plan provides details regarding the methodology and tree selection.

### 6.3 Existing Tree Plantings

Areas with an existing pattern of planting, we will choose the most appropriate tree or trees to the existing streetscape to be used for future plantings to this area. If none of the existing trees are deemed suitable, a new species from the list will be selected based on the species in the surrounding area. No streetscapes shall be removed on mass rather be a process of natural attrition or as infill development requires the removal of trees to the verge.

## 7. ZONE DESCRIPTION

Coastal Zones	These are zones which will experience the direct force of the salt laden prevailing winds, with quick draining sandy soils.
Significant Verges, Median & Roundabouts	These zones include verges, medians or roundabouts that the City of Cockburn identifies as significant and therefore have a particular character predetermined for the streetscaping to create this street hierarchy. Roads such as major entrances to suburbs, significant roundabouts, median or landmarks locations.
Ecological corridors and wetlands	These zones have been identified by the 'Natural area management strategy' as being of significant ecological benefit to the City of Cockburn. These zones create ecological links within the city to help sustain our wildlife and ecological biodiversity. See Appendix A for Ecological area map
Industrial and commercial zones.	The zones are often identified by larger setbacks and car parks directly adjacent to the front lot boundary. This space allows the planting of larger street trees which will provide a greater shade to help combat the extreme heat sinks often associated with these areas.
Residential zones	This zone consists of everywhere else that does not fall into the above zones one to four. These zones aim to create a consistent avenue planting with the same plant to both sides of the road. Many existing roads will only achieve infill of a single species to gradually over the decades to come achieve this vision. New developments will achieve this from the outset.



## 8. STREET TREE SELECTION FOR ZONES

### Zone 1:

#### Coastal Front Line

- Agonis Flexuosa
- Araucarcia heterophylla
- Casuarina equisetifolia
- Corymbia ficifolia
- Cupaniopsis anacardiodes
- Callistemon kings park special
- Callistemon viminalis
- Erythrina sykesii
- Eucalyptus gomphcephala
- Gleditsia tricanthos shademaster
- Hibiscus tilaceus rubra
- Melaleuca quinquenervia
- Olea europa
- Pyrus cleveland select
- Ulmus parvifolia

#### Beneath Power Lines

- Agonis flexuosa
- Corymbia ficifolia
- Cupaniopsis anacardiodes
- Callistemon kings park special
- Callistemon viminalis
- Gleditsia tricanthos shademaster
- Hibiscus tilaceus rubra
- Olea europa
- Melaleuca quinquenervia
- Ulmus parvifolia

### Zone 2:

#### Significant Verges, Median, and Roundabouts

- Araucarcia heterophylla
- Corymbia maculata
- Erythrina Sykesii
- Platanus acerfolia
- Platanus insularis
- Platanus orientalis
- Platanus digitata
- Fraxinus oxycarpa Raywood
- Liquidamber styraciflua
- Ulmus parvifolia

#### Beneath Power Lines

- Ulmus parvifolia
- Erythrina sykesii





## Zone 3

### Ecological Corridors

- *Agonis flexuosa*
- *Angophora costata*
- *Araucaria heterophylla*
- *Brachychiton Acerfolia*
- *Callistemon viminalis*
- *Callistemon kings park special*
- *Corymbia ficifolia*
- *Corymbia maculata*
- *Erythrina sykesii*
- *Eucalyptus gomphocephala*
- *Eucalyptus leucoxylon 'rosea'*
- *Eucalyptus sideroxylon 'rosea'*
- *Eucalyptus torquata*
- *Melaleuca quinquenervia*

### Beneath Power Lines

- *Agonis flexuosa*
- *Callistemon viminalis*
- *Callistemon kings park special*
- *Corymbia ficifolia*
- *Eucalyptus leucoxylon 'Rosea'*
- *Eucalyptus torquata*
- *Melaleuca quinquenervia*

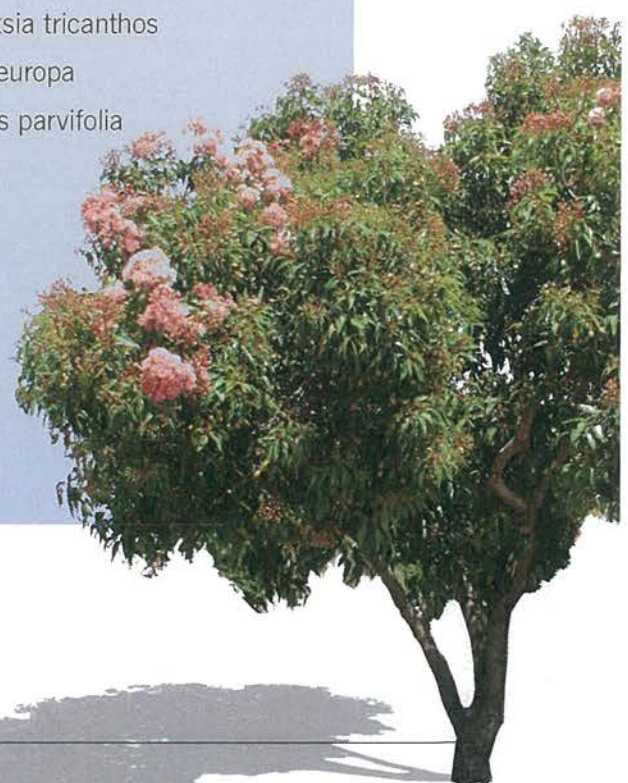
## Zone 4

### Industrial Commercial

- *Angophora costata*
- *Brachychiton acerfolia*
- *Brachychiton populneus*
- *Delonix regia*
- *Eucalyptus gomphocephala*
- *Eucalyptus sideroxylon 'rosea'*
- *Fraxinus oxycarpa 'raywoodii'*
- *Gleditsia tricanthos inermis*
- *Liquidamber styraciflua*
- *Magnolia grandiflora*
- *Olea europaea*
- *Platanus acerfolia*
- *Platanus orientalis*
- *Platanus insularis*
- *Ulmus parvifolia*

### Beneath Power Lines

- *Angophora costata*
- *Eucalyptus sideroxylon 'rosea'*
- *Gleditsia tricanthos*
- *Olea europaea*
- *Ulmus parvifolia*





## Zone 5 Residential Wide Verges

- Agonis flexuosa
- Angophora Costata
- Bauhinia sp.
- Brachychiton Acerfolia
- Eucalyptus leucoxylon 'Rosea'
- Eucalyptus sideroxylon 'rosea'
- Fraxinus oxycarpa Raywood
- Delonix regia
- Gleditsia tricanthos inermis
- Hibiscus tilaceus rubra
- Jacaranda mimosifolia
- Lagerstroemia sp.
- Liquidamber styraciflua
- Magnolia little gem
- Melaleuca quinquenervia
- Platanus orientalis
- Platanus insularis
- Paulownia tomentsa
- Prunus dulcis
- Pyrus ussuriensis
- Ulmus parvifolia

### Beneath Power Lines

- Agonis Flexuosa
- Eucalyptus leucoxylon 'Rosea'
- Delonix regia
- Gleditsia tricanthos inermis
- Hibiscus tilaceus rubra
- Jacaranda mimosifolia
- Melaleuca quinquenervia
- Ulmus parvifolia

## Zone 6 Residential Narrow Verges

- Callistemon 'KPS'
- Callistemon viminalis
- Corymbia ficifolia
- Eucalyptus foresterianna
- Eucalyptus spathulata
- Eucalyptus torquata
- Lagerstroemia sp.
- Pyrus calleryana Cleveland select
- Pyrus calleryana capital
- Prunus cerasifera sp.
- Olea europa
- Sapium Sebiferum

### Beneath Power Lines

- Callistemon 'KPS'
- Callistemon viminalis
- Corymbia ficifolia
- Eucalyptus foresterianna
- Eucalyptus spathulata
- Eucalyptus Torquata
- Lagerstroemia sp.
- Pyrus calleryana Cleveland select
- Pyrus calleryana capital
- Prunus cerasifera sp.
- Olea europa
- Sapium Sebiferum





## 9. FUTURE TREE PLANTING OPPORTUNITIES

In 2014 an audit of the City of Cockburn's verge trees was undertaken. The survey also recorded residential lots which had no tree present. The number of tree required to achieve an outcome of one tree per residential verge is recorded below. This information coupled with data from the urban canopy survey will be applied in our on going street tree planting program.

\* Leeming and Banjup will be audited in 2016 / 2017.

Suburb	Total no. of potential tree planting opportunities
Spearwood	2504
Hamilton Hill	2443
Yangebup	2096
Success	1808
South Lake	1704
Bibra Lake	1653
Atwell	1558
Beeliar	1418
Munster	1391
Coolbellup	1351
Coogee	1127
Aubin Grove	1004
Hammond Park	937
Jandakot	822
Banjup	688
North Coogee	577
Wattleup	574
Cockburn Central	315
North Lake	237
Henderson	183
Total	24,390





## 10. STREET TREE DETAILS - NATIVE

Botanic name	Common name	Mature size	Flowering	Growth habit	Growth rate	Sand	Loam	Limestone	Clay	Deciduous	Evergreen	Use beneath power lines	Invasive roots	Comments
<i>Agonis flexuosa</i>	WA Peppermint	H: 10m W: 7m	✓	Weeping / round spreading form	M/S	✓	✓	✓			✓			
<i>Angophora Costata</i>	Smooth barked apple gum	H: 15m W: 7m	✓	High rounded dense canopy	M/F	✓	✓		✓	✓			✓	Moderate root damage
<i>Araucaria heterophylla</i>	Norfolk Island Pine	H: 30m W: 15m		Conical, erect standing	M/S/	✓	✓	✓	✓		✓			Land mark plant
<i>Brachychiton Acerfolia</i>	Illawarra flame tree	H: 10m W: 6m	✓	Pyramidal dense canopy	S	✓	✓			✓			✓	
<i>Callistemon viminalis</i>	Weeping bottlebrush	H: 7m W: 4m	✓	Low, weeping, dense habit	M	✓	✓				✓	✓	✓	
<i>Callistemon 'KPS'</i>	Kings Park Special	H: 5m W: 3m	✓	Large bushy habit	F		✓		✓					
<i>Corymbia ficifolia</i>	Red flowering gum	H: 12m W: 6m	✓	Compact rounded canopy	M	✓	✓	✓	✓		✓	✓		
<i>Corymbia maculata</i>	Spotted gum	H: 30m W: 6m	✓	Tall straight dense canopy	F	✓	✓	✓	✓			✓	✓	
<i>Cupaniopsis Anarcardiodes</i>	Tuckeroo	H: 8m W: 8m	✓	Rounded canopy	M	✓	✓	✓	✓		✓	✓		
<i>Erythrina x Sykesii</i>	Australian Coral tree	H: 15m W: 12m	✓	Dense rounded canopy	F	✓	✓	✓	✓	✓		✓	✓	
<i>Eucalyptus Forrestiana</i>	Fuscia gum	H: 5m W: 4m	✓	Upright open form	M	✓	✓	✓	✓		✓	✓		
<i>Eucalyptus gomphocephala</i>	Tuart	H: 40m W: 15m	✓	Broad spreading, upright branches	M	✓	✓	✓	✓			✓		
<i>Eucalyptus leucoxylon 'rosea'</i>	Yellow gum	H: 6m W: 5m	✓	Open form	F	✓	✓	✓	✓		✓	✓	✓	
<i>Eucalyptus marginata</i>	Jarra	H: 15m W: 7m	✓	Open form	S	✓	✓		✓			✓		
<i>Eucalyptus sideroxylon 'rosea'</i>	Red ironbark	H: 15m W: 7m	✓	Dense pyramidal upright	M/F	✓	✓	✓	✓			✓		
<i>Eucalyptus Spathulata</i>	Swamp mallee	H: 8m W: 5m	✓	Small round or spreading	M	✓	✓	✓	✓		✓	✓		
<i>Eucalyptus Torquata</i>	Coral gum	H: 12m W: 4m	✓	Small round or spreading	F	✓	✓	✓	✓		✓	✓		
<i>Melaleuca quinquenervia</i>	Broad leaf paper bark	H: 15m W: 7m	✓	Tall Rounded canopy	M/F	✓	✓	✓			✓	✓		

## 11. STREET TREE DETAILS - EXOTIC

Botanic name	Common name	Mature size	Flowering	Growth habit	Growth rate	Sand	Loam	Limestone	Clay	Deciduous	Evergreen	Use beneath powerlines	Invasive roots	Comments
Bauhinia sp.	Orchid tree	H: 8m W: 6m	✓	Spreading irregular canopy	F		✓		✓	✓		✓		Semi deciduous
Fraxinus oxycarpa raywoodii	Claret ash	H: 15m W: 12m		Oval, rounded dense canopy	F	✓	✓		✓	✓			✓	
Delonix regia	Poinciana Flame tree	H: 8m W: 6m	✓	Wide spreading canopy	M		✓		✓	✓			✓	Wide spreading canopy
Gleditsia tricanthos inermis	Shademaster / Sunburst	H: 15m W: 12m	✓	Spreading rounded canopy	F	✓	✓			✓			✓	Autumn colour: yellow
Hibiscus tilaceus rubra	Cottonwood	H: 9m W: 5m	✓	Rounded canopy	F	✓	✓	✓	✓		✓	✓		Surface roots.
Jacaranda mimosifolia	Jacaranda	H: 5m W: 3m	✓	Open globed canopy	M	✓	✓		✓	✓			✓	
Lagerstroemia sp.	Crepe myrtle	3-10m 3-6m	✓	Rounded dense canopy	M/F	✓	✓		✓	✓		✓		
Liquidamber styraciflua	American sweet gum	H: 15m W: 7m		Pyramidal canopy	F		✓		✓	✓			✓	Autumn colour
Magnolia grandiflora	Southern magnolia	H: 10m W: 8m	✓	Globed / pyramidal dense canopy	M	✓	✓		✓		✓			
Magnolia	Little gem	H: 6m W: 3m		Irregular pyramid canopy		✓	✓	✓	✓		✓	✓		
Olea europa	Olive	H: 7m W: 5m	✓	Dense rounded canopy	M	✓	✓		✓	✓			✓	Berries drop and self-seed.
Platanus acerfolia	London Plane	H: 20m W: 15m	✓	Rounded pyramidal canopy	M/F	✓	✓		✓	✓			✓	Autumn colour
Platanus orientalis	Oriental plane	H: 12m W: 6m		Round pyramidal canopy	F									
Platanus insularis	Autumn Glory		✓				✓		✓	✓				
Paulownia tomentsa	Pallownia	H: 12m W: 12m	✓	Pyramidal spreading canopy	F		✓		✓	✓				
Prunus cerasifera sp.	Prunus cerasifera sp.	H: 5m W: 3m	✓	Upright growth	M	✓	✓		✓	✓		✓		Several varieties.
			✓			✓	✓		✓	✓		✓		



## STREET TREE DETAILS - EXOTIC

Botanic name	Common name	Mature size	Flowering	Growth habit	Growth rate	Sand	Loam	Limestone	Clay	Deciduous	Evergreen	Use beneath powerlines	Invasive roots	Comments
<i>Prunus dulcis</i>	Almond	H: 4m W: 3m	✓	Rounded canopy	S/M	✓	✓		✓	✓		✓		
<i>Pyrus calleryana</i> Cleveland select	Chanticleer	H: 9m W: 4m	✓	Small round or spreading	M/F	✓	✓		✓	✓		✓		Autumn colour: red.
<i>Pyrus calleryana</i> capital	Capital	H: 9m W: 3m	✓	Narrow upright	M		✓		✓	✓		✓		Autumn colour: red.
<i>Pyrus ussuriensis</i>	<i>Pyrus ussuriensis</i>	8-15m 8-12m		Conical pyramid to round canopy	M	✓	✓		✓	✓		✓		Rounded canopy
<i>Sapium Sebiferum</i>	Chinese tallow	H: 10m W: 5m		Rounded canopy	M	✓	✓		✓	✓				Rounded canopy
<i>Ulmus parvifolia</i>	Chinese elm	H: 10m W: 5m		Oval, rounded dense canopy	M	✓	✓		✓	✓				Suckering roots
<i>Elkova serrata</i>	Green vase	H: 14m W: 10m		Vase-shaped, upright branching	M		✓		✓	✓				Not suitable for wetlands.

\*This table represents a selection of tree species which the City considers appropriate in size and form for Streetscapes. Is it accepted that there will be other species over the course of time which may become available that should be considered to be included on this list. The City will consider alternate species upon application.





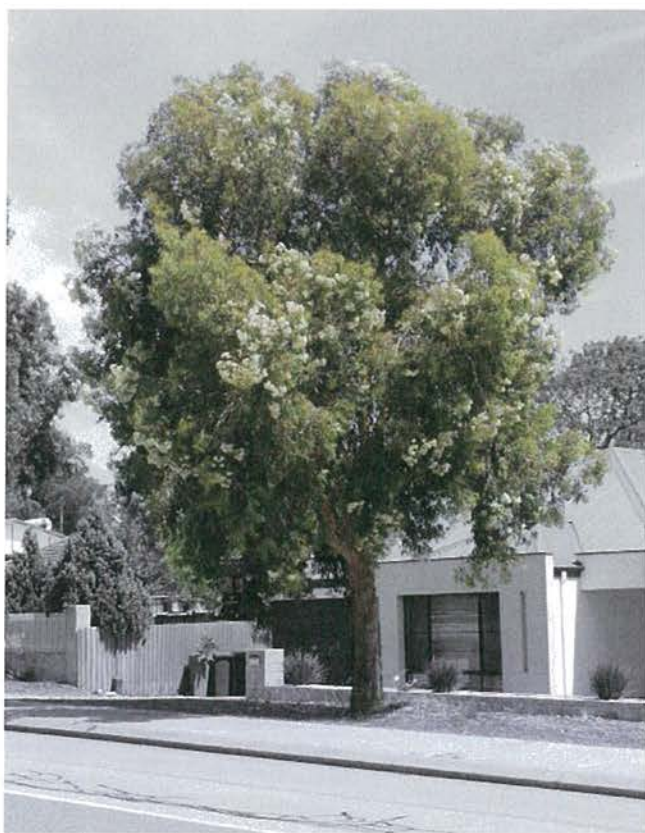
## 12. STREET TREE GALLERY



*Agonis flexuosa*



*Araucaria heterophylla*



*Angophora costata*

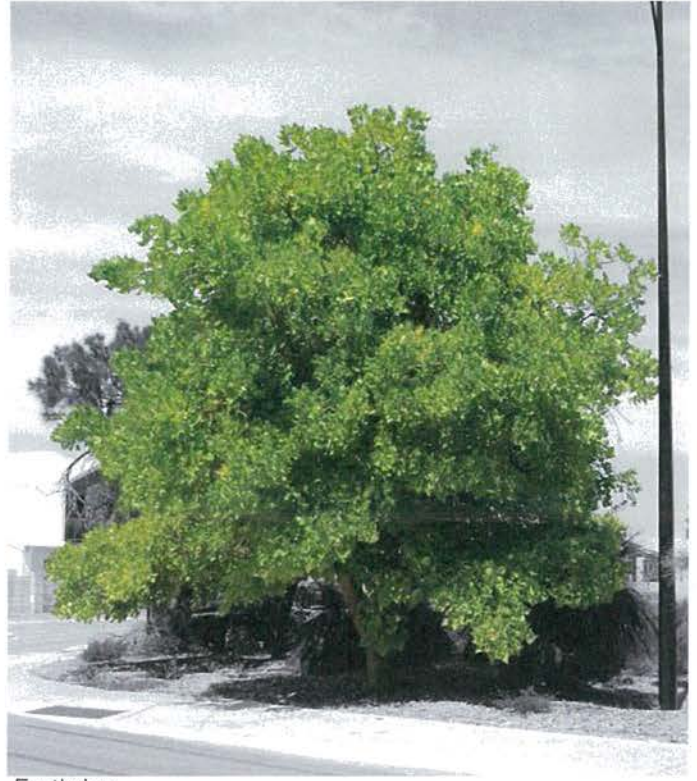


*Brachychiton acerfolia*

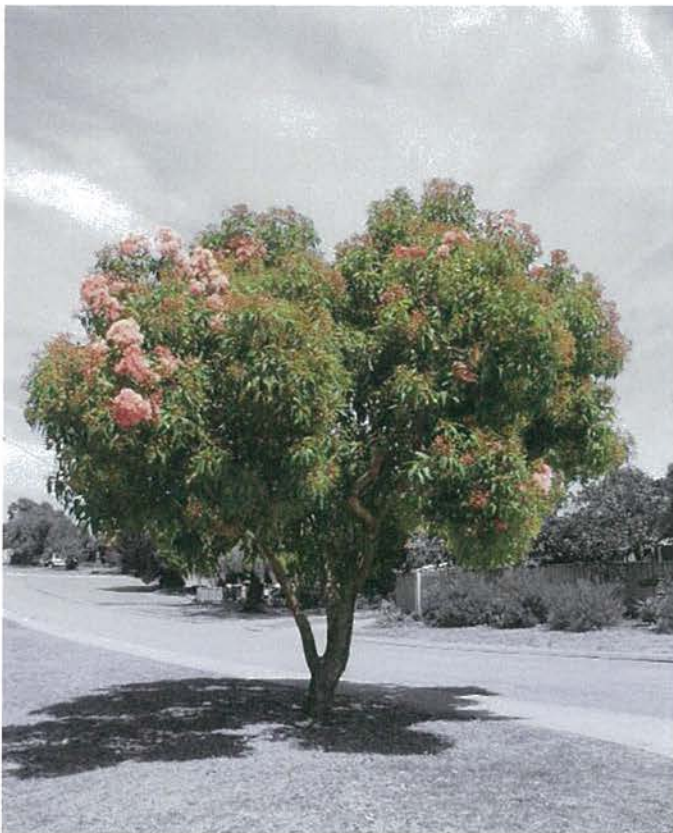




Calistemon 'kings park special'



Erythrina



Calistemon 'kings park special'

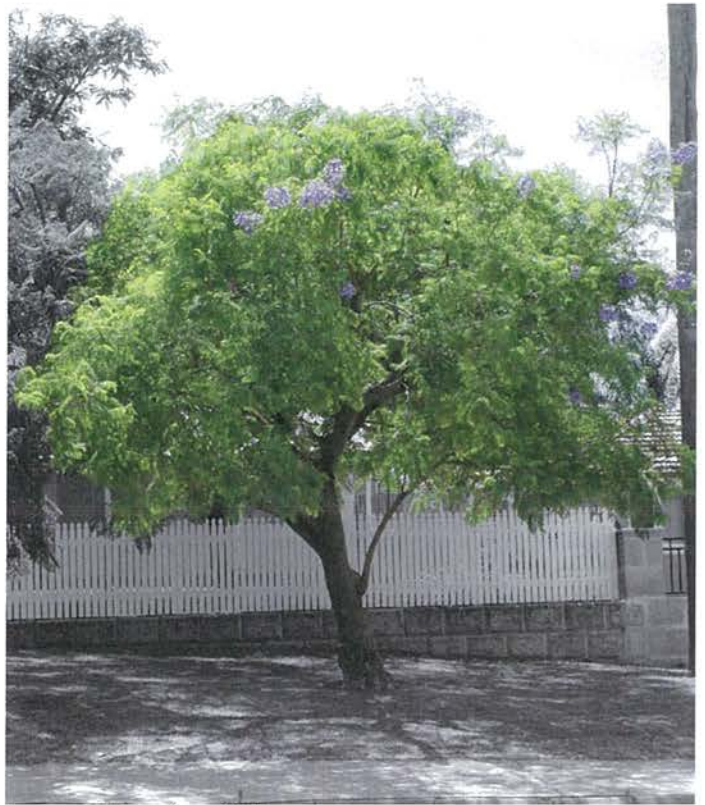


Eucalyptus maculata





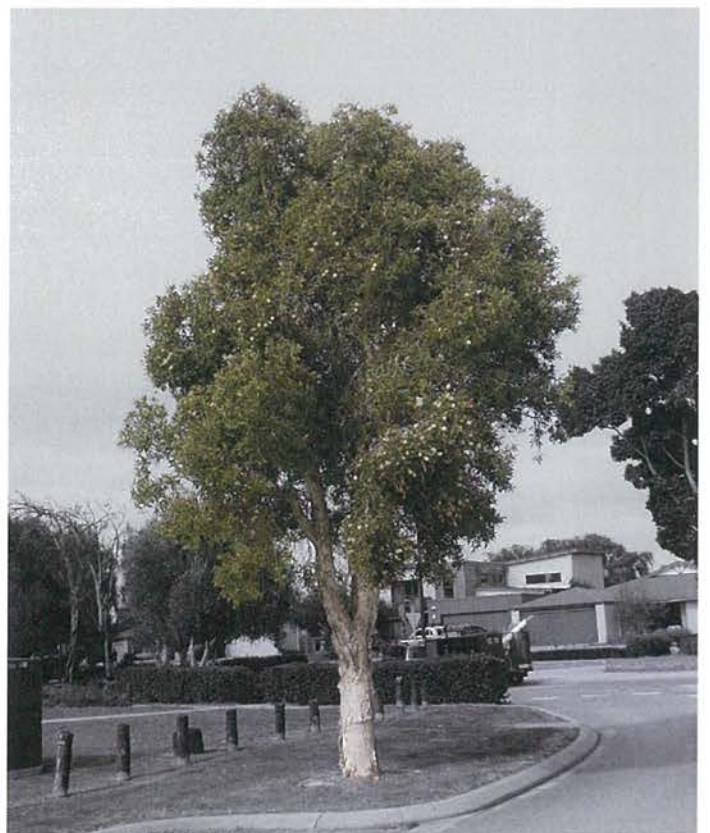
*Eucalyptus sideroxylon rosea*



*Jacarandah mimosifolia*

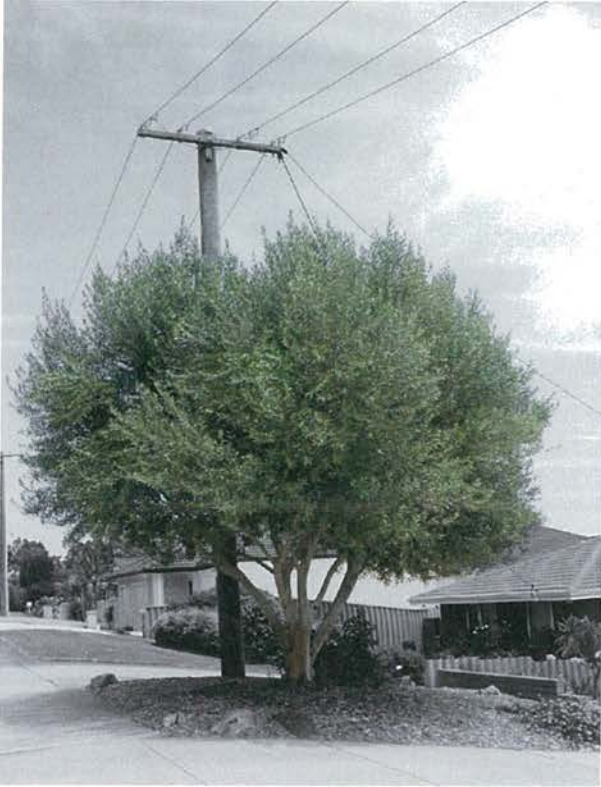


*Magnolia little gem*



*Melaleuca quinquenervia*





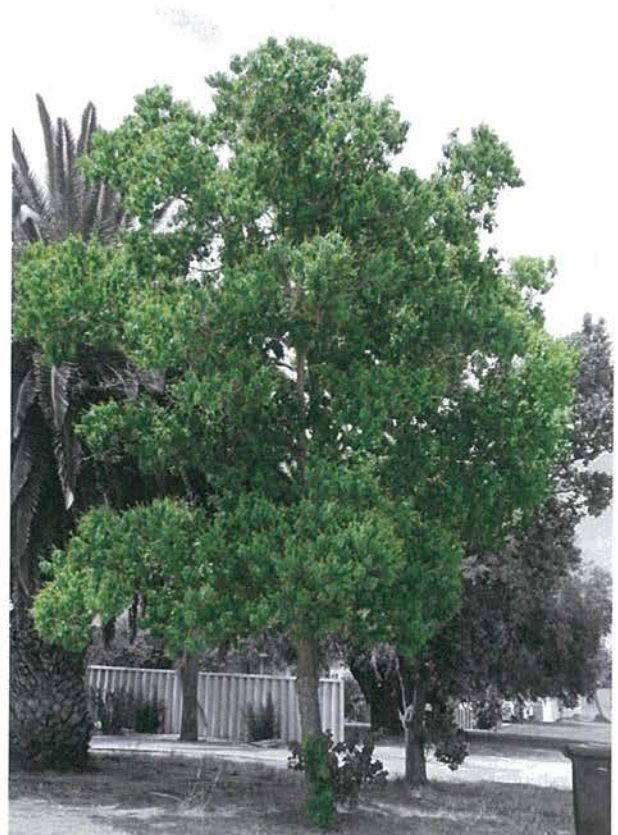
*Olea europaea*



*Platanus 'london plane'*

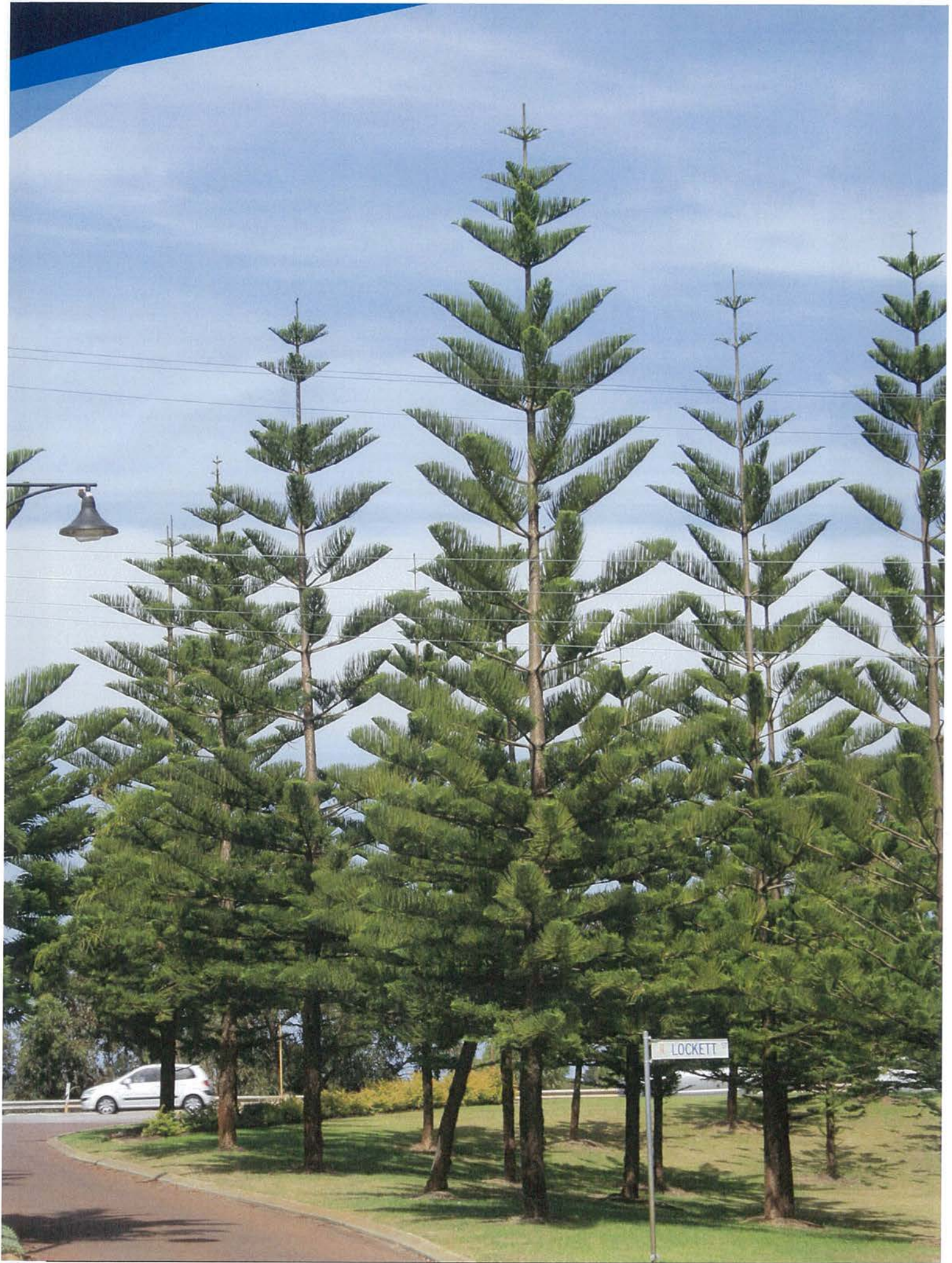


*Pyrus calleryana 'cleveland select'*



*Sapium sebiferum*

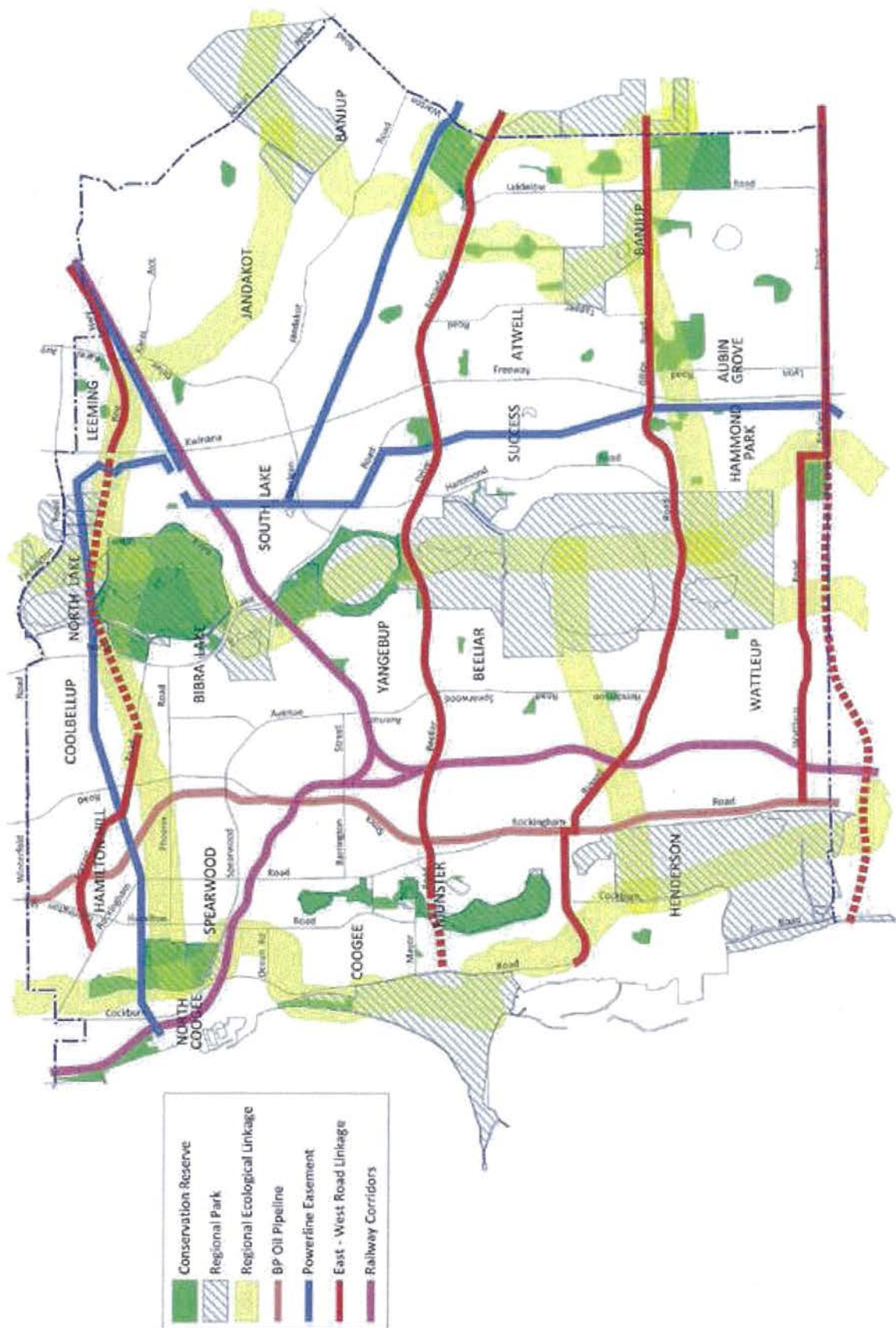






# 1. APPENDICES

## 1. 1 Ecological corridors within the City of Cockburn





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PO Box 1215, Bibra Lake DC WA 6965  
P 08 9411 3444 F 08 9411 3333

[cockburn.wa.gov.au](http://cockburn.wa.gov.au)



HASSELL



Client  
AUSTRALAND

Project  
PORT COOGEE

Drawing  
TREE MASTERPLAN

Drawing No  
SK-01

Project No  
PPL0017

Date  
07.12.2011

Scale  
1:2500 @ A1

Drawn By  
QUEPB





frankland park open space

site plan

for 2022  
valley road  
hammond park 6164



SK01



DONALD  
CANT  
WATTS  
CORKE

# FRANKLAND PARK OPEN SPACE

## Opinion of Cost

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Aug-17

CONFIDENTIAL

---

Client:	Dave Lanfear Consulting
DCWC Project No.:	W17---

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partners for  
excellence

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1.0	30/08/2017	OPC	ND

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Name	Organisation	Date	Method
Dave Lanfear	Dave Lanfear Consulting	30/08/2017	Email

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SUMMARY			
Element	Base Development		
	Area	\$sqm	Total
Main Building Works	1,900	\$ 2,338	\$ 4,441,500
<u>Provisional Sum</u>			
External Works			\$ 3,204,200
External Services			\$ 485,000
<b>Construction Works Sub-Total</b>	<b>1,900</b>	<b>\$ 4,279</b>	<b>\$ 8,130,700</b>
Design Contingency	5%		\$ 406,535
Construction Contingency	5%		\$ 426,862
Professional Fees @ 7.5%	7.50%		\$ 672,307
<b>Construction Works Sub-Total</b>	<b>1,900</b>	<b>\$ 5,072</b>	<b>\$ 9,636,404</b>

Exclusion :

Excludes GST  
Excludes abnormal ground conditions / contamination etc  
Excludes major services diversions  
Excludes major utility upgrades / contributions & headworks  
Excludes any new civil works  
Exclude equipment  
Excludes FF&E  
Excludes client costs, legal costs, site costs, agents fees, finance etc  
Excludes land purchase costs  
Excludes Client Representative / Project Management Fee / Professional Fees  
Excludes escalation - costs are current day  
Excludes % for Public Art  
Excludes ESD  
Costs assume Competitive Tender process with local builders using basic palette of materials.

Notes :

OPC based on indicative area schedule

FRANKLAND PARK OPEN SPACE  
OPINION OF PROBABLE COST  
30 AUGUST 2017

DONALD  
CANT  
WATTS  
CORKE

FUNCTIONAL BREAKDOWN							
FUNCTIONAL FLOOR	Base Development						
	Qty	Unit	Rate	Sub Total	Total		
GROUND FLOOR							
Pavillion							
Building Area	1110	m2	\$3,400	\$3,774,000	\$3,774,000		
Covered Areas	150	m2	\$1,250	\$187,500	\$187,500		
Unenclosed Covered Area \ Spectator viewing	640	m2	\$750	\$480,000	\$480,000		
Sub-Total / Floor			1900	m2	\$2,337.63	\$4,441,500	\$4,441,500
Total Building Budget						\$4,441,500	
PROVISIONAL SUMS							
External Works							
Allowance for Site Clearance	69600	m2	\$2.00		\$139,200		
Allowance for soft landscaping	1	Sum	\$25,000		\$25,000		
Allowance for ovals	52000	m2	\$50		\$2,600,000		
Allowance for roads / pavement / parking	4000	m2	\$90		\$360,000		
Allowance for pavement to pavillion	1000	m2	\$70		\$70,000		
Allowance for features / signage	1	Sum	\$10,000		\$10,000		
External Services							
Allowance for stormwater /water (assume soakwells)	1	Sum	\$25,000		\$25,000		
Allowance for sewer	1	Sum	\$50,000		\$50,000		
Allowance for gas	1	Sum	Excluded		\$0		
Allowance for electrical and lighting	1	Sum	\$50,000		\$50,000		
Allowance for lighting to ovals	1	Sum	\$350,000		\$350,000		
Allowance for pumps/tanks/hydrants	1	Sum	Excluded		\$0		
Allowance for communications	1	Sum	Excluded		\$0		
Allowance for security	1	Sum	\$10,000		\$10,000		
Total Provisional Sum						\$3,689,200	
Estimated Total Construction Budget						\$8,130,700	