



## Metro Outer Development Assessment Panel Agenda

**Meeting Date and Time:** Thursday, 23 May 2024; 9:30am  
**Meeting Number:** MODAP/14  
**Meeting Venue:** 140 William Street, Perth  
**Public Observing:** Online

A live stream will be available at the time of the meeting, via the following link:  
[MODAP/14 – 23 May 2024 – City of Cockburn](#)

### **PART A – INTRODUCTION**

1. Opening of Meeting, Welcome and Acknowledgement
2. Apologies
3. Members on Leave of Absence
4. Noting of Minutes

### **PART B – CITY OF COCKBURN**

1. Declarations of Due Consideration
2. Disclosure of Interests
3. Form 1 DAP Applications
  - 3.1 Lot 9501 Gaebler Road, Hammond Park – Mixed Use Commercial Development – DAP/23/02623
4. Form 2 DAP Applications
5. Section 31 SAT Reconsiderations

### **PART C – OTHER BUSINESS**

1. State Administrative Tribunal Applications and Supreme Court Appeals
2. General Business
3. Meeting Closure

*Please note, presentations for each item will be invited prior to the items noted on the agenda and the presentation details will be contained within the additional information documentation*



## **ATTENDANCE**

### **DAP Members**

Karen Hyde (Presiding Member)

Lee O'Donohue (Deputy Presiding Member)

John Syme (Specialist Member)

Cr Tom Widenbar (Local Government Member, City of Cockburn)

Cr Tarun Dewan (Local Government Member, City of Cockburn)

### **Minute Secretary**

Claire Ortlepp (DAP Secretariat)

### **Officers in Attendance**

Ashlee Kelly (DAP Secretariat)



## **PART A – INTRODUCTION**

### **1. Opening of Meeting, Welcome and Acknowledgement**

The Presiding Member declares the meeting open and acknowledges the traditional owners and pay respects to Elders past and present of the land on which the meeting is being held.

This meeting is being recorded and livestreamed on the DAP website in accordance with regulation 40(2A) of the *Planning and Development (Development Assessment Panels) Regulations 2011*. Members are reminded to announce their name and title prior to speaking.

### **2. Apologies**

Nil.

### **3. Members on Leave of Absence**

Nil.

### **4. Noting of Minutes**

Signed minutes of previous meetings are available on the [DAP website](#).



## **PART B – CITY OF COCKBURN**

### **1. Declarations of Due Consideration**

Any member who is not familiar with the substance of any report or other information provided for consideration at the DAP meeting must declare that fact before the meeting considers the matter.

### **2. Disclosure of Interests**

Nil.

### **3. Form 1 DAP Applications**

3.1 Lot 9501 Gaebler Road, Hammond Park – Mixed Use Commercial  
Development – DAP/23/02623

### **4. Form 2 DAP Applications**

Nil.

### **5. Section 31 SAT Reconsiderations**

Nil.

**Part B – Item 3.1 – LOT 9501 GAEBLER ROAD HAMMOND PARK – MIXED USE COMMERCIAL DEVELOPMENT**

**Form 1 – Responsible Authority Report**  
(Regulation 12)

<b>DAP Name:</b>	Metro Outer Development Assessment Panel
<b>Local Government Area:</b>	City of Cockburn
<b>Applicant:</b>	Dynamic Planning and Developments
<b>Owner:</b>	Broad Vision Projects Pty Ltd
<b>Value of Development:</b>	\$14.5 million
<b>Responsible Authority:</b>	City of Cockburn
<b>Authorising Officer:</b>	Chantala Hill
<b>LG Reference:</b>	DAP23/004
<b>DAP File No:</b>	DAP/23/02623
<b>Application Received Date:</b>	18/12/2023
<b>Report Due Date:</b>	05/04/2024
<b>Application Statutory Process Timeframe:</b>	90 Days with an additional 48 days agreed.
<b>Attachment(s):</b>	<ol style="list-style-type: none"> <li>1. Development Plans</li> <li>2. Location Plan</li> <li>3. EPA Advice (2005)</li> <li>4. Southern Suburbs District Structure Plan</li> <li>5. Draft Local Structure Plan</li> <li>6. Schedule of Submissions</li> <li>7. Applicant response to submissions &amp; referral agencies</li> <li>8. DPLH updated referral response</li> <li>9. DBCA referral response</li> <li>10. DWER referral response</li> <li>11. Department of Health referral response</li> <li>12. Department of Education referral response</li> <li>13. DFES referral response</li> <li>14. Water Corporation referral response</li> <li>15. Final Design Review Panel report</li> <li>16. McDonalds kitchen exhaust compliance certificate</li> <li>17. Traffic Technical Memo</li> </ol>

**Responsible Authority Recommendation**

That the Metro Outer Development Assessment Panel resolves to:

1. **Refuse** DAP Application reference **DAP/23/02623** (DAP23/004) and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes)*

*Regulations 2015* and the provisions of the City of Cockburn Town Planning Scheme No. 3, for the following reasons:

### Reasons

1. The proposal does not comply with the City of Cockburn *Town Planning Scheme No. 3* including the 'Aims of the scheme.'
2. The proposal does not comply with the Draft '*Part Lot 41 Gaebler Road, Hammond Park Structure Plan*' (2017).
3. The proposal does not comply with the *Southern Suburbs District Structure Plan Stage 3 (Hammond Park / Wattleup)* (2012).
4. The proposal does not comply with the Environmental Protection Authority *Guidance for the Assessment of Environmental Factors Separation Distances between Industrial and Sensitive Land Uses No. 3* (2005).
5. The proposal does not comply with the State Planning Policy No. 4.2 *Activity Centres* (2023).
6. The proposal does not comply with the City of Cockburn *Local Commercial and Activity Centre Strategy* (2012).
7. The proposal does not comply with the WAPC's *Draft Guideline for the Determination of Wetland Buffer Requirements* (2005).
8. The proposal does not comply with the WAPC's *Draft Operational Policy 1.12 Planning Proposals Adjoining Regional Roads in Western Australia* (2023).
9. The proposal does not comply with the WAPC's *Operational Policy 2.4 - Planning for School Sites* (2022).
10. The proposal is considered to pose an unacceptable impact on human health and the natural environment.
11. The proposal is incompatible with its setting.
12. The proposal is not considered to accord with the provisions of orderly and proper planning. As such the proposal is likely to reduce the quality of life enjoyed by the surrounding inhabitants and is therefore considered to be 'poor planning'.

### Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme - Zone/Reserve	Urban
Local Planning Scheme	City of Cockburn Town Planning Scheme No. 3
Local Planning Scheme - Zone/Reserve	Special Control Area - Development Zone, Development Area 26, Development Contribution Areas 9 and 13.

Structure Plan/Precinct Plan	Draft Local Structure Plan – <i>Portion of Lot 9501 (Former Lot 41) Gaebler Road, Hammond Park - SPN/2117, 110/172 (2017)</i>
Structure Plan/Precinct Plan - Land Use Designation	Draft Local Structure Plan – Residential R60
Use Class and permissibility:	<p><b>Pursuant to the Draft Local Structure Plan ‘Residential’ designation:</b>  Service Station – ‘X’ (Not Permitted)  Fast Food Outlet – ‘X’ (Not Permitted)  Medical Centre – ‘A’ (Advertising)  Motor Vehicle Wash – ‘X’ (Not Permitted)</p> <p><b>In the absence of an approved LSP:</b></p> <p>Objectives of the Development Zone:</p> <p style="text-align: center;"><i>To provide for future residential, industrial or commercial development to be guided by a comprehensive Structure Plan prepared under the Scheme.</i></p> <p>Development Area 26 provisions:</p> <ol style="list-style-type: none"> <li>1. <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>2. <i>To provide for residential development and compatible land uses.</i></li> </ol>
Lot Size:	38,193m <sup>2</sup>
Existing Land Use:	Vacant Land
State Heritage Register	No
Local Heritage	<input checked="" type="checkbox"/> N/A <input type="checkbox"/> Heritage List <input type="checkbox"/> Heritage Area
Design Review	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> Local Design Review Panel <input type="checkbox"/> State Design Review Panel <input type="checkbox"/> Other
Bushfire Prone Area	Yes
Swan River Trust Area	No

### Proposal:

The proposal comprises the following:

- One Service Station (floor area 192m<sup>2</sup>) with associated fuel canopy and four fuel bowsers;
- Three Fast Food Outlets (floor areas of 245m<sup>2</sup>, 450m<sup>2</sup> and 270m<sup>2</sup>), each with drive-through facilities (McDonalds and 7/11 are proposed for 24hr operation);
- One automatic Motor Vehicle Wash (24hr operation), including three wash bays, two vacuum bays and a dog wash area;
- One Medical Centre (floor area 640m<sup>2</sup>), to accommodate up to ten (10) practitioners;
- Individual service yards and bin storage areas associated with each of the tenancies;
- Communal landscaped and car parking areas; and
- Six (6) pylon signs and other wall signs associated with the tenancies.

The original development plans submitted with the application are available through Attachment 1.

## **Background:**

### *Physical description of the site*

The subject site is located in Hammond Park. Established vegetation exists across the site, and a large portion of the site area (approximately 20,000m<sup>2</sup> on the eastern side) has been identified as a Conservation Category Wetland (CCW). The site adjoins existing residential development to the east and the remainder of the wetland to the south (with zoned residential development beyond). The site is opposite existing residential development and the Hammond Park Primary School to the north. West of the site, across Hammond Road, is Harry Waring Marsupial Reserve (Regional Reserve for Parks and Recreation and a Bush Forever Area). A Location Plan is available through Attachment 2.

### *Planning Framework*

The subject site is zoned 'Urban' under the Metropolitan Region Scheme (MRS) and 'Development' (Special Control Area - Development Area 26) under the City of Cockburn's Town Planning Scheme No. 3 (TPS 3). Further, the site is located within two Development Contribution Areas (DCA9 and DCA13).

The objective of the Development Zone is as follows;

*'To provide for future residential, industrial or commercial development to be guided by a comprehensive Structure Plan prepared under the Scheme.'*

The provisions for Development Area 26 (DA 26) under TPS 3 are;

3. *'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.'*
4. *To provide for residential development and compatible land uses.'*

Of relevance, DA 26 was introduced via Scheme Amendment No. 28 to TPS 3 and was referred to the Environmental Protection Authority (EPA) in 2005. The EPA determined not to assess the amendment. The EPA's 2005 advice is available through Attachment 3. As a result of the EPA's determination, factors relating to the CCW and

environmental values of the site were deferred, to be adequately addressed and protected in subsequent planning processes; in particular, via a structure plan. A structure plan logically ensures the environmental matters are addressed at a strategic stage, and the City and the Department of Planning, Lands and Heritage (DPLH) have provided advice to the proponent over the course of several years, stating that a structure plan would be required for the site given the range of issues.

### *Structure Plans*

The subject site is located within the *Southern Suburbs Stage 3 District Structure Plan* (SSDSP – available through Attachment 4). The SSDSP was approved by Council in September 2012 and was intended to guide local structure planning in the area. The SSDSP shows the subject site as ‘Residential’ and ‘Conservation Category Wetland’.

In February 2017 the proposed *Lot 41 Frankland Avenue, Hammond Park Structure Plan* (draft LSP) was submitted to the City in accordance with the requirements of DA 26. The draft LSP is available through Attachment 5 and sought to guide orderly future development on the subject site. Approximately one third of the overall site was included within the draft LSP, with the remainder being recognised as CCW and ‘subject to further planning’. The developable area within the LSP was designated as Residential R60. A strip of Public Open Space (POS) along the eastern edge of the LSP area proposed to abut a 50 metre buffer to the CCW. Of note, the 50 metre buffer is consistent with the Western Australian Planning Commission’s (WAPC) *Guideline for the Determination of Wetland Buffer Requirements* (2005) (Buffer Guideline) and as a result the draft LSP was not required to be assessed by the EPA. Matters relating to the wetland buffer are discussed further in the ‘Planning Assessment’ section below.

The draft LSP was assessed, advertised to the community and endorsed by Council subject to modifications at its meeting in August 2017. In December 2017, pursuant to Schedule 2, Clause 22(1)(b) of the *Planning and Development (Local Planning Schemes) Regulations 2015* (Regulations), the Western Australian Planning Commission (WAPC) requested the applicant or the City to modify the draft LSP. The modifications have yet to be formally resubmitted to the WAPC and as a result the LSP remains in ‘draft’ form. It is the usual practice for applicants to make modifications, notwithstanding the ability for the City to undertake these modifications.

Recent legal advice suggests the draft LSP should be considered as a ‘seriously entertained planning proposal’. As demonstrated by case law in *Nicholls v WAPC* [2005 WASAT 40] a ‘seriously entertained planning proposal’ is a relevant matter for consideration during a planning assessment for which the decision maker should give regard. The draft LSP as an aspect of orderly and proper planning is discussed further in the ‘Planning Assessment’ section below.

The ‘Planning Assessment’ section discusses the key considerations of this proposal, which have been informed by the ‘Background’.

### **Legislation and Policy:**

#### Legislation

*Planning and Development Act 2005*

*Planning and Development (Development Assessment Panel) Regulations 2011*

*Planning and Development (Local Planning Schemes) Regulations 2015*

*City of Cockburn Town Planning Scheme No. 3*

State Government Policies

*Draft State Planning Policy 2.9 Planning for Water (Draft SPP 2.9)*

This policy outlines how water resources should be managed during the planning process and is relevant in the context of the CCW on the subject site – discussed further below.

*Draft State Planning Policy 3.7 Planning in Bushfire Prone Areas (Draft SPP 3.7)*

The subject site is designated as a ‘bushfire prone area’ and as such the requirements of this policy and its associated Guidelines apply, particularly how bushfire risk can be mitigated – discussed further below.

*State Planning Policy 4.2 Activity Centres for Perth and Peel (SPP 4.2)*

This policy guides the appropriate development of activity centres and is relevant to this application considering the proposed development constitutes ‘out-of-centre development’ – discussed further below.

*State Planning Policy 7.0 Design of the Built Environment (SPP 7.0)*

This policy provides design principles to achieve good quality built form outcomes. The proposed development was subject to a Design Review Panel process which considered these design principles – discussed further below.

*Operational Policy 2.4 Planning for School sites (OP 2.4)*

This policy considers the appropriate locations for schools in the context of surrounding land uses, and conversely should be considered where development is proposed in close proximity to schools. The location of the proposed commercial development opposite a primary school is discussed further below.

*Draft Operational Policy 1.12 Planning Proposals Adjoining Regional Roads in Western Australia (Draft OP 1.12)*

This policy provides guidance on vehicular access where sites adjoin Regional Roads. This is relevant to the proposed development because the subject site is adjacent to an “Other Regional Road” (Hammond Road). Access is discussed further below.

*Liveable Neighbourhoods (2009)*

This operational policy guides the structure planning for urban infill sites. The policy addresses elements such as ‘Urban Water Management’ and ‘Activity Centres’, noting that such considerations should be considered at the structure planning stage. This is discussed further below.

## Structure Plans/Activity Centre Plans

### *City of Cockburn draft Local Planning Strategy (Draft LPS)*

The City's draft Local Planning Strategy provides direction and context for the City's Town Planning Scheme No. 3 (and the upcoming new local planning scheme). Commercial development should be located within appropriate zones, as informed by the draft LPS. The location of the proposed development in absence of an appropriate zone is discussed further below.

### *City of Cockburn Local Commercial and Activity Centres Strategy (LCACS)*

This Strategy identifies and plans for commercial and activity centres within the City. The Strategy is relevant to the proposed commercial development as it does not identify the subject site as being within an activity centre – discussed further below.

### *Southern Suburbs District Structure Plan (SSDSP)*

As mentioned in the section above, the SSDSP was prepared to guide more localised structure planning in the area. The SSDSP identifies the subject site as 'Residential' – discussed further below.

### *Draft 'Lot 41 Frankland Avenue, Hammond Park' Structure Plan (2017) (Draft LSP)*

As mentioned in the section above, the Draft LSP is considered a 'seriously entertained planning proposal' so can be given due regard – discussed further below.

## Local Policies

### *Local Planning Policy 1.12 Noise Attenuation (LPP 1.12)*

Noise produced by the proposed development has potential to impact the overall amenity of the local community. An Acoustic Report was provided as part of the application to address these impacts.

### *Local Planning Policy 1.14 Waste Management (LPP 1.14)*

Appropriate management of waste must be considered within the proposal. A Waste Management Plan was provided as part of the application.

### *Local Planning Policy 3.4 Service Stations and Motor Vehicle Wash Facilities (LPP 3.4)*

This policy seeks to ensure Service Stations and Motor Vehicle Wash facilities are located appropriately and managed to control impact on surrounding residents' amenity and the natural environment. Whether these uses are appropriate in close proximity to sensitive land uses and the CCW is discussed further below.

### *Local Planning Policy 3.7 Signs & Advertising (LPP 3.7)*

This policy provides standards for development signage to limit visual impact on the streetscape. This policy is relevant in the context of the proposed commercial development, which is located within a predominantly residential area. Signage is discussed further below.

### *Local Planning Policy 5.16 Design Review Panel (LPP 5.16)*

This policy provides criteria for development proposals to be reviewed by the City's Design Review Panel and refers to the design principles outlined in SPP 7.0. The proposed development met the criteria at the time for DRP review – the outcomes are discussed further below.

#### **Consultation:**

##### Public Consultation

The proposal was advertised for a period of 28 days (25 January to 22 February 2024), by way of a letter sent to 170 property owners and occupiers in the vicinity of the development who had the potential to be most impacted. The proposal was also placed on the City's community engagement online platform, *Comment on Cockburn*, and a sign was installed on the site. The applicant's planning report, development plans and all other supporting documents were made available for public viewing. Due to significant community and media interest, the City also hosted a public information session prior to the closure of the consultation period.

A total of 447 submissions were received during the advertising period, with approximately 40% in support and 60% opposed. All submissions can be viewed in Attachment 6. A summary of the issues raised during consultation is as follows:

<b>Issue raised</b>	<b>Support/ oppose</b>	<b>Officer comments</b>
Development would erode the character of the area and is 'out of scale' with its surroundings	Oppose	The compatibility of the development within the surrounding residential context is a valid planning consideration. This matter is discussed further in the 'Planning Assessment' section.
Expectation for residential development on the site, no mention of 'commercial' in the planning framework, does not align with the strategic framework	Oppose	The SSDSP and 2017 draft LSP indicate the site as 'residential' and there has been no alternative structure planning process to designate a commercial zoning. This matter is discussed further in the 'Planning Assessment' section.
Surrounding property values would decrease	Oppose	Noted, however this is not a valid planning consideration.
Risk of bushfire in the context of chemicals, fuels etc in proximity to vegetation	Oppose	The risk of bushfire is a valid consideration and is discussed further in the 'Planning Assessment' section.
Impact of emissions (odour, gaseous) and link to health concerns	Oppose	The possible impact of the land uses on human health are a valid planning consideration and are discussed further in the 'Planning Assessment' section.

Health impact of fast food in close proximity to primary school	Oppose	Noted. These concerns surround human behaviour rather than a direct impact from the land use, however the issue of whether Fast Food Outlets are compatible with primary schools are discussed further in the 'Planning Assessment' section.
Traffic issues (pedestrian safety, congestion during school pickup/drop-off, lack of parking)	Oppose	A Transport Impact Assessment was submitted with the application, though it is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes and parking availability of a residential area. Traffic is discussed further in the 'Planning Assessment' section.
Increased noise	Oppose	An Acoustic Report was submitted with the application, though it is noted that the nature of the commercial development will result in increased levels of noise.
Environmental impact (clearing of vegetation, proximity to wetland)	Oppose	The environmental impact of the proposed development is noted and discussed further in the 'Planning Assessment' section.
Risk of increased crime/antisocial behaviour	Oppose	Noted. These concerns surround human behaviour rather than a direct impact from the land use. However, it is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
There is a need for the proposed businesses (particularly Service Station)	Support	Noted, however there is no appropriate underlying zoning on the site to support such land uses in this location. Hammond Park is an area under transition. Alternative locations are identified for future commercial development elsewhere in the planning framework for the area.
Will provide increased employment opportunities	Support	Noted, however there is no appropriate underlying zoning on the site to support such land uses in this location. Hammond Park is an area under transition. Alternative locations are identified for future commercial development elsewhere in the planning framework for the area.
Will provide amenities within a convenient distance	Support	Noted, however there is no appropriate underlying zoning on the site to support such land uses in this location. Hammond Park is an area under transition. Alternative locations are identified for future commercial development elsewhere in the planning framework for the area.

The applicant was provided with a summary and full version of submissions, and opted to respond to the issues raised – this response can be seen in Attachment 7.

### Referrals/consultation with Government/Service Agencies

#### *Department of Planning, Lands and Heritage (DPLH)*

The subject site abuts Hammond Road, which is designated on the WAPC's plan SP694/6 as a Category 1 Other Regional Road (ORR). As per the WAPC's Draft DP 1.12 and delegation instrument *DEL2022/03 Powers of Local Governments Metropolitan Region Scheme* direct access onto this category of road is not permitted. The proposal was referred to DPLH's Transport Team for comment.

DPLH returned an initial non-objection to the proposal, subject to all access being proposed from the lower order road network (Gaebler Road). Following this advice, the applicant initiated a meeting with DPLH and the City to further discuss the access concerns. DPLH's final response is available through Attachment 8. Site access is discussed further in the 'Planning Assessment' section below.

#### *Department of Biodiversity, Conservation and Attractions (DBCA)*

Due to the presence of the CCW on site and the requirement for vegetation clearing, the proposal was referred to DBCA for comment. DBCA's comments are summarised as follows;

- A 50 metre buffer to the CCW is recommended, and any proposed reduction to this buffer should be assessed by the City to determine whether it is appropriate;
- The location of the Service Station, Motor Vehicle Wash and Fast Food Outlets in close proximity to the CCW, in the context of a reduced buffer, is not appropriate and poses a risk of nutrients and pollutants entering the surface water and groundwater systems;
- Should the application be approved, a Wetland Management Plan should be provided;
- The subject site contains Matters of National Environmental Significance (MNES) under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and a vegetation clearing permit is likely required;
- The proposal has the potential to disturb native fauna; and
- Proposed species noted on the Landscaping Plans have the potential to become invasive weeds in the wetland and should be reselected or appropriately managed.

DBCA's full response is available through Attachment 9. Environmental considerations are discussed further in the 'Planning Assessment' section below.

#### *Department of Water and Environmental Regulation (DWER)*

Due to the presence of the CCW on site and the proximity of the proposed development to sensitive land uses, the proposal was referred to DWER for comment. DWER objected to the proposal, with commentary provided on the following matters;

- The proposed 15 metre buffer to the wetland is inadequate to protect the CCW's ecological and environmental values and a 50 metre buffer is instead recommended;
- Should the application be approved, a vegetation clearing permit is required due to the 50 metre wetland buffer being an Environmentally Sensitive Area;
- A suitable buffer distance should be provided for the Service Station in relation to sensitive land uses (residential dwellings and the primary school); and
- The provided Local Water Management Strategy is not sufficient and requires amendment.

DWER's full response is available through Attachment 10. Environmental considerations and the proximity of the development to sensitive land uses are discussed further in the 'Planning Assessment' section below.

#### *Environmental Protection Authority (EPA)*

The EPA determined not to assess environmental factors at the time of Amendment No. 28 to TPS 3 in 2005. In absence of a prior structure planning process supporting a reduced buffer to the CCW, the City met with officers from EPA Services for advice on the proposed application. The EPA noted that reducing the buffer on the grounds that the adjoining property to the south had a reduced buffer was not sufficient justification, given the subject proposal is for commercial development as opposed to residential. Based on discussions with the EPA officers, the City considers that the proposal for a reduced wetland buffer to a commercial development may warrant a formal referral to the EPA for their assessment under Section 38 of the *Environmental Protection Act 1986*. A formal referral would undermine the ability for the DAP to determine the proposal, until the conclusion of an EPA assessment. For this reason, and in consideration that environmental factors are not the sole reason for the City's refusal recommendation, a s38 referral was not undertaken. The wetland buffer (including the buffer for the adjoining site to the south) is discussed further in the 'Planning Assessment' section below.

#### *Department of Health*

The proposal was referred to the Department of Health for comment due to the proposed Service Station's proximity to residential dwellings and the primary school. The Department of Health disagreed with the separation distance (buffer) noted by the applicant and advised that a separation distance of 200 metres should be maintained (in accordance with the requirements of the EPA's Separation Distance Guidance, discussed further below) to avoid exposure to potentially harmful gaseous pollutants. The Department also advised that there would be no way to verify any site-specific studies in support of a reduced separation distance. The Department of Health's full response is available through Attachment 11. The proximity of the proposed development to sensitive land uses is discussed further in the 'Planning Assessment' section below.

#### *Department of Education*

Due to the proximity of the proposed development to the Hammond Park Primary School (HPPS), and in accordance with the WAPC's OP 2.4, the proposal was referred to the Department of Education for comment. The Department of Education strongly objected to the proposal, with comments summarised as follows;

- The site is not subject to an approved Local Structure Plan and the proposal is inconsistent with the SSDSP, which indicates residential use for the site (excluding the wetland area);
- The development is not compatible with the existing school site and will compromise the amenity of the school;
- The proximity of the Fast Food Outlets may result in unhealthy diets and obesity which contribute to death, disease and disability;
- The proximity of the Service Station may result in exposure to emissions which have the potential to adversely impact health and wellbeing, and a reduced separation distance to the school site is noted; and
- The proposed development will compound existing parking and traffic issues around the school site and will compromise pedestrian safety.

The Department of Education's full response is available through Attachment 12. Traffic, proximity of the proposed development to sensitive land uses and the lack of an approved Local Structure Plan is discussed further in the 'Planning Assessment' section below.

*Department of Fire and Emergency Services (DFES)*

Due to the proposed Service Station involving the storage of high-risk flammable material within a bushfire prone area, the proposal, and specifically the supplied Bushfire Management Plan (BMP) was referred to DFES for comment. DFES advised that the BMP did not sufficiently address the requirements of SPP 3.7. DFES' comments are summarised as follows:

- Uncertainty surrounding how the future road widening area of Hammond Road will be managed as low-threat vegetation given it is outside the development site boundaries, and further landscape management details required;
- Further photographic evidence would be required to confirm vegetation classifications and validate the provided Bushfire Attack Level (BAL) ratings;
- Proposal of a "fire break" along the eastern side of the development area is not a sufficient mechanism to manage bushfire risk;
- The pump room associated with the Motor Vehicle Wash is considered to be a "habitable building" that appears to be exposed to an unacceptable level of bushfire risk (BAL-FZ); and
- Further detail within the BMP is required to confirm that all elements of the Bushfire Protection Criteria can be met.

DFES' full response is available through Attachment 13. Bushfire risk and management is discussed further in the 'Planning Assessment' section below.

*Water Corporation*

Due to the subject site currently being un-serviced, the proposal was referred to the Water Corporation for comment. The Water Corporation indicated that:

- Services are available in the area to connect to; and
- The proposed development does not appear to affect Water Corporation's assets.

The Water Corporation's full response is available through Attachment 14.

### Design Review Panel Advice

The City's LPP 5.16 specifies criteria where review by the City's DRP is mandatory;

- Proposals three storeys or greater; or
- Proposals with 20 or more multiple dwellings; or
- Proposals where determination by the Joint Development Assessment Panel is mandatory; or
- Any other proposal referred by the Director of Planning and Development.

The proposal met the threshold for mandatory JDAP determination (noting that this was prior to the amendments to determination thresholds within the *Planning and Development (Development Assessment Panels) Regulations 2011*), therefore review by the DRP was required. The DRP considered the proposal against design principles of SPP 7.0 and LPP 5.16. The proposal was presented at two DRP meetings. Upon conclusion of the second meeting, items pending further attention included;

- Further detail required as to how the design responds to the unique context and character of the area (proximity of the wetland and residential development);
- Progressing landscaping concepts and including appropriate native species; and
- Recommendation to unify the built form and signage in relation to the streetscape and surrounding area.

The final DRP report is available through Attachment 15. It is noted that within their report, the DRP supported provision of a pedestrian track within the wetland buffer area. Matters relating to the buffer, as well as the development's built form are discussed in the 'Planning Assessment' section below.

### Other Advice

The proposal was referred internally to a number of departments within the City, most notably;

- Environmental Management, Policy and Planning (EMPP);
- Environmental Health;
- Strategic Planning; and
- Transport and Traffic

Internal responses have informed the key issues identified within this proposal, which are discussed in the 'Planning Assessment' section.

### **Planning Assessment:**

The proposal has been assessed against all the relevant legislative requirements of the Scheme, State and Local Planning Policies and the structure planning framework outlined in the 'Legislation and Policy' section of this report. The following matters have been identified as key considerations for the determination of this application and are discussed below.

#### *Orderly and Proper Planning*

Schedule 2, Clause 67(2)(b) of the Regulations requires the matter of 'orderly and proper planning' to be considered during the planning assessment. The proposed development cannot be seen as 'orderly and proper planning' for several reasons.

Firstly, as mentioned above, the objective of the Development Zone within TPS 3 is for development to be guided by a comprehensive structure plan. Consistent with this objective, DA 26 specifically requires a structure plan through Provision (1) in Table 9 of TPS 3. A structure plan is recognised as a key planning instrument for the coordination of future zoning, subdivision, and development of an area of land. The Regulations (Schedule 2, cl.27(2)) state that a subdivision or development application in an area for which a structure plan has not yet been approved, may be approved if the decision maker is satisfied that the application does not conflict with the principles of orderly and proper planning. At the district level, the SSDSP nominates the subject site as 'Residential'. At the local level, the draft LSP, which is a seriously entertained planning proposal, also designates a Residential Zone for the subject site. Considering the permissibility of the proposed land uses in a Residential Zone against Table 1 of TPS 3;

- Service Station – X use
- Fast Food Outlet – X use
- Motor Vehicle Wash – X use
- Medical Centre – A use

In other words, within a Residential Zone all proposed uses (with the exception of the Medical Centre) would not be permitted. Notwithstanding the draft LSP, there has been no structure plan prepared or approved which contemplates an alternative zoning whereby the proposed uses could be capable of consideration.

Similarly, the second provision in Table 9 of TPS 3 for DA 26 is to provide for residential development and 'compatible uses'. The compatibility of the development with its setting is a matter that requires consideration as per Clause 67(2)(m)(i) of the Regulations. Whether the proposed uses for the site are 'compatible' depends on a range of factors, including existing character of the area, general amenity impact and design of the development. The surrounding area is characterised by education, conservation/environment and residential. Numerous concerns were raised during community consultation surrounding noise, emissions, traffic, environmental impact and inconsistency with the strategic planning framework. Taking existing neighbourhood character into account, including evaluation of the volume and nature of objections received, indicates that the development could not reasonably be considered as 'compatible' within its setting. These factors are typically structure planning matters, notwithstanding, the City has been unable to overcome the predominant issue of compatibility at the development application stage, and for this reason, it is considered that the proposal does not meet either objective of DA 26.

Secondly, the proposal cannot be considered 'orderly and proper planning' due to its inconsistencies with the broader strategic planning framework and SPP 4.2. Element 7 of *Liveable Neighbourhoods* requires careful consideration of the location of commercial uses in relation to other centres. Further, the activity centre hierarchy is set out in SPP 4.2, the City's LCACS and the City's draft LPS. The activity centre hierarchy is to be used when preparing and determining planning instruments, subdivision and development applications to coordinate the location and distribution of activity centres. The subject site is not an identified 'Local Centre' in any of these strategic documents. Given the development is not located within the boundary of an

identified activity centre, it constitutes ‘out-of-centre development’ as outlined in Clause 7.9 of SPP 4.2, which is defined as:

*‘Any development application that proposes floorspace greater than 500m<sup>2</sup> NLA for Category A activity centre uses located outside the boundary of an activity centre.’*

The proposal includes approximately 905m<sup>2</sup> of Category A activity uses (Fast Food Outlets). Furthermore, while development applications for Category B activity centre uses are not considered to be out-of-centre developments where the existing zoning contemplates (P, D, A) those land uses, commercial zoning has never been contemplated formally for the subject site. Therefore, the Category B activity centre uses within the proposal (Service Station, Motor Vehicle Wash and Medical Centre) *are also* considered out-of-centre development. As per Clause 7.9a) of SPP 4.2:

*‘There is a general presumption against the approval of activity centre uses outside of activity centres as they are likely to impact nearby activity centres and the overall activity centre hierarchy.’*

In this regard, the proposed commercial development sits approximately 700 metres north of an existing Local Centre Zone, which includes the recently approved Hammond Park Neighbourhood Centre development (DAP/23/02556). The SPP 4.2 ‘Activity Centres Implementation Guidelines’ stipulate that identification of new local centres should only occur through an appropriate strategic planning process, either through preparation or review of local planning strategies or local-level structure plans informed by a Needs Assessment to ensure that the existing and planned activity centre hierarchy is not undermined, consistent with the objectives and outcomes and measures of SPP 4.2 and the Implementation Guidelines.

The SPP 4.2 Guidelines are clear that a Needs Assessment should not be prepared for development applications because the intention is for these to only be contemplated through a holistic strategic planning process, which has not occurred in this instance. The supplied Needs Assessment does not provide sufficient justification for the out-of-centre development for the following reasons:

1. It is premised on the site being a ‘Local Centre’, however it has not been identified as such in any strategic document; and
2. It does not consider the additional retail floorspace potential of the other Local Centre zoned sites located west of the recently approved Hammond Park Neighbourhood Centre (DAP/23/02556).

The proposal also cannot be seen as “orderly and proper planning” when considering the “Guiding Principles for the Exercise of Discretion” outlined in the WAPC’s 2024 *Development Application Exercise of Discretion Guidelines* (Discretion Guidelines). For example, Principle One of the Discretion Guidelines requires a properly constructed planning framework. It is noted that:

*‘Where the need for a standard/precinct structure plan or similar is foreshadowed by the zoning of the land or through the strategic planning framework, and such a plan has not yet been prepared, the starting point for any major discretionary decision should be refusal.’*

Further, Principle Three of the Discretion Guidelines notes that if the standard is to be departed from, there must be clear and logical reasons for doing so. Following assessment of all the information provided it is not considered that the proposal warrants a departure from the broader strategic planning framework (LCACS, draft LPS, SSDSP, draft LSP).

As per Principle Four of the Discretion Guidelines, public/community input has a legitimate role in the planning process. Of relevance, submissions need to be given careful consideration when forming views on the development's compatibility with its setting. Concerns raised through submissions included detrimental amenity impact resulting from visual appearance (signs, lighting and the like), emissions and increased traffic and environmental impact. All are valid concerns and are discussed further below.

Overall, the proposal constitutes out-of-centre development that does not align with the strategic planning framework and undermines the importance of the structure planning process. Therefore, the proposal is not in line with "orderly and proper planning".

### *Environmental Considerations*

DBCA's 'Geomorphic Wetlands – Swan Coastal Plain (Management Category) Dataset' identifies that a CCW is located on the subject site. 'Conservation' is the highest category of wetland, indicating that it has high conservation value for natural or human use. Advice from external agencies (EPA, DWER, DBCA) and internally from the City's Environmental team has consistently referred to the EPA's Guidance Statement No. 33 (GS 33) and the WAPC's *Guideline for the Determination of Wetland Buffer Requirements* (Buffer Guideline) to determine an appropriate buffer distance. The Buffer Guideline notes that the objective for management of CCWs is to 'preserve wetland (natural) attributes and functions.' It is also noted that:

*'A reduction in the wetland boundary, the required separation distance or recommended management measures for C category wetlands is unlikely to meet the identified management objective. In such cases the proposal should be referred to the EPA.'*

The Buffer Guideline acknowledges that separation between wetlands and development can be simply a distance, or via a physical barrier such as a fence or wall. It is noted that the DRP indicated from an urban design perspective, integration between the development and the wetland (no barrier, public access) was encouraged. However, advice from environmental agencies has confirmed that the risk of rubbish spread (from the Fast Food Outlets in particular) and damage from public access/dogs means that a physical barrier is warranted. Environmental reporting provided by the applicant has indicated a proposed 1.2m high chain mesh fence.

A buffer distance of 15 metres has been nominated between the CCW and the proposed development. A firebreak 3 metres in width is proposed to run along the eastern edge of the development, which results in the buffer width effectively being 12 metres. GS 33 and the Buffer Guideline recommend a minimum 50 metre separation distance (buffer) for CCWs. Advice from DWER and DBCA is consistent with the Buffer Guideline. Further, DBCA noted that the appropriateness of any reduction to the separation distance should be determined solely by the City. The City's EMPP team reviewed the Environmental Assessment Report, Wetland Buffer Assessment and

Banksia Woodland TEC and Black Cockatoo Habitat Assessment that were provided in support of the proposal. The Wetland Buffer Assessment noted that a key justification for the reduced buffer is the previously accepted 15 metre buffer for the site to the south (Lot 9008 Frankland Avenue). This justification is not considered appropriate for several reasons.

Firstly, while the same wetland covers both sites, the developable area on Lot 9008 Frankland Avenue adjacent to the CCW is zoned Residential under an approved structure plan ('*Lot 9008, Frankland Avenue Hammond Park LSP*'). The proposed development on the subject site is a mix of commercial land uses, including Fast Food Outlets, a Motor Vehicle Wash and a Service Station. It is considered that the potential environmental impact to the wetland from these uses (in terms of nutrient/pollutant runoff, litter, risk of chemical spills and light impact on fauna) is far greater than residential development. Furthermore, the effective buffer will be even further reduced than what was accepted on Lot 9008 Frankland Avenue due to the 3m firebreak.

Secondly, it was made clear by the EPA and DWER that the reduced 15 metre buffer on Lot 9008 Frankland Avenue should not be viewed as a precedent. Further discussions with the EPA in relation to the proposed development have confirmed that the 15 metre buffer on Lot 9008 Frankland Avenue does not justify a buffer reduction for proposed commercial development. Additionally, following discussion with the EPA the City considers that the reduction to the buffer distance to a commercial outcome may warrant formal referral to the EPA under Section 38 of the *Environmental Protection Act 1986*. Should the EPA resolve to assess the proposal under Section 38, this would need to be completed prior to determining the subject development application. These considerations are typically resolved at the strategic level through a prior structure planning process.

Thirdly, the Department of Water and Environmental Regulation's *Water Quality Protection Note 49 – Service Stations* (WQPN 49) requires that wetlands be separated from Service Stations by a buffer of 200 metres. The City's LPP 3.4 also requires Motor Vehicle Wash uses to be consistent with the requirements of WQPN 49. Adequate separation needs to be provided in conjunction with a detailed Environmental Management Plan and specific details including stormwater management, wastewater management and chemical spill contingency. The fuel bowsers for the proposed Service Station are approximately 96 metres from the edge of the wetland in lieu of 200 metres, and the Motor Vehicle Wash is the closest use to the wetland, sitting 20 metres from the wetland edge. A sufficiently detailed Environmental Management Plan has not been provided.

Concerns were also raised by the City's EMPP team surrounding the findings of the Banksia Woodland TEC and Black Cockatoo Habitat Assessment (Habitat Assessment). Due to the extent of clearing proposed (1.27ha) and the fact the vegetation offers foraging and future breeding habitat to all three protected species of Black Cockatoo, the applicant has acknowledged the requirement to refer to the application to the Commonwealth Government for the impacts to Matters of National Environmental Significance that are protected under the *Environment Protection and Biodiversity Conservation Act 1999*. Figure 5 of the Habitat Assessment specifically identifies two Jarrah trees (Black Cockatoo Habitat) that intersect with the proposed development area. In the context of the inappropriate CCW buffer, the removal of the two Jarrah trees is considered to compound the environmental impact of the commercial development.

Appropriate management of water within the development must be considered in accordance with Element 5 of *Liveable Neighbourhoods*, Draft SPP 2.9 and the WAPC's *Better Urban Water Management Guidelines* (2008). A Local Water Management Strategy (LWMS) was provided, but as per the Draft SPP 2.9 Guidelines this should have been considered at a prior structure planning stage. Endorsement from DWER has not yet been provided, with some outstanding issues from DWER and the City including;

- The LWMS is premised on a reduced wetland buffer distance (as discussed above). DWER noted that the LWMS should provide written evidence from DBCA that the reduced buffer is supported. In its referral response to the proposed development, DBCA has already advised that the 50 metre buffer should be maintained unless otherwise supported by the City; and
- Details surrounding the location of stormwater management infrastructure in relation to the CCW buffer were unclear.

The applicant's response to DWER's comments on the LWMS and other environmental matters raised by the external referral agencies is available through Attachment 7.

Overall, it is considered that the reduced buffer to the CCW is likely to compound the environmental impact created by a commercial development outcome. In absence of a prior structure planning process which supports commercial development, the proposed buffer distance and resultant impact on the CCW, including flora and fauna, reaffirms the proposal should not be supported.

#### *Proximity to sensitive land uses*

Concerns were raised during community consultation surrounding the proximity of the Service Station and Fast Food Outlets to the HPPS and residential dwellings.

Regarding the Service Station, community concerns particularly focussed on the possible impact of emissions (notably benzene) on human health and the potential links to cancer. Clause 67(2)(r) of the Regulations requires that the following matter be taken into consideration:

*(r) 'The suitability of the land for the development taking into account the possible risk to human health or safety.'*

The EPA's *Guidance for the Assessment of Environmental Factors - Separation Distances between Industrial and Sensitive Land Uses* (GS3) provides advice on the minimum recommended separation distance between uses (such as Service Stations) and 'sensitive land uses' (residential development and schools). Separation is required to reduce possible impacts (emissions, noise, odour). For 24-hour Service Stations, GS3 requires a 200 metre buffer distance between the boundaries. The development proposes a 20 metre separation distance between the subject site boundary and the lot boundary of the HPPS.

The Department of Health and DWER have advised that the 200 metre buffer distance should be maintained in accordance with GS3. In response to this advice, the applicant opted to provide an Emissions Impact Assessment (within Attachment 7), which utilises dispersion modelling to predict the spread of emissions. The Department of Health noted that if the proposed separation distance is less than the recommended distance, this type of site-specific study would be expected, however:

*'The Department of Health has received advice from DWER that air quality dispersion modelling has a number of areas of uncertainty and DWER is generally not able to verify the assumptions made in these modelling studies. Therefore, the use of dispersion modelling to make precise judgements on separation distances is impossible... Therefore, from a public health point of view the Department of Health recommends the application of separation distances as they appear in the Guideline (GS3)'*

As further justification for a reduced separation distance, the applicant referenced the 2021 DAP approval of a 24-hour Convenience Store at 38 Canning Highway, South Perth (DAP/21/02122). The application was approved adjacent to residential dwellings in lieu of a 200 metre separation distance. Accepting the reduced separation of the Service Station to sensitive land uses on the basis of previous approvals would not be appropriate for the following reasons;

1. As recommended by the Department of Health, other Service Stations in close proximity to sensitive land uses should not provide precedent. Based on DWER's advice, air quality dispersion modelling cannot be verified;
2. There are other recent examples of DAP decisions for comparable Service Stations whereby the matter of cl. 67(2)(r) of the Regulations was considered and determined to be a valid reason for refusal. Examples include DAP/18/01473 (72 Walter Road East, Bassendean) and DAP/22/02317 (41-43 & 45 Angove Street, North Perth); and
3. Most importantly, the example used by the applicant refers to a land use that was 'Discretionary' within its Zone under the relevant Local Planning Scheme.

With regard to point (3) above, the reduced separation distance proposed by the Service Station within the commercial development comes in absence of any strategic framework to support the land use. Given the land use was not previously contemplated for the site, the valid concerns raised by the community and reflected by advice from external agencies need to be considered.

Concerns were also raised by the community surrounding the proximity of the three proposed Fast Food Outlets to the HPPS and residential dwellings. One such concern was possible odours – in this regard, it is noted that the applicant has provided a Compliance Certificate detailing that McDonalds was able to comply with the relevant Australian Standards for exhaust air discharges (see Attachment 16). The Emissions Impact Assessment provided through Attachment 7 also addresses odour from all three proposed Fast Food Outlets.

Another significant concern was the potential increase in the consumption of fast food (particularly by children) as a contributor to obesity, disease and death. This was also raised by the Department of Education in their referral response. The WAPC's OP 2.4 applies to development applications proposed in close proximity to school sites, and seeks to encourage appropriate surrounding land uses. Clause 3.6.2 of OP 2.4 states:

*'Careful consideration needs to be given to ensure that school sites are located amongst or adjacent to compatible land uses to support education, health and wellbeing outcomes.'*

It is recognised that the Fast Food Outlet land use itself does not pose a risk to human health; the risk comes from the human behaviour of poor dietary choices/lifestyles. However, the broader question of compatibility of the land use being in close proximity

to the HPPS is a valid matter for consideration under Clause 67(2)(m)(i) of the Regulations. Based on community concerns and in absence of a strategic planning framework to contemplate the proposed uses, the Fast Food Outlets in close proximity to the HPPS are not considered to be appropriate.

#### *Character of the locality*

There is a clear expectation within the SSDSP for predominantly residential development. As mentioned in the 'Background' section, the subject site is shown as 'medium (residential) density and 'Conservation Category Wetland'. The area surrounding the site is similarly identified as 'medium density', with some pockets of 'high density' and 'Local Centre', and associated public open space and local reserves. West of the subject site is defined by the Harry Waring Marsupial Reserve, which extends north to Russell Road.

At a local level, LSPs have been approved across almost the entire SSDSP area. The LSPs are broadly consistent with the SSDSP, identifying low to medium density residential. For example, the approved LSP south of the subject site (the *Lot 9008, Frankland Avenue Hammond Park* LSP) comprises residential (R25) in addition to the CCW and buffer (buffer matters are discussed further above). Similarly, LSPs to the east of the subject site, such as the *Lot 40 Gaebler Road Hammond Park* LSP designate residential densities from R20 to R40. North of Gaebler Road is predominantly R20.

Submission responses reflected the local community's expectations of the area as predominantly residential, particularly in the context of the SSDSP and the draft LSP, which was publicly advertised, identifying the site as Residential. Given that 'Service Station', 'Fast Food Outlet' and 'Motor Vehicle Wash' are 'X' uses in the Residential Zone, in absence of any approved LSP designating an appropriate zoning these uses would be considered inconsistent with the prevailing (residential) character of the area. Clause 67(2)(m)(i) of the Regulations confirms that character of the area is a valid matter for consideration.

#### *Built form*

In absence of the site being appropriately zoned to contemplate the proposed uses within what is a predominantly residential area, impact of the built form on the streetscape requires careful consideration. The Fast Food Outlets and Service Station propose to accommodate franchises that have pre-established built form requirements. As a result, overall built form is relatively generic with limited opportunity to respond to the context and character of the area, as required by SPP 7.0 and LPP 5.16. It was noted in the DRP's final report that the Service Station "*presents an inactive façade facing Gaebler Road*". Additionally, the Medical Centre "*has a limited contribution in the unified built form response for the development.*"

The six (6) proposed pylon signs contribute to the overall built form outcome and are considered against the planning framework through the following table:

<b>Provision</b>	<b>Requirement</b>	<b>Proposal</b>	<b>Assessment</b>
TPS 3 cl. 4.9.3 d) (i)	Limited to a common pylon sign comprising	A total of 6 pylon signs	The overall development will result in a significant number of pylon signs, which, when

	up to six advertisements, or where the development comprises a service station then up to two pylon signs are permitted.	proposed across the site.	combined with their size, pose a visual amenity impact to surrounding residents.
LPP 3.7 Clause (3) 'Standards' 6. Pylon Sign	a) Maximum size of 6m <sup>2</sup> per street frontage	49m <sup>2</sup> on Gaebler Road frontage; 47m <sup>2</sup> on Hammond Road frontage.	Signage exceeds the maximum size permitted on both frontages.
LPP 3.7 Clause (3) 'Standards' 6. Pylon Sign	b) Maximum height of 3 metres	Four of the signs are 10m in overall height; one sign (Medical Centre) is 9.5m in height, and the Service Station pricing board is 6m in height.	All pylon signs exceed the maximum permitted height. It is considered that the scale of the signs is significant in relation to the surrounding residential area.
LPP 3.7 Clause (3) 'Standards' 6. Pylon Sign	c) On any one lot, maximum of one sign per frontage, or one sign per 100 metres of frontage; whichever is the greater.	Three signs for 150m of effective frontage on Gaebler Road; Three signs for 130m of frontage on Hammond Road.	Both street frontages have more signage per 100m of frontage than is permitted.
LPP 3.7 Clause (3) 'Standards' 6. Pylon Sign	d) Setback a minimum distance of half its own overall height to the front property boundary.	Setbacks ranging from 0.2m to 2.2m distance to the front lot boundary.	All pylon signs are closer to the street boundaries than is permitted.

An objective of *Local Planning Policy 3.7 Signs & Advertising* (LPP 3.7) is:

- (1) *"To ensure that signage and advertising does not detract from the streetscape or amenity of the area".*

The size, number and location of the pylon signs pose a significant visual impact to the streetscape given the area comprises predominantly single storey (residential) dwellings with overall roof heights approximately 6m in height. In absence of a commercial zoning, the scale of the signs, particularly being illuminated, is considered

inappropriate. Potential amenity impact of the signs was reiterated through the community consultation process and by the DRP. It is noted that the recent JDAP approval of the nearby Hammond Park Neighbourhood Centre (DAP/23/02556) required all pylon signs to be reduced in height to present a more appropriate scale.

### *Traffic & Vehicular Access*

The impact of vehicular access and traffic in/around the subject site as a result of the proposed development requires consideration in accordance with Clause 67(2)(s) and (t) of the Regulations. Concerns were also raised during community consultation surrounding pedestrian safety (particularly children coming to/from HPPS) and the effect on parking availability at school drop-off/pickup times. It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and the proposal would impact the expected traffic volumes of a residential area. The applicant supplied a Transport Impact Assessment (TIA) to address these considerations.

The subject site is located on the corner of Gaebler and Hammond Roads, with Hammond Road designated as a Category One *Other Regional Road* ("blue road"). Of note, the City's Transport team has advised that the section of Hammond Road adjacent to the subject site, and the Hammond/Gaebler Road intersection, will be upgraded to a divided dual carriageway road within the next five years. The proposed commercial development originally included two full access crossovers on Gaebler Road and two full access crossovers on Hammond Road. As per Clause 5.1 of Draft OP 1.12, there is a general presumption against the creation of new driveways on regional roads, particularly where alternative access from another road is available. This was reflected in the DPLH Transport team's referral response, who recommended that all access be taken from Gaebler Road.

The City met with the applicant (including applicant's traffic consultant) and DPLH to further discuss the access arrangements. As a result of the meeting, the applicant provided a Technical Memo (see Attachment 17) which proposed the following;

- Northern crossover off Hammond Road revised to be a left-out only, for use by fuel tanker trucks only;
- Southern crossover off Hammond Road to be full-access initially, and following Hammond Road upgrade would be left-in left-out only;
- Swept paths provided for largest vehicles accessing the site, to confirm adequate entry into the site, movement through and exit;
- Internal entry between the Service Station and Fast Food Outlet (proposed Starbucks) closed off to improve traffic flow in and out of crossovers on Gaebler Road;
- Turn warrant assessment conducted for the Hammond Road southern access point; and
- Justification that the proposed development would not result in a roundabout at the Hammond/Gaebler Road intersection being required.

Whilst the City's Transport & Traffic team have advised that technical traffic concerns could potentially be mitigated by the above, the issues raised by the community surrounding the detrimental amenity impact of the proposed commercial development (in a predominantly residential area) remain valid. It is considered the resolution of this matter does not address the non-compatibility of the commercial outcome overall. Furthermore, final advice from DPLH's Transport team has reiterated the importance

of controlling access to/from an Other Regional Road in accordance with Draft OP 1.12. In this regard, DPLH would only be willing to support a single access point to Hammond Road. The Technical Memo and proposed updates were therefore unable to satisfy DPLH.

### *Bushfire Risk and Management*

The proposed development is located within a bushfire prone area, and with the existence of the CCW and proximity to Harry Waring Marsupial Reserve the ongoing risk of bushfire is considered significant. Bushfire management was also identified as a concern during community consultation, particularly due to the storage of flammable products associated with the Service Station. As required by Draft SPP 3.7, a Bushfire Management Plan (BMP) was provided with the application. The City sought advice from DFES, who recommended that the BMP be further refined, particularly with regard to the classification of vegetation plots which could in turn verify the BAL ratings. DFES also commented on the location of the Motor Vehicle Wash, which is proposed to be partially located within an area of extreme bushfire risk (BAL-FZ). DFES considered the Motor Vehicle Wash “pump room” a *habitable building*, defined in the draft SPP 3.7 Guidelines as:

- “A permanent or temporary structure on land that –*
- a. Is fully or partially enclosed; and*
  - b. Has at least one wall of solid material and a roof of solid material; and*
  - c. Is used for a purpose that involves the use of the interior of the structure by people for living, working, studying or being entertained.”*

As per the draft SPP 3.7 Guidelines there is a presumption against approving habitable buildings within areas of BAL-FZ, so in this regard the proposal, and in particular the location of the Motor Vehicle Wash, is not considered to be appropriate. Furthermore, the BMP does not clarify how bushfire risk could be acceptably managed on an ongoing basis for two reasons:

1. The BMP relies upon the management of vegetation in the Hammond Road widening reserve to the west, which is external to the site. The City is not willing to commit to managing this area to a low-threat state in light of the City’s non-support of the overall development; and
2. The BMP proposes a 3m wide firebreak along the eastern side of the development. This contributes to the reduction in the buffer to the CCW, as discussed in the sections above, which is not supported. Additionally, as noted by DFES, firebreaks in accordance with a local governments’ Fire Control Order may be subject to change and should not be relied upon for continued risk management.

Overall, the proposed measures within the BMP for managing bushfire risk are not considered to be acceptable, the requirements of Draft SPP 3.7 have not been met and community concerns surrounding bushfire risk have been raised. In light of these considerations, and all other issues raised in the sections above, the proposed development should not be supported.

### **Conclusion:**

This report has raised several issues, which accumulatively result in the City's refusal recommendation. Whilst some matters could be reasonably addressed and mitigated, the City considers the proposal, if approved, would represent a land use planning conflict within its current surrounds, and is at odds with prior planning contemplation for the site. Fundamentally, this conflict cannot be resolved via the submission of additional information or further consultant reports, as it relates specifically to the matter of 'land use capability', existing character and lack of supportive strategic planning due process.

Overall, the City considers the proposed commercial development is inappropriate for the subject site, namely due to;

- The overarching strategic framework indicates a residential zoning should apply to the subject site. There has been no structure planning process to establish an alternative zoning whereby the land uses could be capable of consideration. Further, the City is unlikely to support a structure plan contemplating commercial development, particularly as currently proposed;
- Given the proposed development's inconsistency with the overarching strategic framework and the fact it constitutes 'out-of-centre development' the proposal cannot be deemed to be in line with 'orderly and proper planning';
- The issue of a reduced buffer to the CCW, which is typically addressed at a prior planning stage, has been 'side-stepped' and not adequately resolved. The reduced buffer has further impacts on water management, flora and fauna on the site. The City is not objectionable to considering a reduced buffer, however this should be informed by a supported buffer definition study and appropriate land use interface (ideally residential, or land uses permissible within the residential zone);
- The proximity of the Service Station to sensitive land uses poses a risk to human health. In particular, the proximity to the Hammond Park Primary School, which was identified as a school site early in the planning stages for Hammond Park and purposefully positioned to nearby 'Residential' and 'Conservation' land use designations;
- The proximity of the Fast Food Outlets to residences/HPPS is inappropriate (in particular 24hr operations) and the uses cannot be seen to be '*compatible*'. Approval would otherwise necessitate several onerous planning conditions, which accumulatively indicate a refusal recommendation is more appropriate; and
- The built form, particularly the extent of pylon signs, is inconsistent with the scale and character of the surrounding area, which is predominantly residential in nature; and
- The land uses within the proposed development pose a high bushfire risk in a vegetated (bushfire prone) area. The proposal cannot adequately mitigate the bushfire risk.

The City therefore recommends that the application be refused.

### Alternatives

N/A

# PROPOSED MIXED USE DEVELOPMENT

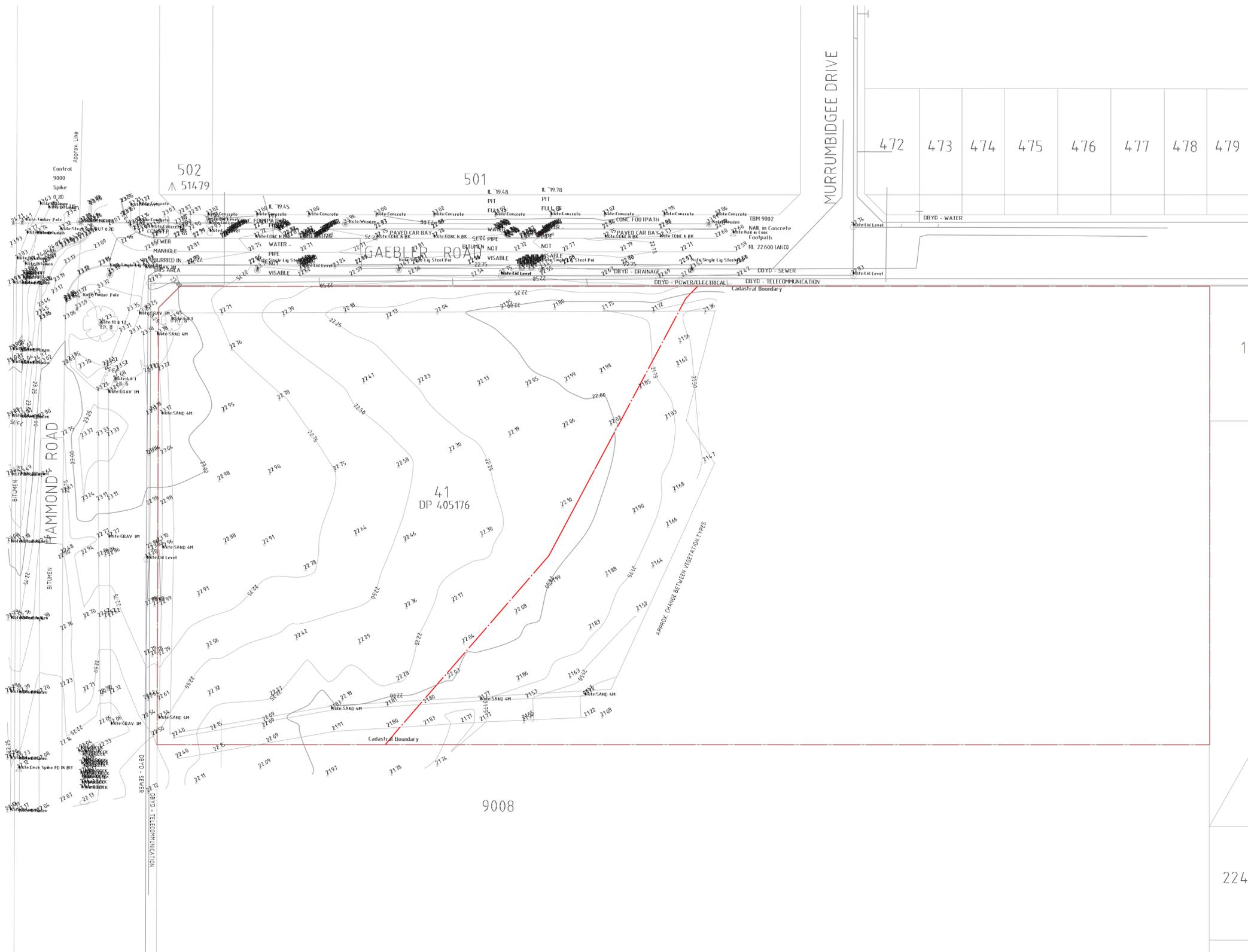
LOCATION : LOT 9501 CNR GAEBLER ROAD & HAMMOND ROAD, HAMMOND PARK  
FOR : BROAD VISION PROJECTS





**LOCATION PLAN**  
SCALE: 1:1500





**EXISTING SITE SURVEY**  
SCALE: 1:500

300  
N 29241

502  
N 51479

501  
N 1948  
N 1978

472 473 474 475 476 477 478 479

MURRUMBIDGE DRIVE

GAEBLER ROAD

41  
DP 405176

9008

1

224



**SITE PLAN - PROPOSED LOTS**

SCALE: 1 : 500



**SITE CRITERIA**

**LOT 1**

1. Site Area		2,378m <sup>2</sup>
2. Landscaping		
a. Required Soft L/S OR 10% Of Site 5% + Verge		238m <sup>2</sup> 119m <sup>2</sup>
b. Provided		
i. Soft		267m <sup>2</sup>
ii. Hard		89m <sup>2</sup>
<b>Total</b>		<b>352m<sup>2</sup></b>
3. Floor Area (GFA)		
a. Convenience Store		192m <sup>2</sup>
4. Carparking		
a. Cars Required	192m <sup>2</sup> @ 1/15m <sup>2</sup>	13
	1 Per Employee	2
<b>Total</b>		<b>15</b>
b. Cars Provided		
i. On Grade		9
ii. Fuel Canopy		8
<b>Total</b>		<b>17</b>

**LOT 2**

1. Site Area		1,696m <sup>2</sup>
2. Landscaping		
a. Required Soft L/S OR 10% Of Site 5% + Verge		170m <sup>2</sup> 85m <sup>2</sup>
b. Provided		
i. Soft		222m <sup>2</sup>
ii. Hard		195m <sup>2</sup>
<b>Total</b>		<b>417m<sup>2</sup></b>
3. Floor Area (GFA)		
a. Fast Food		245m <sup>2</sup>
4. Carparking		
a. Cars Required	245m <sup>2</sup> @ 1/15m <sup>2</sup>	17
b. Cars Provided		
i. On Grade		14
ii. Drive Thru		10
<b>Total</b>		<b>24</b>

**LOT 3**

1. Site Area		3,259m <sup>2</sup>
2. Landscaping		
a. Required Soft L/S OR 10% Of Site 5% + Verge		326m <sup>2</sup> 163m <sup>2</sup>
b. Provided		
i. Soft		477m <sup>2</sup>
ii. Hard		354m <sup>2</sup>
<b>Total</b>		<b>831m<sup>2</sup></b>
3. Floor Area (GFA)		
a. Medical Centre		640m <sup>2</sup>
4. Carparking		
a. Cars Required	10 Practitioner @ 5 Per	50
b. Cars Provided		
i. On Grade		45

**LOT 4**

1. Site Area		2,702m <sup>2</sup>
2. Landscaping		
a. Required Soft L/S OR 10% Of Site 5% + Verge		270m <sup>2</sup> 135m <sup>2</sup>
b. Provided		
i. Soft		327m <sup>2</sup>
ii. Hard		166m <sup>2</sup>
<b>Total</b>		<b>493m<sup>2</sup></b>
3. Floor Area (GFA)		
a. Fast Food		450m <sup>2</sup>
4. Carparking		
a. Cars Required	450m <sup>2</sup> @ 1/15m <sup>2</sup>	30
b. Cars Provided		
i. On Grade		25
ii. Drive Thru		12
<b>Total</b>		<b>37</b>

**LOT 5**

1. Site Area		4,453m <sup>2</sup>
2. Landscaping		
a. Required Soft L/S OR 10% Of Site 5% + Verge		445m <sup>2</sup> 223m <sup>2</sup>
b. Provided		
i. Soft		842m <sup>2</sup>
ii. Hard		184m <sup>2</sup>
<b>Total</b>		<b>1,026m<sup>2</sup></b>
3. Floor Area (GFA)		
a. Fast Food		270m <sup>2</sup>
4. Carparking		
a. Cars Required	270m <sup>2</sup> @ 1/15m <sup>2</sup>	18
b. Cars Provided		
i. On Grade		25
ii. Drive Thru		10
<b>Total</b>		<b>35</b>

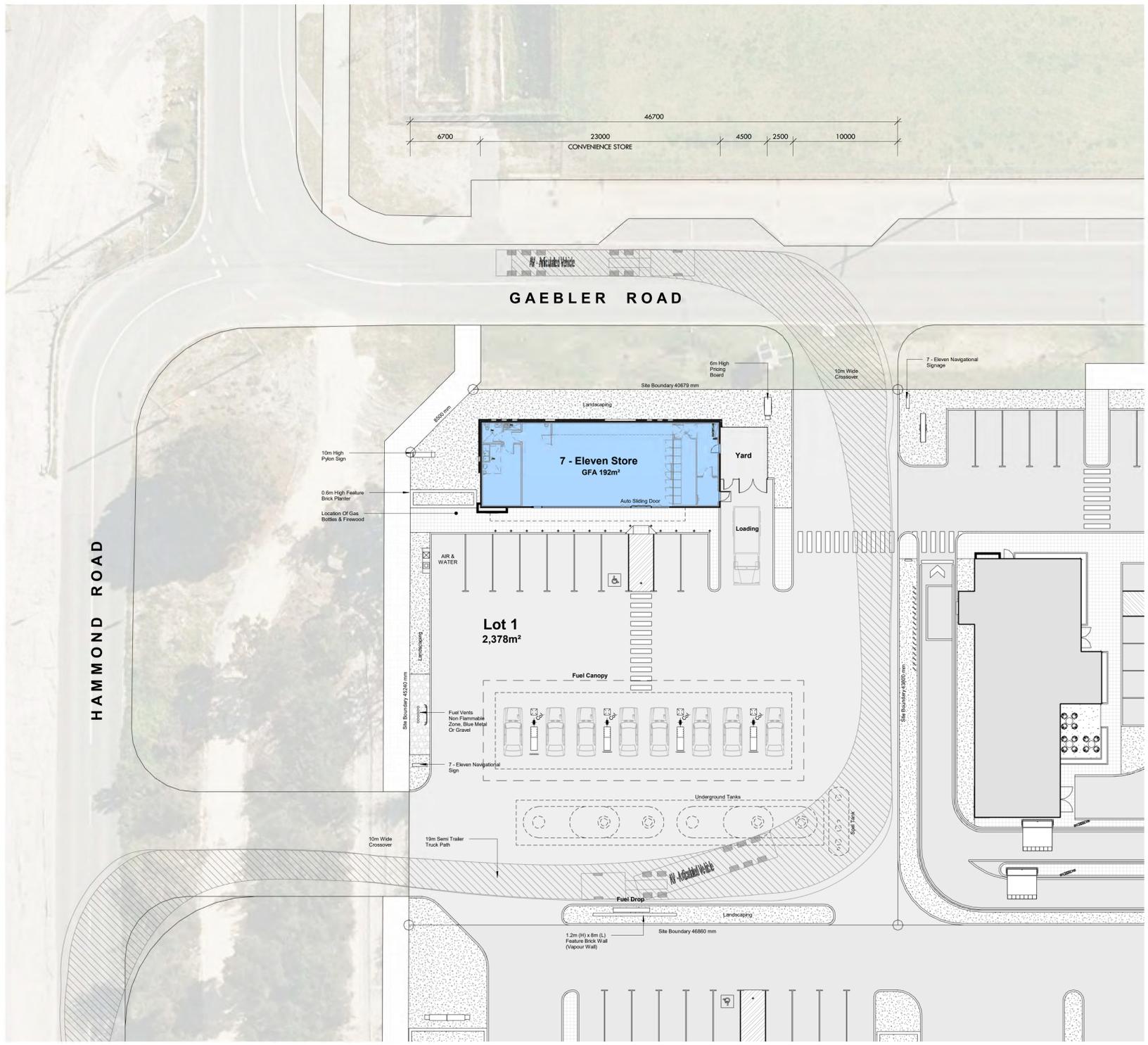
**Landscaping**  
 A. Hard Landscaping  
 Defined as paved walkways either open or covered.  
 B. Soft Landscaping  
 Defined as vegetative landscaping.

**Gross Floor Area - GFA**  
 A. All Floor Areas on this plan are shown as GROSS FLOOR AREA. Unless otherwise noted as Nett Floor Area.  
 B. Definition of Gross Floor Area is defined as:  
 i. GROSS FLOOR AREA OF TENANCY  
 Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.  
 ii. GROSS FLOOR AREA OF A BUILDING  
 Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls.

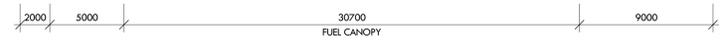
**COMPOSITE SITE CRITERIA**

1. Site Area		
a. Lot 1		2,378m <sup>2</sup>
b. Lot 2		1,696m <sup>2</sup>
c. Lot 3		3,259m <sup>2</sup>
d. Lot 4		2,702m <sup>2</sup>
e. Lot 5		4,453m <sup>2</sup>
<b>Total</b>		<b>14,488m<sup>2</sup></b>
2. Landscaping		
a. Provided		
i. Soft		2,135m <sup>2</sup>
ii. Hard		984m <sup>2</sup>
<b>Total</b>		<b>3,119m<sup>2</sup></b>
3. Floor Area (GFA)		
a. Convenience Store		192m <sup>2</sup>
b. Food Restaurant		965m <sup>2</sup>
c. Medical Centre		640m <sup>2</sup>
<b>Total</b>		<b>1,797m<sup>2</sup></b>
4. Carparking		
a. Required		
Convenience Store	192m <sup>2</sup> @ 1/15m <sup>2</sup>	13
	1 Per Employee	2
Food Restaurant	965m <sup>2</sup> @ 1/15m <sup>2</sup>	65
Medical Centre	10 Prac @ 5 Per	50
<b>Total</b>		<b>130</b>
b. Cars Provided		
i. On Grade		118
ii. Drive Thru		32
iii. Fuel Canopy		8
<b>Total</b>		<b>158</b>

**SITE PLAN**  
SCALE: 1 : 500

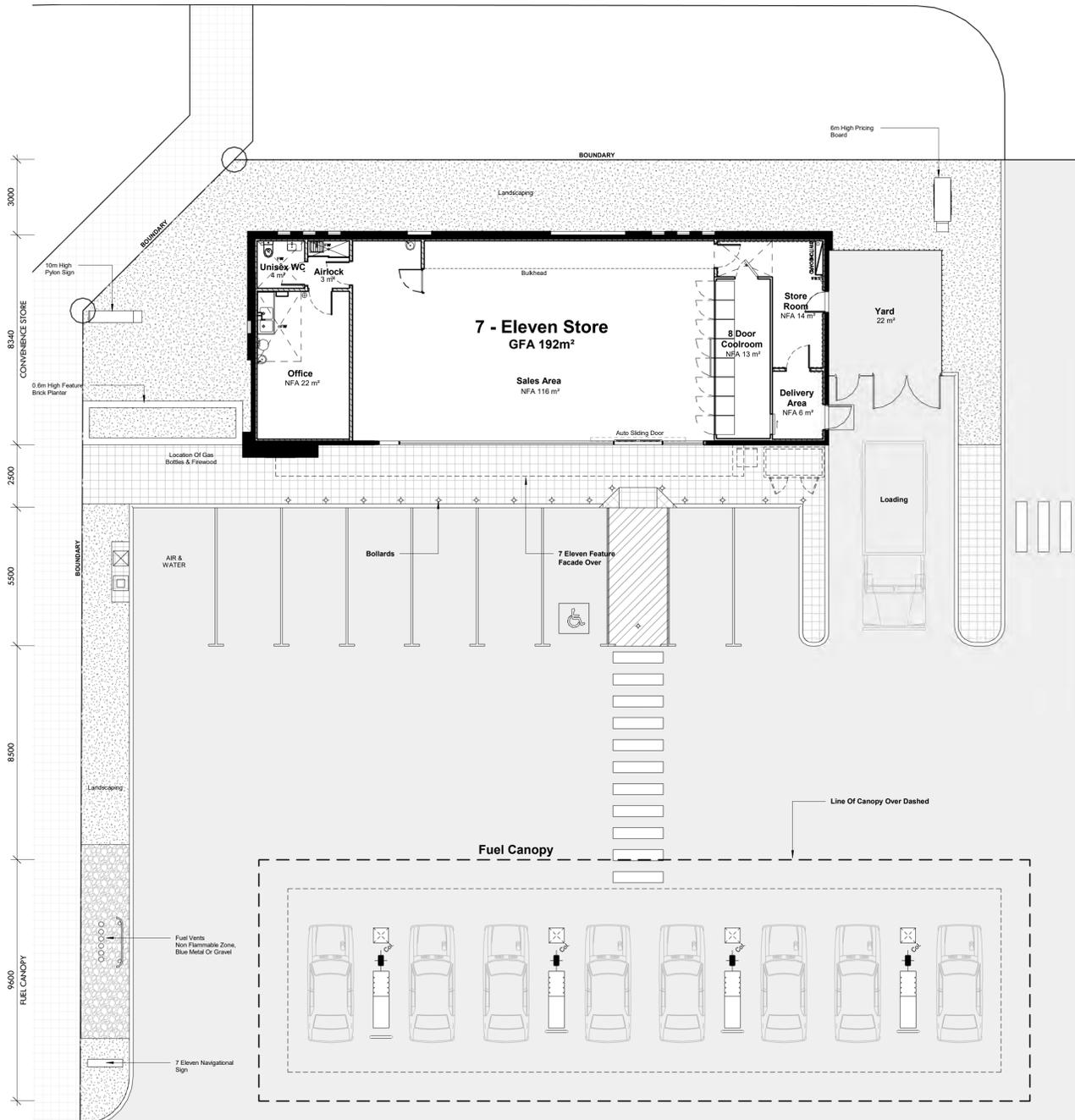


**LOT 1 - 7 ELEVEN SITE PLAN**  
SCALE: 1 : 200

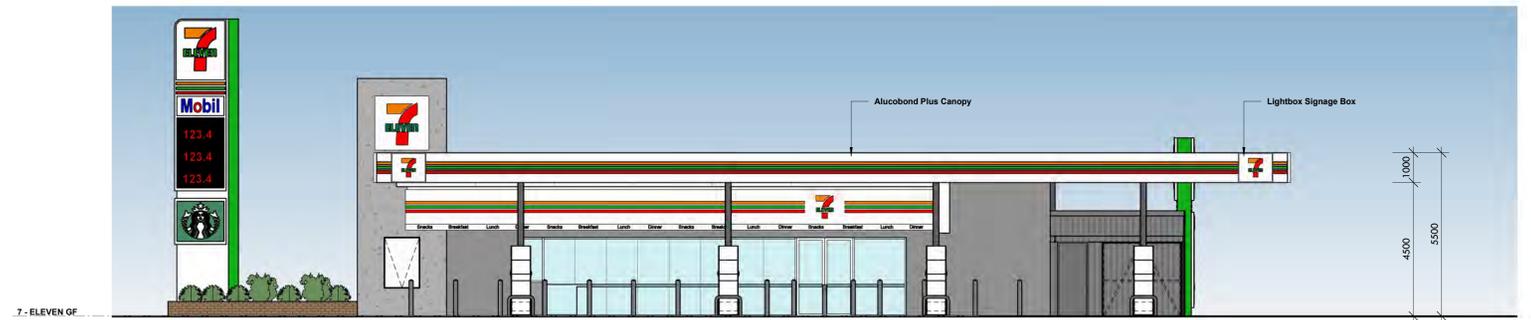




**GAEBLER ROAD**

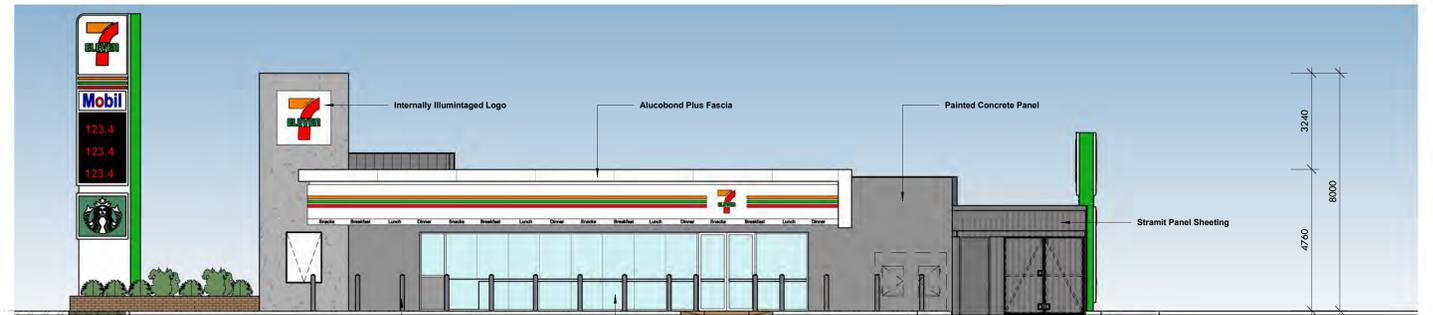


**7 - ELEVEN GROUND FLOOR PLAN**  
SCALE: 1 : 100



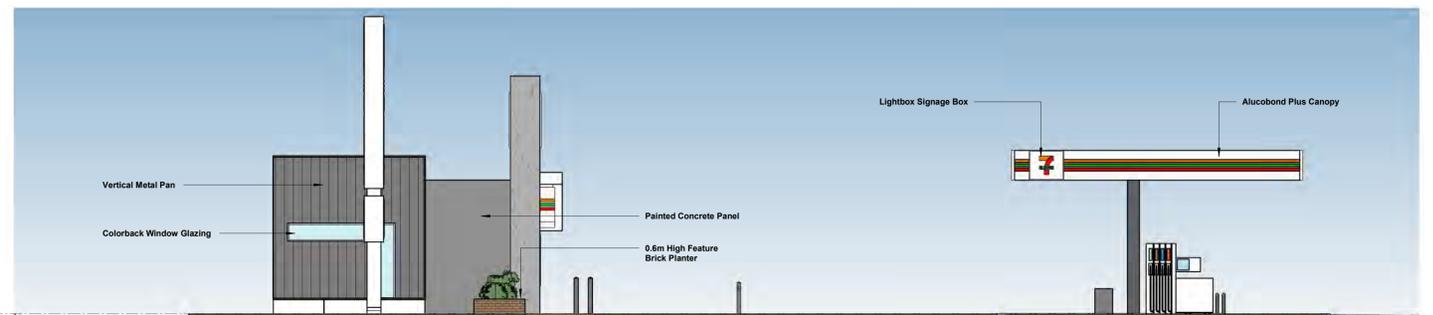
**SOUTH ELEVATION (W/CANOPY)**

SCALE: 1 : 100



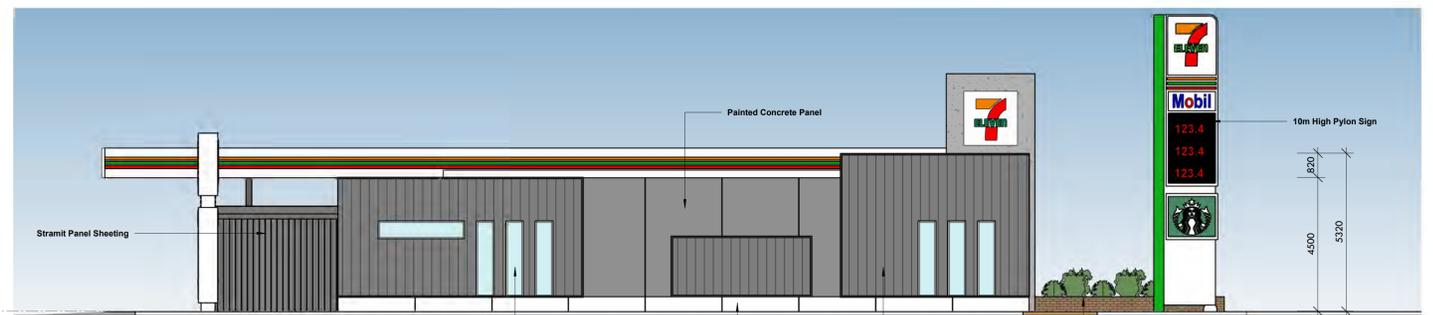
**SOUTH ELEVATION**

SCALE: 1 : 100



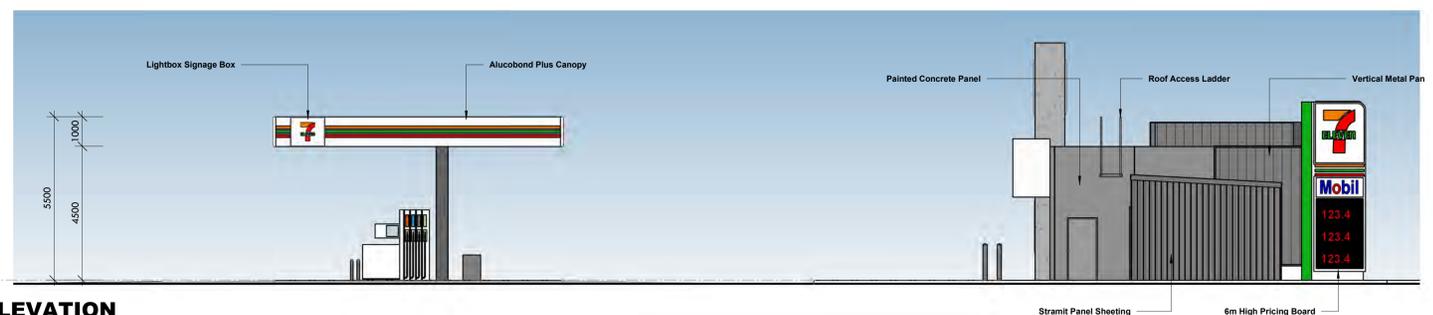
**WEST ELEVATION (HAMMOND ROAD)**

SCALE: 1 : 100



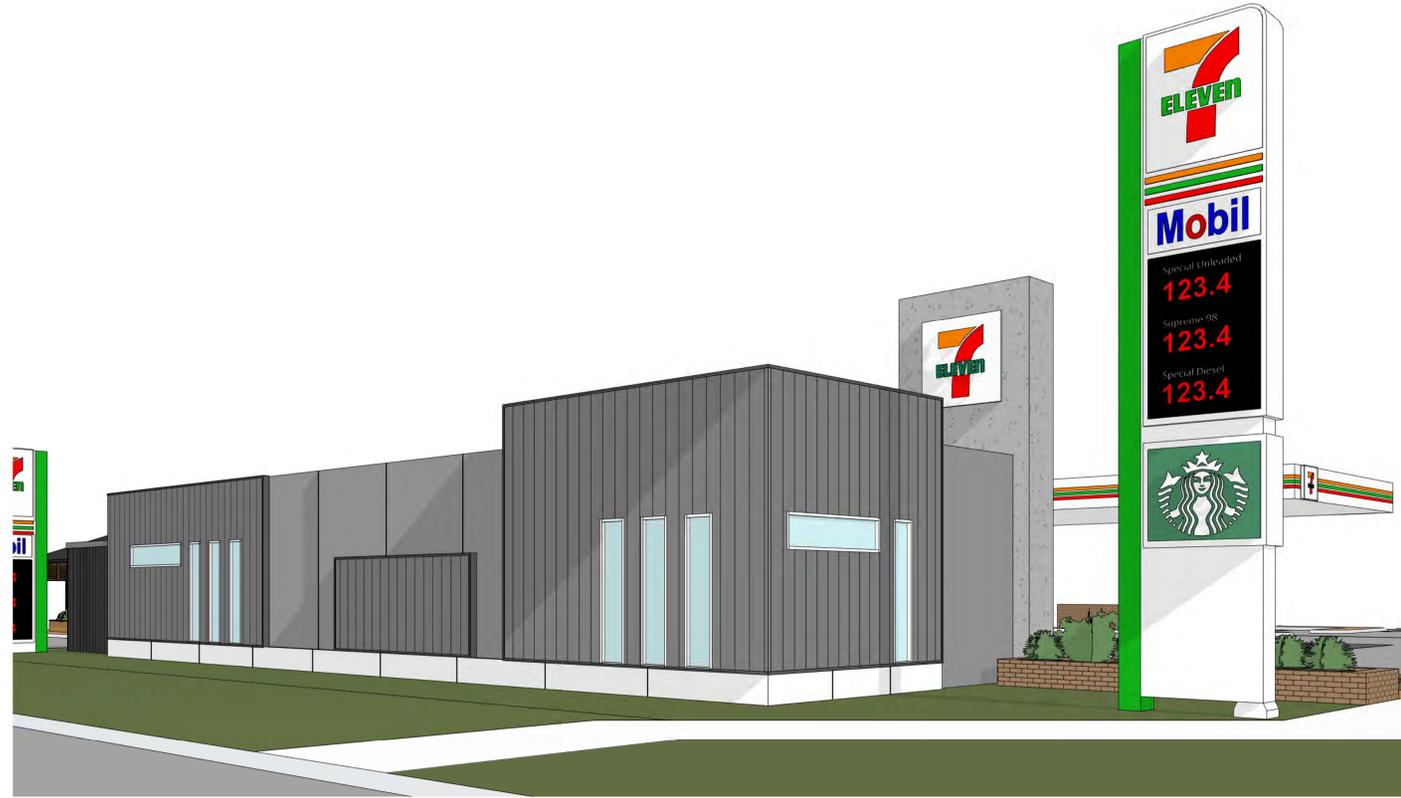
**NORTH ELEVATION (GAEBLER ROAD)**

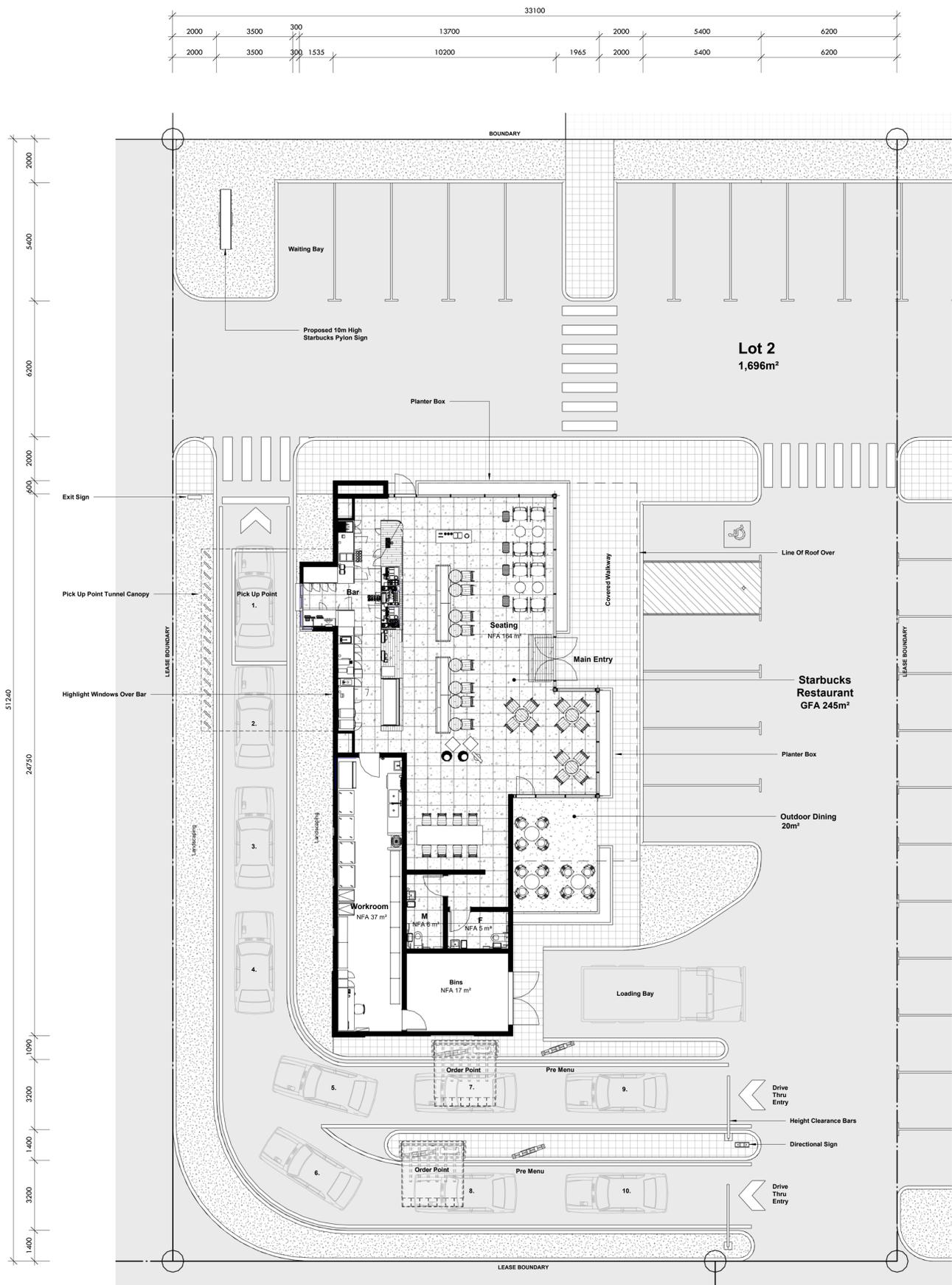
SCALE: 1 : 100



**EAST ELEVATION**

SCALE: 1 : 100





**LOT 2 - STARBUCKS GROUND FLOOR PLAN**  
SCALE: 1 : 100



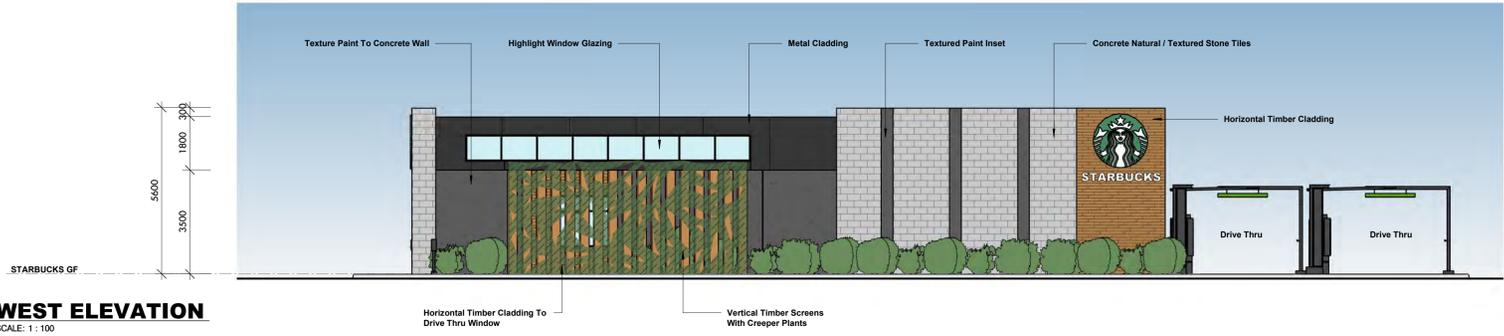
**NORTH ELEVATION (GAEBLER ROAD)**  
SCALE: 1 : 100



**EAST ELEVATION**  
SCALE: 1 : 100



**SOUTH ELEVATION**  
SCALE: 1 : 100

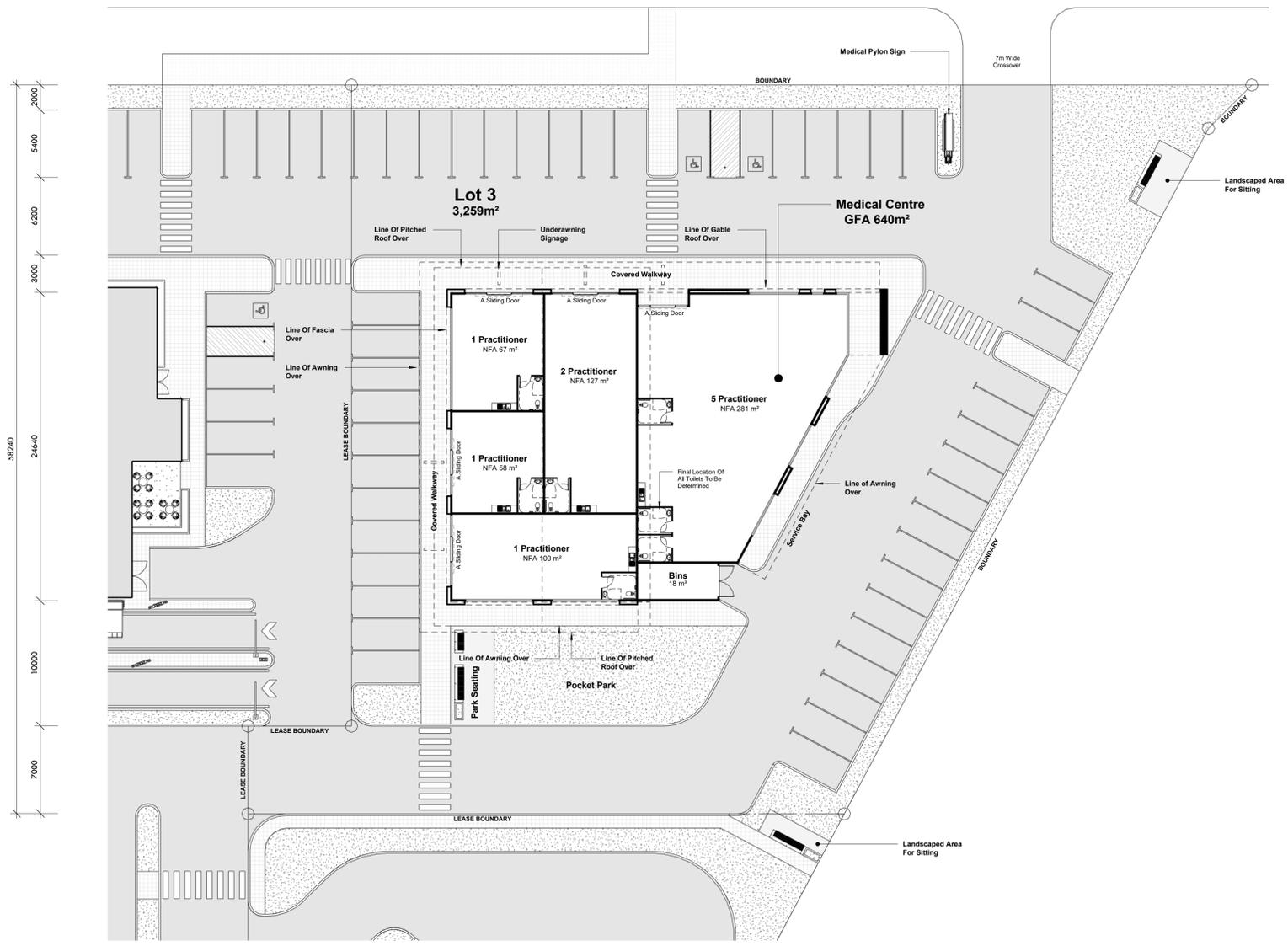


**WEST ELEVATION**  
SCALE: 1 : 100



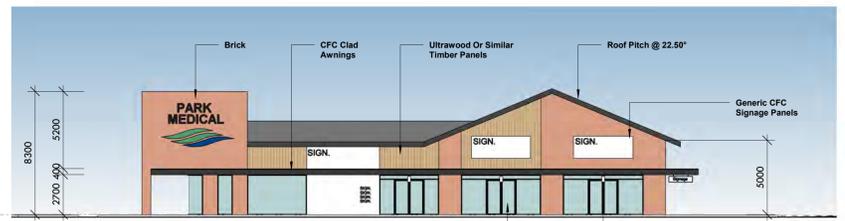


**GAEBLER ROAD**



**LOT 3 - MEDICAL CENTRE SITE & GROUND FLOOR PLAN**

SCALE: 1 : 200



**NORTH ELEVATION (GAEBLER ROAD)**

SCALE: 1 : 200



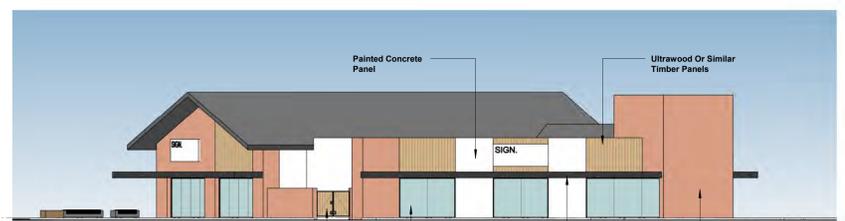
**WEST ELEVATION**

SCALE: 1 : 200



**SOUTH ELEVATION**

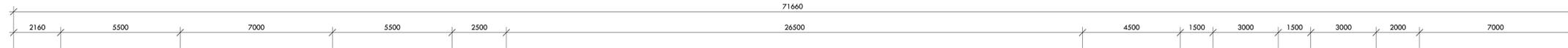
SCALE: 1 : 200



**EAST ELEVATION**

SCALE: 1 : 200



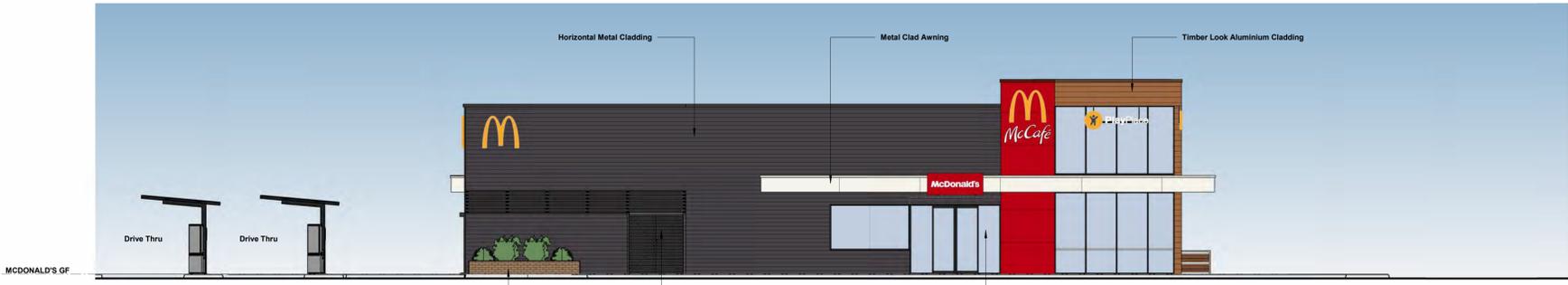


**LOT 4 - MCDONALD'S SITE & GROUND FLOOR PLAN**  
SCALE: 1:100



**WEST ELEVATION (HAMMOND ROAD)**  
SCALE: 1 : 100

Aluminium Framed Window Glazing



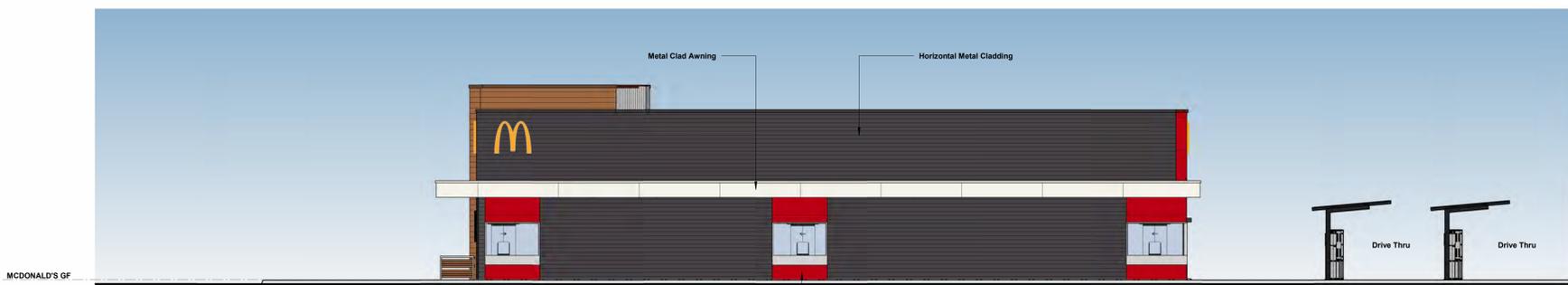
**NORTH ELEVATION**  
SCALE: 1 : 100

0.6m High Feature Brick Planter Louvre Screen To Blinds Aluminium Framed Window Glazing



**EAST ELEVATION**  
SCALE: 1 : 100

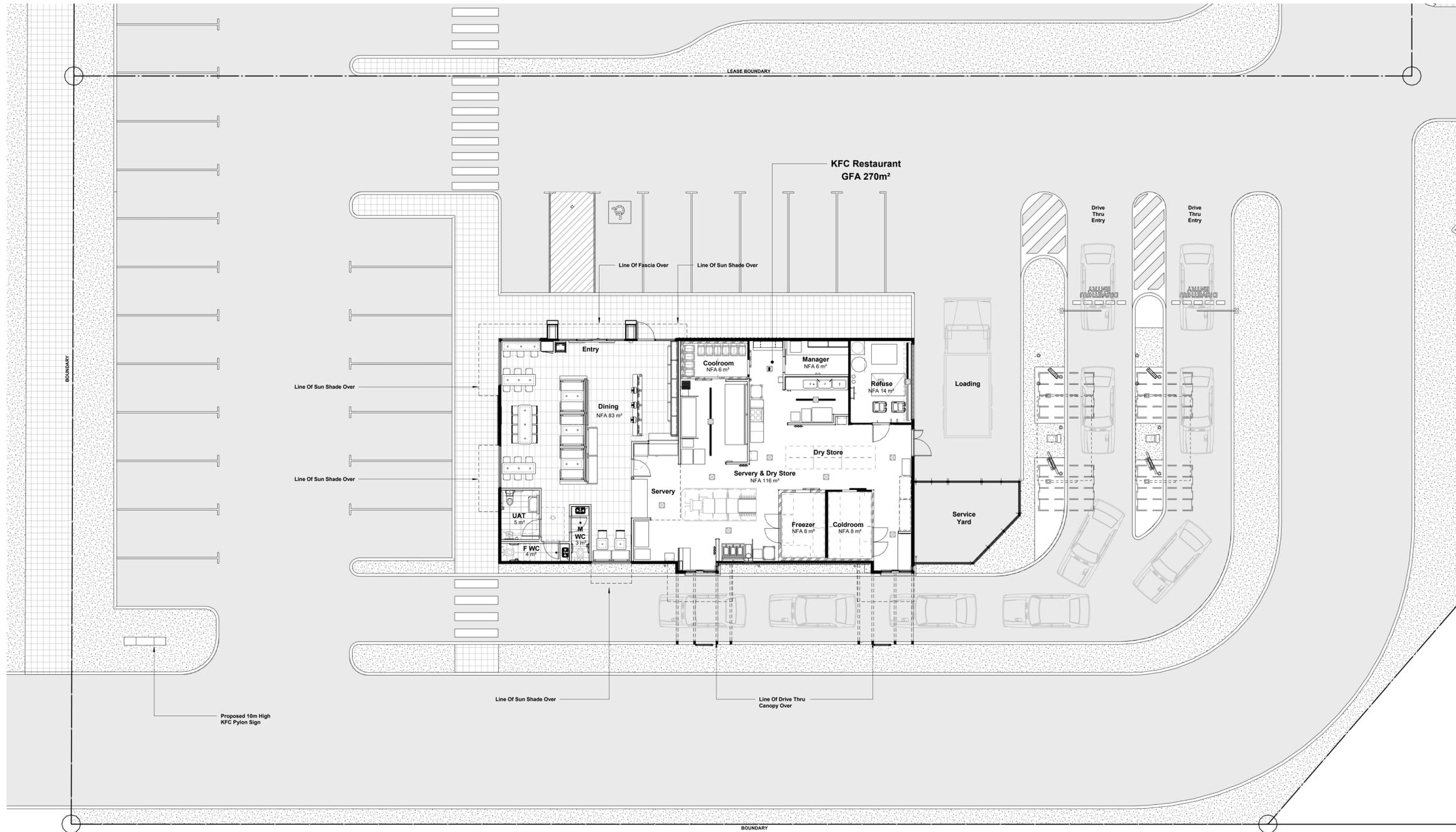
Louvre Screen To Blinds



**SOUTH ELEVATION**  
SCALE: 1 : 100

Drive Thru Windows

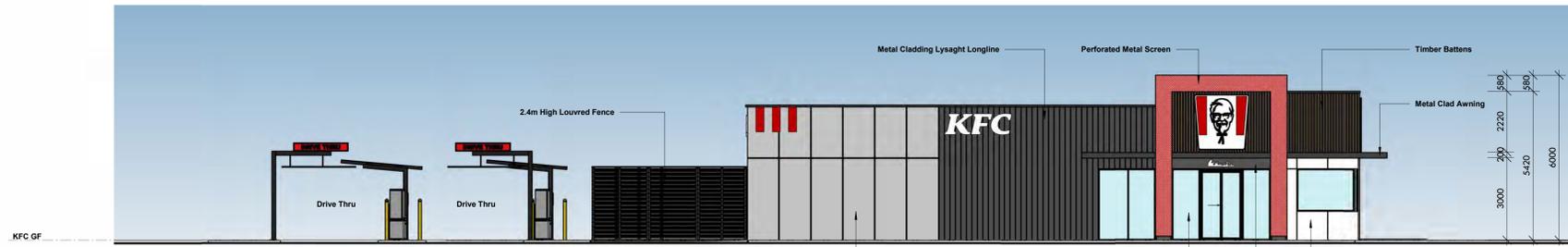




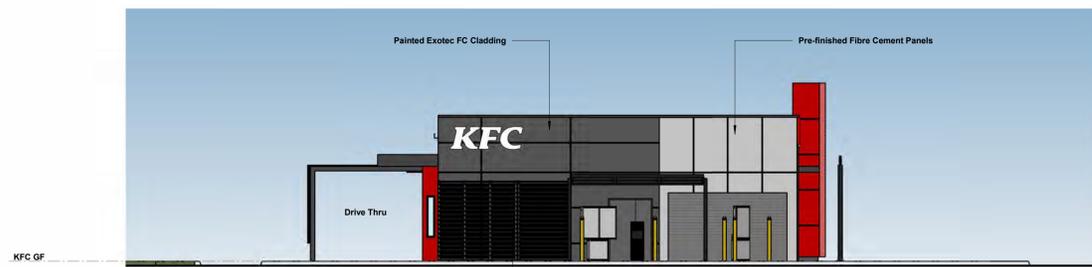
**LOT 5 - KFC SITE & GROUND FLOOR PLAN**  
SCALE: 1 : 100



**WEST ELEVATION (HAMMOND ROAD)**  
SCALE: 1:100



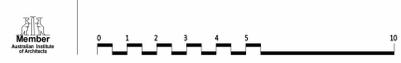
**NORTH ELEVATION**  
SCALE: 1:100

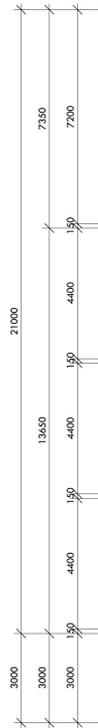
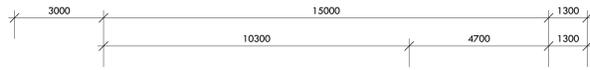


**EAST ELEVATION**  
SCALE: 1:100



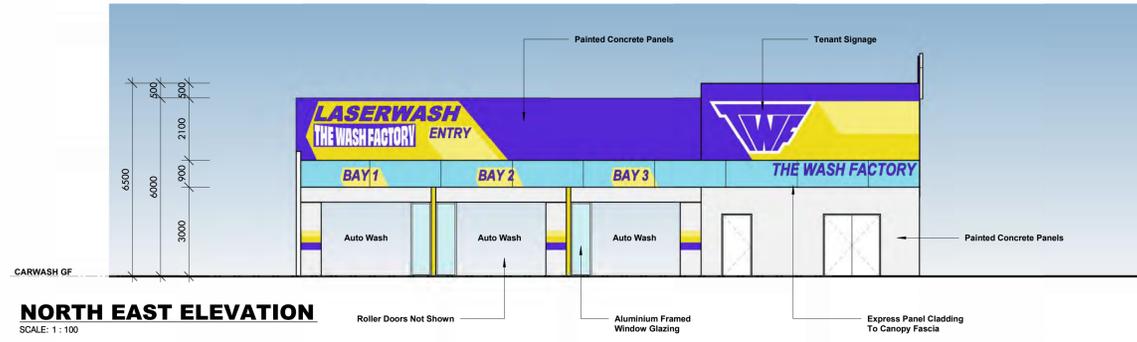
**SOUTH ELEVATION**  
SCALE: 1:100



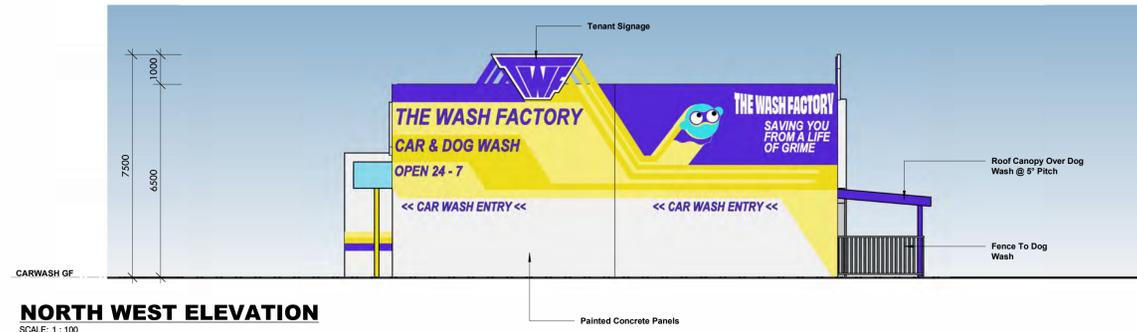


**LOT 5 - CARWASH SITE & GROUND FLOOR PLAN**

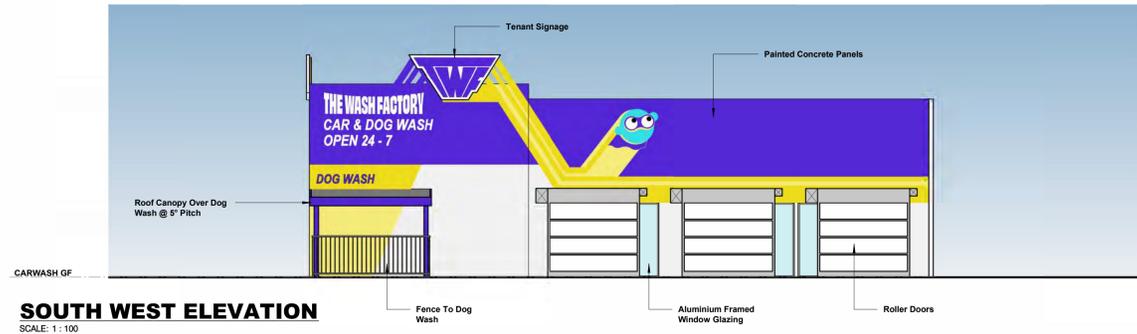
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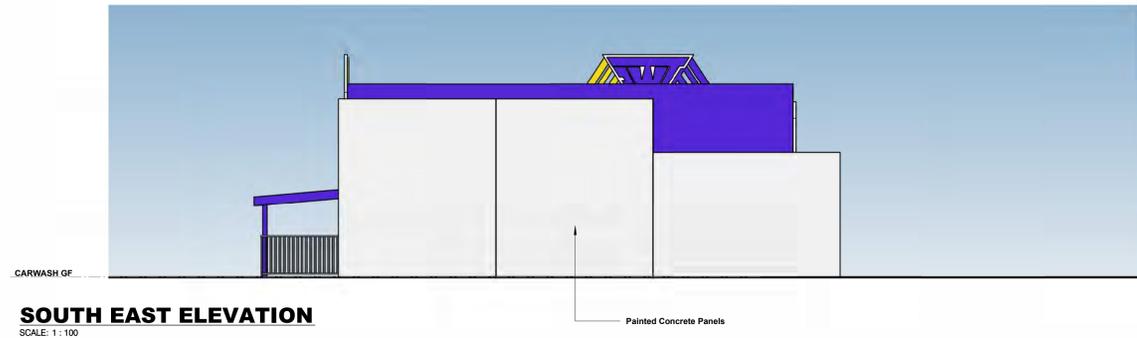
**NORTH EAST ELEVATION**  
SCALE: 1 : 100



**NORTH WEST ELEVATION**  
SCALE: 1 : 100



**SOUTH WEST ELEVATION**  
SCALE: 1 : 100

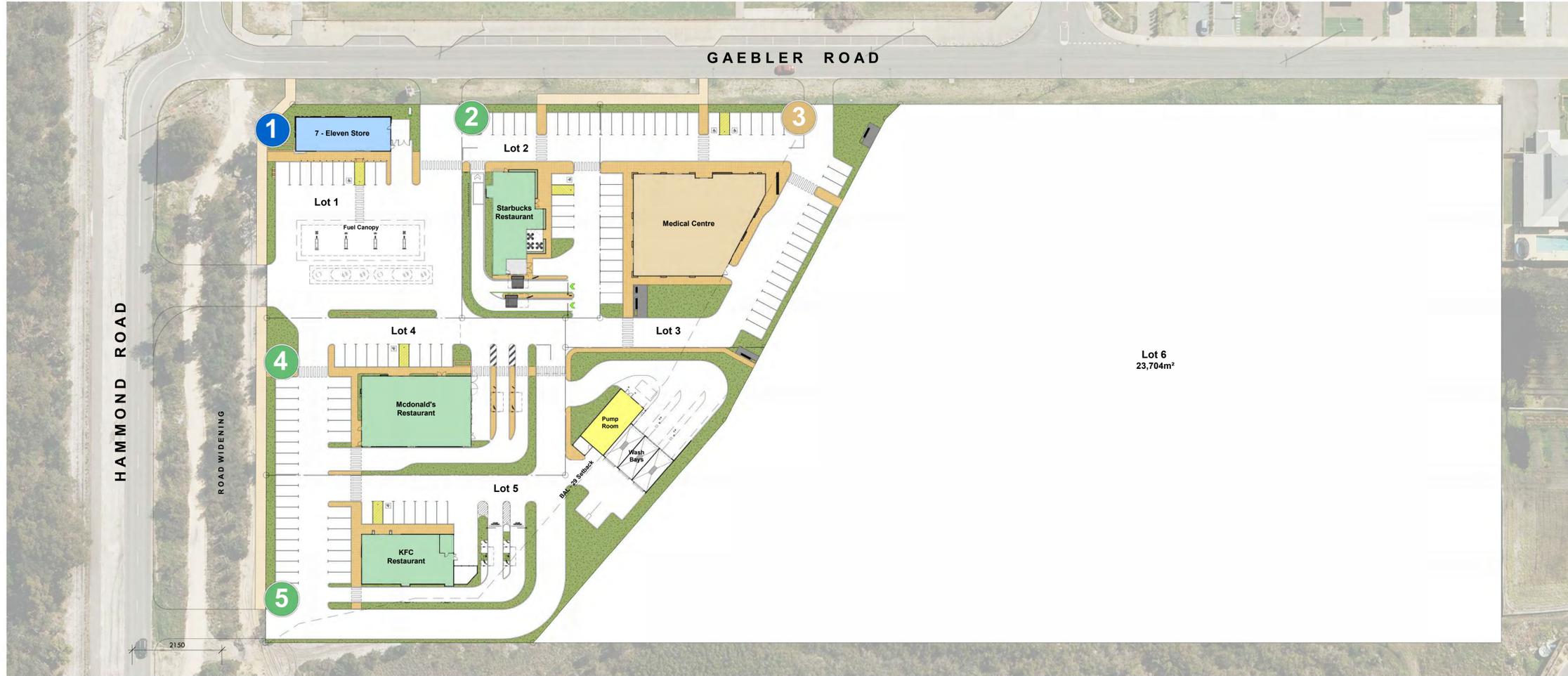


**SOUTH EAST ELEVATION**  
SCALE: 1 : 100

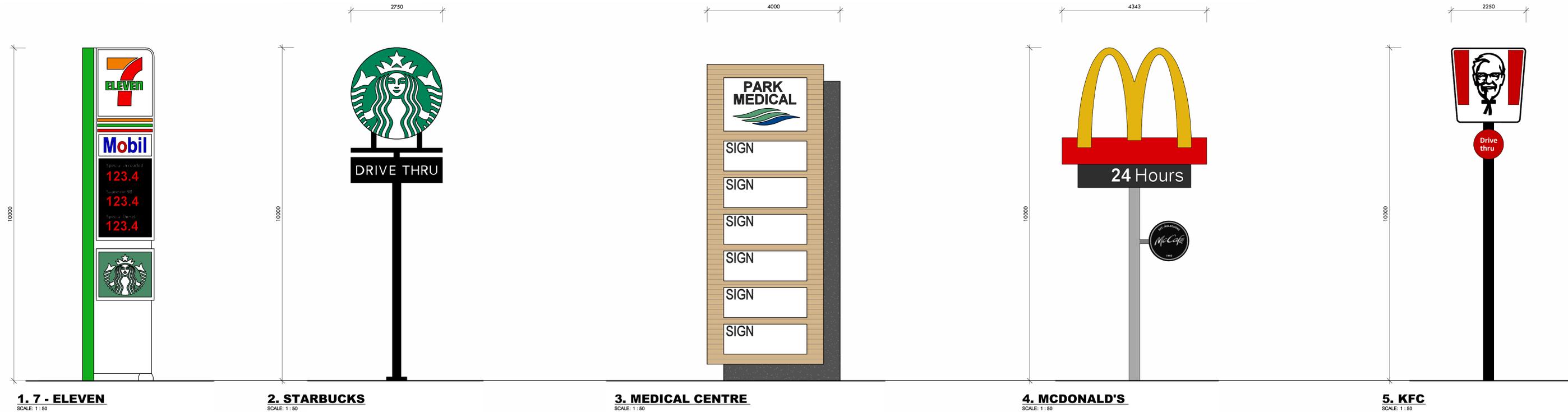


# PYLON SIGN

FIVE PYLON SIGNS



**LOCATION PLAN**  
SCALE: 1 : 500



**1. 7 - ELEVEN**  
SCALE: 1 : 50

**2. STARBUCKS**  
SCALE: 1 : 50

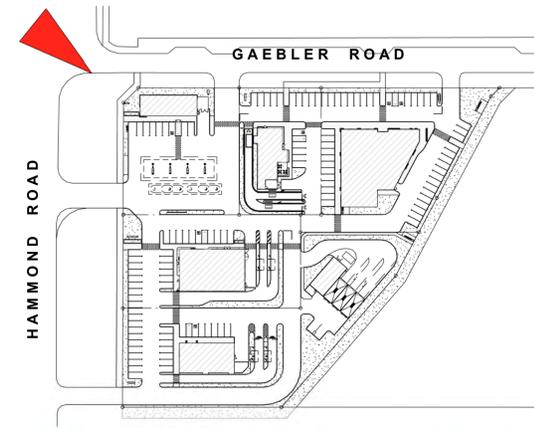
**3. MEDICAL CENTRE**  
SCALE: 1 : 50

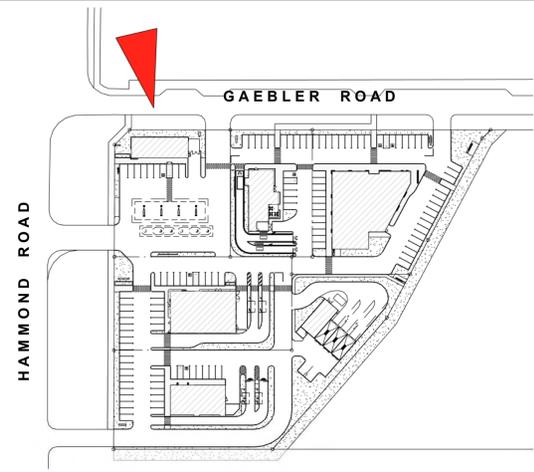
**4. MCDONALD'S**  
SCALE: 1 : 50

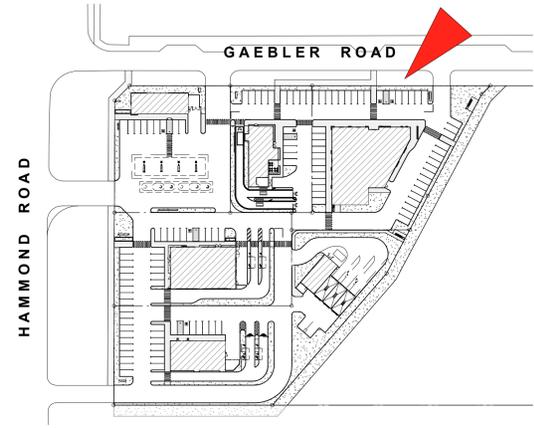
**5. KFC**  
SCALE: 1 : 50

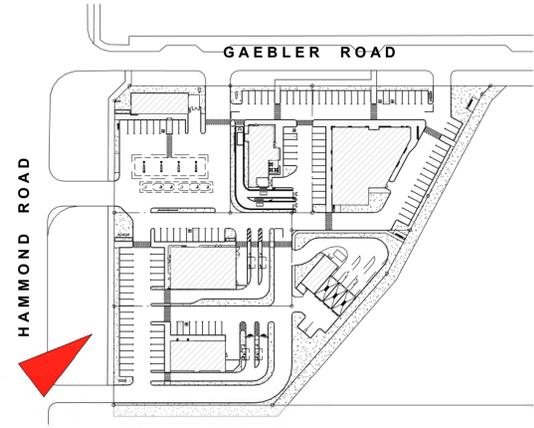


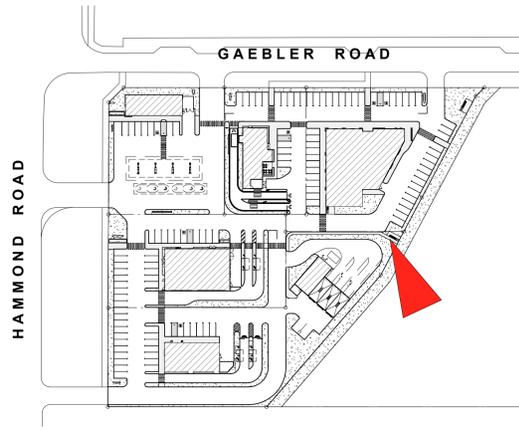
**SITE - ROOF PLAN**  
SCALE: 1:500











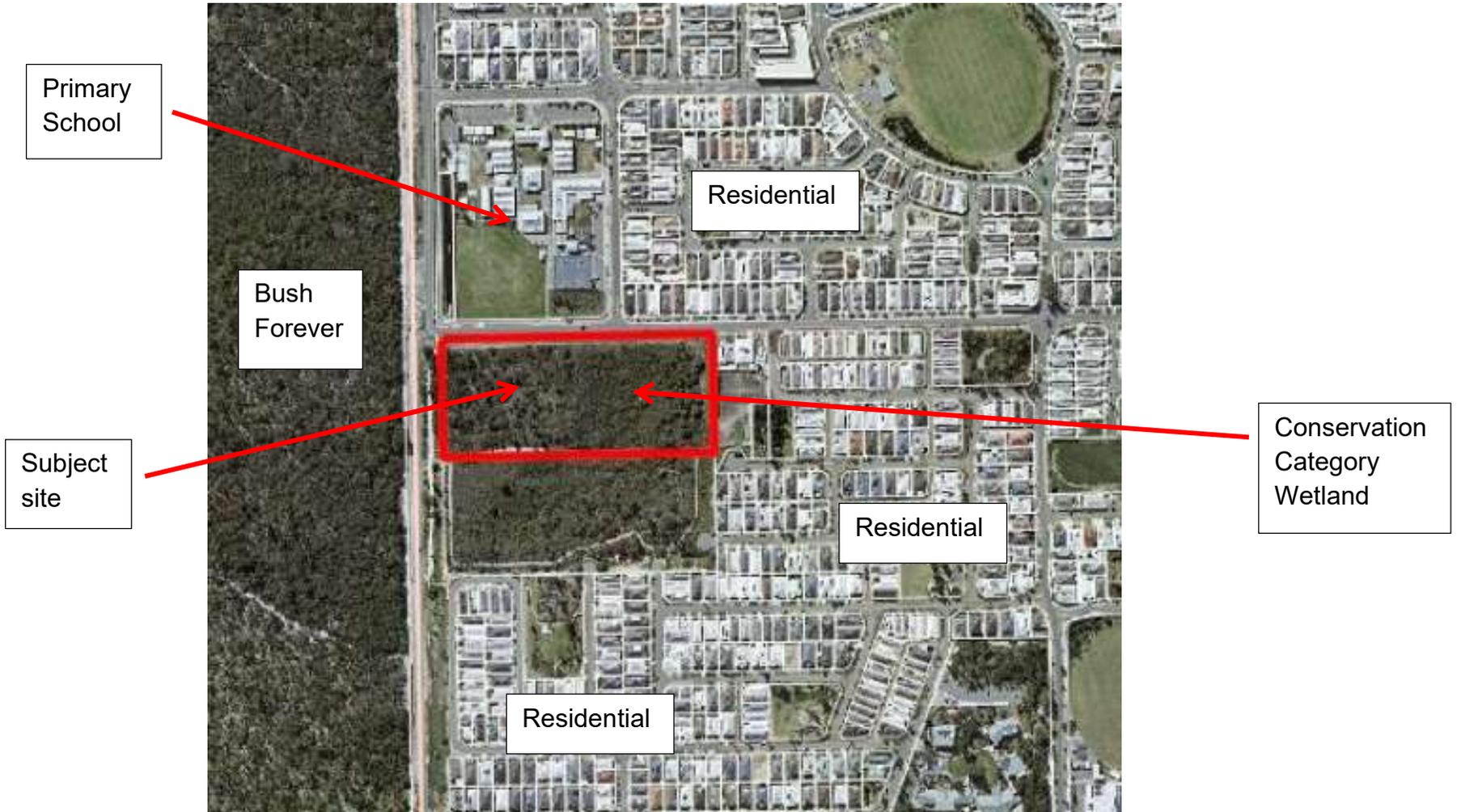
# PROPOSED MIXED USE DEVELOPMENT

LOCATION : LOT 9501 CNR GAEBLER ROAD & HAMMOND ROAD, HAMMOND PARK  
FOR : BROAD VISION PROJECTS



**ATTACHMENT 2 – Location Plan**

**Lot 9501 Gaebler Road, Hammond Park – Commercial Development**





# Environmental Protection Authority

Westralia Square,  
141 St Georges Terrace, Perth, Western Australia 6000.  
Telephone: (08) 9222 7000. Facsimile: (08) 9222 7155.

Postal Address: PO Box K822,  
Perth, Western Australia 6842.  
Website: www.epa.wa.gov.au

CR-05/03905

93028  
AB

Chief Executive Officer  
City of Cockburn  
PO Box 1215  
BIBRA LAKE DC WA 6965

Your Ref 93028  
Our Ref CRN213121  
Enquiries Maxine Dawson

Att: Allen Blood

Dear Sir/Madam

<b>SCHEME/AMENDMENT TITLE:</b>	<b>City of Cockburn TPS 3 Amendment 28 introducing two new Development Contribution Areas and Development Areas to the Hammond Park/Wattleup area</b>
<b>LOCALITY:</b>	<b>City of Cockburn</b>
<b>RESPONSIBLE AUTHORITY:</b>	<b>City of Cockburn</b>
<b>LEVEL OF ASSESSMENT:</b>	<b>Scheme Not Assessed - Advice Given (no appeals)</b>

Thank you for your letter of 1 April 2005 referring the above scheme amendment.

After consideration of the likely environmental factors related to the above scheme amendment and based on the information provided by you, the EPA decided that the overall environmental impact of its implementation would not be severe enough to warrant assessment under Part IV of the Environmental Protection Act, the preparation of an Environmental Review and the subsequent setting of formal conditions by the Minister for the Environment. Please note that there are no appeal rights on the level of assessment set for scheme amendments.

The following advice is provided to you on the key environmental factors.

### **Deferred Environmental Factors - Regionally significant vegetation, conservation category wetland**

In the absence of sufficiently detailed information on the factors 'regionally significant vegetation' and 'conservation category wetland', the EPA has identified these factors as deferred factors that need to be adequately considered and protected during the subsequent planning process. If these deferred factors are not fully considered and protected through suitable design, management and legally enforceable requirements, the EPA may apply the formal environmental impact assessment process at a later stage.

#### **Regionally significant vegetation**

A number of lots in the amendment area, including but not limited to Frankland Reserve, have been nominated for Bush Forever. The EPA Service Unit is advised by the Bush Forever Office (Department for Planning and Infrastructure) that some of these remain under consideration. The City of Cockburn is advised to liaise with the Bush Forever Office to ascertain the current status of nominated sites in the amendment area and determine appropriate recognition through the planning process.

#### **Conservation category wetland**

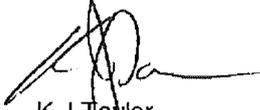
The proposed structure plan indicatively shows that a conservation category wetland and a buffer around the wetland will be protected. This is supported. However, the EPA has not been provided with information sufficient to show that an adequate buffer will be protected. The EPA recommends that site specific buffer studies in accordance with Department of Environment and

Department for Planning and Infrastructure protocols are carried out before detailed site planning, and that the buffer meets current agency guidelines.

A copy of this advice will also be sent to the relevant decision-making authorities and will be publicly available on request.

Under the provisions of Section 48A(a) of the Environmental Protection Act the above scheme amendment is now deemed assessed by the EPA.

Yours faithfully



K J Taylor  
Director  
Environmental Impact Assessment

2 May 2005

cc: Department for Planning & Infrastructure  
Department of Conservation and Land Management

**PLAN NOTES**

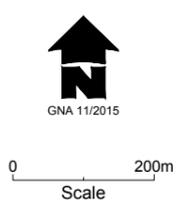
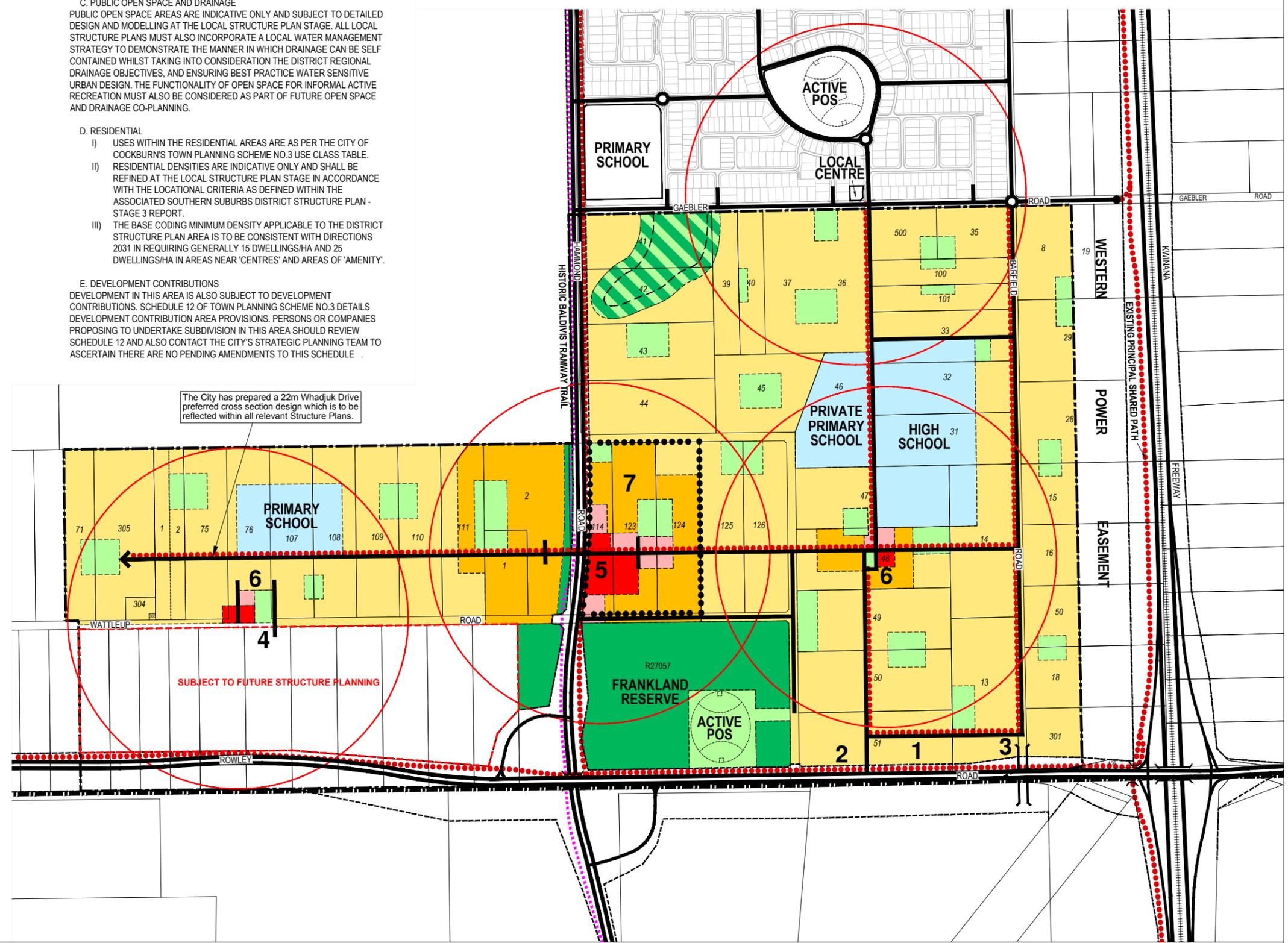
1. FUTURE RESIDENTIAL DEVELOPMENT SHALL NOT DIRECTLY ABUT ROWLEY ROAD. FUTURE LOCAL STRUCTURE PLANNING IS TO DEMONSTRATE A SUITABLE INTERFACE TREATMENT (E.G. ENLARGED SERVICE ROAD DESIGN WITH FRONTING RESIDENTIAL DEVELOPMENT AS A MINIMUM) BEING PROVIDED TO THE FUTURE ROWLEY ROAD FREIGHT ACCESS ROUTE.
2. FUTURE ACCESS ROAD TO BE PROVIDED AS A FULL INTERSECTION UNTIL ROWLEY ROAD IS UPGRADED AND CONSTRUCTED TO A REGIONAL ROAD AT WHICH TIME THE INTERSECTION WILL BE CONVERTED AND MAINTAINED AS LEFT INLEFT OUT ACCESS ONLY. (SUBJECT TO MAIN ROADS WA APPROVAL).
3. AS PART OF THE UPGRADING OF ROWLEY ROAD, GRADE SEPARATED PEDESTRIAN AND VEHICULAR ACCESS IS TO BE PROVIDED AS A CONTINUATION OF BARFIELD ROAD, IN ORDER TO MAINTAIN CONNECTIVITY BETWEEN FUTURE DEVELOPMENT TO THE SOUTH OF ROWLEY ROAD. THIS MAY BE FURTHER RATIONALISED THROUGH SUBSEQUENT LOCAL STRUCTURE PLANNING TO DETERMINE HOW THIS SPECIFIC ACCESS IS CREATED.
4. FUTURE STRUCTURE PLANNING OF THE CELL SOUTH OF WATTLEUP ROAD MUST PROVIDE AN APPROPRIATE INTERFACE WITH RESIDENTIAL DEVELOPMENT NORTH OF WATTLEUP ROAD. THIS IS TO HAVE PARTICULAR REGARD TO THE POSITION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION IN RESPECT OF ITS POSITION ON THE ACCEPTABILITY (OR OTHERWISE) OF RESIDENTIAL DEVELOPMENT SOUTH OF WATTLEUP ROAD, AND ALTERNATIVE (NON-RESIDENTIAL) LAND USES THAT MAY BE REQUIRED. ANY IMPACTS ASSOCIATED WITH THE FUTURE DEVELOPMENT OF NON-RESIDENTIAL LAND USES IN THE CELL SOUTH OF WATTLEUP ROAD MUST BE FULLY CONTAINED WITHIN THE CELL BOUNDARIES.
5. NEIGHBOURHOOD CENTRE-THE DESIGN AND FUNCTION OF THE PROPOSED NEIGHBOURHOOD CENTRE SHALL BE BASED ON 'MAIN STREET' PRINCIPLES AND RELEVANT PROVISIONS OF LIVEABLE NEIGHBOURHOODS. ANY ASSOCIATED LOCAL STRUCTURE PLAN MUST ADEQUATELY DEMONSTRATE THROUGH CONCEPT PLANS AND OR DETAILED AREA PLANS THE MANNER IN WHICH THE CENTRE ADDRESSES THE REQUIREMENTS OF THE RELEVANT SECTIONS OF THE SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN - STAGE 3 REPORT, AND PARTICULARLY THE NEIGHBOURHOOD CENTRE CONCEPT PLAN PROVIDED WITHIN THE REPORT DOCUMENT.
6. NEIGHBOURHOOD NODES - THE DESIGN AND FUNCTIONALITY OF THE NEIGHBOURHOOD NODES SHALL BE DISTINCTLY DIFFERENT TO THE PRIMACY OF THE NEIGHBOURHOOD CENTRE. THESE LOCATIONS ARE TO PROVIDE FOR RANGE OF MORE LOCALLY FOCUSED ACTIVITIES AND FUNCTIONS. WHERE RETAIL IS PROPOSED, THESE ARE TO NOT EXCEED A MAXIMUM RETAIL FUNCTION OF 300SQM, WITH SUCH FUNCTION BASED UPON A 'CONVENIENCE STORE' TYPE USE.
7. CENTRAL PRECINCT - A COMPREHENSIVE LOCAL STRUCTURE PLAN WILL BE REQUIRED FOR THE CENTRAL NEIGHBOURHOOD CENTRE AND ADJACENT DEVELOPMENT. THE CITY WILL NOT CONSIDER INDIVIDUAL STRUCTURE PLANS IN THIS LOCATION DUE TO THE NEED TO ENSURE THE SUITABLE INTEGRATION OF DEVELOPMENT.

**GENERAL NOTES**

- A. ALL LOCAL STRUCTURE PLANS MUST INCLUDE AND BE INFORMED BY:**
- I) DETAILED LWMS BASED UPON REGIONAL DRAINAGE STUDY,
  - II) DETAILED NOISE MANAGEMENT STRATEGY WHERE LSPAD JOINS ROWLEYROAD,
  - III) FIRE MANAGEMENT PLAN WHERE LSP IS LOCATED NEAR ROS OR SIGNIFICANT POS,
  - IV) FLORA AND FAUNA MANAGEMENT PLAN,
  - V) TRAFFIC MANAGEMENT PLAN,
  - VI) CONTAMINATED SITES & ACID SULPHATE SOILS MANAGEMENT PLAN WHERE REQUIRED,
  - VII) HERITAGE STUDY WHERE LSP INCLUDES FORMER HISTORIC TRAMWAY,
  - VIII) TRANSITION AND/OR INTERFACE STRATEGY IN RESPECT OF EXISTING RURAL USES,
  - IX) NEIGHBOURHOOD CENTRE CONCEPT PLAN AND DETAILED AREA PLAN WHERE INCLUDED WITHIN LSP AREA,
  - X) NEIGHBOURHOOD NODE CONCEPT PLAN AND DETAILED AREA PLAN.
- B. LOCAL STRUCTURE PLANS**  
SUBDIVISION AND DEVELOPMENT OF THE SUBJECT AREA IS TO BE IN ACCORDANCE WITH AN ENDORSED APPLICABLE LOCAL STRUCTURE PLAN.

- C. PUBLIC OPEN SPACE AND DRAINAGE**  
PUBLIC OPEN SPACE AREAS ARE INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN AND MODELLING AT THE LOCAL STRUCTURE PLAN STAGE. ALL LOCAL STRUCTURE PLANS MUST ALSO INCORPORATE A LOCAL WATER MANAGEMENT STRATEGY TO DEMONSTRATE THE MANNER IN WHICH DRAINAGE CAN BE SELF CONTAINED WHILST TAKING INTO CONSIDERATION THE DISTRICT REGIONAL DRAINAGE OBJECTIVES, AND ENSURING BEST PRACTICE WATER SENSITIVE URBAN DESIGN. THE FUNCTIONALITY OF OPEN SPACE FOR INFORMAL ACTIVE RECREATION MUST ALSO BE CONSIDERED AS PART OF FUTURE OPEN SPACE AND DRAINAGE CO-PLANNING.
- D. RESIDENTIAL**
- I) USES WITHIN THE RESIDENTIAL AREAS ARE AS PER THE CITY OF COCKBURN'S TOWN PLANNING SCHEME NO.3 USE CLASS TABLE.
  - II) RESIDENTIAL DENSITIES ARE INDICATIVE ONLY AND SHALL BE REFINED AT THE LOCAL STRUCTURE PLAN STAGE IN ACCORDANCE WITH THE LOCATIONAL CRITERIA AS DEFINED WITHIN THE ASSOCIATED SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN - STAGE 3 REPORT.
  - III) THE BASE CODING MINIMUM DENSITY APPLICABLE TO THE DISTRICT STRUCTURE PLAN AREA IS TO BE CONSISTENT WITH DIRECTIONS 2031 IN REQUIRING GENERALLY 15 DWELLINGS/HA AND 25 DWELLINGS/HA IN AREAS NEAR 'CENTRES' AND AREAS OF 'AMENITY'.
- E. DEVELOPMENT CONTRIBUTIONS**  
DEVELOPMENT IN THIS AREA IS ALSO SUBJECT TO DEVELOPMENT CONTRIBUTIONS. SCHEDULE 12 OF TOWN PLANNING SCHEME NO.3 DETAILS DEVELOPMENT CONTRIBUTION AREA PROVISIONS. PERSONS OR COMPANIES PROPOSING TO UNDERTAKE SUBDIVISION IN THIS AREA SHOULD REVIEW SCHEDULE 12 AND ALSO CONTACT THE CITY'S STRATEGIC PLANNING TEAM TO ASCERTAIN THERE ARE NO PENDING AMENDMENTS TO THIS SCHEDULE .

The City has prepared a 22m Whadjuk Drive preferred cross section design which is to be reflected within all relevant Structure Plans.



<p><b>Residential Density</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: yellow; border: 1px solid black;"></span> High</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #fff9c4; border: 1px solid black;"></span> Medium</li> </ul>	<p><b>Local Centre (Pedestrian Based Retail)</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: red; border: 1px solid black;"></span> Local Centre (Pedestrian Based Retail)</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #f08080; border: 1px solid black;"></span> Mixed Business/Commercial/ Home Based Business</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #add8e6; border: 1px solid black;"></span> Community Facilities/ Schools etc</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #90ee90; border: 1px solid black;"></span> Conservation Category Wetland* <small>*In accordance with DEC Geomorphic Wetlands Swan Coastal Plain dataset</small></li> </ul>	<p><b>Key Open Space Areas:</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #90ee90; border: 1px solid black;"></span> Public Open Space</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #32cd32; border: 1px solid black;"></span> Regional Open Space</li> </ul>	<p><b>Key Road Structure (Existing and Proposed)</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid black;"></span> Major Shared Path</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed black;"></span> Historic Baldvins Tramway Trail</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dotted red;"></span> 400m Walkable Catchment</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dotted black;"></span> Central Precinct</li> </ul>
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# SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN

- STAGE 3, HAMMOND PARK / WATTLEUP



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 PO Box 170, West Perth WA 6872  
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**Our Ref:** PRI131336-1

**Email:** Sheldon.day@rpsgroup.com.au  
**Date:** 8<sup>th</sup> February 2017

The Chief Executive Officer  
 City of Cockburn  
 PO Box 1215,  
 Bibra Lake DC  
 Western Australia 6965

**Attention: Andrew Trosic**

Dear Andrew,

**RE: SUBMISSION OF PROPOSED LOT 41 FRANKLAND AVENUE,  
 HAMMOND PARK STRUCTURE PLAN  
 (PART LOT 41 FRANKLAND AVENUE, HAMMOND PARK)**

CITY OF COCKBURN
DOC Set
15 FEB 2017
SUBJECT 110/111
RETENTION 124.3.2 AS
PROPERTY
APP
ACTION ANDREW TROSIC

We write on behalf of the Applicant, Broad Vision Projects Pty Ltd, to submit the proposed Lot 41 Frankland Avenue, Hammond Park Structure Plan for consideration and approval by the City of Cockburn. The Structure Plan (SP) has been prepared over a portion of Lot 41 in order to provide a statutory framework to guide the orderly future subdivision and development of the subject site, which is bounded by Frankland Avenue to the west and Gaebler Road to the north. The SP, which covers a total area of 1.15 hectares, encompasses approximately one third of Lot 41 adjoining Frankland Avenue.

We note that the balance of the subject site, not the subject of this structure plan submission, does contain an area mapped as Conservation Category Wetland (dampland). No portion of this mapped wetland area or the associated 50m buffer encroaches into the boundaries of the proposed Structure Plan. We request that this structure plan be assessed and approved on the same basis as the adjacent property to the east (on Gaebler Road) where the area containing the mapped wetland and buffer was quarantined as a balance parcel, allowing assessment of a structure plan submission to proceed over the unconstrained lands.

The applicant wishes to meet with Council to discuss the proposed structure plan and long term vision for the subject site once it has been allocated to a planning officer for assessment. We would be most appreciative if this could be scheduled as soon as Council has undertaken a preliminary review of attached the documentation.

In support of our submission please find attached:

- Two (2) hard copies and one digital copy of our report submission.

We trust this information is sufficient for your purposes, however should you require any further details or clarification, please do not hesitate to contact the writer by telephone.

Yours sincerely  
**RPS**

Sheldon Day  
 Principal Planner/ Urban Designer

CC: [sheldon.day@rpsgroup.com.au](mailto:sheldon.day@rpsgroup.com.au)  
 ENR: [enr@rpsgroup.com.au](mailto:enr@rpsgroup.com.au)



# Lot 4I Frankland Avenue, Hammond Park Structure Plan

## Part Lot 4I Frankland Avenue, Hammond Park

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Prepared by:

**RPS AUSTRALIA EAST PTY LTD**

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Client Manager: Sheldon Day – Principal Planner  
Report Number: PR131336-1  
Version / Date: January, 2017

Prepared for:

**BROAD VISON PROJECTS PTY LTD**

C/ Terranovis  
PO Box 1320  
Canning Bridge WA 6153

**IMPORTANT NOTE**

Apart from fair dealing for the purposes of private study, research, criticism, or review as permitted under the Copyright Act, no part of this report, its attachments or appendices may be reproduced without the written consent of RPS Australia East Pty Ltd.

We have prepared this report for the sole purposes of Broad Vision Projects Pty Ltd (“Client”) for the specific purpose of only for which it is supplied (“Purpose”). This report is strictly limited to the purpose and the facts and matters stated in it and does not apply directly or indirectly and should not be used for any other application, purpose, use or matter.

In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have not made any independent investigations with respect to the matters the subject of that assumption. We are not aware of any reason why any of the assumptions are incorrect.

Document Status

Version	Purpose of Document	Orig	Review	Review Date
Draft A	Client review	RS	MG	14 September 2016
Draft B	Lodgement	JC	SD	30 January, 2017

Approval for Issue

Name	Signature	Date
Sheldon Day		30 January, 2017

## Endorsement Page

This structure plan is prepared under the provisions of the City of Cockburn Town Planning Scheme No. 3.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON:

\_\_\_\_\_Date

Signed for and on behalf of the Western Australian Planning Commission

\_\_\_\_\_

An officer of the Commission duly authorised by the Commission pursuant to section 16 of the *Planning and Development Act 2005* for that purpose, in the presence of:

\_\_\_\_\_Witness

\_\_\_\_\_Date

\_\_\_\_\_Date of Expiry

# Table of Amendments

**Table 1 – Table of Amendments**

<b>Amendment No.</b>	<b>Summary of the Amendment</b>	<b>Amendment type</b>	<b>Date approved by WAPC</b>

# Table of Density Plans

**Table 2 – Table of Density Plans**

Density Plan No.	Area of density plan application	Date endorsed by WAPC

## Executive Summary

The Lot 41 Frankland Avenue, Hammond Park Structure Plan (SP) has been prepared over a portion of Lot 41 in order to provide a statutory framework to guide the orderly future subdivision and development of the subject site, which is bounded by Frankland Avenue to the west and Gaebler Road to the north. Abutting the SP area to the east and south are residentially zoned lots in various stages of development.

The SP, which covers a total area of 1.15 hectares, has been prepared on behalf of Broad Vision Projects Pty Ltd. The SP area encompasses approximately one third of Lot 41, being the parent lot.

The following consultants have been involved with the preparation of the various technical reports and studies that underpin the SP report and map:

- RPS Planning and Development – Town Planning
- Development Engineering Consultants – Servicing and Local Water Management
- Bio Diverse Solutions – Bushfire Management
- Uloth – Transport Assessment
- ENV – Flora and Vegetation Survey

Once developed, the SP will accommodate a population of approximately 151 people through the provision of up to 54 dwelling units.

The subject site is identified within the Southern Suburbs District Structure Plan Stage 3, and identified for residential development.

The SP satisfies the relevant state and local strategic and statutory planning objectives.

A summary of the key statistics for the SP area are provided in the following table.

**Table 3 – Structure Plan Summary Table**

Item	Data	Structure Plan Ref:
Total are covered by the structure plan	1.15 hectares	Table 5
Area of residential land use proposed:	0.8045ha	Table 6
Total estimated lot/dwelling yield	54	Table 6
Estimated residential site density	67 dwellings per hectare	Table 6
Estimated population	151 (54 dwelling x 2.8 people per household)	Table 6
Area of internal road reserves	N/A	N/A
Area of future road widening	0.258 hectares	Table 5
Area of public open space	0.089 hectares	Table 5

# Table of Contents

<b>STRUCTURE PLAN CONTENT</b> .....	<b>1</b>
<b>PART ONE – IMPLEMENTATION</b> .....	<b>2</b>
<b>ATTACHMENT A – STRUCTURE PLAN MAP</b> .....	<b>5</b>
<b>PART TWO – EXPLANATORY REPORT</b> .....	<b>6</b>
<b>1.0 PLANNING BACKGROUND</b> .....	<b>7</b>
<b>1.1 Introduction and Purpose</b> .....	<b>7</b>
<b>1.2 Land Description</b> .....	<b>7</b>
1.2.1 Location and Area .....	7
1.2.2 Land Use .....	8
1.2.3 Legal Description and Ownership .....	8
<b>1.3 Statutory Planning Framework</b> .....	<b>8</b>
1.3.1 Zoning and Reservation .....	8
<b>1.4 Strategic Planning Framework</b> .....	<b>8</b>
1.4.1 Perth and Peel @ 3.5 Million .....	8
1.4.2 Directions 2031 .....	9
1.4.3 Southern Suburbs Stage 3 District Structure Plan .....	10
<b>1.5 Planning Policy Framework</b> .....	<b>10</b>
1.5.1 Liveable Neighbourhoods .....	10
1.5.2 State Planning Policy No. 3 – Urban Growth and Settlement .....	10
1.5.3 SPP 3.7 – Planning for Bushfire Risk Management .....	11
1.5.4 City of Cockburn Local Commercial and Activity Centre Strategy .....	11
1.5.5 Pre-lodgement consultation .....	11
<b>2.0 SITE CONDITIONS AND CONSTRAINTS</b> .....	<b>12</b>
<b>2.1 Biodiversity and Natural Area Assets</b> .....	<b>12</b>
2.1.1 Flora and Vegetation .....	12
<b>2.2 Landform and Soils</b> .....	<b>12</b>
<b>2.3 Groundwater and Surface Water</b> .....	<b>12</b>
2.3.1 Groundwater .....	12
2.3.2 Surface Hydrology and Wetlands .....	13
<b>2.4 Bushfire Hazard</b> .....	<b>13</b>
<b>2.5 Heritage</b> .....	<b>14</b>
<b>2.6 Context and Other Land Use Constraints and Opportunities</b> .....	<b>14</b>
<b>3.0 LAND USE AND SUBDIVISION REQUIREMENTS</b> .....	<b>15</b>
<b>3.1 Land Use</b> .....	<b>15</b>
<b>3.2 Public Open Space</b> .....	<b>15</b>
<b>3.3 Residential</b> .....	<b>16</b>

---

3.3.1	Dwelling Type and Distribution .....	16
3.3.2	Dwelling Yield and Density Estimates .....	16
<b>3.4</b>	<b>Movement Networks .....</b>	<b>17</b>
<b>3.5</b>	<b>Water Management .....</b>	<b>17</b>
<b>3.6</b>	<b>Infrastructure Coordination, Servicing and Staging .....</b>	<b>17</b>
3.6.1	Earthworks .....	17
3.6.2	Roads .....	17
3.6.3	Stormwater Drainage .....	18
3.6.4	Wastewater .....	18
3.6.5	Water Supply .....	18
3.6.6	Power Supply .....	18
3.6.7	Telecommunications .....	18
3.6.8	Gas Supply .....	18
3.6.9	Staging .....	18
<b>3.7</b>	<b>Developer Contribution Arrangements .....</b>	<b>19</b>
<b>3.8</b>	<b>Other Requirements .....</b>	<b>19</b>
3.8.1	Local Development Plans .....	19
<b>4.0</b>	<b>CONCLUSION .....</b>	<b>20</b>

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## Attachments

Attachment A: Structure Plan Map

## Tables

Table 1: Table of Amendments

Table 2: Table of Density Plans

Table 3: Structure Plan Summary Table

Table 4: Pre-lodgement Consultation

Table 5: Public Open Space Schedule

Table 6: Residential Density Calculations

## Figures

Figure 1 Location Plan

Figure 2: Aerial Plan

Figure 3: Context and Constraints Plan

## Appendices

Appendix 1: Certificate of Title

Appendix 2: Flora and Vegetation Survey

Appendix 3: Bushfire Management Plan (BMP)

Appendix 4: Transport Assessment Report

Appendix 5: Local Water Management Strategy

Appendix 6: Engineering Services Report

# Structure Plan Content

This Structure Plan comprises:

## **Part One – Implementation**

This section contains the Structure Plan Map, and outlines the purpose and intent of the Structure Plan.

## **Part Two – Explanatory Section**

This section contains the explanatory component of the structure plan including background information, and an explanation of the structure plan including design methodology, relevance, and compliance with the applicable planning frameworks at the State and Local Government level.

This section also includes plans and maps in support of the structure plan.

## **Part Three - Appendices**

This section contains all of the technical reports and studies in support of the structure plan, with the level of detail contained within these reports and studies being commensurate with the context and scale of the proposed structure plan.



# Part One – Implementation

## 1. Structure Plan Area

This Structure Plan applies to Part Lot 41 Frankland Avenue, Hammond Park, being the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan Map.

The Structure Plan Map is provided as **Attachment A**.

This Structure Plan is identified as the Lot 41 Frankland Avenue, Hammond Park Structure Plan (SP).

## 2. Operation

The date the structure plan comes into effect is the date the structure plan is approved by WAPC.

## 3. Interpretation and relationship with statutory planning framework

The Lot 41 Frankland Avenue, Hammond Park Structure Plan constitutes a Structure Plan pursuant to Section 6.2 of the City of Cockburn Town Planning Scheme No. 3, and the Planning and Development (Local Planning Schemes) Regulations 2015, Schedule 2 – Deemed provisions for local planning schemes.

The Structure Plan Map (**Attachment A**) outlines future land use(s) and zones applicable within the structure plan area.

Pursuant to the Planning and Development (Local Planning Schemes) Regulations 2015, Schedule 2 – Deemed provisions for local planning schemes, a decision maker of an application for development approval or subdivision approval is to have due regard to the provisions of this Structure Plan, including the Structure Plan Map, Implementation Report, Explanatory Report and Technical Appendices.

## 4. Subdivision and development requirements

### 4.1 Land use

- a) The subdivision and development of land is to be generally in accordance with the zones and reserves which appear on the structure plan map.
- b) Residential densities applicable to the structure plan area shall be those residential densities shown on the structure plan map.

### 4.2 Hazards and separation areas

#### Bushfire Management

- a) No buildings or structures shall be permitted to encroach within the 20m low fuel area identified in the Bushfire Management Plan contained within Appendix 2, until such time as the bushfire hazard level for the land to the south is reclassified.
- b) An emergency access way is to be provided onto Frankland Avenue for emergency vehicle access in the event of bush fire, within the 20m low fuel area.

- c) A notification to be placed on the Certificate(s) of Title(s) will be required as a condition of subdivision approval, where land or lots are deemed to be affected by a Bush Fire Hazard as identified in the Bushfire Management Plan contained within Appendix 2.
- d) Building setbacks and construction standards to achieve a Bushfire Attack Level 19 or lower in accordance with Australian Standards (AS3959-2009): Construction of buildings in bushfire prone areas, shall be complied with for land or lots that are deemed to be affected by a Bush Fire Hazard as identified in the Bushfire Management Plan.

#### 4.3 Residential Densities

- a) The residential densities which appear on the structure plan map are consistent with residential density targets under the Commission's Liveable Neighbourhoods Policy.
- b) The subdivision and development of land is to be generally in accordance with the densities which appear on the structure plan map.

### 5. Local Development Plans

Local Development Plans (LDP's) shall be prepared and implemented for lots comprising one or more of the following site attributes:

- a) Lots with rear-loaded vehicle access; and
- c) Lots deemed to be affected by a recognised bushfire hazard (as identified by the Bushfire Management Plan)

# Attachment A – Structure Plan Map



FRANKLAND AVE

GAEBLER ROAD

FRANKLAND AVENUE

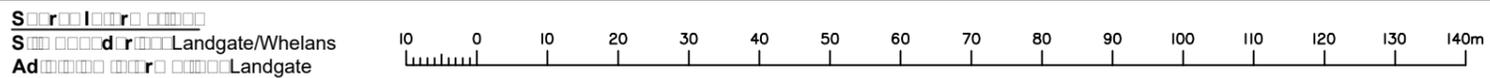
20m ROAD WIDENING

R60

POS  
890m<sup>2</sup>

LOT 41  
SUBJECT TO  
FURTHER PLANNING

LOT 42



- L** **S** **P** **B** **d**
- ONES**
- G** **R** **d**
- RESERVES**
- P** **O** **S**

<b>PROJECT</b>		LOT 41 FRANKLAND AVENUE HAMMOND PARK	
Job Ref.	131336-1	Date	06 February 2017
Comp By.	LCFV	DWG Name.	131336-1-001f.dwg
Locality	HAMMOND PARK	Local Authority	CITY OF COCKBURN

<b>CLIENT</b>	BROADVISION PROJECTS PTY LTD
<b>STRUCTURE PLAN MAP</b>	



**RPS**

RPS Australia East Pty Ltd  
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Scale	1:1000	Sheet	A3	Plan Ref	131336-1	Rev	F
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## Part Two – Explanatory Report

## I.0 Planning Background

### I.1 Introduction and Purpose

This Structure Plan, hereinafter referred to as the Lot 41 Frankland Avenue, Hammond Park Structure Plan (SP), has been prepared on behalf of Broad Vision Projects Pty Ltd.

The purpose of the SP is to facilitate the orderly future development of the subject site.

In addition to the planning considerations canvassed within this report, the preparation of this structure plan has been informed by a number of technical and design investigations, which are referred to in this report and the accompanying technical appendices.

This structure plan has been prepared in accordance with the design requirements outlined in Liveable Neighbourhoods, and responds to requirements outlined in the City of Cockburn Town Planning Scheme No 3 (TPS 3).

The format of this structure plan follows that set out in the Western Australian Planning Commission's (WAPC) Structure Plan Framework (August 2015), consisting of three parts:

- Part 1: Implementation Section: Contains the Structure Plan Map and outlines the requirements that will be applied when assessing subdivision and development applications.
- Part 2: Explanatory Section: Discusses the key outcomes and planning implications of the background and technical reports and describes the broad vision and more detailed planning framework being proposed. Part 2 is based on a detailed site specific analysis of opportunities and constraints and the following technical reports and strategies:
  - Flora and Vegetation Survey (ENV);
  - Bushfire Management Plan (Bio Diverse Solutions);
  - Local Water Management Strategy (Development Engineering Consultants);
  - Transport Assessment Report (Uloth); and
  - Engineering Servicing Report (Development Engineering Consultants).
- Part 3: Technical Appendices: Includes the technical reports and supporting plans and maps prepared by the project team to support the structure plan.

### I.2 Land Description

#### I.2.1 Location and Area

The subject site is approximately 28 km south of the Perth CBD, and is approximately 8 km south of Cockburn Central. The subject site is located on the western side of Kwinana Freeway, approximately half way between the Russell Road and Rowley Road exits. A location plan illustrating the location of the subject site is provided as **Figure 1**, and an aerial photo of the subject site is provided as **Figure 2**.

The subject site is bound by Gaebler Road to the north, residential subdivision to the east, Frankland Avenue and the Banganup and Thomson Lake reserves to the west, and undeveloped land (Lot 42) to the south.

## 1.2.2 Land Use

The following land uses are contemplated within the structure plan area:

- Residential with a density coding of R60
- Public Open Space; and
- Road reserve

The subject site is vacant and has remained generally unused and unimproved to date. The subject site was completely cleared in the past but has had significant regrowth. The site is now generally uncleared, with informal access tracks located around the periphery.

The subject site is predominantly bound by low to medium density residential development sites to the north and east, vacant land to the south and Harry Waring Marsupial Reserve to the west.

The subdivision and development of the subject site reflects a continuation of the existing pattern of subdivision in the area, with established, approved or future residential subdivision to the north, east and further south.

A plan illustrating the context of the subject land and surrounding constraints is provided as **Figure 3**.

## 1.2.3 Legal Description and Ownership

The subject site constitutes a portion of a single landholding with a total land area of 4.082 hectares. The registered landowner is Broad Vision Projects Pty Ltd. The subject land is formally described as Lot 41 on Diagram 45174, Certificate of Title Volume 1360 Folio 585 (Appendix 1). There are no restrictions or encumbrances registered on the title.

## 1.3 Statutory Planning Framework

### 1.3.1 Zoning and Reservation

The subject site is zoned 'Urban' under the provisions of the Metropolitan Region Scheme (MRS), with a 20 metre wide strip in the western portion of the subject site abutting Hammond Road being reserved for Other Regional Roads.

The subject site is zoned 'Development' under the provisions of the City of Cockburn Town Planning Scheme No. 3 (TPS 3). The Scheme provisions applicable to the Development zone provide that subdivision and development is to be in accordance with an approved Structure Plan.

The subject site is also included in Development Area 9 (DA 9). The provisions of TPS 3 relating to DA 9 also give rise to the requirement for a Structure Plan to be prepared and adopted.

## 1.4 Strategic Planning Framework

### 1.4.1 Perth and Peel @ 3.5 Million

To realise the vision encapsulated in Directions 2031 and beyond and the State Planning Strategy 2050, the Western Australian Planning Commission, through the Department of Planning has created a series of detailed draft planning frameworks, detailing the long-term growth strategy for land use and infrastructure for the Perth and Peel regions.

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 on how we can realistically accommodate a substantially increased population.

Together with the Perth and Peel@3.5million document, four draft sub-regional planning frameworks have been adopted for the Central, North-West, North-East and South Metropolitan Peel sub-regions.

In terms of the South Metropolitan Peel sub-region framework, this document provides guidance for:

- the preparation of amendments to the Perth metropolitan and Peel region schemes, local planning strategies/schemes and district, local and activity centre structure plans; and
- the staging and sequencing of urban development to inform public investment in regional community, social and service infrastructure.

The South Metropolitan Peel sub-regional framework document is reflective of the current zoning of the subject site in the MRS, being “urban”.

### 1.4.2 Directions 2031

Directions 2031 is the current spatial planning framework for Perth and Peel, and outlines the planning vision and direction which will guide the planning of the region to 2031.

The Strategy recognises the benefits of a more consolidated city, which includes;

- A reduced overall need for travel via private vehicle;
- Supports the use of public transport, cycling and walking for access to services, facilities and employment; and
- A more energy efficient urban form.

The Strategy aims to provide for different lifestyle choices, vibrant nodes for economic and social activity and a more sustainable urban transport network. A key component of the strategy is to increase the gross residential densities in greenfield areas and to provide for greater housing diversity, which are items specifically relevant to the SP.

Directions 2031 seeks a 50% increase in the current average residential density of 10 dwellings per ‘gross urban zoned’ hectare in new development areas i.e. 15 dwellings per ‘gross urban zoned’ hectare of land.

The Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy forms an integral part of Directions 2031. The Draft Strategy along with its counterpart for Central Metropolitan Perth provides the strategic spatial plan which will achieve the objectives of Direction 2031. The Draft Strategy identifies the broader locality area as ‘SOU1’ and classifies it as ‘urban zoned undeveloped’, with the potential to deliver 3,000+ plus dwellings in the future.

Endorsement of the SP will facilitate subdivision and development of the subject land, and assist in meeting the objectives established under Directions 2031. The proposed densities outlined in the LSP will assist in meeting the increase in density requirements envisaged by Directions 2031.

### 1.4.3 Southern Suburbs Stage 3 District Structure Plan

The Southern Suburbs District Structure Plan Stage 3 (DSP) applies to the subject site for the purposes of providing guidance to inform the preparation of detailed structure plans.

The DSP provides a broad land use framework for the future development of the DSP area, prescribing key road networks, residential densities and open space areas. The DSP identifies the subject site for residential development at a medium density.

The proposed structure plan is consistent with the land use framework established by the DSP.

## 1.5 Planning Policy Framework

The following state and local planning policies are noted as being specifically relevant to the structure plan area.

### 1.5.1 Liveable Neighbourhoods

The Commission's Liveable Neighbourhoods Policy is intended to guide the subdivision and development of land in Western Australia. The key principles of this policy include:

- Providing a variety of lots sizes and housing types to cater for the diverse housing needs of the community at a density that can ultimately support the provision of local services;
- To ensure cost-effective and resource efficient development to promote affordable housing; and
- To maximise land efficiency.

Liveable Neighbourhoods provides guidance for the design and development of greenfield subdivision through eight design elements including: community design, movement networks, lot layout, public parkland, urban water management, utilities, activity centres and employment, and schools. These principles have been considered in the preparation of the SP.

### 1.5.2 State Planning Policy No. 3 – Urban Growth and Settlement

This Policy sets out the principles and considerations which apply to the planning of urban growth settlements in Western Australia. The Policy aims to facilitate sustainable patterns of urban growth and settlement, and recognises that the State is undergoing rapid growth and change which is expected to continue. The policy acknowledges that the spread of urban development intensifies pressures on valuable land and water resources, imposes costs for the provision of infrastructure and services, increases dependence on private cars and creates potential inequities for those living in the outer suburbs where job opportunities and services are not so readily available.

The objectives of the policy include:

- To promote a sustainable and well planned pattern of settlement with sufficient and suitable land to provide for a wide variety of housing, employment, recreation facilities and open space;
- To build on existing communities with established local and regional economies, concentrate investment on the improvement of services and infrastructure and enhance the quality of life in those communities;
- To manage growth and development of urban areas in response to social and economic needs of the community and in recognition of the relevant climatic, environmental, heritage and community values and constraints; and

- To promote the development of sustainable and liveable neighbourhood form which reduces energy, water and travel demand whilst ensuring safe and convenient access to employment services by all modes.

### 1.5.3 SPP 3.7 – Planning for Bushfire Risk Management

The objectives of this Policy are to:

- Facilitate the avoidance of placing people, property and infrastructure in areas of extreme bushfire risk.
- Reduce vulnerability to bushfire through the identification and assessment of bushfire hazards and risk in decisions at all stages of the planning process, including strategic planning, regional and local planning schemes, and structure planning through to subdivision and development.
- Ensure that subdivision, development and land-use proposals take into account bushfire protection requirements and include specified fire protection measures, especially over land that has or will have a moderate or extreme bushfire hazard level, and/or land where construction standards of BAL-12.5 and above apply.
- Achieve a responsible and balanced approach between bushfire risk management measures and landscape amenity and biodiversity conservation objectives.

Planning or development applications within identified bushfire-prone areas are to undertake a bushfire hazard assessment (low, moderate or extreme), prepared by a fire consultant, in accordance with the methodology set out in the *Planning for Bushfire Risk Management Guidelines*.

### 1.5.4 City of Cockburn Local Commercial and Activity Centre Strategy

A Local Centre and Activity Centre Strategy (LCACS) has been prepared to implement the strategic direction provided for within Directions 2031 and *State Planning Policy No. 42 – Activity Centres for Perth and Peel* (SPP 4.2). The LCACS reaffirms the role of the Hammond Park Local Centre as provided for within the DSP, with a proposed ultimate shop floor space of 736 – 1,277m<sup>2</sup> by 2026.

A small local centre is also identified on the DSP to the north east of the subject land at the corner of Gaebler Road and Botany Parade. The subject land is highly serviced by planned future retail centres.

### 1.5.5 Pre-lodgement consultation

**Table 4 – Pre-lodgement Consultation**

Agency	Date of consultation	Method of consultation	Summary of outcome
Water Corporation	May 2016	Phone discussions & correspondence	Water Corporation has provided information regarding water and wastewater availability and method of servicing the SP area which has been addressed in the Engineering Services Report appended to this report.

## 2.0 Site Conditions and Constraints

A summary of the site conditions and environment, and associated management measures is provided as follows.

### 2.1 Biodiversity and Natural Area Assets

#### 2.1.1 Flora and Vegetation

A Flora and Vegetation survey has previously been undertaken over the subject site by ENV, and the report is provided in **Appendix 2**.

The Flora and Vegetation survey identifies that no plants are gazetted as Declared Rare Flora pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act* (1950) or Priority Flora species were located during the field survey. Additionally, no Endangered or Vulnerable species, pursuant to s178 of the *Environmental Protection and Biodiversity Conservation Act* (1999) were located during the survey.

There were two floristic communities present at the subject site. These were: *Melaleuca preissiana* damplands; and open woodland of *Banksia attenuata* and *Eucalyptus marginata*. Neither of these communities are listed as a Threatened Ecological Communities. Accordingly, there are no specific floristic impediments to the development of the subject site.

The subject site is not identified as a Bush Forever site. Bush Forever sites associated with the Banganup and Thomson Lake areas are located to the west of the subject site. There is no flora or fauna restricting development of the SP area for the intended residential land use

### 2.2 Landform and Soils

The subject site is relatively flat, with elevations falling from approximately 23m AHD in the west to approximately 22m AHD along the eastern edge.

Regional mapping suggests that the subject site is composed mainly of Bassendean sand from the Spearwood Dune system. This is described as "SAND (S8): very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted of eolian origin".

Some imported fill will be required to improve the site classification and ensure adequate clearance to groundwater, sewer and to facilitate stormwater detention.

The State Government's acid sulphate soil mapping databases identify the subject site as having a moderate to low risk of ASS occurring within 3 metres of natural soil surface.

The subject site is a bush block, and there are no previous or ongoing land use activities that would have caused site contamination.

### 2.3 Groundwater and Surface Water

#### 2.3.1 Groundwater

Groundwater levels shown in the Russell Road Arterial Drainage Scheme show the levels grading from RL19.5m AHD at the eastern boundary of the subject site, to around RL19.0m AHD at the western boundary of the subject site. These level are in comparison to the predicted likely groundwater levels based on

predevelopment groundwater monitoring, which indicate the groundwater levels ranging from RL20.20m AHD to 19.80m AHD.

In investigation of this 0.7 – 0.8 metre discrepancy in groundwater levels, it has been revealed that a number of developments in the surrounding area have not implemented effective subsoil drainage systems into their designs and have elected to infiltrate all stormwater up to the 100 year ARI event. This in conjunction with the clearing of the existing vegetation in the area is likely to be the contributing factors which have resulted in the groundwater rise.

### 2.3.2 Surface Hydrology and Wetlands

The subject site is relatively flat, with the majority of the area grading at approximately 1%. The steepest area is in the south-west corner which grades at approximately 1.5%. There is a high point in the north-western corner of the subject site at around RL23.0m AHD, which falls towards a mapped wetland area to the east of the SP boundary on Lot 41 which sits at around RL21.5m AHD. This surface hydrology results in most of the surface water grading in an easterly direction.

The soil underlying the western portion of the subject site is generally very permeable, and the majority of rainfall onto the subject site is expected to infiltrate accordingly.

The area noted as subject to further study which is excluded from the SP area contains a mapped Conservation Category Wetland (dampland). No portion of this mapped wetland area or associated 50m buffer encroaches into the boundaries of the SP. The proponent does not agree with the dampland classification and is continuing to study the vegetation, soil and hydrology of the area mapped as dampland to better ascertain its status.

## 2.4 Bushfire Hazard

A Bushfire Management Plan (BMP) has been prepared by Bio Diverse Solutions to support the SP and is provided in **Appendix 3**.

In order to reduce the risk of bushfire to people, property and infrastructure, WAPC has prepared a State Planning Policy (SPP) identified as SPP 3.7: Planning for Bushfire Risk Management.

The SPP requires the preparation of a BMP to assess the risk and where practicable, reduce potential impact from vegetation fire within or adjacent to the site.

The objectives of the BMP are as follows:

- Achieve consistency with objectives and policy measures of SPP 3.7;
- Assess any building requirements to AS3959-2009 (current and endorsed standards) and BAL Construction;
- Assess the subdivision proposal against the Bushfire Protection Criteria Acceptable Solutions as outlined in the Guidelines for Planning in Bushfire Prone Areas;
- Understand and document the extent of the bushfire risk and hazards to the subject site;
- Prepare bushfire mitigation and management measures of all land within the subject area with due regard to people, property, infrastructure and the environment; and
- Nominate individuals and organisations responsible for bushfire management and associated works within the subject site.

Once developed, future subdivision will be classified as a low bushfire hazard level including all built and managed POS areas.

Remnant native vegetation areas external to the site located to the east, west and south will remain in their native state, and have been rated a mix of “Extreme” and “Moderate” bushfire hazard level. The BMP assumes that the bushfire risks to the east, west and south will remain in perpetuity.

As setback distances of over 100m from bushfire prone vegetation cannot be achieved for the development, building to Bushfire Attack Levels (BAL) and AS3959-2009 will apply to dwellings within the SP area.

No higher BAL allocation than BAL 19 will apply to buildings upon completion of construction. Individual BAL assessments may be considered on the lots by following detailed design requirements when dwelling design/placement is known, and can be undertaken at building approval stages.

The developer will be responsible for the implementation of a notification on title pursuant to Section 70A of the Transfer of Land Act 1893 for all lots affected by an increase in construction standards consistent with a BAL rating/AS3959-2009 allocation to the lot, and alerting the prospective owner(s) of the lots and successors in title of the Bushfire Management Plan.

The vegetation clearing required for POS, street verges and the Asset Protection Zone areas identified in the BMP will allow for the retention of significant trees. The POS area within the eastern portion of the SP area is expected to be landscaped, managed and maintained as a conventional POS area. This means that once developed, the internal areas of the subject site would form “Low threat vegetation and non vegetated areas”, thus posing a low bushfire hazard level.

A 20m low fuel area has been applied in the south western corner of the SP area to ensure no higher than BAL 19 applies to the building(s) in this area. The deletion of this low fuel area can be contemplated if/when the bushfire risk on the adjoining lot to the south can be reclassified.

As access will be restricted onto Frankland Avenue through the internal SP road network, an emergency access way will be required whereby a secondary emergency access way onto Frankland Avenue is provided. The 20m low fuel zone in the south western corner of the SP area can encompass the emergency access way. Entry to the access way would occur via a gate remaining locked at all times. The accommodation of the emergency access way can be achieved in low fuel areas such as POS, by linking a 6m wide dual use path that is also accessed via a gate remaining unlocked at all times. The installation of signage will also assist in direction for residents in an emergency bushfire situation.

## 2.5 Heritage

There are no Aboriginal Heritage sites or sites of European Heritage significance that fall within the SP area.

## 2.6 Context and Other Land Use Constraints and Opportunities

A Context and Constraints Plan which illustrates the subject site and surrounding context is provided as **Figure 3**.

With the exception of bushfire risk as mentioned in Section 2.4 of this report, surrounding land uses either complement, or do not have any material impact on the use or development of the subject site as contemplated by the structure plan.

## 3.0 Land Use and Subdivision Requirements

### 3.1 Land Use

The land uses contemplated within the structure plan are:

- Residential with a density coding of R60;
- Public Open Space; and
- Road reserve.

The configuration of the residential and open space land uses are consistent with the Southern Suburbs District Structure Plan Stage 3. This is reflective of the configuration of a mapped wetland area, a portion of which falls within the eastern portion of Lot 41, but which has been excluded from the SP area, and is currently the subject of further investigation.

### 3.2 Public Open Space

The SP provides for a total of 890 square metres of public open space to be ceded as a local 'Parks and Recreation' reserve. The POS area runs from Gaebler Road at the northern boundary of the SP area, through to the common boundary between Lots 41 and 42. The POS strip is approximately 6m in width. This open space has been designed to accommodate drainage and credited open space, whilst excluding potential future development and public open space areas requirements.

In accordance with the Element 4 (Public Parkland) requirements of Liveable Neighbourhoods, the Public Open Space Schedule for the LSP is provided in Table 5 as follows.

**Table 5 – Public Open Space Schedule**

Developable Area		Site Area	
<b>Lots</b>	<b>Total</b>		<b>1.151 ha</b>
	Road Widening	0.258 ha	
	<b>Total Deductions</b>		<b>0.258 ha</b>
<b>Gross Subdivisible Area (GSA):</b>			<b>0.893 ha</b>
<b>Public Open Space Requirement</b>			
	<b>10% of Gross Subdivisible Area</b>		<b>0.089 ha</b>
	80% Unrestricted		0.071 ha
	20% Restricted		0.018 ha
<b>Open Space Provided</b>			
	Unrestricted		0.089 ha
	Restricted		0.000 ha
	Total		0.089 ha
	<b>* Surplus / Shortfall</b>		<b>0.000 ha</b>
<b>POS/Green Space Development Table</b>			
Green Space Required (POS + Drainage)	<b>Unrestricted POS</b>		<b>0.089 ha</b>
	Unrestricted POS	0.089 ha	
<b>Total Green Space Required</b>			<b>0.089 ha</b>

The ultimate function and usability of the POS for active and passive recreational purposes, including local water management functions, will be subject to further detailed design at the subdivision stage to the satisfaction of the local authority.

### 3.3 Residential

#### 3.3.1 Dwelling Type and Distribution

The SP contemplates a base density code of R60. This density is consistent with the District Structure Plan. The proposed density takes advantage of the proximity of the subject site to public open space and the future Hammond Park local centre to the south. This will offer high amenity outlooks for future dwellings, provide increased passive surveillance for the POS area and adjacent streets, and assist in providing a critical mass of population in walkable distance to the local centre which will enhance its viability.

Single residential lots/dwellings, grouped housing, multiple dwellings and ancillary dwellings are all permissible within the 'Residential' zone in TPS 3. It is expected that the SP area would ultimately be developed with a combination of grouped and multiple dwelling developments, with strata titling of developments being a distinct possibility.

#### 3.3.2 Dwelling Yield and Density Estimates

As illustrated in the table below, the area identified for 'Residential' use in the SP is estimated to yield approximately 54 lots/dwellings. Based on this dwelling yield estimate, the SP achieves an estimated residential density of approximately 47 dwellings per gross hectare of 'Urban' zoned land, and 67 dwellings per net hectare of residential developable land. This is calculated as follows:

**Table 6 – Residential Density Calculations**

Indicator	Amount
Gross SP area ( <i>all 'Urban' zoned land</i> )	1.15 hectares
Net SP area identified for 'Residential' purposes	0.8045 hectares
Total estimated dwellings	54
Estimated Gross Residential Density ( <i>Dwellings / Gross SP area</i> )	47
Estimated Net Residential Density ( <i>Dwellings / Net Residential area</i> )	67

These estimated residential densities exceed the density targets set by the following regional and district level planning documents:

- **Directions 2031** – Sets a target of 15 dwellings per gross urban zoned hectare in new development areas.
- **Liveable Neighbourhoods (Element 1, R17)** – Recommends a minimum residential density of 20 to 30 dwellings per site hectare (net residential density) for areas within 250m of a major bus route.

### 3.4 Movement Networks

A Transport Assessment Report has been prepared by Uloth and Associates to support the SP, and is provided in **Appendix 4**.

The report estimates that the proposed development could generate a maximum of approximately 400 vehicle trips per day, and expects no more than 15 percent of trips will travel east to/from Barfield Road via Gaebler Road.

The report identifies that the proposed access/driveway for any development off Gaebler Road should be located no closer than 40m from the Hammond Road reserve, and that a footpath connection should be provided adjacent to the access driveway off Gaebler Road as well as off Hammond Road at the southern end of the site.

Future bus routes are anticipated along Hammond Road adjacent to the subject site, and to the east along Barfield Road. Bus stops are therefore expected to be located close to the subject site, providing good public transport services for residents.

### 3.5 Water Management

A Local Water Management Strategy (LWMS) has been prepared by Development Engineering Consultants to support the SP, and is provided in **Appendix 5**. It has been approved by the Department of Water (DOW) on 19 January, 2017.

The LWMS identifies that the open space area within the eastern portion of the SP provides sufficient space for a drainage swale. A detention basin will be constructed in the POS and will provide soakage at source for the larger ARI events. Storms up to the 100 year ARI also will be contained within the basin. The internal layout of the group housing site will be undertaken to provide an overland flow path towards the POS and associated drainage area.

### 3.6 Infrastructure Coordination, Servicing and Staging

An Engineering Servicing Report has been prepared by Development Engineering Consultants to support the SP, and is provided as **Appendix 6**. The following information is a summary of their findings:

#### 3.6.1 Earthworks

The subject site will be filled to a final finished level of approximately 22.5m AHD. Earthworks will entail removal of topsoil, cut and fill with imported fill, and stabilisation of the finished development level with topsoil and hydromulch. This fill height may require construction of retaining walls up to one metre in height.

#### 3.6.2 Roads

Any roads will be constructed in line with the applicable local government standards, including the provision of kerbs, footpaths and drainage.

Frankland Avenue to the west is a rural type road which will eventually be upgraded as a dual carriageway to become the southern extension of Hammond Road. A 20 metre road widening along the western boundary of the subject site will be ceded for this purpose. Frankland Avenue is reserved for 'Other Regional Roads' in the MRS. The SP will not rely on road or driveway access onto Frankland Avenue in line with WAPC policy for regional road access.

Gaebler Road has recently been upgraded to full urban standard along the frontage of the subject site.

### 3.6.3 Stormwater Drainage

Stormwater drainage will be captured and retained on site in line with the approved Local Water Management Strategy (refer **Appendix 5**). The soil characteristics of the subject site allow site soakage based on the geology and the depth to the groundwater table. Drainage from future individual lots will occur via conventional discharge into soakwells. Depth to groundwater levels will be sufficient for soakwells to operate efficiently.

Subsoil drainage may be installed to limit groundwater rise where required by a future Urban Water Management Plan. Some works external to the SP area will need to be undertaken as required by the LWMS in order to link existing drainage infrastructure with the intention of limiting future groundwater rise.

### 3.6.4 Wastewater

The SP area falls within a gravity sewer catchment connected to the Bibra Main Sewer north of the subject site. The development will be connected to the 300mm reticulation sewer that has been constructed along Gaebler Road.

### 3.6.5 Water Supply

A 250mm reticulation water main is located along the northern side of the Frankland Avenue road reserve. This main will be extended to service the SP area. The Water Corporation has advised that some upgrading of this water supply service will be required in future by way of a planned trunk main extension.

### 3.6.6 Power Supply

Whilst there is no underground reticulated power that directly abuts the subject site, there is sufficient electrical capacity in surrounding locality to service the SP area. An underground power supply will be installed at the subdivision stage as required by Western Power. The construction of an electrical substation and associated switchgear within the subject site is also likely to be required.

### 3.6.7 Telecommunications

Telstra services exist within both the Gaebler Road and Frankland Avenue road reserves which are capable of being extended to service this SP area. In accordance with current Telstra standards, the developer is required to install NBN "pipe and pit" to allow for future installation of cables for the NBN. The design of the "pipe & pit" is the responsibility of the developer, and will be designed in conjunction with the underground power network, and installed during the construction phase of the development.

### 3.6.8 Gas Supply

Gas mains are available in the surrounding locality with a high pressure main located in the Gaebler Road adjacent to the subject site.

### 3.6.9 Staging

There is no formal infrastructure coordination or staging arrangements proposed in the SP area owing to the consolidated nature of the land tenure, and straightforward approach to the provision of infrastructure and POS.

### 3.7 Developer Contribution Arrangements

The SP area is located within Development Contribution Area 9 (DCA 9) as identified in Schedule 12 of TPS 3. Development contributions will apply at the subdivision stage, with the quantum of the contribution being in line with the DCA 9 requirements in place at the time of subdivision.

### 3.8 Other Requirements

#### 3.8.1 Local Development Plans

To further guide and control development within the SP area, a Local Development Plan (LDP) will be prepared for residential lots provided with vehicular access via a rear laneway, and for lots deemed to be affected by a recognised Bush Fire Hazard.

LDPs may be imposed as a condition of subdivision approval. Matters to be addressed by LDPs for residential lots generally include:

- Built form outcomes, including setbacks, garage locations and open space provision;
- POS and private lot/dwelling interface, ensuring adequate surveillance of POS;
- Appropriate separation of public and private space;
- Orientation and design of homes to address solar orientation principles; and
- On-street and off-street parking provision.

## 4.0 Conclusion

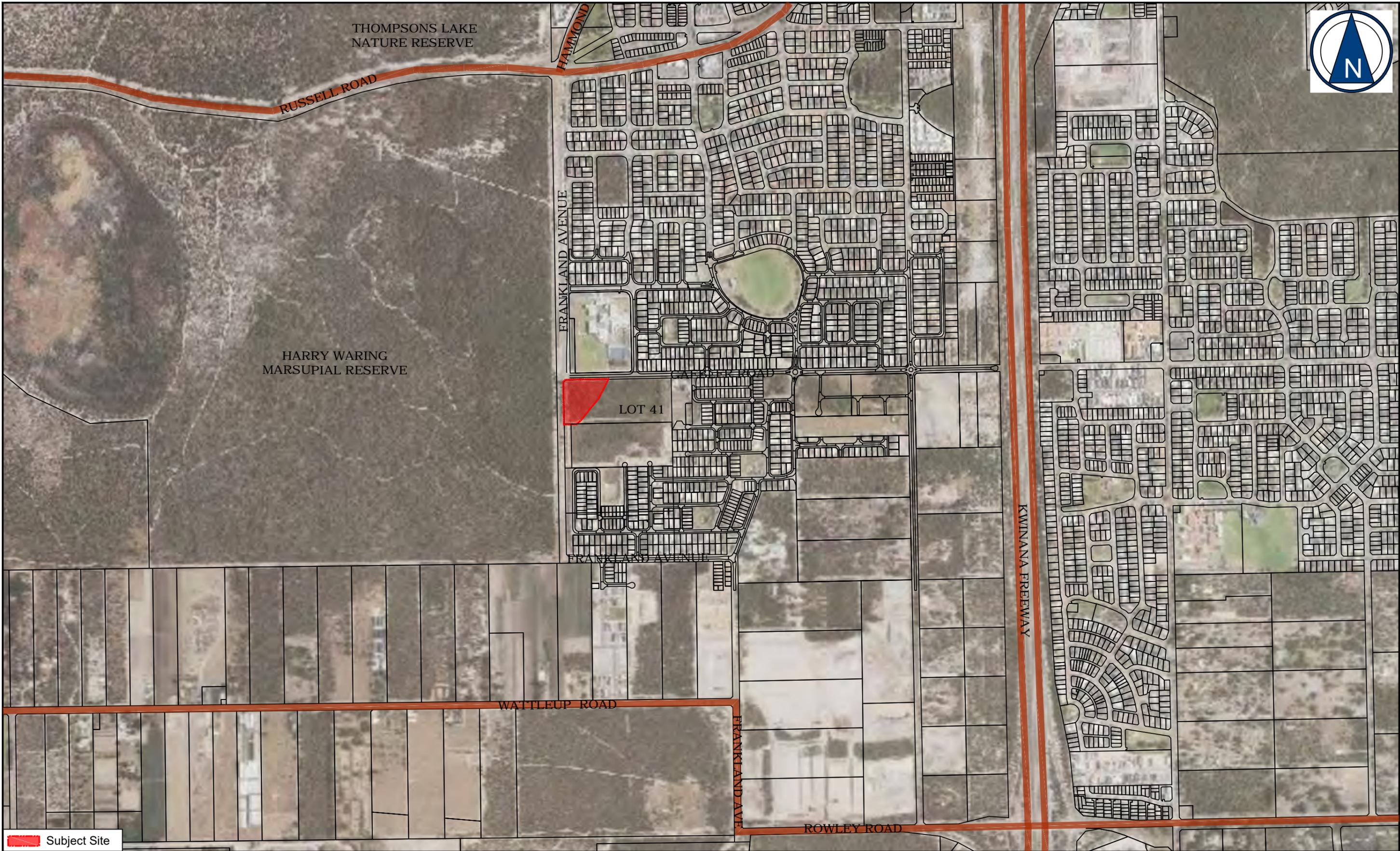
The purpose of this Structure Plan (SP) is to facilitate the orderly future subdivision and development of the subject site.

The Structure Plan has been prepared in accordance with the design requirements outlined in Liveable Neighbourhoods, and responds to requirements outlined in TPS 3 and other applicable state and local planning policies.

The Structure Plan design is based on best-practice design principles and is consistent with the Southern Suburbs District Structure Plan Stage 3.



# FIGURES



 Subject Site

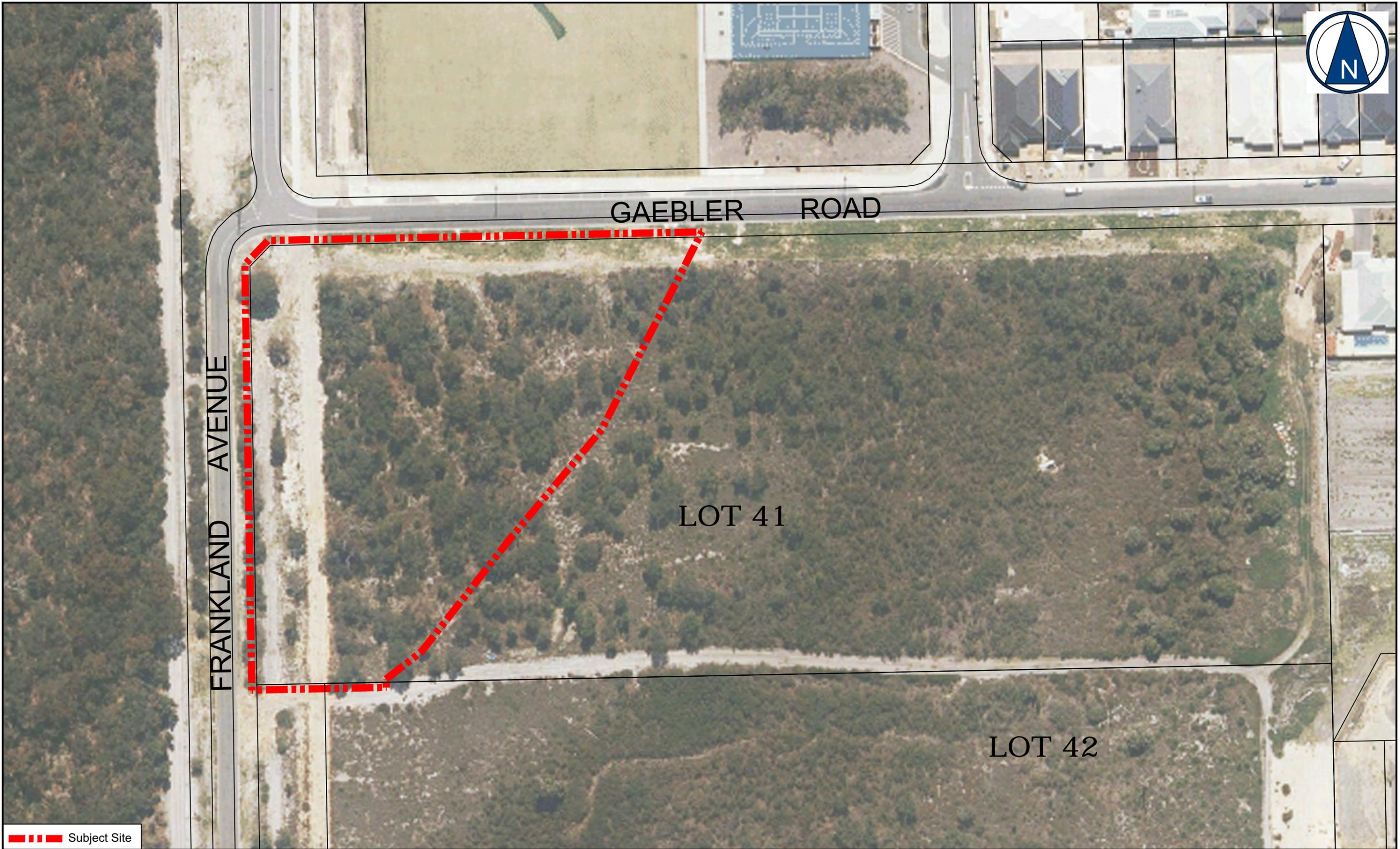
<b>PROJECT</b>		<b>LOT 41 FRANKLAND AVENUE HAMMOND PARK</b>	
Job Ref.	131336-1	Date	06 February 2017
Comp By.	LCFV	DWG Name.	131336-1-001f_Fig1.dwg
Locality	HAMMOND PARK	Local Authority	CITY OF COCKBURN

<b>CLIENT</b>	<b>BROADVISION PROJECTS PTY LTD</b>
<b>FIGURE 1 - LOCATION PLAN</b>	



RPS Australia East Pty Ltd  
 ACN 140 292 762  
 ABN 44 140 292 762  
 Level 2, 27-31 Troode Street  
 West Perth WA, Australia, 6005  
 PO Box 170, West Perth WA 6872  
 T +61 8 9211 1111  
 F +61 8 9211 1122  
 W rpsgroup.com.au

Scale	Sheet	Plan Ref	Rev
1:10000	A3	131336-1	F

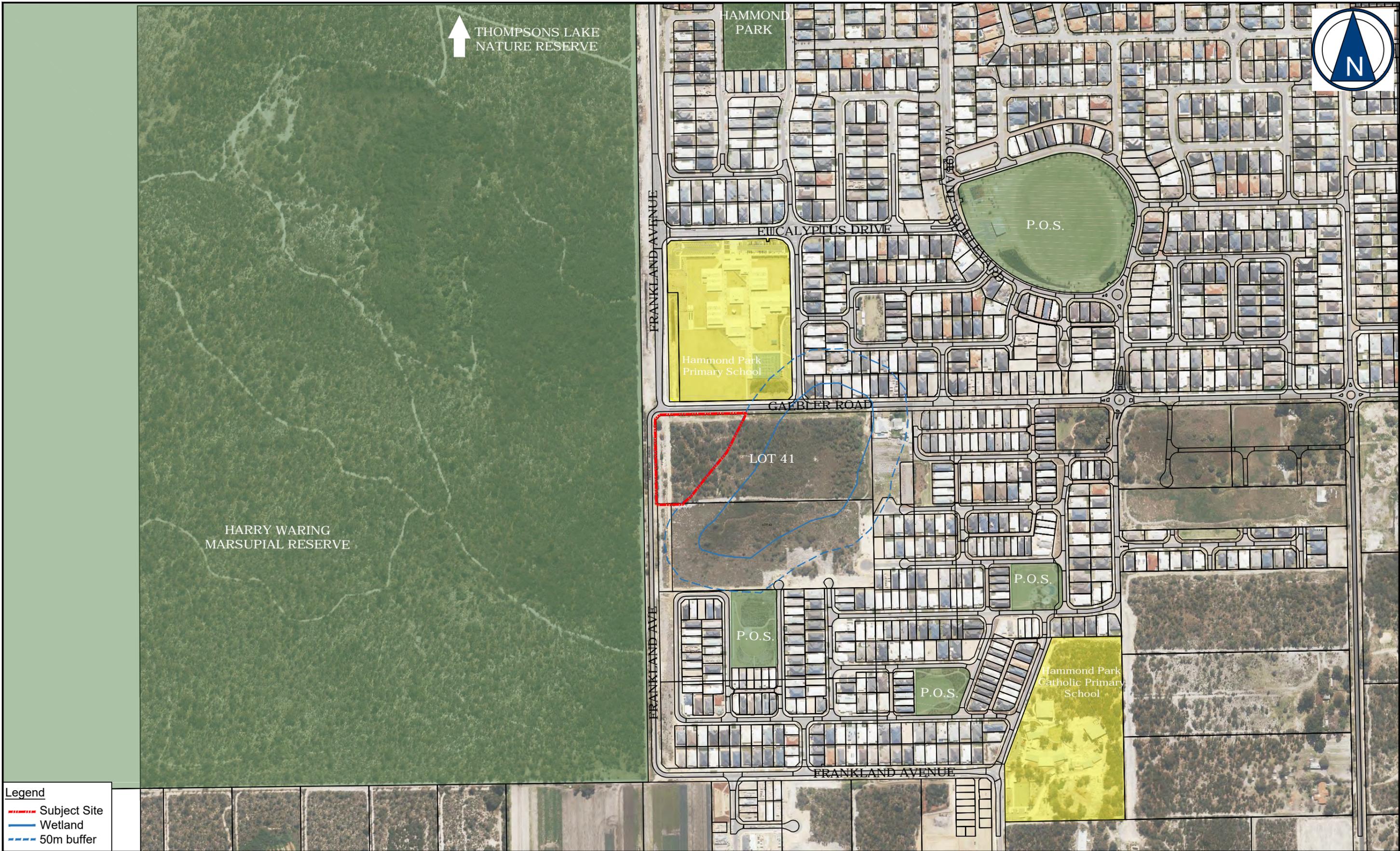


Subject Site

<b>PROJECT</b>		LOT 41 FRANKLAND AVENUE HAMMOND PARK	
Job Ref.	131336-1	Date	06 February 2017
Comp By.	LCFV	DWG Name.	131336-1-001f_Fig2.dwg
Locality	HAMMOND PARK	Local Authority	CITY OF COCKBURN

<b>CLIENT</b>	BROADVISION PROJECTS PTY LTD
<b>FIGURE 2 - AERIAL PLAN</b>	

	RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762		Level 2, 27-31 Troode Street West Perth WA, Australia, 6005 PO Box 170, West Perth WA 6872				
	© COPYRIGHT PROTECTS THIS PLAN Unauthorised reproduction or amendment not permitted. Please contact the author.		T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au				
Scale	1:1000	Sheet	A3	Plan Ref	131336-1	Rev	F



Legend	
	Subject Site
	Wetland
	50m buffer

<b>PROJECT</b>		<b>CLIENT</b>	
LOT 41 FRANKLAND AVENUE HAMMOND PARK		BROADVISION PROJECTS PTY LTD	
Job Ref. 131336-1	Date 06 February 2017	<b>FIGURE 3 - CONTEXT AND CONSTRAINTS PLAN</b>	
Comp By. LCFV	DWG Name. 131336-1-001f_Fig3.dwg		
Locality HAMMOND PARK	Local Authority CITY OF COCKBURN		

<b>RPS</b>		RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762		Level 2, 27-31 Troode Street West Perth WA, Australia, 6005 PO Box 170, West Perth WA 6872	
		© COPYRIGHT PROTECTS THIS PLAN Unauthorised reproduction or amendment not permitted. Please contact the author.		T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au	
Scale	1:5000	Sheet	A3	Plan Ref	131336-1
			Rev	F	



## PART 3 - APPENDICES

# APPENDIX I

## Certificate of Title



REGISTER NUMBER <b>41/D45174</b>	
DUPLICATE EDITION <b>3</b>	DATE DUPLICATE ISSUED <b>30/10/2013</b>

VOLUME 1360 FOLIO 585

RECORD OF CERTIFICATE OF TITLE UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.



REGISTRAR OF TITLES

LAND DESCRIPTION:

LOT 41 ON DIAGRAM 45174

REGISTERED PROPRIETOR: (FIRST SCHEDULE)

BROAD VISION PROJECTS PTY LTD OF 53 KIRWAN STREET, FLOREAT

(T J617715 ) REGISTERED 9/2/2006

LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS: (SECOND SCHEDULE)

- 1. M413754 EASEMENT TO WATER CORPORATION FOR PIPELINE PURPOSES - SEE SKETCH ON DEPOSITED PLAN 77333. REGISTERED 25/9/2013.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required. \* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title. Lot as described in the land description may be a lot or location.

-----END OF CERTIFICATE OF TITLE-----

STATEMENTS:

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents of for local government, legal, surveying or other professional advice.

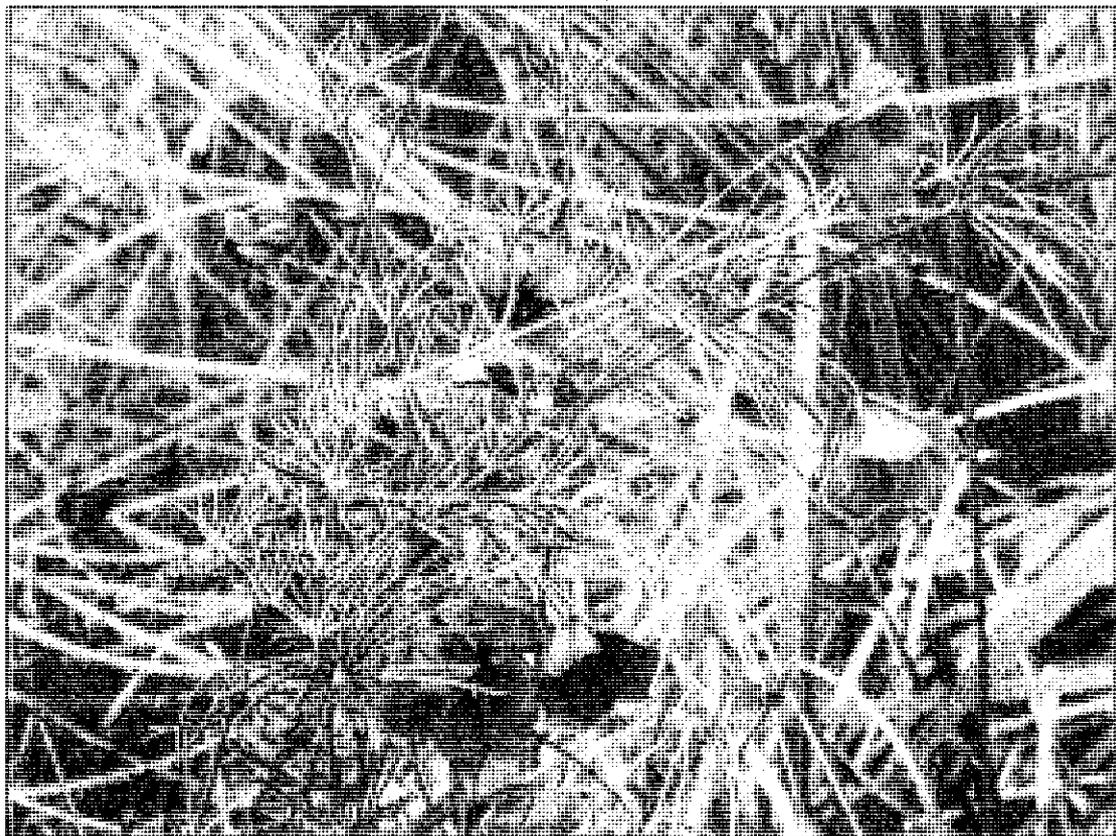
SKETCH OF LAND: 1360-585 (41/D45174)
PREVIOUS TITLE: 1360-584
PROPERTY STREET ADDRESS: 41 GAEBLER RD, HAMMOND PARK.
LOCAL GOVERNMENT AUTHORITY: CITY OF COCKBURN

## APPENDIX 2 Flora and Vegetation Survey

# LOT 41 GAEBLER ROAD HAMMOND PARK FLORA AND VEGETATION SURVEY

Prepared for:

*SPM PROJECT MARKETING*



*Platytheca galloldes*

**JOB NO: 06.150**

**REPORT NO: RP001**



Australia

# LOT 41 GAEBLER ROAD HAMMOND PARK FLORA & VEGETATION SURVEY

*Prepared for:*

**SPM PROJECT MARKETING**

*Prepared by:*

ENV Australia Pty Ltd  
Level 7, 182 St George's Terrace  
PERTH WA 6000  
Phone: (08) 9289 8360  
Fax: (08) 9322 4251  
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<b>Prepared by:</b>	<i>Rachael Pratt</i>
<b>Status:</b>	<i>Final</i>
<b>QA Review:</b>	<i>Rachael Pratt</i>
<b>Technical Review:</b>	<i>Mitchell Ladyman</i>
<b>Content Review:</b>	<i>Dale Newsome</i>
<b>Date:</b>	<i>16 February 2007</i>

# TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	III
1 INTRODUCTION .....	1
1.1 LOCATION.....	1
1.2 DECLARED RARE AND PRIORITY FLORA .....	1
1.3 THREATENED ECOLOGICAL COMMUNITIES .....	2
1.4 LISTING OF THREATENED FLORA AND VEGETATION.....	3
1.5 INTRODUCED SPECIES .....	3
2 SCOPE OF WORKS .....	5
3 METHODS.....	6
4 RESULTS .....	7
4.1 DATABASE SEARCH .....	7
4.2 FIELD SURVEY .....	8
4.2.1 Flora.....	8
4.2.2 Rare and Priority Flora .....	8
4.2.3 Vegetation .....	8
4.2.4 Vegetation Condition.....	9
4.2.5 Introduced Species .....	9
5 DISCUSSION .....	10
5.1 REVIEW OF FLORISTIC COMMUNITIES .....	10
5.2 OTHER SITE VALUES.....	10
6 CONCLUSIONS AND RECOMMENDATIONS.....	12
7 REFERENCES .....	13

## **FIGURES**

FIGURE 1 SITE LOCATION MAP

FIGURE 2 VEGETATION MAP

## **TABLES (INCLUDED IN TEXT)**

TABLE 1 DECLARED RARE AND PRIORITY FLORA

TABLE 2 DOMINANT WEED SPECIES IDENTIFIED

## **APPENDICES**

APPENDIX A DEFINITIONS OF DECLARED RARE AND PRIORITY FLORA SPECIES

APPENDIX B DEFINITIONS OF THREATENED ECOLOGICAL COMMUNITIES

APPENDIX C SPECIES LIST

APPENDIX D SITE PHOTOS

APPENDIX E CONDITION SCALES

APPENDIX F QUADRAT DATA

## **STATEMENT OF LIMITATIONS**

### **Scope of Services**

This environmental site assessment report ("the report") has been prepared in accordance with the scope of services set out in the contract, or as otherwise agreed, between the Client and ENV.Australia Pty Ltd (ENV) ("scope of services"). In some circumstances the scope of services may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

### **Reliance on Data**

In preparing the report, ENV has relied upon data, surveys, analyses, designs, plans and other information provided by the Client and other individuals and organisations, most of which are referred to in the report ("the data"). Except as otherwise stated in the report, ENV has not verified the accuracy or completeness of the data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in the report ("conclusions") are based in whole or part on the data, those conclusions are contingent upon the accuracy and completeness of the data. ENV will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to ENV.

### **Environmental Conclusions**

In accordance with the scope of services, ENV has relied upon the data and has conducted environmental field monitoring and/or testing in the preparation of the report. The nature and extent of monitoring and/or testing conducted is described in the report.

Within the limitations imposed by the scope of services, the monitoring, testing, sampling and preparation of this report have been undertaken and performed in a professional manner, in accordance with generally accepted practices and using a degree of skill and care ordinarily exercised by reputable environmental consultants under similar circumstances. No other warranty, expressed or implied, is made.

### **Report for Benefit of Client**

The report has been prepared for the benefit of the Client and no other party. ENV assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of ENV or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own enquiries and obtain independent advice in relation to such matters.

### **Other Limitations**

ENV will not be liable to update or revise the report to take into account any events or emergent circumstances or facts occurring or becoming apparent after the date of the report.

The scope of services did not include any assessment of the title to or ownership of the properties, buildings and structures referred to in the report nor the application or interpretation of laws in the jurisdiction in which those properties, buildings and structures are located.

## EXECUTIVE SUMMARY

ENV. Australia Pty Ltd (ENV) was commissioned by SPM Project Marketing to undertake a flora and vegetation assessment for Lot 41 Gaebler Road, Hammond Park. The work focussed on determining vegetation communities present, locating Declared Rare and Priority Flora and Threatened Ecological Communities, as well as conducting a condition assessment of the existing flora.

The 4 ha site was moderately diverse, with a total of 31 families, 61 genera and 75 taxa recorded in the survey area, of which 13 were introduced species. No plant taxa gazetted as Declared Rare pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act* (1950) or Priority Flora species were located during the field survey. No Endangered or Vulnerable species, pursuant to s178 of the *Environmental Protection and Biodiversity Conservation Act* (1999) were located during the survey.

There were two floristic communities present at the subject site. These were: *Melaleuca preissiana* damplands; and open woodland of *Banksia attenuata* and *Eucalyptus marginata*. Neither of these is listed as a Threatened Ecological Community.

There are no specific floristic impediments to the development of this site.

# 1 INTRODUCTION

ENV. Australia Pty Ltd (ENV) was commissioned by SPM Project Marketing to undertake a flora and vegetation assessment for Lot 41 Gaebler Road, Hammond Park. The site is an uncleared remnant of native vegetation, consisting of a wetland and upland area opposite the Thompson's Lake Nature Reserve.

Lot 41 covers an approximate area of 4ha, and contains remnant native vegetation. An assessment of vegetation is required, to examine the potential constraints that vegetation on the site may pose for a redevelopment application for the site. This document presents the results of this assessment.

This report comprises a spring Declared Rare and Priority Flora survey as well as a general flora and vegetation survey.

## 1.1 LOCATION

Lot 41 Gaebler Rd is approximately 24km south of Perth in the suburb of Hammond Park, within the City of Cockburn. The site is bound by Gaebler Rd on the northern side, by Frankland Road and the Thompson's Lake Nature Reserve to the west, a horticultural enterprise to the east and uncleared land to the south.

The site is located in the southwest province of Western Australia in the Darling Botanical District. This region typically consists of forest country with related woodlands and is divided into four subregions or botanic subdistricts.

Lot 41 is located within the Swan Coastal Plain subregion in the Drummond Botanical subdistrict, which consists mainly of the following vegetation communities:

- *Banksia* Low Woodland on leached sands and *Melaleuca* Swamps in poorly drained areas;
- Woodland of Tuart (*Eucalyptus gomphocephala*); and
- Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*) on the less leached soils (Beard, 1990).

The climate of this region is Warm Mediterranean, with winter precipitation of 600-1000mm and 5-6 dry months per year.

## 1.2 DECLARED RARE AND PRIORITY FLORA

Flora species acquire Declared Rare or Priority conservation status where populations are geographically restricted or threatened by local processes. The Department of Environment and Conservation (DEC), formerly CALM, enforces regulations under the *Wildlife Conservation Act (1950)* to conserve Declared Rare Flora (DRF) and protect significant populations.

Declared Rare Flora species are gazetted under Subsection 2 of Section 23F of the *Wildlife Conservation Act* (1950) and therefore it is an offence to “take” or damage rare flora without Ministerial approval. Section 23F of the *Wildlife Conservation Act* (1950-1980) defines “to take” as to: ‘gather, pick, cut, pull up, destroy, dig up, remove or injure the flora or to cause or permit the same to be done by any means’.

Priority Flora are under consideration for declaration as Declared Rare Flora, but are in urgent need of further survey (Priority One to Three) or require monitoring every 5-10 years (Priority Four) (see Appendix A for definitions).

Flora is also classified according to their conservation status at a federal level, under the *Environmental Protection and Biodiversity Conservation Act*, 1999 (EPBC Act). The EPBC Act is administered by the Department of Environment and Heritage. These categories of classification are summarised in Appendix A.

### 1.3 THREATENED ECOLOGICAL COMMUNITIES

A vegetation community is considered a Threatened Ecological Community (TEC) if it is found to fit into one of the following categories:

- Presumed Totally Destroyed;
- Critically Endangered;
- Endangered; or
- Vulnerable

The definitions of these categories are described in Appendix B.

Coordination of threatened species and ecological community conservation is carried out by the DEC's Nature Conservation Division, primarily through the Western Australian Threatened Species and Communities Unit (WATSCU). TECs are not protected by State Government legislation, however, several Western Australian TECs are listed and formally protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act*, 1999 (refer to Section 1.4 for further detail about listing of TECs).

## 1.4 LISTING OF THREATENED FLORA AND VEGETATION

The Wildlife Conservation Act provides for taxa of plants and animals to be listed as 'threatened'. CALM Policy Statements Nos 9 *Conservation of threatened flora in the wild* and 33 *Conservation of endangered and specially protected fauna in the wild* cover this area.

Threatened flora and vegetation lists are reviewed and changes recommended by Department of Environment and Conservation's Threatened Species Scientific Committee. Ministerial approval is necessary before changes are given legal status in a notice in the Government Gazette.

There is currently no equivalent legislation or formal policy for the protection of threatened ecological communities, however, an informal, non-statutory process, including advice from a scientific advisory committee, the establishment of the threatened ecological communities database, and steps for assigning ecological communities to categories of threat, is now in place.

The Department has been identifying and informally listing threatened ecological communities (TECs) for twelve years. As of May 2003, 106 ecological communities had been entered into the Department's TEC Database. Of these, 21 have been endorsed by the Minister for the Environment as Critically Endangered, 17 as Endangered, 28 as Vulnerable and three as presumed totally destroyed. The remainder are either awaiting endorsement as threatened or are allocated to one of five priority lists. Sixteen TECs are now listed under the Commonwealth's EPBC Act.

Any person may nominate an ecological community for listing under the EPBC Act, 1999. Nominations are forwarded to the Threatened Species Scientific Committee. Once the Committee has conducted an assessment of the conservation status of the ecological community, its advice and subsequent recommendations are forwarded to the Minister for the Environment and Heritage who makes the final decision. The recommendations endorsed by the Minister in making a listing decision are provided via the EPBC Act lists.

## 1.5 INTRODUCED SPECIES

The Environmental Weed Strategy for Western Australia contains criteria for the assessment and ranking of weeds in terms of their environmental impact on biodiversity. These criteria are as follows:

- **Invasiveness** – ability to invade bushland in good to excellent condition or ability to invade waterways. (Score as yes or no).

- **Distribution** – wide current or potential distribution including consideration of known history of wide spread distribution elsewhere in the world. (Score as yes or no).
- **Environmental Impacts** – ability to change the structure, composition and function of ecosystems. In particular an ability to form a monoculture in a vegetation community. (Score as yes or no).

The rating of each weed is determined by the following scoring system:

- **High** – a weed species would have to score yes for all three criteria. Rating a weed species as high would indicate prioritising this weed for control and/or research i.e. prioritising funding to it.
- **Moderate** – a weed species would have to score yes for two of the above criteria. Rating a weed species as moderate would indicate that control or research effort should be directed to it if funds are available, however it should be monitored (possibly a reasonably high level of monitoring).
- **Mild** – a weed species scoring one of the criteria. A mild rating would indicate monitoring of the weed and control where appropriate.
- **Low** – a weed species would score none of the criteria. A low ranking would mean that this species would require a low level of monitoring.

Plants may also be “declared” by the Agriculture Protection Board under the Agriculture and Related Resources Protection Act, 1979. Declared Plants are gazetted under 5 categories (P1 – P5), which define the action required. The category may apply to the whole state, districts, individual properties or even paddocks. If a plant is declared, all landholders are obliged to control that plant on their properties (Department of Agriculture, 2004).

## 2 SCOPE OF WORKS

The work focussed on determining vegetation communities present, locating Declared Rare and Priority flora and Threatened Ecological Communities, as well as conducting a condition assessment of the existing flora. Specifically, this comprised:

- A database search for Declared Rare and Endangered species and TECs that may occur in the area by reference to Department of Environment and Conservation and Department of Environment and Heritage databases;
- A flora and vegetation field survey, including the establishment of 10 x 10m quadrats in each vegetation community type, to determine the presence of any DRF/TECs;
- A search for rare and endangered flora contained within the defined area;
- Identification of any Threatened Ecological Communities (TECs);
- The review of data collected against criteria established in State and Federal processes for species conservation;
- The production of an aerial photograph with vegetation mapping overlaid; and
- A final report that describes the results from the above, the potential constraints that may be posed by the vegetation given the available information and recommendations for further work.

### 3 METHODS

The methodology for the work involved the following key steps:

#### **PHASE 1**

On the 15<sup>th</sup> August 2006 a database search request was submitted to the DEC to obtain a list of Declared Rare and Priority Flora species (DRF) or Threatened Ecological Communities (TECs) that occur within the surrounding area of the subject site. The search was conducted within coordinates from 385445mE 6434905mN to 396245mE 6445705mN (GDA94).

#### **PHASE 2**

On the 4<sup>th</sup> and 30<sup>th</sup> October 2006 an ENV botanist visited the site and conducted a vegetation survey by traversing the property on foot. In each floristic community, data was collected from a 10 x 10 m quadrat, a photo was taken, the vegetation was described and a condition statement made.

#### **PHASE 3**

Where field identification of plant taxa was not possible, specimens were collected in a systematic manner so that they could be later identified at the West Australian Herbarium by comparison with the reference collection and use of identification keys.

## 4 RESULTS

The following results are accurate at the time of report preparation. Flora composition changes over time with flora species having specific growing periods, especially annuals and ephemerals (some plants lasting for a markedly brief time, some only a day or two). For this reason the outcome of future botanical surveys undertaken on the properties have the potential to change.

### 4.1 DATABASE SEARCH

A Department of Environment and Conservation database search of the area identified 14 species as potentially occurring in the area (see Appendix A for the definitions of Conservation Codes). The 14 species are:

**Table 1:** Declared Rare and Priority Species Potentially Occurring Within the Site Area

Family	Taxa	Conservation Code: FEDERAL	Conservation Code: STATE
Byblidaceae	<i>Byblis gigantea</i>	Not listed	2
Cyperaceae	<i>Cyathochaeta teretifolia</i>	Not listed	3
Goodeniaceae	<i>Anthotium juncliforme</i>	Not listed	4
Mimosaceae	<i>Acacia lasiocarpa</i> var. <i>bracteolata</i> long peduncle variant	Not listed	1
Myrtaceae	<i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>	Not listed	4
Orchidaceae	<i>Caladenia huegellii</i>	Endangered	R
Orchidaceae	<i>Diuris purdiei</i>	Endangered	R
Orchidaceae	<i>Drakaea elastica</i>	Endangered	R
Orchidaceae	<i>Drakaea micrantha</i>	Vulnerable	R
Orchidaceae	<i>Microtis media</i> subsp. <i>quadrata</i>	Not listed	4
Papilionaceae	<i>Aotus cordifolia</i>	Not listed	3
Sapindaceae	<i>Dodonaea hackettiana</i>	Not listed	4
Stackhousiaceae	<i>Tripterococcus paniculatus</i>	Not listed	1
Stylidiaceae	<i>Stylidium longitubum</i>	Not listed	3

The DEC database search showed that there is one TEC within a 5km radius of the survey site. The information supplied by the Department of Environment and Conservation is only an indication of the TECs that may be present.

- *Melaleuca huegelii* - *Melaleuca acerosa* (currently *M. systema*) shrublands on limestone ridges (Gibson et al. 1994 type SCP26a);

SCP26a: *Melaleuca huegelii* - *Melaleuca acerosa* (currently *M. systema*) shrublands on limestone ridges is listed as Endangered by the WA Threatened Species and Communities Unit – endorsed by the Minister for the Environment, but is not listed under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*.

See Appendix B for the definitions of Threatened Ecological Community conservation categories.

## 4.2 FIELD SURVEY

### 4.2.1 Flora

A total of 31 families, 61 genera and 75 taxa were recorded in the survey area, of which 13 were introduced species (see Appendix C).

To successfully record all species from an area surveys should be undertaken several times throughout the year. The majority of species occur through spring, however there are some species that occur at different times of year, for example, RESTIONACEAE and CYPERACEAE families flower in autumn.

The dominant plant families recorded from the survey were as follows:

- Proteaceae (8 species);
- Myrtaceae (7 species); and
- Papilionaceae (7 species).

### 4.2.2 Rare and Priority Flora

No plant taxa gazetted as Declared Rare pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act, 1950* or Priority Flora species (Atkins, 2006) was located during the field survey.

No Endangered or Vulnerable species, pursuant to s178 of the *Environmental Protection and Biodiversity Conservation Act, 1999* was located during the survey.

### 4.2.3 Vegetation

There were two floristic communities present at the subject site with an area in which they overlap and intergrade (see Appendix D for site photos and Figure 2 for the vegetation map). These were:

1. *Melaleuca preissiana* damplands; and

## 2. Open woodland of *Banksia attenuata* and *Eucalyptus marginata*.

Several species, including *Banksia illicifolia* and *Kunzea glabrescens* are present in greater numbers in the intergraded zone than in the primary communities.

For further Interpretation of the site floristics, please refer to the Discussion (Section 5.1).

### 4.2.4 Vegetation Condition

The condition of vegetation at the site was Very Good, with the site being generally uncleared and the weed species that were present not dominating the understorey. There was evidence of the activities of both rabbits and foxes at the site. There were disturbances at the site, particularly at the edges, such as rubbish dumping, firebreaks and invasion of aggressive weeds, leading to areas around the edges of the property that were Degraded. The area corresponding with Community 1 (*Melaleuca preissiana* damplands) may have been partially cleared historically as parts of it lacked trees, but there was a low density of weeds and a good representation of appropriate native species in this area at the time of the survey.

The condition scale commonly used in the Perth metropolitan area and Bush Forever, Keighery B. J. 1994, was used for this assessment due to it providing a standardised scaling system that is widely known by government agencies. The definition of the condition scales are in Appendix E.

### 4.2.5 Introduced Species

The table below contains the dominate weed species identified during the field survey with their ratings and criteria according to the Environmental Weed Strategy.

**Table 2: Dominant Weed Species Identified**

Taxon	Common Name	Criteria			
		Rating	Invasiveness	Distribution	Impacts
* <i>Bromus diandrus</i>	Great brome	High	Yes	Yes	Yes
* <i>Ehrharta calycina</i>	Perennial veldt grass	High	Yes	Yes	Yes
* <i>Lagurus ovatus</i>	Hare's tail grass	High	Yes	Yes	Yes
* <i>Briza maxima</i>	Blowfly grass	Moderate	Yes	Yes	No

There were no Declared Plant species (pursuant to the *Agriculture and Related Resources Protection Act 1976*) found at the site.

## 5 DISCUSSION

The subject site does not support any Declared Rare Flora taxa pursuant to subsection (2) of section 23F of the Wildlife Conservation Act (1950) or Priority Flora species (Department of Environment and Conservation 2006). The survey was conducted during spring to maximise the opportunity for the full suite of potential species (ephemerals/annuals) to emerge. Therefore this site is unlikely to support any flora taxa of significance as the survey was conducted at the appropriate time of year.

Lot 41 Gaebler Road comprises a relatively small area of uncleared land in generally Very Good condition with some disturbance around the edges of the lot.

### 5.1 REVIEW OF FLORISTIC COMMUNITIES

Community 1 is inferred as being representative of Gibson *et al.*'s (1994) SCP4 "*Melaleuca preissiana* damplands".

Community 2 is inferred as being representative of Gibson *et al.*'s (1994) SCP4 "*Central Banksia attenuata – Eucalyptus marginata* woodland".

Both of these communities are considered to be well reserved and are not listed as Threatened Ecological Communities by either Department of Environment and Conservation or Department of Environment and Heritage.

### 5.2 OTHER SITE VALUES

The south-eastern and eastern portion of the site is a listed Conservation category wetland. This corresponds reasonably well with the area mapped as Community 1 (*Melaleuca preissiana* damplands), though the conservation category wetland does not include the whole of the intergraded area between the two communities.

This wetland area is not connected to any waterways, but may form part of the same groundwater catchment system that feeds the nearby Ramsar listed Thompson's Lake. The portion of the site that is listed as a Conservation category wetland is in Very Good condition.

Geomorphic Wetlands do not have any formal legislative protection but are prioritised for conservation by Local and State Government authorities and receive the general protection of the environmental harm provisions in the *Environmental Protection Act* (1986) as amended in 2003.

Clearing, draining and infilling are generally proscribed in Geomorphic Wetlands. Any development applications involving wetlands of conservation significance are

generally referred for assessment by the Environmental Protection Authority as a part of the approvals process.

Further investigations that would be warranted at the site, given the presence of a wetland area, include a review of acid sulphate soils and a baseline hydrologic investigation. Development of a drainage and wetland management plan for the site would be valuable in demonstrating due diligence during the approvals process.

Chapter B4 of the EPA's Guidance Statement 33 (2005) outlines the EPA's policies and appropriate planning practices for areas containing wetlands.

## 6 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that:

- Lot 41 Gaebler Road contains 75 flora taxa, of which 62 are native;
- No DRF or Priority Flora taxa appear to occur at the site. This survey was conducted at the appropriate time of year therefore this statement can be made with a high level of reliability; and
- No Threatened Ecological Communities occur at the site.

There are no specific floristic impediments to the development of this site.

## 7 REFERENCES

- Atkins, K.J. (2006). Declared Rare and Priority Flora List for Western Australia, 30 June 2006. Dept of Conservation and Land Management. Como, W.A.
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- Western Australian Herbarium (2006). Florabase - Information on the Western Australian Flora. Department of Conservation and Land Management. <http://www.calm.wa.gov.au/science/florabase.html>

# FIGURES

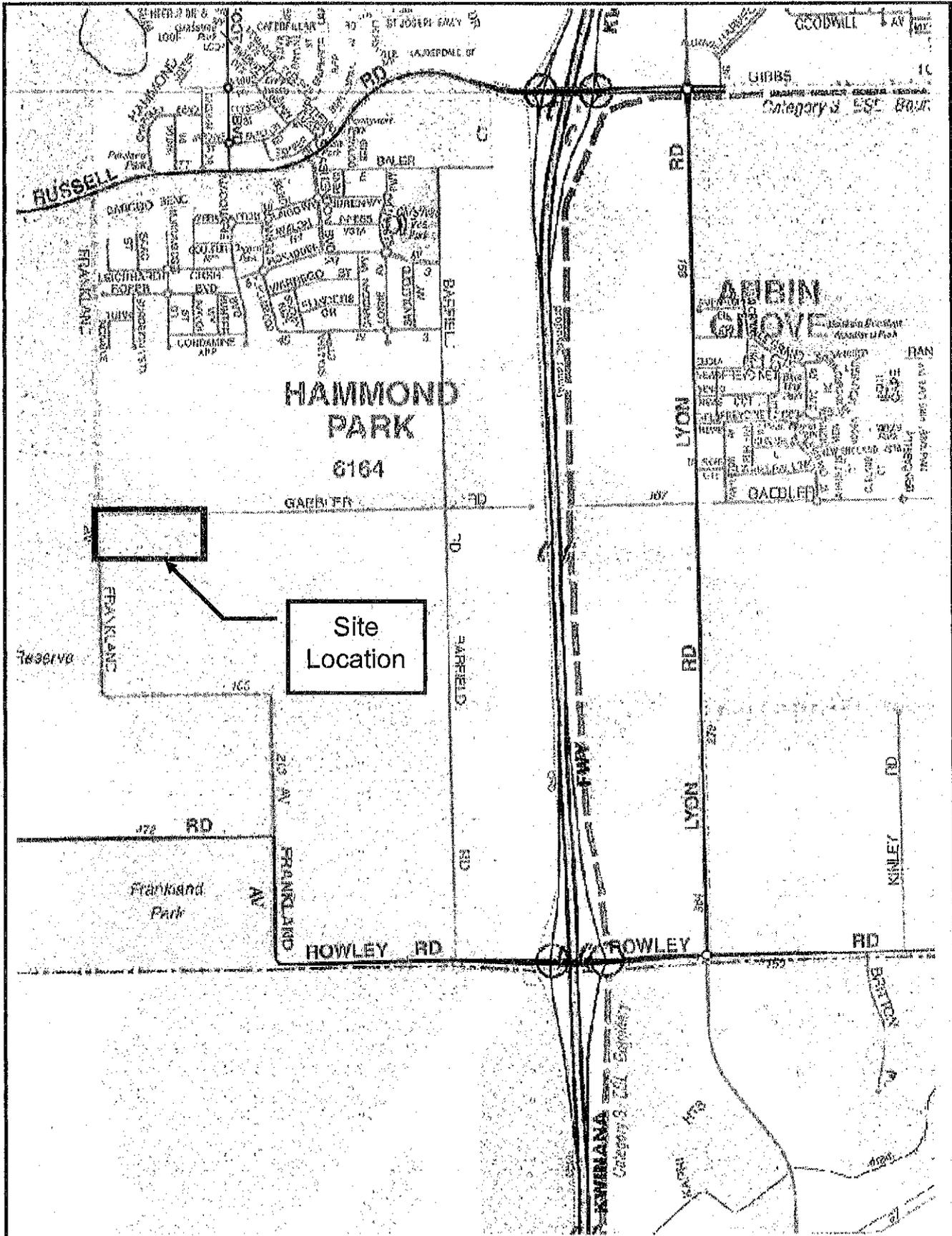


FIGURE 1: Site location

CLIENT: SPM Project Marketing

JOB NUMBER: 06.150

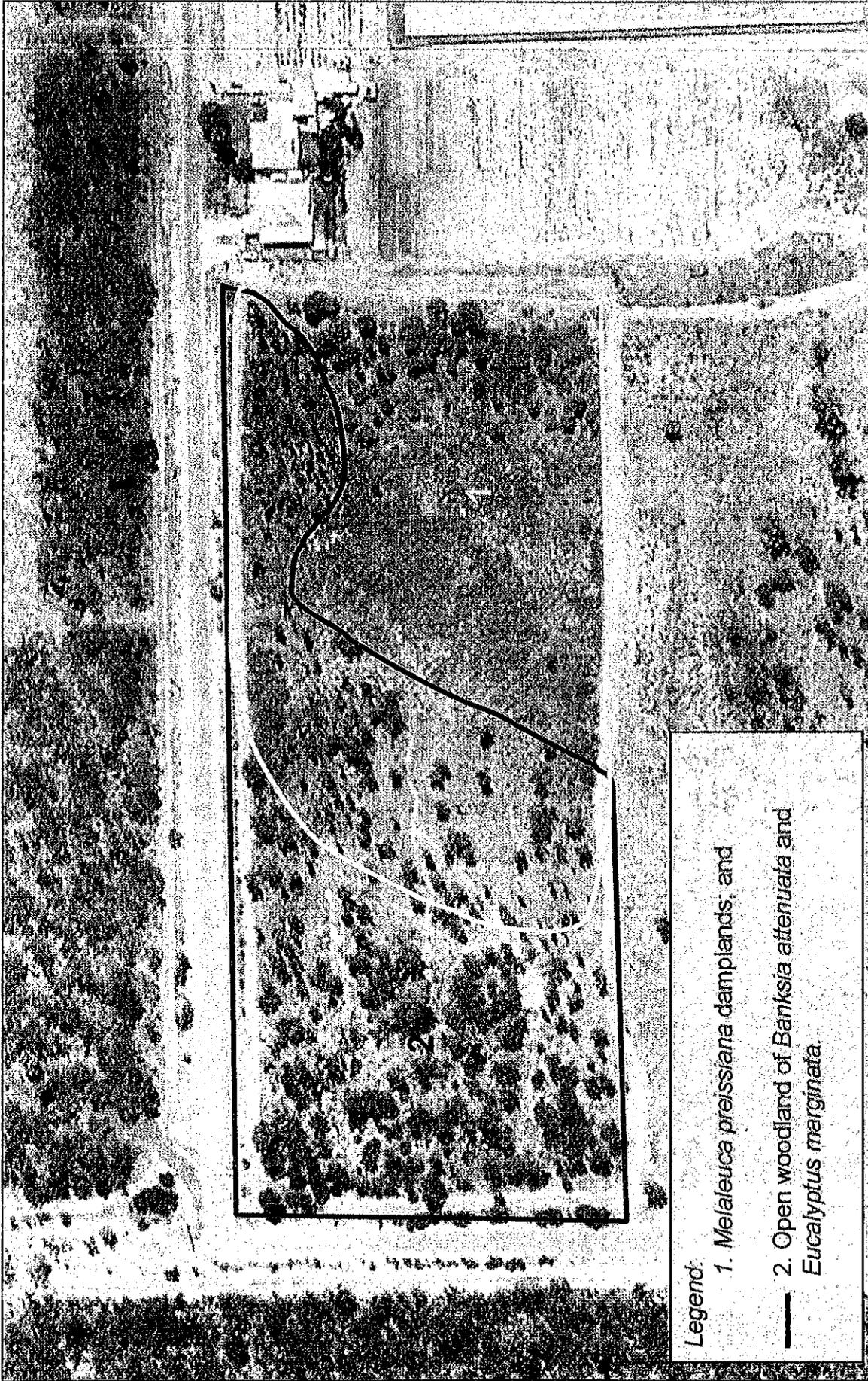
DATE: 15/8/2006

DRAWN BY: RP

CHECKED BY: ML

SCALE: NTS





Legend:

- 1. *Melaleuca preissiana* damplands; and
- 2. Open woodland of *Banksia attenuata* and *Eucalyptus marginata*.

FIGURE 2: Vegetation map

CLIENT: SPM Project Marketing

DATE: 12/1/2007

JOB NUMBER: 06.150

DRAWN BY: RP

CHECKED BY: ML



# **APPENDIX A**

## **DEFINITIONS OF DECLARED RARE AND PRIORITY FLORA SPECIES**

## APPENDIX A

**Definition of Rare and Priority Flora Species  
(Department of Conservation and Land Management, 2003)**

<b>Conservation Code</b>	<b>Category</b>
<b>R</b>	<p>Declared Rare Flora- Extant Taxa</p> <p>"Taxa which have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection and have been gazetted as such"</p>
<b>X</b>	<p>Declared Rare Flora – Presumed Extinct Taxa</p> <p>Taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such.</p>
<b>P1</b>	<p>Priority One- Poorly Known Taxa</p> <p>"Taxa which are known from one or a few (generally &lt;5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but urgently need further survey."</p>
<b>P2</b>	<p>Priority Two- Poorly Known Taxa</p> <p>"Taxa which are known from one or a few (generally &lt;5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but urgently need further survey."</p>
<b>P3</b>	<p>Priority three- Poorly Known Taxa</p> <p>"Taxa which are known from several populations, and the taxa are not believed to be under immediate threat (i.e. not currently endangered), or known populations being large, and either widespread or protected. Such taxa are under consideration for declaration as 'rare flora' but need further survey."</p>
<b>P4</b>	<p>Priority Four- Rare Taxa</p> <p>"Taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5-10 years."</p>

**APPENDIX A**

**Categories of Threatened Flora Species  
(Environmental Protection and Biodiversity Conservation Act, 1999)**

<b>Category Code</b>	<b>Category</b>
<b>Ex</b>	<p>Extinct</p> <p>Taxa which at a particular time if, at the time, there is no reasonable doubt that the last member of the species has died.</p>
<b>ExW</b>	<p>Extinct in the wild</p> <p>Taxa which is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.</p>
<b>CE</b>	<p>Critically Endangered</p> <p>Taxa which at a particular time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.</p>
<b>E</b>	<p>Endangered</p> <p>Taxa which is not critically endangered and it is facing a very high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.</p>
<b>V</b>	<p>Vulnerable</p> <p>Taxa which is not critically endangered or endangered and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.</p>
<b>CD</b>	<p>Conservation Dependent</p> <p>Taxa which at a particular time if, at that time, the species is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.</p>

# **APPENDIX B**

## **DEFINITIONS OF THREATENED ECOLOGICAL COMMUNITIES**

## APPENDIX B

### DEFINITIONS OF THREATENED ECOLOGICAL COMMUNITIES

#### Presumed Totally Destroyed (PD)

An ecological community will be listed as presumed totally destroyed if there are no recent records of the community being extant **and either** of the following applies (A or B);

- A) Records within the last 50 years have not been confirmed despite thorough searches or known or likely habitats **or**
- B) All occurrences recorded within the last 50 years have since been destroyed.

#### Critically Endangered (CR)

An ecological community will be listed as **Critically Endangered** when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future. This will be determined on the basis of the best available information, by it meeting **any one or more** of the following criteria (A, B or C):

- A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 90% and **either or both** of the following apply (i or ii):
  - i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is imminent (within approximately 5 years);
  - ii) modification throughout its range is continuing such that in the immediate future (within approximately 5 years) the community is unlikely to be capable of being substantially rehabilitated.
- B) Current distribution is limited, and **one or more** of the following apply (i, ii or iii):
  - i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the immediate future (within approximately 5 years);
  - ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes;
  - iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes.
- C) The ecological community exists only as highly modified occurrences which may be capable of being rehabilitated if such work begins in the immediate future (within approximately 5 years).

### Endangered (EN)

An ecological community will be listed as **Endangered** when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. This will be determined on the basis of the best available information, by it meeting **any one or more** of the following criteria (A, B or C):

- A) The estimated geographic range, and/or total area occupied, and/or number of discrete occurrences since European settlement have been reduced by at least 70% and **either or both** of the following apply (i or ii)
  - i) geographic range, and/or total area occupied and/or number of discrete occurrences are continuing to decline such that total destruction of the community is likely in the short term (within approximately 10 years)
  - ii) modification throughout its range is continuing such that in the short term future (within approximately 10 years) the community is unlikely to be capable of being substantially restored or rehabilitated.
- B) Current distribution is limited, and **one or more** of the following apply (i, ii or iii):
  - i) geographic range and/or number of discrete occurrences, and/or area occupied is highly restricted and the community is currently subject to known threatening processes which are likely to result in total destruction throughout its range in the short term future (within approximately 10 years)
  - ii) there are very few occurrences, each of which is small and/or isolated and extremely vulnerable to known threatening processes
  - iii) there may be many occurrences but total area is very small and each occurrence is small and/or isolated and extremely vulnerable to known threatening processes
- C) The ecological community exists only as highly modified occurrences which may be capable of being rehabilitated if such work begins in the short term future (within approximately 10 years).

### Vulnerable (VU)

An ecological community will be listed as **Vulnerable** when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing a high risk of total destruction in the medium to long term future. This will be determined on the basis of the best available information, by it meeting **any one or more** of the following criteria (A, B or C):

- A) The ecological community exists largely as modified occurrences which are likely to be capable of being substantially restored or rehabilitated.
- B) The ecological community can be modified or destroyed and would be vulnerable to threatening processes, is restricted in area and/or range and/or is only found at a few locations.

- C) The ecological community may still be widespread but is believed likely to move into a category of higher threat in the medium to long term future because of existing or impending threatening processes.

# APPENDIX C

# SPECIES LIST

## Appendix C

### Flora Species List

\*: denotes introduced species

FAMILY	TAXA
Aizoaceae	* <i>Carpobrotus edulis</i>
Anthericaceae	<i>Laxmannia squarrosa</i>
Anthericaceae	<i>Tricoryne elatior</i>
Apiaceae	<i>Daucus glochidiatus</i>
Asteraceae	<i>Hyalosperma cotula</i>
Asteraceae	* <i>Hypochaeris radicata</i>
Asteraceae	* <i>Ursinia anthemoides</i>
Colchicaceae	<i>Burchardia congesta</i>
Cyperaceae	<i>Lepidosperma obtusum</i>
Cyperaceae	<i>Lepidosperma</i> sp. c.f. <i>costale</i>
Cyperaceae	<i>Schoenus curvifolius</i>
Cyperaceae	<i>Schoenus efoliatus</i>
Dasypogonaceae	<i>Dasypogon bromeliifolius</i>
Dasypogonaceae	<i>Lomandra hermaphrodita</i>
Dasypogonaceae	<i>Lomandra sonderi</i>
Dilleniaceae	<i>Hibbertia hypericoides</i>
Dilleniaceae	<i>Hibbertia subvaginata</i>
Dilleniaceae	<i>Hibbertia vaginata</i>
Epacridaceae	<i>Conostephium pendulum</i>
Epacridaceae	<i>Leucopogon conostephioides</i>
Euphorbiaceae	* <i>Euphorbia terracina</i>
Goodeniaceae	<i>Dampiera linearis</i>
Haemodoraceae	<i>Conostylis aculeata</i>
Haloragaceae	<i>Gonocarpus pithyoides</i>
Iridaceae	* <i>Gladiolus caryophyllaceus</i>
Iridaceae	<i>Patersonia occidentalis</i>
Lamiaceae	<i>Hemianandra pungens</i>
Loranthaceae	<i>Nuytsia floribunda</i>
Mimosaceae	<i>Acacia huegellii</i>
Mimosaceae	<i>Acacia pulchella</i>
Mimosaceae	<i>Acacia stenoptera</i>
Myrtaceae	<i>Astartea fascicularis</i>
Myrtaceae	<i>Eucalyptus marginata</i>
Myrtaceae	<i>Hypocalymma angustifolium</i>
Myrtaceae	<i>Kunzea glabrescens</i>
Myrtaceae	<i>Melaleuca preissiana</i>
Myrtaceae	<i>Melaleuca seriata</i>
Myrtaceae	<i>Pericalymma ellipticum</i> var. <i>ellipticum</i>
Orchidaceae	<i>Microtis media</i>
Orchidaceae	<i>Pterostylis</i> sp.
Orobanchaceae	* <i>Orobanche minor</i>
Papilionaceae	<i>Bossiaea eriocarpa</i>
Papilionaceae	<i>Daviesia hakeoides</i> subsp. <i>hakeoides</i>
Papilionaceae	<i>Euchilopsis linearis</i>
Papilionaceae	<i>Gompholobium tomentosum</i>
Papilionaceae	<i>Jacksonia furcellata</i>
Papilionaceae	* <i>Lathyrus odoratus</i>
Papilionaceae	<i>Pultenaea ochreatea</i>
Poaceae	<i>Amphipogon turbinatus</i>
Poaceae	* <i>Briza maxima</i>
Poaceae	* <i>Bromus diandrus</i>
Poaceae	* <i>Ehrharta calycina</i>
Poaceae	* <i>Lagurus ovatus</i>

## Appendix C

### Flora Species List

\*: denotes Introduced species

<b>FAMILY</b>	<b>TAXA</b>
Primulaceae	* <i>Anagallis arvensis</i> var. <i>caerulea</i>
Proteaceae	<i>Adenanthos cygnorum</i>
Proteaceae	<i>Adenanthos obovatus</i>
Proteaceae	<i>Allocasuarina fraseriana</i>
Proteaceae	<i>Banksia attenuata</i>
Proteaceae	<i>Banksia ilicifolia</i>
Proteaceae	<i>Banksia menziesii</i>
Proteaceae	<i>Petrophile linearis</i>
Proteaceae	<i>Stirlingia latifolia</i>
Restionaceae	<i>Hypolaena exsulca</i>
Restionaceae	<i>Loxocarya cinerea</i>
Restionaceae	<i>Lyginia barbata</i>
Restionaceae	<i>Lyginia imberbis</i>
Rutaceae	<i>Boronia crenulata</i>
Rutaceae	<i>Philotheca spicata</i>
Solanaceae	* <i>Solanum nigrum</i>
Stylidiaceae	<i>Stylidium brunonianum</i>
Stylidiaceae	<i>Stylidium repens</i>
Tremandraceae	<i>Platytheca galioides</i>
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i>
Xanthorrhoeaceae	<i>Xanthorrhoea preissii</i>
Zamiaceae	<i>Macrozamia riedlei</i>

# APPENDIX D

## SITE PHOTOGRAPHS

## Appendix D Site Photographs

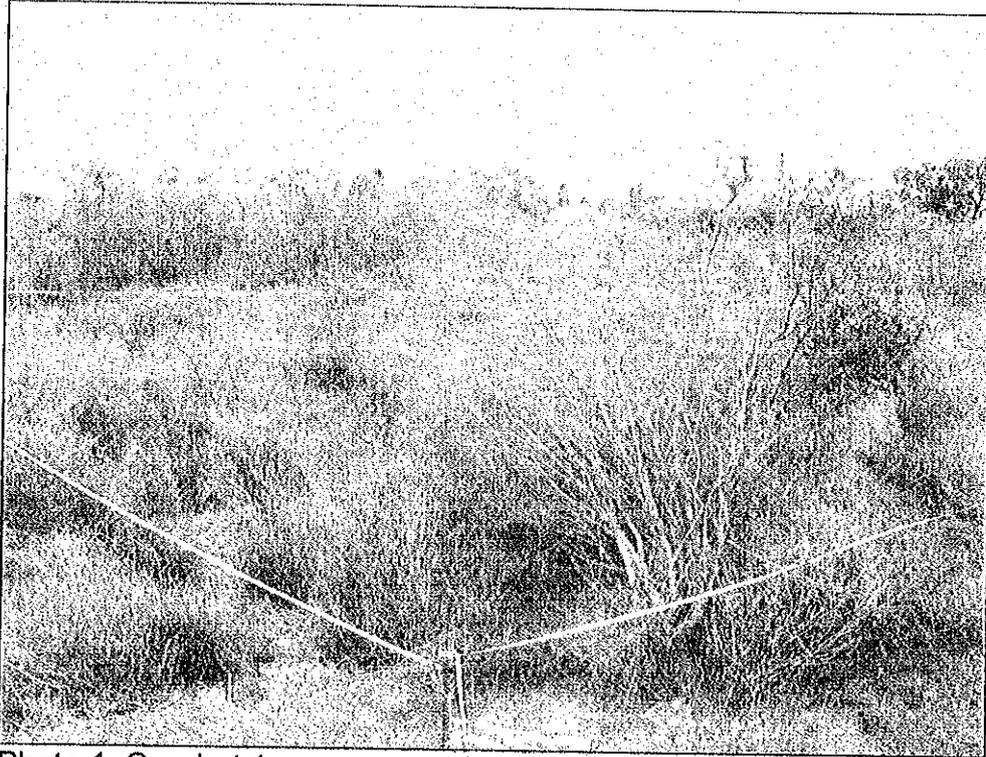


Photo 1. Quadrat 1.

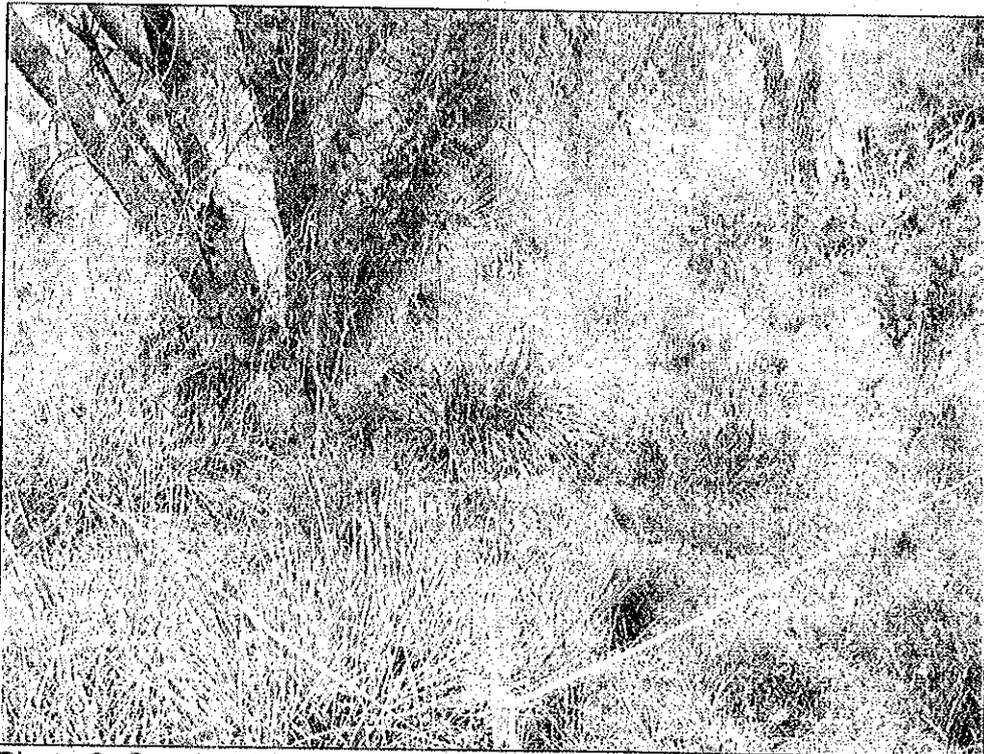


Photo 2. Quadrat 2.

# APPENDIX E

## CONDITION SCALES

## Appendix E: Vegetation Condition Scales Commonly Used in Perth Metropolitan Region

(Source: *Bush Forever*)

Condition scale used in BUSH FOREVER VOL 2, from Kelghery BJ (1994)	Condition scale used to derive Kelghery BJ (1994) and Connell (1995) after Trudgen (1991)	Condition scale used in PEP MAPPING after Connell (1995)
<b>Pristine (1)</b> Pristine or nearly so, no obvious signs of disturbance	<b>Excellent (E)</b> Pristine or nearly so, no obvious signs of damage caused by the activities of European man.	No equivalent unit.
<b>Excellent (2)</b> Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species.	<b>Very Good (VG)</b> Some relatively slight signs of damage caused by the activities of European man. For example, some signs of damage to tree trunks caused by repeated fires and the presence of some relatively non-aggressive weeds such as <i>Ursinia anthemoides</i> or <i>Briza</i> species, or occasional vehicle tracks.	<b>Very Good (VG)</b> Evidence of localised low level damage to otherwise healthy bush. Seedling recruitment and generally healthy population size (age/stage) structure apparent. Weed and grazing damage is confined (<20% of area). Some modification to vegetation structure due to changes in fire regimes may be apparent. Evidence of logging or firewood collection may be found. High likelihood that vegetation structure and species richness can be maintained.
<b>Very Good (3)</b> Vegetation structure altered, obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.	<b>Good (G)</b> More obvious signs of damage caused by the activities of European man, including some obvious impact on the vegetation structure such as caused by low levels of grazing or by selective logging. Weeds as above, possibly plus some more aggressive ones.	<b>Good (g)</b> Evidence of localised high level damage to otherwise low level damaged bush. Recruitment is localised and the populations of some species may be senescent. Weed and grazing damage is apparent in 20-50% of the area. Modification to vegetation structure due to changes in fire regimes may be apparent. Localised gall and parasitic plant damage may be apparent. Evidence of logging or firewood collection. Moderate likelihood that vegetation structure and species richness can be maintained.
<b>Good (4)</b> Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.	<b>Poor (P)</b> Still retains basic vegetation structure or ability to regenerate to it after very obvious impacts of activities of European man such as grazing or partial clearing (chaining) or very frequent fires. Weeds as above, probably plus some more aggressive ones such as <i>Ehrharto</i> species.	<b>Poor (p)</b> Widespread high level damage. Recruitment is disrupted and most woody species appear senescent. Weed and grazing damage may be apparent throughout >50% of the area. Modification to vegetation structure due to changes in fire regimes may be apparent. Locally some vertical strata are absent. Gall and mistletoe damage apparent. Evidence of logging or firewood collection. Low likelihood that vegetation structure and species richness can be maintained or re-established.
<b>Degraded (5)</b> Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.	<b>Very Poor (VP)</b> Severely impacted by grazing, fire, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species including aggressive species.	<b>Very Poor (p)</b> Widespread high level damage. Recruitment is disrupted and most species appear senescent. Weed and grazing damage apparent throughout the area. Modification to vegetation structure due to changes in fire regimes apparent. Widespread loss of vertical strata. Gall and mistletoe damage apparent. Evidence of logging or firewood collection. Little to no likelihood that vegetation structure and species richness can be re-established.
<b>Completely Degraded (6)</b> The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.	<b>Completely Degraded (D)</b> Area that are completely or almost completely without native species in the structure of their vegetation, i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.	Not used – does not apply to bushland.

# APPENDIX F

# QUADRAT DATA

**QUADRAT 1**

<b>GPS Datum:</b> AUS84	<b>Date:</b> 30/10/2006	<b>Litter cover:</b> 10%
<b>Easting:</b> 390905 mE	<b>Outcrop:</b> nil	<b>Litter type:</b>
<b>Northing:</b> 6440057 mN		leaves 2% twigs 8%
<b>Topography:</b> flat	<b>Rocks:</b> n/a	<b>Bare ground:</b> 20%
<b>Soil Type:</b> Sand	<b>Aspect:</b> n/a	<b>Age since fire:</b> unknown
<b>Soil colour:</b> grey		<b>Disturbance:</b> Medium
<b>Vegetation Description:</b> <i>Melaleuca</i> swamp with <i>Kunzea glabrescens</i> , <i>Hypocalymma angustifolium</i> , <i>Hypolaena exsulca</i> , <i>Lyginia barbata</i> , <i>Astartea fascicularis</i> and <i>Banksia ilicifolia</i> .		

<b>SPECIES PRESENT</b>	<b>HEIGHT (cm)</b>	<b>% COVER</b>
<i>Hypocalymma angustifolium</i>	70	65
<i>Hypolaena exsulca</i>	35	<1
<i>Kunzea glabrescens</i>	230	3
<i>Pericalymma ellipticum</i> var. <i>ellipticum</i>	50	<1
<i>Astartea fascicularis</i>	60	<1
<i>Pultenaea ochreatea</i>	100	<1
<i>Boronia crenulata</i>	40	<1

## QUADRAT 2

<b>GPS Datum:</b> AUS84	<b>Date:</b> 30/10/2006	<b>Litter cover:</b> 50%
<b>Easting:</b> 390745 mE	<b>Outcrop:</b> nil	<b>Litter type:</b> leaves 45% twigs 5%
<b>Northing:</b> 6440087 mN		<b>Bare ground:</b> <15%
<b>Topography:</b> flat	<b>Rocks:</b> n/a	
<b>Soil Type:</b> sand	<b>Aspect:</b> n/a	<b>Disturbance:</b> Medium
<b>Soil colour:</b> grey		
<b>Vegetation Description:</b> Banksia woodland		

SPECIES PRESENT	HEIGHT (cm)	% COVER
<i>Eucalyptus marginata</i>	1000	3
<i>Banksia attenuata</i>	800	5
<i>Banksia menziesii</i>	700	4
<i>Allocasuarina fraseriana</i>	700	2
<i>Kunzea glabrescens</i>	230	<1
<i>Adenanthos cygnorum</i>	130	<1
<i>Jacksonia furcellata</i>	130	<1
<i>Xanthorrhoea preissii</i>	120	3
* <i>Ehrharta calycina</i>	100	<1
<i>Xanthorrhoea brunonis</i>	70	<1
<i>Patersonia occidentalis</i>	65	2
<i>Acacia pulchella</i>	60	<1
<i>Lyginia imberbis</i>	60	<1
<i>Stirlingia latifolia</i>	50	<1
<i>Burchardia congesta</i>	50	<1
<i>Hibbertia hypericoides</i>	50	1
<i>Lepidosperma</i> sp. c.f. <i>costale</i>	45	<1
<i>Amphipogon turbinatus</i>	45	<1
<i>Tricoryne elatior</i>	40	<1

<i>Gompholobium tomentosum</i>	40	<1
<i>Conostylis aculeata</i>	35	<1
<i>Petrophile linearis</i>	35	<1
<i>Hibbertia subvaginata</i>	30	<1
<i>Bossiaea eriocarpa</i>	30	<1
<i>Gonocarpus pithyoides</i>	30	<1
<i>Dasypogon bromeliifolius</i>	30	<1
<i>Lomandra hermaphrodita</i>	30	<1
<i>Acacia stenoptera</i>	30	<1
<i>Briza maxima</i>	30	<1
<i>Philothea spicata</i>	25	<1
<i>Dampiera linearis</i>	25	<1
<i>Leucopogon conostephioides</i>	25	<1
<i>Loxocarya cinerea</i>	25	<1
<i>Conostephium pendulum</i>	25	<1
* <i>Ursinia anthemoides</i>	25	<1
<i>Hyalosperma cotula</i>	15	<1
<i>Laxmannia squarrosa</i>	15	<1
<i>Daucus glochidiatus</i>	15	<1

## APPENDIX 3

### Bushfire Management Plan

**Lot 41 Frankland  
Ave  
Hammond Park  
WA**

# Bushfire Management Plan



12/1/2017

Kathryn Kinnear

Bio Diverse Solutions

## DOCUMENT CONTROL

### TITLE

Lot 41 Frankland Avenue Hammond Park

Bushfire Management Plan

Author (s): Kathryn Kinnear

Reviewer (s): Lorraine Spencer

Job No. TER012

Client: Broadvision Pty Ltd

### REVISION RECORD

Revision	Summary	Revised By	Date
Draft Id 7/07/2016	Internal Q.A review	B. Theyer	7/7/2016
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Final Id 21/7/2016	Issued to client as a Final	K. Kinnear	21/7/2016
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Final Id 12-1-17	Issued with updated SP	K. Kinnear	12/1/2017

### **DISCLAIMER**

*The recommendations and measures contained in this assessment report are based on the requirements of the Australian Standards 3959 – Building in Bushfire prone Areas, WAPC SPP3.7, Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) and CSIRO’s research into Bushfire behaviour. These are considered the minimum standards required to balance the protection of the proposed dwelling and occupants with the aesthetic and environmental conditions required by local, state and federal government authorities. They DO NOT guarantee that a building will not be destroyed or damaged by a bushfire. All surveys and forecasts, projections and recommendations made in this assessment report and associated with this proposed dwelling are made in good faith on the basis of the information available to the fire protection consultant at the time of assessment. The achievement of the level of implementation of fire precautions will depend amongst other things on actions of the landowner or occupiers of the land, over which the fire protection consultant has no control. Notwithstanding anything contained within, the fire consultant/s or local government authority will not, except as the law may require, be liable for any loss or other consequences (whether or not due to negligence of the fire consultant/s and the local government authority, their servants or agents) arising out of the services rendered by the fire consultant/s or local government authority.*



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## CONTENTS

1.	INTRODUCTION .....	4
	1.1.STATUTORY CONDITIONS .....	4
	1.2.SUITABLY QUALIFIED BUSHFIRE CONSULTANT .....	5
2.	AIMS OF THIS PLAN.....	6
	2.1.PLANNING CONTEXT .....	6
	2.2.SITE INSPECTION AND ASSESSMENT .....	6
	2.3.OBJECTIVES.....	6
3.	DESCRIPTION OF THE AREA .....	7
	3.1.LOCATION .....	7
	3.2.DEVELOPMENT PROPOSAL .....	7
	3.3.HISTORICAL LAND USE .....	8
	3.4.BURN HISTORY .....	9
	3.5.PREVALENT FIRE WEATHER .....	9
	3.6.CLIMATE CHANGE .....	11
	3.7.TOPOGRAPHY .....	11
	3.8.BUSHFIRE FUELS – VEGETATION .....	12
	3.9.ASSETS.....	18
	3.10.ACCESS .....	18
	3.11 WATER SUPPLY .....	18
	3.12 FIRE BREAKS .....	18
4.	POTENTIAL BUSHFIRE ISSUES AND BUSHFIRE HAZARD LEVEL (BHL).....	19
5.	ASSESSMENT TO BUSHFIRE PROTECTION CRITERIA .....	21
	5.1.ELEMENT 1: LOCATION .....	22
	5.1.1.RECOMMENDATIONS ARISING FROM ASSESSMENT TO THIS ELEMENT .....	23
	5.2.ELEMENT 2: SITING AND DESIGN OF DEVELOPMENT .....	24
	5.2.1.ASSET PROTECTION ZONES (APZ) (ACCEPTABLE SOLUTION A2.1) .....	24
	5.2.2.RECOMMENDATIONS ARISING FROM ASSESSMENT TO THIS ELEMENT .....	25
	5.3.ELEMENT 3: VEHICULAR ACCESS .....	26
	5.3.1.TWO ACCESS ROUTES (A3.1).....	26
	5.3.2.PUBLIC ROADS (A3.2).....	26
	5.3.3.CUL DE SACS (A3.3).....	26
	5.3.4.BATTLE AXES (A3.4) .....	26
	5.3.5.PRIVATE DRIVEWAYS (A3.5).....	26
	5.3.6.EMERGENCY ACCESS WAYS (A3.6).....	26
	5.3.7.FIRE SERVICE ACCESS ROUTES (A3.7).....	27
	5.3.8.INDIVIDUAL FIRE BREAKS (A3.8).....	27
	5.3.9.SIGNAGE AND GATES ON THE EAW .....	28
	5.3.10.RECOMMENDATIONS ARISING FROM ASSESSMENT TO THIS ELEMENT .....	29
	5.4.ELEMENT 4 WATER .....	30
	5.4.1.RETICULATED AREAS (A4.1).....	30
	5.4.2.NON-RETICULATED AREAS (A4.2).....	30
	5.4.3.INDIVIDUAL LOTS WITHIN NON-RETICULATED AREAS .....	30
	5.4.4.RECOMMENDATIONS ARISING FROM ASSESSMENT TO THIS ELEMENT .....	30
	5.5.OTHER BUSHFIRE RISK MITIGATION MEASURES .....	31
	5.5.1.EVAPORATIVE AIR CONDITIONERS .....	31
	5.5.2.BARRIER FENCING .....	31
	5.5.3.STAGING.....	31
	5.5.4.REDUCTION IN CONSTRUCTION THROUGH SHIELDING .....	31
	5.5.5.LANDSCAPING AND STREETSCAPING TREATMENTS.....	32
	5.5.6.INFORMATION RELATING TO BAL AND AS3959-2009 .....	32
6.	INDIVIDUAL BUSHFIRE SURVIVAL PLAN .....	34
	6.1.HOMEOWNER PROTECTION .....	34
	6.2.BUSHFIRE PLAN .....	34
7.	SUMMARY .....	36
	7.1.OVERALL FIRE THREAT .....	36
	7.2.FUTURE LOT OWNERS RESPONSIBILITY .....	36
	7.3.DEVELOPERS RESPONSIBILITY .....	37
	7.4.CITY OF COCKBURN RESPONSIBILITY.....	37
8.	CHECKLIST FOR COMPLIANCE TO AND GUIDELINES FOR PLANNING IN BUSHFIRE PRONE AREAS AND STATE PLANNING POLICY 3.7 .....	39
	8.1.CHECKLIST TO COMPLIANCE TO GUIDELINES FOR PLANNING IN BUSHFIRE PRONE AREAS.....	39
	8.2.RECOMMENDATIONS/CONCLUSIONS BASED ON ABOVE CHECKLISTS .....	40
9.	REFERENCES .....	41

### APPENDICES

APPENDIX A – LOCATION MAPPING & OBRM BUSHFIRE PRONE AREA MAPPING.

APPENDIX B – SUBDIVISION GUIDE PLAN

APPENDIX C – VEGETATION CLASSES MAP

APPENDIX D – BHL MAPPING

APPENDIX E- BAL CONTOUR PLAN

APPENDIX F – BUSHFIRE MANAGEMENT PLAN

APPENDIX G – DFES INFORMATION FOR HOMEOWNER & DEVELOPER



## 1. Introduction

Broadvision Pty Ltd (“the Client”) through Terranovis Pty Ltd commissioned Bio Diverse Solutions (Bushfire Consultants) to undertake a bushfire hazard assessment and prepare a Bushfire Management Plan to guide all future fire management as part of the planning process for part Lot 41 Frankland Avenue Hammond Park in accordance with the Local Structure Plan (LSP) for the area (the “subject site”).

This BMP is to guide the bushfire management and planning for the LSP, guide Bushfire Attack Levels (BAL) for new future dwelling construction requirements and specifically to guide future subdivision/development applications pertaining to the development and the LSP area.

The basic requirements of any Bushfire Management Plan (BMP) is to identify potential issues or problems relating to environmental fire threats and recommend specific actions by certain persons, agencies, authorities and developers to ensure, as much as practical, that the lives and assets of the location are not put at undue threat from any unplanned fire event. A BMP takes into account various physical attributes of the land, including topographical and vegetation properties, local climatic impacts, biodiversity, past and current land use, past fire history and management practices, local authority fire management obligations, road access, water supplies, adjacent property and tenure, and future obligations by various parties should the subdivision application be successful.

Such planning takes into consideration standards and requirements specified in various documents such as Australian Standard (AS) 3959-2009, Western Australian Planning Commission (WAPC) Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) and State Planning Policy 3.7 (WAPC, 2015b). These policies, plans and guidelines have developed by WAPC to ensure uniformity to planning in designated “Bushfire Prone Areas” and consideration of the relevant bushfire hazards when identifying or investigating land for future development.

The subject site is described as part Lot 41 Frankland Avenue Hammond Park, refer to Location Mapping Appendix A and the LSP Appendix B.

### 1.1. Statutory Conditions

This BMP has been prepared for the subject site to address bushfire management issues associated with subject site and is consistent with State and Local Government planning instruments.

On the 7<sup>th</sup> December 2015 the *Fire and Emergency Services (Bush Fire Prone Areas) Order 2015; Planning and Development (Local Planning Scheme) Amendment Regulations 2015; Planning and Development Act 2005 State Planning Policy 3.7 - Planning in Bushfire Prone Areas* and the *Building Amendment Regulations (No.3)* were published in the WA Government Gazette. The Western Australian State Bushfire Prone Mapping was also publicly released.

These reforms introduce new requirements for people intending to develop and/or build in bushfire prone areas, including the need to assess a property’s bushfire risk and take additional construction measures to limit the impact of bushfires.

The reforms introduced in 2015 included:

1. **Emergency Services (Bush Fire Prone Areas) Order 2015:** 4 (1) *The areas of the state described in the Bushfire Prone Areas dataset are designated as bush fire prone areas.*
2. **Planning and Development (Local Planning scheme) Amendment Regulations 2015:**
  - *States that a property is within a ‘bush fire prone area’ if designated as such by the Fire and Emergency Services Commissioner for the purposes of land-use planning requirements;*
  - *Clarify where exemptions to the requirements set out in the LPS Amendment Regulations 2015 apply;*
  - *Ensure that a Bushfire Attack Level (BAL) assessment is undertaken for new habitable buildings in a bush fire prone area (unless exemptions apply);*
  - *Require development approval for habitable buildings and land uses on sites that receive a BAL of BAL-40 or BAL-Flame Zone (FZ);*
  - *Include a four-month transitional period from the date a site is designated as being bushfire prone to ensure landowners and the development industry have time to adequately prepare; and*
  - *Ensure Special Control Areas continue to have effect in local government areas.*

(DoP, 2016)
3. **Planning and Development Act 2005 State Planning Policy 3.7 (SPP 3.7)- Planning in Bushfire Prone Areas:** *The intent of this policy is to implement effective, risk based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. The*

*application of SPP 3.7 applies to all higher order strategic planning documents, strategic planning proposals, subdivision and development applications located in designated bushfire prone areas.*

- 4. Building Amendment Regulations (No.3):** Outlines the definition of the bushfire prone area as designated under the *Fire and Emergency Services Act 1998* Regulation 31BA applicable building standards for buildings and incidental structures in bushfire prone areas.  
(WA Australian Government Gazette, 2015)

The publicly released bushfire prone mapping (Bushfire Prone Area Mapping, OBRM, 8/12/15) outlines the site to be Bushfire Prone as per the above regulations, as it is situated within 100m of >1 ha of bushfire prone vegetation. Refer to extract from the Office of Bushfire Risk Management (OBRM) as released in December 2015 (updated 20/5/2016) Appendix A.

This document and the recommendations contained are aligned to the following policy and guidelines:

- AS 3959-2009 "Construction of Buildings in Bushfire Prone Areas" current and endorsed standards;
- State Planning Policy 3.7 (SPP 3.7) Planning in Bushfire-Prone Areas (WAPC, 2015b);
- Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a);
- *Fire and Emergency Services (Bush Fire Prone Areas) Order 2015*;
- *Planning and Development (Local Planning Scheme) Amendment Regulations 2015*;
- *Bushfires Act 1954*; and
- City of Cockburn annual Fire Control Order.

#### **1.2. Suitably Qualified Bushfire Consultant**

This BMP has been prepared by Kathryn Kinnear (nee White), who has 10 years operational fire experience with the (formerly) DEC (1995-2005) and has the following accreditation in Bushfire Management:

- Incident Control Systems;
- Operations Officer;
- Prescribed Burning Operations;
- Fire and Incident Operations;
- Wildfire Suppression 1, 2 & 3;
- Structural Modules – Hydrants and hoses, Introduction to Structural Fires, and Fire extinguishers; and
- Ground Controller.

Kathryn Kinnear currently has the following Tertiary Qualifications:

- BAS Technology Studies & Environmental Management;
- Diploma Business Studies; and
- Graduate Diploma of Environmental Management.

Kathryn Kinnear is an accredited Level 2 BAL Assessor (Accreditation No: BPAD30794) and a member of Bronze Corporate member of Fire Protection Australia Association and a committee member of the Bushfire Subcommittee Western Australia. Kathryn is a suitably qualified Bushfire Practitioner to prepare this Bushfire Management Plan.

## 2. Aims of this Plan

The aim of this BMP is to assess the bushfire risks associated with the existing subdivision and future subdivisions and to reduce the occurrence of, and minimise the impact of bushfires, thereby reducing the threat to life, property and the environment. It also aims to guide future development of the subject site by assessing the development to the Bushfire Protection Criteria Acceptable Solutions as outlined in the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a).

### 2.1. Planning Context

The BMP has been prepared to assess the Local Structure Plan developed by RPS Australia as shown in Appendix B. The BMP has been prepared as part of the planning process to prescribe bushfire management measures for the proposed development as per the State Planning Policy 3.7 Planning in Bushfire-Prone Areas (WAPC, 2015b), and the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) (Appendices, 2, 3 and 4). The BMP will guide the development design to implement bushfire protection, risk mitigation measures for the preservation of life, property and infrastructure.

### 2.2. Site inspection and assessment

To ensure that every aspect of the proposed subdivision meets the planning requirements as set out in Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) (Appendices, 2, 3 and 4) a site inspection was undertaken on the 27<sup>th</sup> June 2016 by Kathryn Kinnear (Bushfire Consultant, Bio Diverse Solutions) to assess the vegetation on site and for 100m from the subject site boundary, current site conditions, bushfire risk and bushfire mitigation procedures.

The site was assessed as having an **Extreme- Moderate** Bushfire Hazard Level (BHL) due to internal and external classifiable vegetation (AS39059-2009) of forest, woodland and scrub remnant native vegetation areas. Upon completion there will be internal (built) areas of **Low** BHL. Where a subdivision is located within an extreme or moderate BHL, the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) requires assessment to the bushfire protection criteria – a process where subdivisions are assessed for compliance to the criteria. The bushfire protection criteria (Appendix 4, WAPC, 2015a) are a performance based criteria in assessing bushfire risk management measures and they outline four “Elements”. The “Elements” which are to be met either through the objectives of the “Performance Principle” or “Acceptable Solutions” (WAPC, 2015a) for the subject site include:

- Element 1 - Location;
- Element 2 - Siting and design of development.
- Element 3 - Vehicular access; and
- Element 4 – Water.

(WAPC, 2015a)

This BMP has been prepared to assess the site suitability against the “Acceptable Solutions” of the bushfire protection criteria (WAPC, 2015a).

### 2.3. Objectives

The objectives of this BMP are:

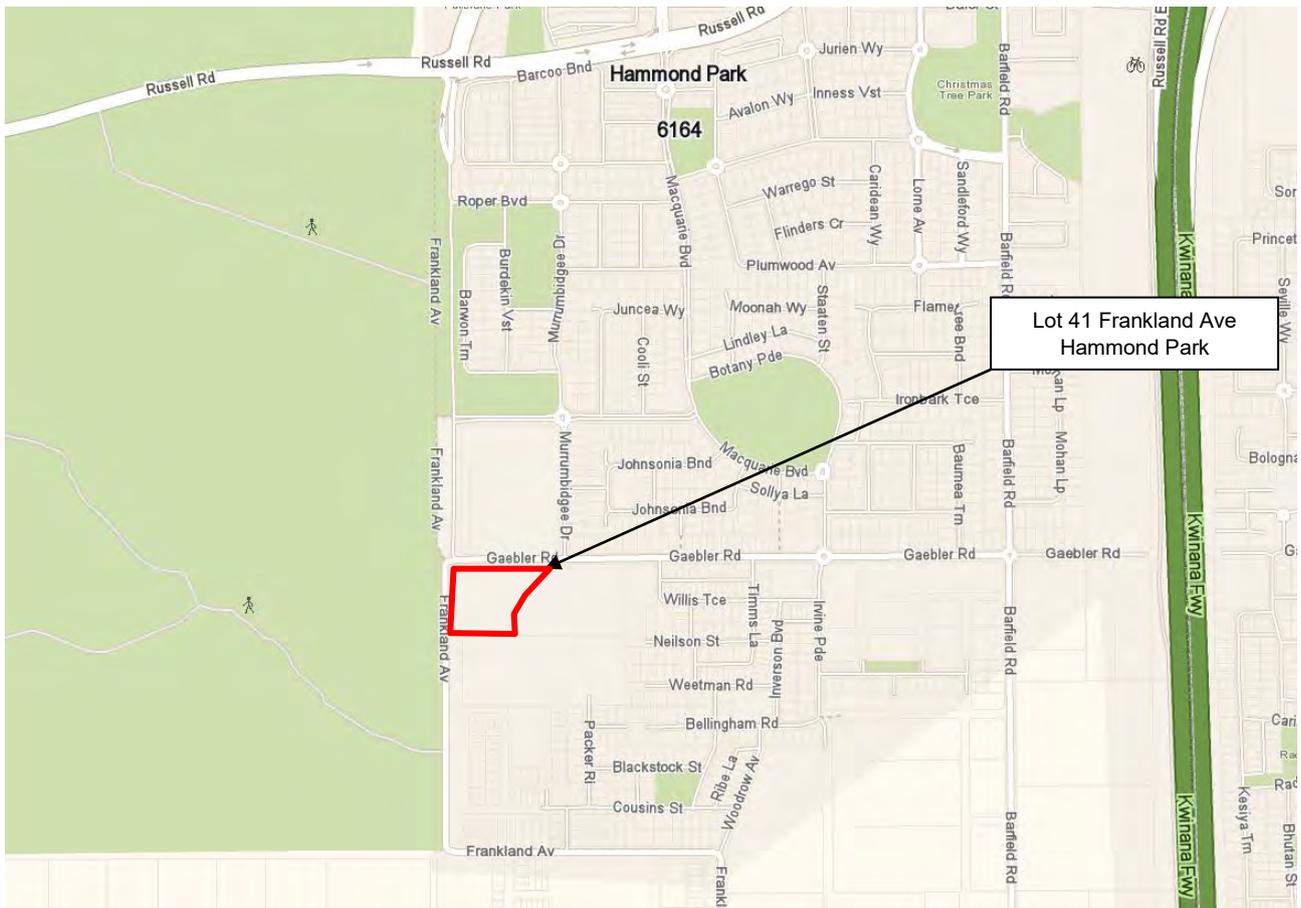
- Achieve consistency with objectives and policy measures of SPP 3.7 (WAPC, 2015b);
- Assess any building requirements to AS3959-2009 (current and endorsed standards) and BAL Construction;
- Assess the subdivision proposal against the Bushfire Protection Criteria Acceptable Solutions as outlined in the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a);
- Understand and document the extent of the bushfire risk and hazards to the subject site;
- Prepare bushfire mitigation and management measures of all land within the subject area with due regard to people, property, infrastructure and the environment;
- Nominate individuals and organisations responsible for bushfire management and associated works within the subject area; and
- Aligned to the recommended assessment procedure (SPP3.7 WAPC, 2015b) & Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) which evaluates the effectiveness and impact of proposed, as well as existing, bushfire risk management measures and strategies.

### 3. Description of the area

#### 3.1. Location

The site is defined as Part of Lot 41 Frankland Avenue Hammond Park approximately 10m south of the Cockburn CBD in the municipality of the City of Cockburn (CoC). The site is approximately 24 km from the Perth CBD and is 2.0 ha of presently vacant land. The site is presently accessible off Gaebler Road in the north and Frankland Ave in the west. Future access is proposed off Gaebler Road. Please refer to Figure 1 - Locality Map and Appendix A - Location Mapping.

**Figure 1 – Subject site locality**



(www.whereis.com)

#### 3.2. Development proposal

The subject site is currently zoned “Development” under the City of Cockburn (CoC) Town Planning Scheme 3. To the north of the site is a school site and to the east are existing residential areas. To the south is a vacant lot (lot 42 Frankland Ave) which is also proposed for urban development but presently uncleared vacant land. To the west is Beeliar Regional Reserve. The eastern extent of Lot 41 is subject to further planning and therefore is excluded from the LSP plan. It is assumed this portion of land (eastern portion of Lot 41) will stay in its current form of vacant land.

### 3.3. Historical Land use

Analysis of aerial photographs of Lot 41 indicates the site pre-1965, was virgin bushland and was broadscale cleared in the late 1960's to early 1970's with horticultural pursuits to the east and possible agriculture over the site. The Beeliiar Regional Reserve to the west remained uncleared. Refer to partial aerial image of the subject site, Perth Metropolitan Aerial imagery 1974 (Landgate, 2016), Figure 2.

**Figure 2 – Landgate Imagery 1974**



(Landgate, 2016)

The 1985 imagery available for Lot 41 indicates the site was mostly unused for any land activity (i.e. vacant land) with regeneration of the bushland evident. In 1994 the aerial indicates that regeneration of the bushland across the site is evident. Refer to aerial image of the subject site, Perth Metropolitan Aerial imagery (Landgate, 2016), Figure 3 and 4 below.

**Figure 3 – Landgate Imagery 1985**



(Landgate, 2016)

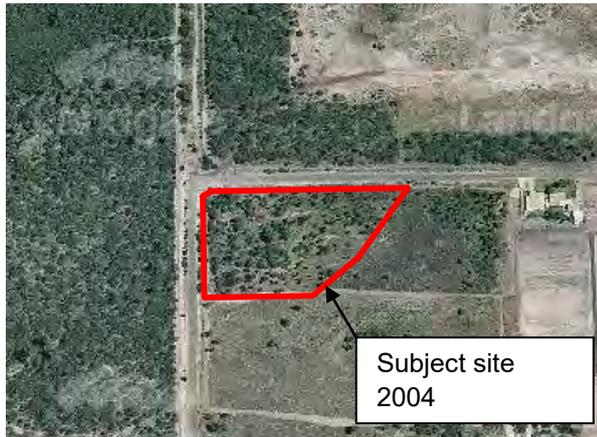
**Figure 4 – Landgate Imagery 1994**



(Landgate, 2016)

The 2004 and 2014 Landgate aerial imagery indicates that the land has not sustained any further clearing and is vacant land. The regrowth of native vegetation is evident across both Lot 41 and Lot 42 to the south. Recent clearing has occurred for developments to the north, east and south (of lot 42) in 2014. See Figures 5 and 6.

**Figure 5 – Landgate Imagery 2004**



(Landgate, 2016)

**Figure 6 – Landgate Imagery 2014**



(Landgate, 2016)

Detailed site investigations by Bio Diverse Solutions of the subject site verifies the aerial imagery whereby bushfire fuels are less than the “virgin” bushland to the west in Beeliar Regional Reserve. This is a direct result of clearing the site in totality in the early 1070’s. The vegetation structure on both Lot 41 and lot 42 is in a “regrowth state” from previous clearing activities. The vegetation structure’s on lot 41 (forest and scrub) is heavily weed infested, with regrowth vegetation in lot 42 to the south limited to grasses, scrubs and occasional trees forming open woodlands, shrublands and scrub.

Recent clearing for developments in 2014-15 to the north (school site), east and south has left these two lots (Lot 41 and 42) an “island” of remnant vegetation. The bushfire fuels are connected by Beeliar Regional Reserve to the west which is intact (never cleared) and forms an extensive remnant vegetated area to the west. Exposure of the subject site from potential bushfire hazards is from the west from Beeliar Regional Reserve and uncleared areas in the balance of lot 41 (east) and Lot 42 (south).

### **3.4. Burn History**

Limited public available data exists for the subject site in terms of burn/fire history. As most of the subject site was historically cleared and vacant, summer grass fires may have dominated historically. Recent reported bushfires in the Beeliar Regional Reserve to the west include:

- 11<sup>th</sup> January 2010 Beeliar Regional Reserve – suspected arson ignition (Perth Now, 2010); and
- 5<sup>th</sup> March 2015 Beeliar Regional Reserve (WA today, 2015).

### **3.5. Prevalent Fire Weather**

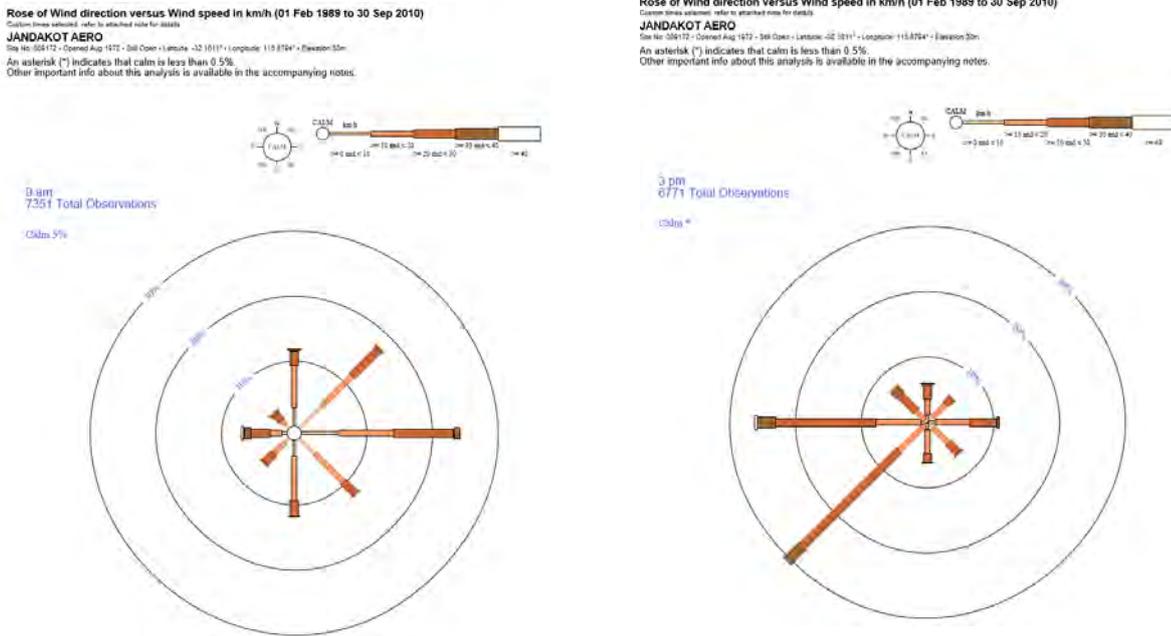
Weather significantly affects the behaviour of bushfires and time of low humidity and strong winds will lead to more aggressive bushfires and extreme bushfire events. Seasonal factors affect fuel moistures and fuel availability and intensity of fires. The south west of WA is one of the most bushfire prone regions in the world due to the combination of a Mediterranean-type climate with hot dry summers and the presence of large areas of flammable native vegetation (Bushfire CRC, 2015).

Fire weather is characterised by mid-level disturbances across the south west of Western Australia, bringing unstable atmospheric conditions (thunder and lightning) from the north or north-west wind directions. Very dangerous fire weather conditions often follow a sequence of hot days and easterly winds when the trough deepens near the coast and moves inland. Winds can change from easterly to northerly, then westerly very quickly during these climatic events. This is characteristic of “Extreme” Fire Weather conditions to the area with hot, dry conditions prior to storm events. Risk of lightning strikes, spark ignition, arson and other causes of fire give rise to uncontrolled bushfires under these conditions.

Prevalent winds which most bushfire events occur in the region during summer (bushfire season) are from the east (dry land based winds), south-east and south-west direction (afternoon sea breezes). Conditions tend to be dry through the day (easterly winds) with low relative humidity. High winds and excess fuels can lead to hazardous conditions for residents. Easterly, south east and south west winds occur during the morning periods with similar directions in the afternoon but stronger wind speeds exist during dry (afternoon)

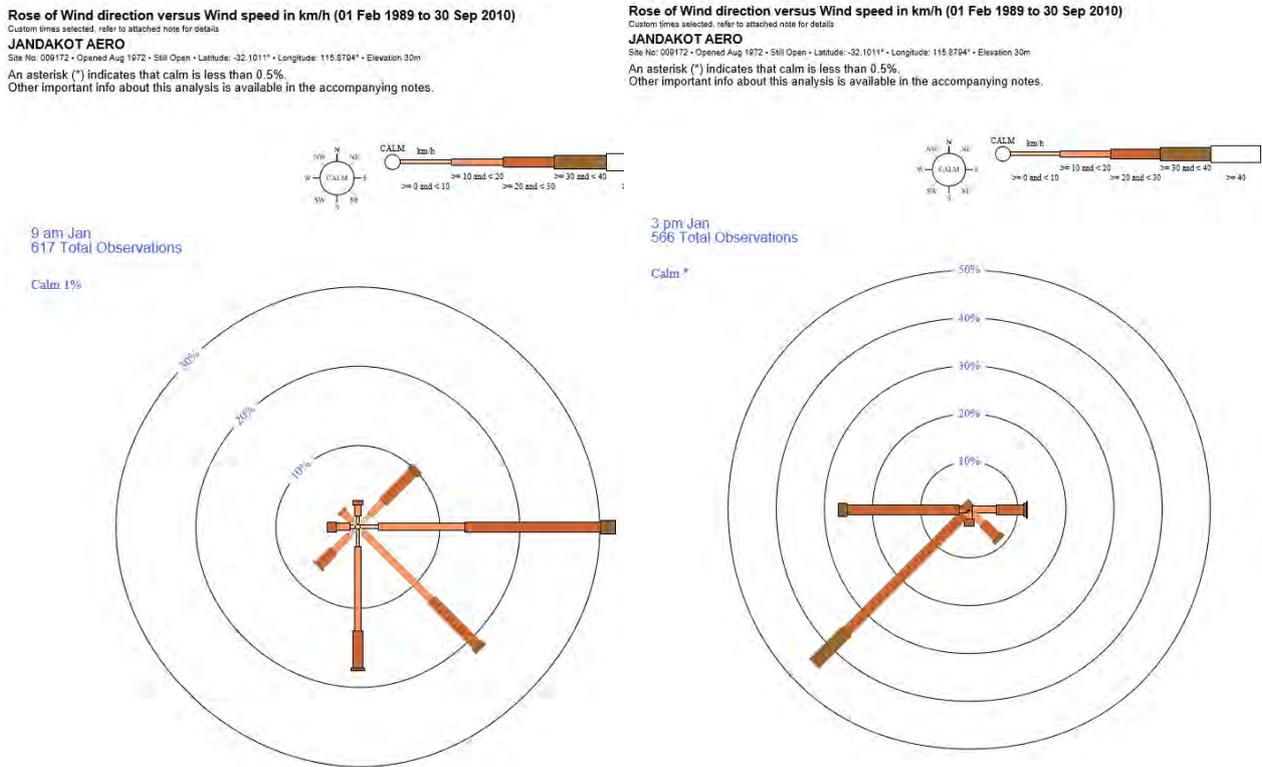
summer periods and from the south west (Figures 7-9). These circumstances place residential housing in the subject site under the most risk from wildfire events.

**Figure 7 – Summer (December 9am & 3pm) wind rose BoM**



(BoM, 2015)

**Figure 8 – Summer (January 9am & 3pm) wind rose BoM**

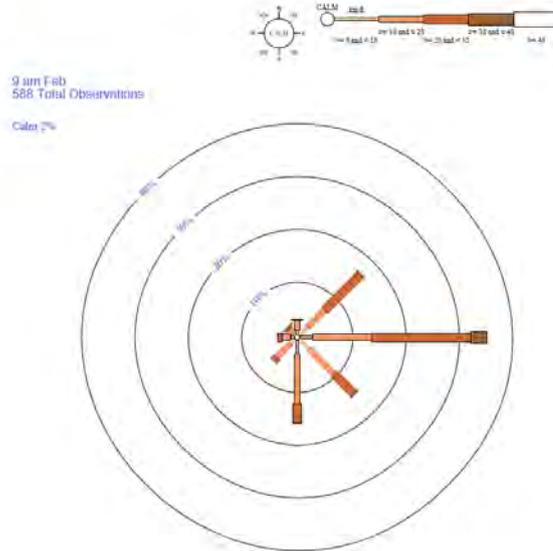
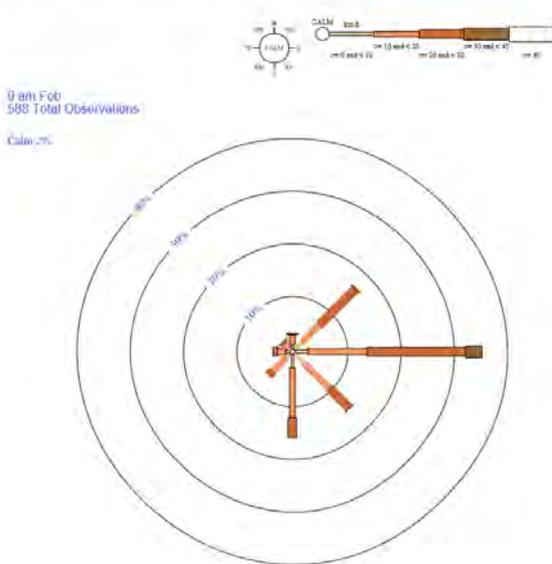


(BoM, 2015)

**Figure 9– Summer (February 9am & 3pm) wind rose BoM**

Rose of Wind direction versus Wind speed in km/h (01 Feb 1989 to 30 Sep 2010)  
 Custom times selected, refer to attached note for details.  
**JANDAKOT AERO**  
 Site No: 200172 - Opened Aug 1972 - 5M Open - IAR:18841 - 32 10 11 - Longitude: 118.8754° - Elevation: 32m  
 An asterisk (\*) indicates that calm is less than 0.5%.  
 Other important info about this analysis is available in the accompanying notes.

Rose of Wind direction versus Wind speed in km/h (01 Feb 1989 to 30 Sep 2010)  
 Custom times selected, refer to attached note for details.  
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 Site No: 200172 - Opened Aug 1972 - 5M Open - IAR:18841 - 32 10 11 - Longitude: 118.8754° - Elevation: 32m  
 An asterisk (\*) indicates that calm is less than 0.5%.  
 Other important info about this analysis is available in the accompanying notes.



(BoM, 2015)

### 3.6. Climate Change

Climate change is expected to impact on the future rainfall pattern of the area. It is recognised that the average rainfall has already declined by 20%-30% over the past few decades and that the long term impact of climate change may lead to a shift in rainfall, as well as dryer climatic conditions for the region. The long term changes are predicted to impact on the flora, fauna and water availability for the region. (Climate Commission 2010)

The Climate Commission (Climate Commission 2010) estimates that *“...Rainfall patterns in Western Australia have changed over the last 40 years. There is significant evidence that climate change has contributed to the marked drying trend in the southwest of the state.”*

In 2015, the Department of Parks and Wildlife Principal Fire Planner, Roger Armstrong reported that *“our (WA) bushfire season tends to be about 6 weeks longer now compared to what it was 20-odd years ago”* (The West Australian, 2013).

The above statements place bushfire preparedness and risk mitigation measures of the highest importance on subdivision design and therefore on protection of lives, property, infrastructure and the environment. The construction of the proposed development could be affected from increased intensity rainfall events or extended drying periods. Increased extreme weather from climate change could affect fire frequency and behaviour in Western Australia (DEC, 2012). This Bushfire Management Plan has been prepared to reduce the risk of bushfire to the proposed residential dwellings in the newly created development.

### 3.7. Topography

The subject site is located on a southern facing slope in a valley of undulating land on the Swan Coastal Plain. The subject site has predominantly low slopes over the site, with gentle slopes to the north and north west from the northern boundary and from south of Lot 42 slopes to the south east to built up urban areas (south of Lot 42). Slopes were measured in the field with a Nikon Forestry Pro under classifiable vegetation. Generally slopes surrounding the site are low not exceeding 5° (degrees). The effective slopes under classifiable vegetation to AS3959-2009 (Table 2.4.3) that to apply to this development include:

- Upslope and Flat Land; and
- Downslope >0 to 5 degrees.

Please refer to the slope analysis on the Vegetation Classes Map Appendix C.

Note: Effective Slopes were measured in the field with a Nikon Forestry Pro where vegetation was accessible. Effective slopes are represented on the Vegetation Classes map as per the field measurements.

**3.8. Bushfire fuels – Vegetation**

The subject lies within the Swan IBRA bioregion. This bioregion is comprised of “*low lying coastal plain, mainly covered with woodlands. It is dominated by Banksia or Tuart on sandy soils.*” The area is located within the SWA1- Dandaragan Plateau. The plateau is bordered by Derby and Dandaragan Faults. Cretaceous marine sediments are mantled by sands and laterites. Characterised by Banksia low woodland, Jarrah - Marri woodland, Marri woodland, and by scrub-heaths on laterite pavement and on gravelly sandplains. (Mitchell et al., 2002).

The vegetation has been mapped on a broad scale by JS Beard (Shepherd et al 2002) in the 1970’s, where a system was devised for state-wide mapping and vegetation classification based on geographic, geological, soil, climate structure, life form and vegetation characteristics (Sandiford and Barrett 2010).

A search of JS Beard’s vegetation classification database for the general area places the site within 1 broad Vegetation Association for the site:

- 1. System Association:** Bassendean
- Vegetation Association Number:** 1001
- Vegetation Description:** Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina. e2Mb cbLi

Env. Australia undertook a flora and vegetation survey of the site in 2007 (Carboon, R, 2013) whereby they identified two flora communities of *Melaleuca pressiana* damplands and *Banksia attenuata/Eucalyptus marginata* open woodlands. Site assessment from Bio Diverse Solutions did not include flora survey of the subject site. Vegetation on site was classified as per the Method 1 AS3959-2009 assessment process.

All vegetation within 100m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2009. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below. Each plot is representative of the Vegetation Classification to AS3959-2009 Table 2.3 and shown on the Vegetation Classification Mapping Appendix C.

Plot	1	Classification or Exclusion Clause	Low Fuel or non Vegetated Exclusion 2.2.3.2 (f)
			<p>North of the subject site in school grounds on the corner of Gaebler Road and Frankland Avenue. Oval, playing fields maintain in low fuel condition Grasses &lt;50mm in height</p>
<p>Photo ID: Photo 1 view of school playing fields to the north of the subject site.</p>			

Plot	2	Classification or Exclusion Clause	Scrub Type D – flat land
		<p>Along northern and central east areas of subject site  <i>Acacia saligna</i>, <i>Banksia attenuata</i>, Woollybush (<i>Adenanthos</i>) interspersed with occasional Grass trees, some <i>Banksia</i> &gt; 4m  Average vegetation height 3-4m  Effective slope under vegetation 0 degrees  Surface fuel loading 25 t/ha</p>	
<p>Photo ID: Photo 2 view of Scrub Type D in eastern area of subject site. View from north to south.</p>			

Plot	3	Classification or Exclusion Clause	Forest Type A- Downslope
		<p>North area of subject site near Gaebler Road  <i>B. attenuata</i> and <i>Eucalyptus marginata</i> 6-8m  Midstorey Woollybush, Melaleuca, scrubs 1-2m, understorey grass trees, pineapple bush  Multi layered, borderline Woodland Type B however has higher total available fuels, reaching 25-35T/ha.  Regenerating from old disturbances  Canopy cover 30%  Average height of trees 4-6m  Effective slopes flat land (0.2 degrees and 0.8 degrees)</p>	
<p>Photo ID: Photo 3 view of Forest Type A, photo from north to south in north of subject site.</p>			
		<p>North eastern corner of subject site near Gaebler Road  <i>Banksias</i> &gt;5m, Woollybush, Spearwood, Midstorey juvenile banksias, <i>Melaleuca pressiana</i>, scrubs 1-2m  understorey grass trees, pineapple bush  Canopy cover &gt;30%  Average height of trees 6-8m  Multi layered total available fuels 25-35T/ha.  Regenerating from old disturbances  Effective slopes downslope 1.3 degrees.  Surface fuel loading 25-35T/ha</p>	
<p>Photo ID: Photo 4 view of Forest Type A, photo from north to south in north east of subject site.</p>			

Plot	4	Classification or Exclusion Clause	Grassland type G – Flat Land
			<p>Unmanaged grassland Type G  Along eastern boundary of subject site and in adjacent areas.  Grasses &gt;100mm, average 400mm  Pigface, Cooch, Wild oats, Kikuyu, cape weed.  Effective slopes 0.4 degrees  Surface fuel loading 4.5 T/ha</p>
<p><i>Photo ID: Photo 5 view of grassland Type G in eastern extents of the subject site and adjacent lands.</i></p>			
Plot	5	Classification or Exclusion Clause	Shrubland Type C - downslope
			<p>Shrubland Type C in south east corner of adjacent lot to the south (lot 42 Frankland Ave).  Grass trees, melaleucas, davesia, grasses.  Occasional <i>B.attenuata</i> at 3-4m  Shrubs at 0.5m to 1m  Effective slopes 1.2 deg  Surface fuel loading 15T/ha</p>
<p><i>Photo ID: Photo 6 view of Shrubland Type C in south east corner of Lot 42 Frankland Ave.</i></p>			
			<p>Shrubland Type C in south east corner of adjacent lot to the south (lot 42 Frankland Ave).  Grass trees, melaleucas, davesia, grasses.  Occasional <i>B.attenuata</i> at 3-4m  Shrubs at 0.5m to 1m  Effective slopes 1.2 deg  Surface fuel loading 15T/ha</p>
<p><i>Photo ID: Photo 7 view of Shrubland Type C in south west corner of Lot 42 Frankland Ave.</i></p>			

Plot	6	Classification or Exclusion Clause	Woodland Type B - Downslope
			<p>Located in south east of Lot 42 Frankland Avenue. Some areas regenerating from recent disturbances. Low Open Woodland of Banksia, occasional Marri and Nuytsia.</p> <p>Surface fuel loading 15-25T/ha  10-30% vegetative cover  Canopy &lt;30%  Scrubs 0.5 to 1m understorey  Ave height of trees 8-10m  Effective Slope 1.2 deg downslope</p>
<p><i>Photo ID: Photo 8 View of Banksia Woodland in southern areas of Lot 42 Frankland Ave. View from north to south from Plot 5.</i></p>			
Plot	7	Classification or Exclusion Clause	Forest Type A – Flat Land
			<p>West of Frankland Ave in Beelihar Regional Reserve Casuarina, Banksia, Jarrah, marri Low Forest.</p> <p>Ave tree heights 10-12m  Multilayered vegetative structure  Canopy cover 80-100%  Surface Fuels 25-35T/ha  Effective slope 0.4 degrees (Flat Land)</p>
			<p>West of Frankland Ave in Beelihar Regional Reserve Casuarina, Banksia, Jarrah, Marri Low Forest.</p> <p>Ave tree heights 10-12m  Multilayered vegetative structure  Canopy cover 80-100%  Surface Fuels 25-35T/ha  Firebreak 3-4m on inside of fenceline.  Effective slope 0.8 degrees (Flat Land)</p>
<p><i>Photo ID: Photo 10 View of Forest Type A in Beelihar Reserve west of Frankland Ave. View from south to north along fenceline.</i></p>			

Plot	8	Classification or Exclusion Clause	Grassland Type G – Flat Land
			Thin strip of Grassland Type G on edge of firebreak (lot 41) and east of Frankland Avenue. Highly disturbed area, grasses and occasional Banksia Fuel loading possibly reach 4.5 T/ha if left unmanaged. Effective slope 0.2 deg
Photo ID: Photo 11 View of Grassland Type G along Frankland Ave (RHS of photo), beside Plot 9. View from north to south			
Plot	9	Classification or Exclusion Clause	Forest Type A – Flat Land
			Corner of Gaebler Road and Frankland Avenue in north west corner of subject site. Previously disturbed in state of regrowth <i>B. attenuata</i> and <i>Eucalyptus marginata</i> 6-8m Midstorey Woolleybush, Melaleuca (spearwood), scrubs 1-2m, understorey grass trees, pineapple bush Multilayered structure. Trees 6-12m Occasionally a Woodland Type B structure but if left to regenerate will become a Forest Type A fuel loading. Surface fuel loads 25-35T/ha. Effective slopes 0.2 degrees
Photo ID: Photo 12 view of Forest Type A in north west corner of subject site. Photo view from west to east.			
Plot	10	Classification or Exclusion Clause	Low fuel or non Vegetated Areas Excl 2.2.3.2 (c)
			Small Plot of remnant Forest Type A in School site stormwater drain/sump. Location north of subject site, north of Gaebler Road. <0.25ha and separated by 29.5m (i.e. >20m). Excluded from classifiable vegetation
Photo ID: Photo 13 View of excluded Forest Type A in school stormwater sump. Photo from south west to north east.			

Plot	11	Classification or Exclusion Clause	Low Fuel or non vegetated areas Exc 2.2.3.2 (e)
 <p><i>Photo ID: Photo 14 view of buildings and road to the south of the site</i></p>  <p><i>Photo ID: Photo 15 view of Frankland Avenue from south to north</i></p>  <p><i>Photo ID: Photo 16 view of stormwater sump parallel to Frankland Avenue from south to north. North of Gaebler Road.</i></p>			<p>Roads, buildings and bare areas associated with previous clearing activities and firebreaks.</p>

Plot	12	Classification or Exclusion Clause	Low Fuel or non vegetated areas Exc 2.2.3.2 (f)
		<p>Located to the east for the subject site in adjacent land. Horticultural lot irrigated and managed. Exclusion 2.2.3.2 (f)</p>	
<p><i>Photo ID: Photo 16 View of Horticultural lot to the east of the subject site. View from north west to south east.</i></p>			

### 3.9. Assets

The subject site is valued for its proximity to the expanding residential areas of Hammond Park. Once developed, the values which will be potentially affected by fire include:

- **Human lives:** It is likely that more than 180 people could be resident at the finished LSP area;
- **Assets:** The development will contain dwellings and valuable infrastructure; and
- **Environmental Conservation Values:** external remnant vegetation to the west in Beeliar Regional Reserve

### 3.10. Access

Access is from Gaebler Road in the north or Frankland Road in the west.

### 3.11 Water supply

Reticulated water is available in the locality, and however is not presently connected to the site.

### 3.12 Fire Breaks

The subject site has the required firebreaks which were trafficable via 4 x 4 around the perimeter of the site during site inspection.

#### 4. Potential Bushfire Issues and Bushfire Hazard Level (BHL)

The Bushfire Hazard Level (BHL) provides a “broad-brush” means of determining the potential intensity of a bushfire for a particular area (WAPC, 2015a). The BHL assessment process assists in informing the suitability of land contained within the strategic planning proposals for future subdivision and development (WAPC, 2015a). The BHL assessment process assigns land within a designated bushfire prone area as either Low, Moderate or Extreme. Refer to the BHL categories Table 1 below.

The Vegetation type for the subject site (within 100m) has been classified as per AS3959-2009 as Forest Type A, Woodland Type B, Scrub Type D, Shrubland Type C, Grassland Type G and Low threat Vegetation (as per vegetation classifications outlined in AS3959-2009, Table 2.3). The bushfire hazard Level (BHL) ratings have been assessed as per the methodology as outlined in the Guidelines for Planning in Bushfire Prone Areas (2015) (Appendix 2). Please refer to Table 1 below.

**Table 1 – Bushfire Hazard Level (BHL) Categories**

Table 3: Hazard levels and characteristics

HAZARD LEVEL	CHARACTERISTICS
<b>Low</b>	<ul style="list-style-type: none"> <li>• devoid of standing vegetation (less than 0.25ha cumulative area);</li> <li>• areas which, due to climatic conditions or vegetation (e.g. rainforest), do not experience bushfires;</li> <li>• inner urban or suburban areas with maintained gardens and very limited standing vegetation (less than 0.25ha cumulative area);</li> <li>• low threat vegetation, including grassland managed in a minimal fuel condition (i.e. to a nominal height of 100mm), maintained lawns, vineyard and orchards; and</li> <li>• pasture or cropping areas with very limited standing vegetation that is shrubland, woodland or forest with an effective up slope*, on flat land or an effective down slope* of less than 10 degrees, for a distance greater than 100 metres.</li> </ul>
<b>Moderate</b>	<ul style="list-style-type: none"> <li>• areas containing pasture or cropping with an effective down slope* in excess of 10 degrees for a distance greater than 100 metres;</li> <li>• unmanaged grasslands;</li> <li>• open woodlands;</li> <li>• open shrublands;</li> <li>• low shrubs on areas with an effective up slope*, on flat land or an effective down slope* of less than 10 degrees, for a distance greater than 100 metres or flat land;</li> <li>• suburban areas with some tree cover; and</li> <li>• forest and woodlands with a permanent grass understorey or at most, a scrub understorey structure consisting of multiple areas of &lt;0.25ha and not within 20 metres of each other or single areas of &lt;1ha and not within 100 metres of other scrub areas.</li> </ul>
<b>Extreme</b>	<ul style="list-style-type: none"> <li>• forests with a scrub understorey which is multi-tiered;</li> <li>• woodlands with a scrub understorey which is multi-tiered;</li> <li>• tall shrubs; and</li> <li>• any area of vegetation not otherwise categorised as low or moderate.</li> </ul>

(WAPC, 2015b)

#### **Internal Bushfire Hazard Levels (BHL)**

The subject site is remnant vegetation that sustained clearing in the early 1970s and has re-grown across the site. Pre-development the site has Extreme and Moderate Bushfire Hazard Levels (BHL), being Forest Type A, Woodland Type B and Scrub Type D. The development proposal will require removal of the site vegetation for buildings and roads. A POS area along the eastern boundary of the LSP (north-south orientation) is proposed to be landscaped (refer to LSP Appendix B) which will be managed and maintained. Once developed the internal areas of the subject site would form “**Low threat vegetation and Non Vegetated areas**” (AS3959-2009), with the internal built landscape posing a “**Low**” BHL (as per WAPC Guidelines, Table 1).

Refer to Bushfire Hazard Level Mapping Appendix D.

### **External BHL**

External bushfire hazards exist adjacent to the site in the west (Beeliar Regional Reserve), to the east in the Balance of Lot 41 and to the south Lot 42 Frankland Avenue. The Forest Type A to the west in Beeliar Regional Reserve is classified as an **“Extreme”** BHL (as per WAPC Guidelines, Table 1). This vegetation will exist in perpetuity to the site and pose a threat of bushfire from north westerly, westerly and south westerly prevailing winds. To the south in private property is Woodland Type B, Scrub Type D and Shrubland Type C which is classified as a **“Moderate”** BHL as per WAPC Guidelines, Table 1. This area is proposed for future residential development however the timing of this is unknown and hence will pose a bushfire threat from south and south westerly prevailing winds.

The balance of lot 41 to the east (External to the LSP) will remain unvegetated which has a small section of Forest Type A which is classified as an **“Extreme”** BHL (as per WAPC Guidelines, Table 1), and predominantly Scrub Type D which is classified as a **“Moderate”** BHL as per WAPC Guidelines, Table 1.

To the north is a developed primary school and sports grounds which are classified as **“Low threat vegetation and Non Vegetated areas”** (AS3959-2009), and would be classified as **“Low”** BHL (as per WAPC Guidelines, Table 1). To the west is developed urban areas and a small horticultural lot which are classified as **“Low threat vegetation and Non Vegetated areas”** (AS3959-2009), and would be classified as **“Low”** BHL (as per WAPC Guidelines, Table 1).

Refer to Bushfire Hazard Level Mapping Appendix D.

### **Proposed Subdivision BHL**

The subdivision upon development will be classified as a **Low BHL** such as built areas and managed POS areas. Remnant native vegetation areas external to the site located to the north west, west, south west, east and south will remain vegetated native vegetation, these areas are rated as **“Extreme”** and **“Moderate”** BHL's. Assumptions have been made that the bushfire risks to the east, west and south will remain in perpetuity. This BMP contains information on how the BHL will be either reduced (internal management of land) and managed at the interface of bushfire prone vegetation.

Setback distances of over 100m from native vegetation (Bushfire Prone Vegetation) cannot be achieved for the development. Where 100m cannot be achieved to dwellings from to Bushfire Prone Vegetation, the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) states that Building to Bushfire Attack Levels (BAL) and AS3959-2009 can apply to dwellings to assist in achieving “Acceptable Solutions” to the subdivision. Where a building is located within the State Gazetted Bushfire Prone Area Mapping (OBRM, 2015), the *Planning and Development (Local Planning Schemes) Amendment Regulations 2015* states that building to Bushfire Attack Levels (BAL) and AS3959-2009 is to apply to new dwellings.

The subdivision (and proposed dwellings) will be located within 100m of Bushfire Prone vegetation and is located within the WA State Bushfire Prone Area (SLIP, 2015 & 2016) mapping. The proposal will require assessment to the bushfire protection criteria as per the newly released “Guidelines for Planning in Bushfire Prone Areas” (WAPC, 2015a). These are outlined in **Section 5 – Assessment to Bushfire Protection Criteria**.

## 5. Assessment to Bushfire Protection Criteria

The Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) outlines bushfire protection criteria which subdivisions and development proposals are assessed for compliance. The bushfire protection criteria (Appendix 4, WAPC, 2015) are a performance based criteria utilised to assess bushfire risk management measures and they outline four elements, being:

- Element 1: Location
- Element 2: Siting and Design of Development
- Element 3: Vehicle Access; and ‘
- Element 4: Water

(WAPC, 2015a)

The plan of subdivision for lot 41 Frankland Avenue is required to meet the “Performance Principles” and/or “Acceptable Solutions” of each Element of the bushfire mitigation measures (WAPC, 2015a). The site has been classified as a having a “**Low**” future internal bushfire hazard in the development/building areas, with adjacent “**Extreme**” and “**Moderate**” bushfire hazards (as per WAPC Guidelines, Table 1) due to the presence of Forest Type A, Woodland Type B, Shrubland Type C and Scrub Type D. Effective Slopes under vegetation are variable across the site but generally are flat land or <5 degrees.

The subdivision will be assessed against the bushfire protection criteria Acceptable Solutions for Elements A1, A2, A3 and A4. The following sections of this report outlines how the proposed LSP complies with the bushfire protection criteria Acceptable Solutions as per the Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a).

## 5.1. Element 1: Location

Intent: To ensure that strategic planning proposals, subdivision and development applications are located in areas with the least possible risk of bushfire to facilitate the protection of people, property and infrastructure.

### Assessment to the Acceptable Solutions.

**Acceptable Solution applied A1.1:** the strategic planning proposal, subdivision and development application is located in an area that is or will, on completion, be subject to either a moderate or low Bushfire hazard level, or BAL-29.

The publicly released Bushfire Prone Mapping (SLIP 2015 & 2016) indicates this area as bushfire prone. After completion of the subdivision, not all of the proposed lots and future dwellings are able to be located >100m from Bushfire Prone Vegetation (classified to AS3959). Proposed dwellings which cannot meet >100m setback from AS3959-2009 classifiable vegetation require a Bushfire Attack Level (BAL) and building to AS3959-2009 to apply to the lot (dwelling).

The development upon completion will have areas of internal **Low** bushfire hazard Levels and BAL –Low applied in developed areas of the subject site. The internal designated POS areas (central) are proposed to be low fuel and landscaped areas, which is a Low BHL.

External to the site to the west there will remain an **Extreme BHL** rating due to the presence of adjacent remnant forest contained in Beeliar Regional Reserve. Road widening of Frankland Avenue is proposed and as the BAL Contour Plan Appendix E indicates a BAL of 12.5 can apply to buildings along the western extent of the LSP adjacent to the bushfire fuels in Beeliar Regional Reserve.

To the south a **Moderate BHL** will exist due to remnant woodland, shrubland and scrub vegetation areas in private property (Lot 42 Frankland Avenue). To meet the Acceptable Solution the developer can implement a 20m Low fuel area along the southern boundary separating the bushfire fuels to the south in Lot 42 from the subject site dwellings. To the east the uncleared land of the balance of lot 41 will be separated by a 21m setback either through the maintained POS (refer to Section 5.5.5 for Landscaping treatments) and associated carparking, low fuel areas. This allows BAL 29, BAL 19 or BAL 12.5 to be achieved on any proposed buildings.

The AS3959-2009 construction standard that can apply to the dwellings in the subject site is shown in Table 2 – Minimum Setback Distances and Construction Standards and Appendix E.

**Table 2 – Guide for minimum setback distances and construction standards**

Vegetation Type	Distance to Vegetation and Effective Slope	BAL Rating	Construction
Forest Type A	42-<100m All upslopes and flat land	BAL 12.5	AS3959-2009 to apply
Forest Type A	31m-<42m All upslopes and flat land	BAL 19	AS3959-2009 to apply
Forest Type A	21m-<31m All upslopes and flat land	BAL 29	AS3959-2009 to apply
Shrubland Type C	19m -<100m Downslope >0 to 5 Degrees	BAL 12.5	AS3959-2009 to apply
Shrubland Type C	13m -<19m Downslope >0 to 5 Degrees	BAL 19	AS3959-2009 to apply
Shrubland Type C	9m-<13m Downslope >0 to 5 Degrees	BAL 29	AS3959-2009 to apply
Scrub Type D	27m-<100m All upslopes and flat land	BAL 12.5	AS3959-2009 to apply
Scrub Type D	19m-<27m All upslopes and flat land	BAL 19	AS3959-2009 to apply

(AS3959-2009, Table 2.4.3 FDI 80)

**Notes on BAL Contour Assessment:**

- **Sites will be subject to detailed feature survey and the mapping depicted in the BAL Contour Mapping Appendix E is a guide, with accuracy to within 5m.**
- **Detailed BAL Assessment (Method 1 AS3959-2009) is determined from the existing vegetation at time of feature survey and building construction/approval stages.**
- **Detailed assessment for BAL Construction as described in this document can be undertaken at construction stage/building approval stages by an accredited Level 1 BAL Assessor with approval from the City of Cockburn.**
- **The BAL Contour Plan should be reviewed/updated at any staged construction, changes to the LSP and/or at completion of the development construction.**

**AS3959-2009 disclaimer:** *It should be borne in mind that the measures contained within this Standard (AS3959-2009) cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather condition.*  
(AS3959, 2009)

**Assumptions made in BAL Contour Mapping:**

- The subject site will be cleared in entirety as shown on the LSP.
- Low fuel areas of POS will be maintained as per AS3959-2009 clauses 2.2.3.2 (f) and has been applied to internal POS areas.
- The balance of the lot to the east of the development is subject to further planning and will remain in its current state.
- Lot 42 to the south will remain in current vegetative status.
- Beeliar Regional Reserve will remain in perpetuity as a bushfire hazard to the west.

The subdivision will comply to Acceptable Solution A2.2 by applying a setback associated with BAL construction and AS3959-2009 as outlined in the BAL Contour Map in Appendix E. No higher BAL allocation than BAL 29 is applied to the proposed buildings.

If staged construction is applied the developer will be responsible during staged construction to maintain setbacks from any bushfire hazards to dwellings at all times or building to BAL/AS3959-2009 will apply to the buildings. Refer to Section 5.5.3 for more detail on Staging.

The LSP is deemed to meet A1.1.

**5.1.1. Recommendations arising from assessment to this element**

The recommendations from assessment of the LSP to Element 1: Location:

- LSP development is deemed compliant to A1.1 due to :
- No higher BAL allocation than BAL 29 will apply to buildings upon completion of construction development;
- The developer will be responsible for the implementation of a notification on title pursuant to Section 70A of the Transfer of Land Act 1893 for all lots affected by an increase in construction standards consistent with a BAL rating/AS3959-2009 allocation to the lot, and alerting the prospective owner (s) of the lots and successors in title of the Bushfire Management Plan; and
- A 20m -21m low fuel area is applied in the south western corner and eastern boundary to ensure no higher than BAL 29 applies to the buildings.

## 5.2. Element 2: Siting and design of development

Intent: To ensure that the siting of development minimises the level of bushfire impact.

**Assessment to the Acceptable Solutions** – To achieve compliance with this Element using an Acceptable Solution, either or both acceptable solutions (A2.1 and A2.2) must be met that it satisfies Element 1.

The Acceptable Solutions which will be applied to this subdivision include:

- **A2.1: Asset Protection Zone (APZ):** Every building is surrounded by a 20m APZ (see Section 5.2.2).
- **A2.2 Hazard Separation:** not assessed.

The subdivision will be assessed to the Acceptable Solutions for Element 2 as demonstrated in the following sections.

### 5.2.1. Asset Protection Zones (APZ) (Acceptable Solution A2.1)

#### Acceptable Solutions applied

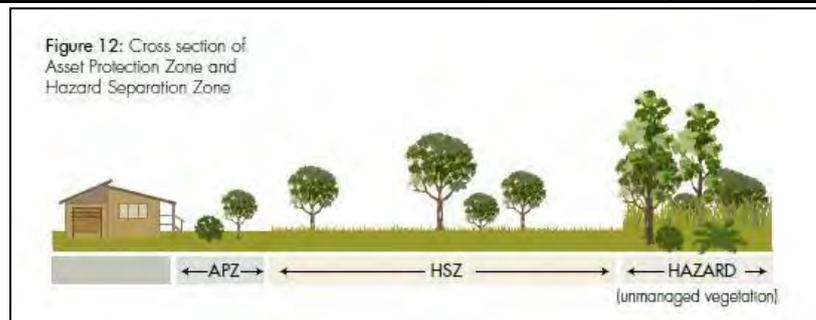
The aim of the Asset Protection Zone (APZ) is a low fuel area immediately surrounding a habitable building, and is designed to minimise the likelihood of flame contact with buildings (WAPC, 2015). APZ will minimise the risk of the building igniting, (thus protecting the occupants), and with the reduced fuel quantities, allow safer and more effective conditions for fire-fighters to contain wildfires. Roads, pathways, lawns, and other low hazard items should be placed within this zone to improve the effectiveness of the zone. The APZ are required in addition to Hazard Separation (see Section 5.2.2).

Every building must be surrounded by a 20 metre wide APZ, this is deemed by WAPC (2015) as the minimum width to be constructed around all buildings as a “defendable zone”. Activity within the APZ (as per WAPC, 2015) for each individual dwelling must meet the following requirements:

- a) Width: 20 metres measured from any external wall of the building or building envelope;
- b) Location: within the boundaries of the lot on which the building is situated;
- c) Fine fuel load: reduced to and maintained at 2 tonnes per hectare;
- d) Trees (crowns) are a minimum of 10 metres apart
- e) Trees are low pruned at least to a height of 2 metres;
- f) No tall shrub or tree is located within 2 metres of a building;
- g) No tree crowns overhang the building;
- h) Fences and sheds within the APZ are constructed using non-combustible materials (e.g. colour bond iron, brick, limestone, metal post and wire); and
- i) Sheds within the APZ should not contain flammable materials.

An example of APZ from the “Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a) is shown in Figure 8.

**Figure 8 – Asset Protection Zone and Hazard Separation Zone (WAPC, 2015)**



All buildings will be required to have a 20-21m APZ area associated with BAL 29 setbacks. To the south of the subject site (Lot 42) require a 20m low fuel area to be implemented to assist in achieving a 20m APZ area inside the parent lot boundary. To the east a 21m setback is required to any building from the subject site boundary to achieve a BAL 29 setback.

Refer to Section 6.5.5 for detail on Landscaping treatments within the LSP area. Refer to the 20m APZ shown on the Bushfire Management Plan Mapping Appendix F.

Upon implementation of APZ areas the subdivision is deemed to be compliant with A2.1.

Long term maintenance information for the homeowner/developer regarding APZ's (formerly called a BPZ) as recommended by DFES is provided in Appendix G.

The subdivision is deemed to be compliant with A2.1.

### **5.2.2.Recommendations arising from assessment to this Element**

The recommendations from assessment of the LSP to Element 2: Siting and design:

- The LSP is deemed to be compliant with Element 2 by:
  - The application of a 20-21m APZ located within the parent lot; and
  - Setbacks associated with BAL 29 or less (AS3959-2009);
- It is recommended that the developer clear all the area within the LSP during development and prior to sale to ensure the APZ and BAL setbacks are demonstrated to the purchaser at time of sale. The APZ areas are to be as per the standards in Section 5.2.1 and these areas are regularly maintained by the developer until all land is relinquished to the new lot owner (s).
- The vegetation clearing required for POS area, street verges and APZ areas does allow for the retention of significant trees, these should be clearly marked for the developer prior to clearing operations on the site and shall be as per the standards of the APZ Section 5.2.1.

### 5.3. Element 3: Vehicular Access

Intent: To ensure that the vehicular access serving a subdivision/development is available during a bushfire event.

#### *Acceptable Solutions applied*

The internal layout of the Subdivision's public roads and private access allows vehicles and other emergency vehicles to move through the subdivision at all times, meeting the Acceptable Solutions. Vehicle access technical standards as outlined in Table 3 are the minimum requirements from Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015). Refer to Table 3 and Bushfire Management Plan Appendix F.

**Table 3 – Vehicular Access Technical Standards**

Technical requirements	Public Road	Cul-de-sacs	Battle Axes & Private Driveways	Emergency Access Ways (EAW)
Minimum trafficable surface (m)	6	6	4	6
Horizontal clearance (m)	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5
Maximum grades	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity(t)	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius(m)	8.5	8.5	8.5	8.5

(WAPC, 2015a)

Assessment of the subdivision to the Acceptable Solutions is outlined in the following sections.

#### **5.3.1. Two access routes (A3.1)**

Central access will be onto Gaebler Road which provides either access to the west to Frankland Avenue (north south access/egress). An Emergency Access Way (EAW) to the south will be required onto Frankland Avenue to give alternative access to the south to a separate destination, refer to Section 5.3.6 for more detail.

With the inclusion of alternative access by a EAW, the LSP is deemed to meet the Acceptable Solution A3.1.

#### **5.3.2. Public roads (A3.2)**

All public roads will be required to meet the minimum grades as per Table 3, column 1. The central road is demonstrated to be 13.5m, meeting this requirement. All internal public roads shall be specified (and meet Table 3) in detailed design drawings for approval by CoC at subdivision stages. The LSP is deemed compliant to Acceptable Solution A3.2.

#### **5.3.3. Cul de Sacs (A3.3)**

Cul-de-sac's are to be avoided in bushfire prone areas the LSP does not give any guidance on cul-de-sacs in the plan, if required these shall be as per the standards in Table 3, column 2. Cul-de-sacs shall not exceed 200m which can be achieved in the LSP. The LSP is deemed compliant to Acceptable Solution A3.3.

#### **5.3.4. Battle Axes (A3.4)**

Battle Axes are to be avoided in bushfire prone areas, the LSP does not give any guidance on battle axes in the plan, if required these shall be as per the standards in Table 3, column 3. Battle axes shall not exceed 600m which can be achieved in the LSP. The LSP is deemed compliant to Acceptable Solution A3.4.

#### **5.3.5. Private Driveways (A3.5)**

Private driveways upon construction will be required to conform to the minimum technical standards as outlined in Table 3, column 3, meeting Acceptable Solutions. The LSP is deemed compliant to Acceptable Solution A3.5.

#### **5.3.6. Emergency Access Ways (A3.6)**

Emergency Access Way (EAW) is not a preferred option in bushfire prone areas however may be used to link roads to allow alternative access and egress during emergencies. As public access may be restricted onto Frankland Avenue through the public road network, an EAW will apply to this development whereby a secondary emergency access onto Frankland Avenue is recommended to the south west. A 20m Low fuel

Zone (i.e. POS) is proposed in the south western corner, this could encompass an EAW which can be gated but not locked. The accommodation of an EAW can be achieved in low fuel areas (i.e. POS) via a linking 6m wide dual use path which is gated and not locked. Sign posting can assist in direction for residents in an emergency bushfire situation (see Section 5.3.8). Refer to Appendix F – Bushfire Management Plan for the location of the EAW. If an EAW is incorporated the LSP is deemed compliant to this Acceptable Solution A3.6.

### **5.3.7. Fire Service Access Routes (A3.7)**

Fire Service Access (FSA) will not apply to this development, access/egress to/from the lots will be via the public road network system. Subdivision upon construction is deemed compliant to this Acceptable Solution A3.7.

### **5.3.8. Individual Fire breaks (A3.8)**

The CC annual *Fire Control Order* states a firebreak as:

*“..an area of land cleared of flammable material, installed to minimise the spread or extension of a bush fire and to provide suitable access for fire fighting vehicles. The standards of a compliant firebreak are as follows:*

*3.1 A Firebreak must be constructed of bare earth, stone, or sealed surfaces and be clear of all flammable materials to create a 3 metre wide trafficable surface;*

*3.2 Maintained lawn may occupy a Firebreak, providing it does not exceed 50mm in height during the Firebreak Time;*

*3.3 Overhanging branches must be pruned to provide a 4 metre vertical clearance above the full width of the Firebreak surface; and*

*3.4 A Firebreak must be a continuous trafficable path for a fire fighting vehicle, clear of any obstructions and must not terminate in a cul-de-sac (dead end)”*

(City of Cockburn, 2016)

The subject site (part Lot 41) is approximately 2000m<sup>2</sup> and until it is developed into urban land will be required to be maintained as per the current CoC Fire Control Order, which states:

*“All property (vacant or developed) – less than 2032m<sup>2</sup>*

*To reduce the fire hazard on your land and to comply with the requirements of this Fire Control Order you are required to;*

*1.1 Have all flammable materials such as long dry grass and weeds slashed, mown or trimmed down by other means to a maximum height of 50mm across the entire property for the duration of this Firebreak Time; and*

*1.2 Remove all dead vegetation”*

(City of Cockburn, 2016)

Please refer to the CoC “Fire Control Order” for detail, this is updated annually and the current versions should be obtained from the City of Cockburn website:

<http://www.cockburn.wa.gov.au>

A variation of the firebreak order can occur through documentation of this BMP and approval of the BMP from CoC. As the LSP area will be separated from the parent lot 41 and managed in isolation from the eastern portion of lot 41, firebreaks are recommended along the eastern and southern boundary until the land is approved for development and construction occurs. It is proposed where the subject site adjoins a public road that a firebreak is not required (i.e. Gaebler Road and Frankland Avenue). As per the CoC specification all firebreaks are to be a hardened surface, given the sandy nature of the site imported gravel will be required to meet this specification.

Upon approval of the LSP firebreaks are recommended until the land is developed as shown in the BMP Appendix F. Upon approval of this BMP and implementation of the firebreak as shown in the BMP Appendix F,

### 5.3.9. Signage and Gates on the EAW

The EAW onto Frankland Avenue will have signage so it is clear to the persons evacuating there is a route to access/egress in an emergency. Any new signage shall be to the DFES and CoC recommended wording for signage as appropriate:

- 'Emergency Access Only'.

The signage shall meet the following standards:

- Minimum height above ground level 0.9 metres;
- Design and construction to be approved by relevant local government; and
- Lettering height 100mm.

Signage is recommended from the internal road network directing persons to the EAW. This should be located as per the Bushfire Management Plan Appendix G. An example of signage which clearly outlines the EAW route off the internal road network is shown below in Photograph 17.



**Photograph 17** – Example of street signage for alerting resident to Emergency Access Way.

The developer will be responsible for the cost and implementation of signage, the long term maintenance of any bushfire management signage will be the responsibility of the CoC.. Refer to Bushfire Management Plan Appendix F for location of signs.

If gates are proposed along the EAW, an example of a gate over a dual use path is shown below in Photograph 18 below.



**Photograph 18** – Example of an EAW gated, but not locked and signposted for Emergency Access Way.

The gate is not to be locked and will be required to meet minimum requirements wide enough to accommodate 3.4 Heavy Duty Fire Appliances.

Gate standards will be as follows:

- Minimum width 3.6 metres;

- Approved by the CoC; and
- Not locked for Emergency Access.

#### **5.3.10. Recommendations arising from assessment to this element**

The recommendations from assessment of the LSP to Element 3: Vehicular Access:

- Is deemed compliant with Element 3 as it meets the Acceptable Solutions as outlined A3.1 to A3.8;
- The developer implements the vehicular construction standards as outlined in Table 3;
- Engineering construction details on the road network particularly to meet maximum allowable grades is provided to the CoC prior to construction of each development stages.
- Fire breaks as per the requirements in the CoC Fire Control Order and as outlined in this BMP maintained by the owner until the land is developed into urban land (annually updated).

#### 5.4. Element 4 Water

Intent: To ensure that water is available to the subdivision, development or land use to enable people, property and infrastructure to be defended from bushfire.

##### *Acceptable Solutions Applied*

##### **5.4.1.Reticulated areas (A4.1)**

The development will be provided with reticulated scheme water in accordance with the specifications of the relevant water supply authority (Water Corporation WA (WCWA)) and DFES requirements. This will be detailed in the detailed engineering drawings and be subject to approval from WCWA and DFES at subdivision condition stages, meeting the Acceptable Solution. Fire hydrant (street) outlets are required, these must be installed to WCWA standards installed in accordance with the *Water Corporation's No 63 Water Reticulation Standard* and are to be identified by standard pole and/or road markings and installed by the Developer.

Subdivision upon construction is deemed compliant to this Acceptable Solution.

##### **5.4.2.Non-reticulated areas (A4.2)**

The subdivision will be connected to reticulated water, therefore water tanks will not be required, assessment to A4.2 not required.

##### **5.4.3.Individual lots within non-reticulated areas**

The subdivision will be connected to reticulated water, therefore water tanks will not be required and assessment to A4.3 not required.

##### **5.4.4.Recommendations arising from assessment to this element**

The recommendations from assessment of the LSP to Element 4: Water:

- Is deemed compliant with Element 4 through the provision of reticulated water to the development which will be detailed in the engineering drawings at development stages; and
- Fire hydrant (street) outlets are required, these must be installed to WCWA standards installed in accordance with the *Water Corporation's No 63 Water Reticulation Standard* and are to be identified by standard pole and/or road markings and installed by the Developer.

## 5.5. Other Bushfire Risk Mitigation measures

### 5.5.1. Evaporative Air Conditioners

Evaporative air conditioning units can catch fire as a result of embers from bushfire getting into the unit. These embers can then spread quickly through the home causing destruction. It can be difficult for fire-fighters to put out a fire in the roof spaces of homes. Information on Evaporative air conditioners is supplied in Appendix G of this document.

It is also recommended that home owners:

- Ensure that suitable external ember screens are placed on roof top mounted evaporative air conditioners compliant with AS3959-2009 (current and endorsed standards) and that the screens are checked annually; and
- Maintain evaporative air conditioners as per DFES guidance note provided Appendix G.

### 5.5.2. Barrier fencing

In November 2010 the Australian Bushfire CRC issued a "Fire Note" (Bushfire CRC, 2010) which outlined the potential for residential fencing systems to act as a barrier against radiant heat, burning debris and flame impingement during bushfire. The research aimed to observe, record, measure and compare the performance of commercial fencing of Colourbond steel and timber (treated softwood and hardwood).

The findings of the research found that:

*".. Colourbond steel fencing panels do not ignite and contribute significant heat release during cone calorimeter exposure"* (exposure to heat)

*.."Colourbond steel (fencing) had the best performance as a non-combustible material. It maintained structural integrity as a heat barrier under all experimental exposure conditions, and it did not spread flame laterally and contribute to fire intensity during exposure"*

Residents will be encouraged to build Colourbond or non combustible fences in bushfire prone areas through dissemination of the CRC information "Fire Note" (Issue 70, Bushfire CRC, 2010) by the developer. It is also noted that non-combustible fences are recommended by WAPC refer to Section 6.2.1 of this document (APZ standards: Fences and sheds within the APZ are constructed using non-combustible materials (e.g. colour bond iron, brick, limestone, metal post and wire).

### 5.5.3. Staging

If the LSP possibly going to be staged from the north western corner, staged development will incorporate the following:

- Incorporation of "Low fuel zone" minimum of a 20m APZ area adjacent to any lots/proposed dwellings. To be implemented by the developer and maintained at all times adjacent to the staged construction.
- All internal grassland POS and low fuel areas are to be maintained to <50mm in height to ensure that these areas remain as classified Low fuel areas (as per AS3959-2009, clause 2.2.3.2 (f));
- Provide the CoC prior to each subdivision stage and/or release of lots with an update of the BAL Contour Plan (if required) indicating any increased construction requirements in accordance with AS3959-2009 Construction of Buildings in Bushfire Prone Areas (current and endorsed standards);
- Maintenance of fire breaks/lot fuels as required by the CoC until the lots are relinquished to new lot owners; and
- Depending on the timing of the future stages, a review of the endorsed Bushfire Management Plan is recommended every 3-5 years and will be the responsibility of the developer until the issue of final approval/clearances from CoC/WAPC.

### 5.5.4. Reduction in Construction through Shielding

"Shielding" as defined by AS3959-2009 is the reduction in construction requirements (for an individual building) for the next lower BAL than determined for the site (individual dwelling) and may be applied to an elevation of a building where the elevation is not exposed to the source of the bushfire attack (AS3959-2009). Shielding applies where the an elevation of a building is not deemed to be exposed to the source of the bushfire attack due to other parts of the individual building obstructing the source of the bushfire attack.

Give the bushfire source is from the east, west and south, buildings in the northern area of the LSP could possibly apply shielding whereby a lower BAL is applied to the northern elevations of a building. This would need to be assessed at building approval stages and be undertaken by an Accredited Level 1 BAL Assessor.

**5.5.5.Landscaping and streetscaping treatments**

Landscaping and streetscaping areas subject to similar standards that apply to the APZ and the following minimum standards shall apply:

- Trees (crowns) a minimum of 10m apart (no continuous crowns);
- Trees should have no dead material within the plant’s crown or on the bole;
- Fuel reduced to <2t/ha;
- Woodchip mulching to be small chips and low fuel in nature, compacted and no deeper than 250mm uniform depths; and
- Shrubs should be no higher than 0.5 m.

A concept POS landscaping plan is presently being developed an example of the POS landscaping is shown below in Photograph 22 on how to meet the above requirements to not increase the internal bushfire hazard.



**Photograph 17:** View of example of POS area in Baldivis with significant trees retained. .

**5.5.6.Information relating to BAL and AS3959-2009**

Bushfire Attack Level (BAL) is the process in AS39598-2009 for measuring the severity of a building’s potential exposure to ember attack, radiant heat and direct flame contact. The threat or risk of bushfire attack is assessed by an accredited BAL Assessor. BAL rating determinations are of 6 levels BAL-LOW, BAL-12.5, BAL-19, BAL-29, BAL-40, BAL FZ. Building is generally not recommended in BAL-40 or BAL-FZ areas. The BAL rating is determined by the distance of the building to vegetation, slope and vegetation type adjacent to the dwelling. Refer to Figure 9 below.

**Figure 9 - - BAL Construction levels in context**



(WAPC, 2015a)

Building design and construction to AS3959-2009 is a standard primarily concerned with improving the ability of buildings in designated bushfire prone areas to better withstand attack from bushfire thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself. The construction standards outlined in AS 3959-2009 provide reference to specific items of building and it is recommended that the future lot owner discuss these in detail with their builder or architect. Table 4 outlines some of the construction consideration to AS3959-2009 when building in bushfire prone areas. Construction standards are to be approved by the CoC prior to construction. Building to AS3959-2009 applies to buildings as defined in the Building Code of Australia (BCS).

**Table 4 – AS3959-2009 Construction Requirement (Example)**

<b>Construction requirement AS3959-2009</b>
Flooring systems
Supporting posts, columns, stumps, piers and poles
External Walls
Windows
External Doors
Vents and weep holes
Roof
Eaves
Fascia's
Gutters and downpipes
Veranda and decks
Service Pipes (water and gas)

## 6. Individual Bushfire Survival Plan

### 6.1. Homeowner Protection

It is the responsibility of homeowners to protect their property from fire. DFES have readily available information online which can assist homeowners in their preparedness during fire season (October to May). The DFES website “**Bushfire Preparedness – Prepare. Act. Survive.**” (DFES, 2014) should be accessed by all owners in bushfire prone areas. A hard copy of the A4 book “Prepare. Act. Survive” can be found at local City of Cockburn Offices or DFES offices, or downloaded off the above web address:

<http://www.dfes.wa.gov.au>

### 6.2. Bushfire Plan

Residents should prepare their own individual fire plans, as they need to make a commitment to develop a bushfire survival plan detailing preparations and actions to take if a bushfire threatens.

*“Before summer starts you need to decide what you will do if a bushfire threatens. If you live or work in a bushland area you need to **prepare** your home, family or business and have a plan so you can **act** to make sure you **survive**.” (DFES 2010).*

## PREPARE. ACT. SURVIVE.

Preparing yourself, your family and your home is your responsibility.  
The more you prepare your home the better the chance it will  
survive a fire, even if you are not there.

(DFES, 2014)

When developing a bushfire survival plan, the following should be considered:

- If you plan to leave for a safer place - where will you go and how will you get there? Your safer place could be with friends and family, and may not be far away. Know where you will go and never ‘wait and see’. Relocating at the last minute can be deadly
- Does your household include elderly relatives, young children, people with disabilities or illness? When, where and how will they be relocated? Who will care for them?
- What will you do with your pets and livestock?
- Can your home be defended? Is it in a location that makes it difficult or dangerous to actively defend? (refer to DFES’s Homeowners Bushfire Survival Manual - PDF)
- Will your home provide shelter if you have to or decide to stay?
- Are you capable of defending your home without the support of fire fighters?
- Do you have the skills, knowledge and capacity to check for and put out Spot fires for up to ten hours after the fire front has passed?
- Do you have the right equipment and resources to actively defend? (e.g. sufficient independent water supply of at least 20,000 litres and a petrol, diesel or generator powered pump capable of pumping 400 litres per minute)
- Will you cope with the noise and stress of a bushfire if you decide to actively defend? Being in a bushfire may be the most traumatic experience of your life.

(from DFES website, 2013)

By compiling information as outlined above, the individual lot owner can be prepared for their response in a bushfire emergency. Home owners should not rely on emergency personnel to attend their home and thus it is stressed to **prepare an individual bushfire emergency plan** regarding their intentions and property. This Bushfire Management Plan is **not** an individual bushfire emergency plan.

As noted in Section 6.0 of this report, building to AS3959-2009 is a standard primarily concerned with improving the ability of buildings in designated bushfire prone areas to better withstand attack from bushfire thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself.

**AS3959-2009 disclaimer:** *It should be borne in mind that the measures contained within this Standard (AS3959-2009) cannot guarantee that a building will survive a bushfire event on every occasion. This is*

substantially due to the unpredictable nature and behaviour of fire and extreme weather condition. (AS3959, 2009)

Information is also available on the City of Cockburn's website and the ABC Radio website to guide homeowners in the event of a fire emergency, such information includes:

Planning for an Emergency Bushfire:

- Survival Kit
- Fire Emergency Services
- Before a Bushfire
- During a Bushfire
- After a Bushfire

Refer to the following links for more information on how to prepare a bushfire plan:

<http://www.cockburn.wa.gov.au/>

and

<http://www.abc.net.au/news/emergency/?ref=front-page-slider-v2--emergencies>

It is also recommended that homeowners in bushfire prone areas understand the DFES Bushfire Warning System. A brief outline is given below, however further detail should be sought from DFES website ([www.dfes.wa.gov.au](http://www.dfes.wa.gov.au)) in a bushfire emergency.

### **Bushfire Warning System**

*During a bushfire, emergency services will provide as much information as possible through a variety of channels.*

#### **Community Alerts**

*DFES issues Community Alerts for bushfires that threaten lives and property.*

*The alert level changes to reflect the increasing risk to your life and the decreasing amount of time you have until the fire arrives. DFES issues the following bushfires warnings:*

- **Advice**  
*A fire has started but there is no immediate danger, this is general information to keep you informed and up to date with developments.*
- **Watch and Act**  
*A fire is approaching and conditions are changing, you need to leave or prepare to actively defend to protect you and your family.*
- **Emergency Warning**  
*You are in danger and you need to take immediate action to survive as you will be impacted by fire. An emergency warning may be supported with a siren sound called the Standard Emergency Warning Signal (SEWS).*
- **All Clear**  
*The danger has passed and the fire is under control, but you need to remain vigilant in case the situation changes. It may still not be safe to return home.*

([www.dfes.wa.gov.au](http://www.dfes.wa.gov.au))



## 7. Summary

### 7.1. Overall Fire Threat

Broadvision Pty Ltd through Terranovis Pty Ltd (“the Client”) commissioned Bio Diverse Solutions (Bushfire Consultants) to undertake a bushfire hazard assessment and prepare a Bushfire Management Plan to guide all future fire management as part of the planning process for a Local Structure Plan (LSP) at part lot 41 Frankland Avenue Hammond Park. The LSP is required to meet the “Performance Principles” and/or “Acceptable Solutions” of each Element for bushfire mitigation measures (WAPC, 2015). The LSP has been assessed against the Acceptable Solutions of Guidelines for Planning in Bushfire Prone areas (WAPC, 2015a).

The subject site has been classified as having a “Low” future internal BHL in the developed urban land and POS areas. Adjacent to the LSP “Extreme” and “Moderate” BHL’s (as per WAPC Guidelines, Table 1) exist to the west, south and east. The Extreme and Moderate ratings are due to the presence of classifiable vegetation to AS3959-2009, being Forest “Type A”, Woodland “Type B”, “Shrubland Type C” Scrub “Type D” and Grassland Type G vegetation. The subject site is located on a southern facing slope with effective slopes under classifiable vegetation being either upslope or between >0 to 5 degrees within 100m of the proposed LSP area.

The LSP was assessed against the bushfire protection criteria Acceptable Solutions for Element A1, A2, A3 and A4 found that the LSP complies with the bushfire protection criteria as per the newly released Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015a).

A summary includes:

- The LSP is deemed to be compliant with Element A1 – Location, see Section 5.1;
- The LSP is deemed to be compliant with Element A2 - Siting and Design, see Section 5.2;
- The LSP is deemed to be compliant with Element A3 – Vehicular Access, see Section 5.3; and
- The LSP is deemed to be compliant with Element 4 - Water (Element), see Section 5.4.

BAL and ASS3959-2009 has been applied to the lots located within the state wide Bushfire Prone Area Mapping (SLIP 2015 & 2016). This BMP report provides details of the fire management strategies proposed to be implemented across the site as it is subdivided and developed to ensure adequate protection of life, property and biodiversity assets. To ensure the mitigation measures are implemented responsibilities are outlined in the following sections for the Future Lot Owner, Developer and CoC.

### 7.2. Future Lot Owners Responsibility

***It is recommended the Future Property Owners shall be responsible for the following:***

- To take measures to protect their own assets on their property;
- Implement this document, the endorsed Bushfire Management Plan covering the LSP area in part Lot 41 Frankland Avenue Hammond Park, as it applies to their individual property;
- Ensure that APZ’s are maintained to a minimum of 20 metres around all buildings as per DFES and Planning for Bushfire Protection Guidelines (Section 6.2.1 and Appendix G of this document);
- Where a lot has been identified as requiring an increased construction standard (i.e. BAL/AS3959-2009) ensure that the design and construction of any building is compliant with the requirements of AS3959-2009 (current and endorsed standards);
- Detailed individual BAL assessment may be undertaken by the individual lot owner through the engagement of an Accredited BAL Assessor.
- It should be noted by individual lot owners in the LSP area, updates may occur to the BAL Contour Plan (appendix E) may occur during the development and the latest BAL Contour plan should be consulted prior to lodgement for Building Approval.
- Maintaining the property to minimise bushfire fuels and mitigate the risk of fire in accordance with CoC annual Fire Control Notice;
- Ensuring that they comply with requirements of 6.5.1 of this BMP and suitable external ember screens are placed on roof top mounted evaporative air conditioners compliant with AS3959-2009 (current and endorsed standards) and that the screens are checked annually;
- Lot owners are encouraged to build Colourbond or non combustible fences in bushfire prone areas as per Section 5.5.2 of this BMP;
- Each lot owner is aware of:
  - The endorsed and approved Bushfire Management Plan,
  - A hard copy of the A4 book “Prepare. Act. Survive”,

- Fire Control Order as supplied by the City of Cockburn (annual updated advice brochure); and
- Future modifications other than requirements as set out in this Bushfire Management Plan can only be done with written agreement from the CoC.

### 7.3. Developers Responsibility

Prior to development being given final approval by the City of Cockburn, the Developer shall be required to carry out works that include the following but in respect to individual stages of development. Subsequent to the issue of final approval, the Developer shall have no further responsibilities to the provision of fire fighting facilities and fire management on individual lots that pass from their ownership.

***It is recommended that the Property Developer shall be responsible for the following:***

- Implement the endorsed Bushfire Management Plan of part lot 41 Frankland Avenue Hammond Park as it applies to their development;
- Comply with standards as outlined by the CoC and WAPC LSP approvals process;
- Ensure that new property owners are aware of the endorsed and approved Bushfire Management Plan;
- Comply with minimum subdivision construction standards as outlined by this Bushfire Management Plan;
- Clear and maintain any APZ and setbacks to buildings as per DFES and Planning for Bushfire Protection Guidelines (as outlined in this plan) until the land is relinquished to new lot owners (see Section 5.2.1 and Appendix G for standards);
- When the land is cleared, maintain internal areas/grasslands to <100mm in height at all times;
- Maintaining the subject site to minimise bushfire fuels and mitigate the risk of bushfire in accordance with the CoC Fire Control Order (yearly advise brochure updated annually) until the land is relinquished to new lot owners;
- Implement a notification on title pursuant to section 70A of Land Act 1893 of lots affected by an increase in construction standards consistent with BAL rating/AS3959-2009 alerting owners of the lot and successors in title of the Bushfire Management Plan;
- Modify this Bushfire Management Plan to accord with any changes to the applicable staged construction, a review is relevant between 3-5 years;
- Construct access to meet Acceptable Solutions with minimum standards outlined in Table 3, this shall be detailed in engineering drawings to be approved by the CoC.

**Table 3 – Vehicular Access Technical Standards**

Technical requirements	Public Road	Cul-de-sacs	Battle Axes & Private Driveways	Emergency Access Ways (EAW)
Minimum trafficable surface (m)	6	6	4	6
Horizontal clearance (m)	6	6	6	6
Vertical clearance (m)	4.5	N/A	4.5	4.5
Maximum grades	1 in 10	1 in 10	1 in 10	1 in 10
Minimum weight capacity(t)	15	15	15	15
Maximum crossfall	1 in 33	1 in 33	1 in 33	1 in 33
Curves minimum inner radius(m)	8.5	8.5	8.5	8.5

(WAPC, 2015a)

- Provide reticulated water supply to the LSP as per WACW standards;
- If the LSP is staged, undertaking works as recommended in Section 5.5.3 of this BMP;
- Provide each prospective owner with:
  - The endorsed and approved Bushfire Management Plan,
  - A map upon completion of construction outlining BAL/AS3959-2009 applicable to individual lots (note this may be updated from the one supplied in Appendix E of this plan); and
  - A hard copy of the A4 book “*Prepare. Act. Survive*”.

### 7.4. City of Cockburn Responsibility

At approval and endorsement of this Bushfire Management Plan, the City of Cockburn has statutory control and responsibility to ensure that aspects of the Plan and community fire safety are maintained.

***It is recommended the City of Cockburn be responsible for the following:***

- Provide advice on standards and methods to achieve community fire protection to owners/occupiers of land through issue and enforcement of the current CoC Fire Control Notice (yearly advice brochure updated annually);
- Ensuring compliance with this Bushfire Management Plan with regard to any related conditions of LSP/subdivision approval;
- Developing and maintaining district Fire Fighting Facilities and related infrastructure; and
- Maintaining public roads consistent with the standards this Bushfire Management Plan and as outlined as the minimum standards in the Guidelines for Planning in Bushfire Areas (WAPC, 2015a)

8. Checklist for compliance to and Guidelines for Planning in bushfire Prone Areas and State Planning Policy 3.7

8.1. Checklist to Compliance to Guidelines for Planning in Bushfire Prone Areas

The following checklist has been developed by Bio Diverse Solutions in response to the bushfire protection criteria as outlined in the recently released Guidelines for Planning in Bushfire Prone Areas.

Checklist for proposal compliance and justification to Guidelines for Planning in Bushfire Prone Areas (2015) )			
<b>BDS Project Name</b>	BMP part Lot 41 Frankland Avenue Hammond Park		
<b>BDS Job Number</b>	TER012		
<b>Date</b>	16/5/2016	<b>WAPC#</b>	n/a
<b>Client name</b>	Broadvision Pty Ltd	<b>Condition #</b>	n/a
<b>Bushfire Prone Area</b>	Yes	<b>Mapping</b>	Yes see App A
<b>Planning proposal</b>	Local Structure Plan	<b>Lots created</b>	Not defined
1. Bushfire Protection Criteria Acceptable Solutions as defined by Guidelines for Planning for Bushfire Prone Areas (WAPC 2015).			
Element	Compliant to Acceptable Solution– Yes/No	Justification	
<b>Element 1 – Location</b>	Yes	LSP area will be classified as low upon construction. Buildings built to BAL and AS3959-2009, no higher building than BAL 19. <b>LSP meets Acceptable Solution.</b>	
<b>Element 2 - Siting and design of development</b>	Yes	A2.1: APZ can be achieved within the LSP, implementation of 20m low fuel area in southern boundary and 21m along eastern boundary. <b>LSP meets Acceptable Solution.</b> A2.2 Not assessed to this element	
<b>Element 3 - Vehicular access</b>	Yes	A3.1: Access onto Gaebler Road, meets A3.1 if an EAW approved onto Frankland Avenue. A3.2 Public roads to meet minimum grades A3.3 Cul-de-sacs to meet minimum grades A3.4 Battle axes to meet minimum grades A3.5 Private Driveways to meet minimum grades A3.6 EAW in south west to Frankland Avenue A3.7 FSA not required A3.8 Firebreaks/low fuel areas compliant to CoC requirements and implementation of firebreak as per the BMP. <b>LSP meets Acceptable Solution(s).</b>	
<b>Element 4 – Water</b>	Yes	Reticulated scheme water proposed. <b>LSP meets Acceptable Solution.</b>	
<b>Bushfire Hazard Assessment required</b>	Yes	See Section 5 and Appendix D of BMP.	
<b>BAL Contour required</b>	Yes	See Section 6 and Appendix E of BMP.	
<b>BMP required</b>	Yes	This BMP document assessed the proposal in detail to the bushfire protection criteria.	

## 8.2. Recommendations/conclusions based on above checklists

A summary of the recommendations within this report is supplied below. This also forms the “upfront” and “ongoing” tasks which need to be completed for this project.

- An updated BMP be produced when future planning has been undertaken for future planning stages if required or the LSP is modified in subsequent planning stages.
- Implementation of responsibilities of the developer (Section 8.3) will be undertaken by the developer/client via formal endorsement/release of this BMP plan. Agreeance to the responsibilities as outlined in Section 8.3 of this BMP is accepted by the developer/client by the provision of this document to approving agencies.
- Implementation of the responsibilities of the developer (Section 8.3) will not occur by the developer until a formal written approval/endorsement is given from the approving agency regarding the endorsed BMP.
- In the event the property passes ownership to a subsequent developer/owner the implementation of the endorsed/approved BMP (Section 8.3) should be the responsibility of the new title owner.
- The developer will be responsible for the implementation of a notification on title pursuant to Section 70A of the Transfer of Land Act 1893 for all lots affected by an increase in construction standards consistent with a BAL rating/AS3959-2009 allocation to the lot, and alerting owner (s) of the lots and successors in title of the Bushfire Management Plan.
- The BAL Contour Plan (Appendix E) is prepared at a point in time and it is recognised by Bio Diverse Solutions that the landscape may change post LSP construction and over time. It is therefore recommended that a review of the BAL Contour Plan is undertaken post construction stages and prior to subdivision clearance stages; and/or the map is over 3 years from date of production and, if required, an updated BAL Contour Plan is provided to the CoC prior to conditional clearance of the bushfire management issues.
- Individual BAL assessments may be required on the lots by the new owners and can be considered at building approval stages with the engagement of an Accredited Level 1 BAL assessor.

Based on the above recommendations, Bio Diverse Solutions recommend the proposed subdivision can occur as documented in this BMP Plan. The BMP plan does not give recommendations in regards to detailed environmental (flora, fauna, soil etc) plans, town planning, engineering – civil, structural or building and feature survey requirements, these considerations would need to be addressed through other suitably qualified practitioners.

## 9. References

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Western Australian Planning Commission (WAPC) (2015a) Guidelines for Planning in Bushfire Prone Areas. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.

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<https://maps.slip.wa.gov.au/landgate/bushfireprone/>

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## Appendices

**Appendix A – Location Mapping**

**Appendix B –Subdivision Guide Plan**

**Appendix C - Vegetation Classes Map**

**Appendix D – Bushfire Hazard Mapping**

**Appendix E- BAL Contour Plan**

**Appendix F – Bushfire Management Plan**

**Appendix G- DFES Information for Homeowners**

**Appendix A**

Location Mapping



**Legend**

-  Subject site
-  100m Assessment boundary
-  Cadastre

SCALE  
1:1,500 @ A3  
MGA GDA 94  
Zone 50



This BAL Contour Plan was prepared by:  
Kathryn Kinnear, Bio Diverse Solutions  
Accreditation No: BPAD30794  
Valid to: Feb 2017  
Jurisdiction: Level 1 - WA



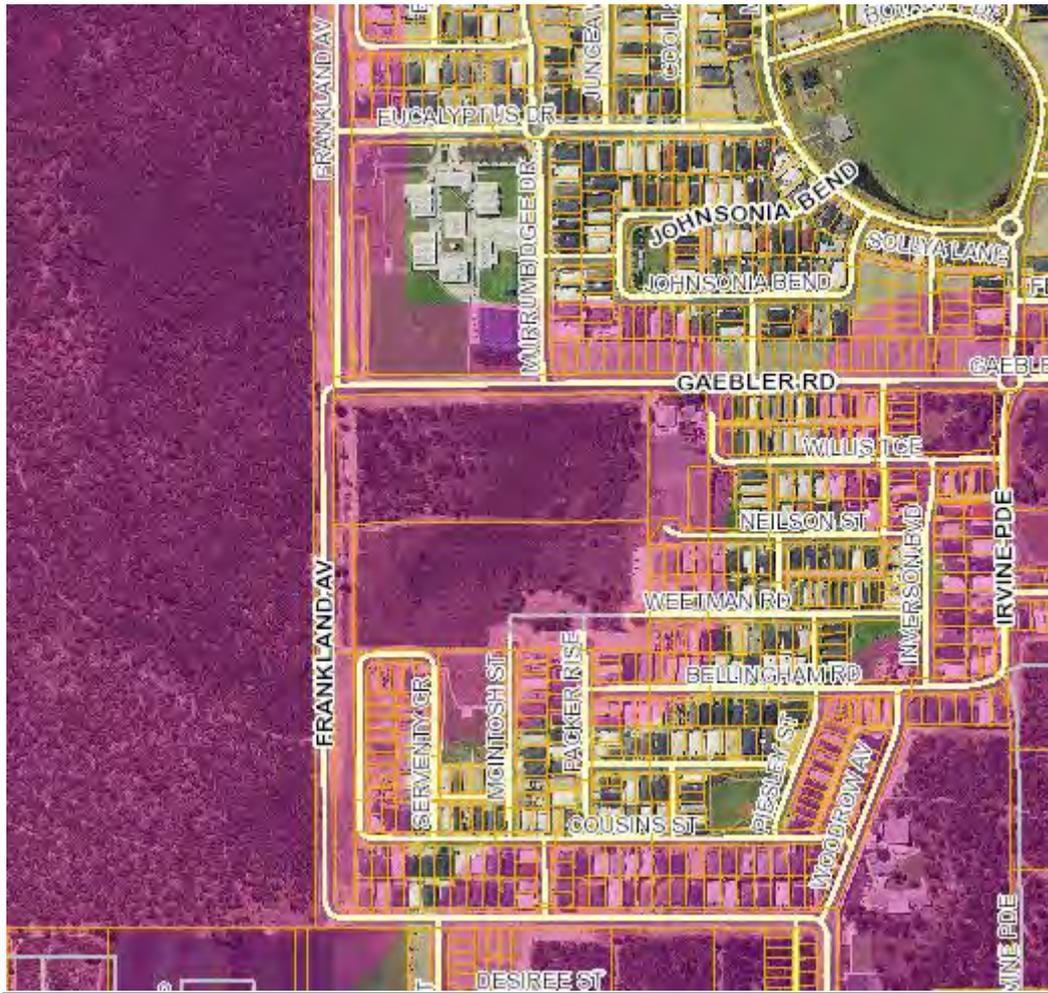
Unit 5A, 209 Chester Pass Road  
Albany, WA 6330  
Australia  
Tel: 08 9842 1575  
Fax: 08 9842 1575

**CLIENT** Broadvision  
C/o Terranovis  
41 Frankland Avenue  
Hammond Park

**Location Mapping**

STATUS	FILE	DATE
FINAL	TER012	9/12/2016

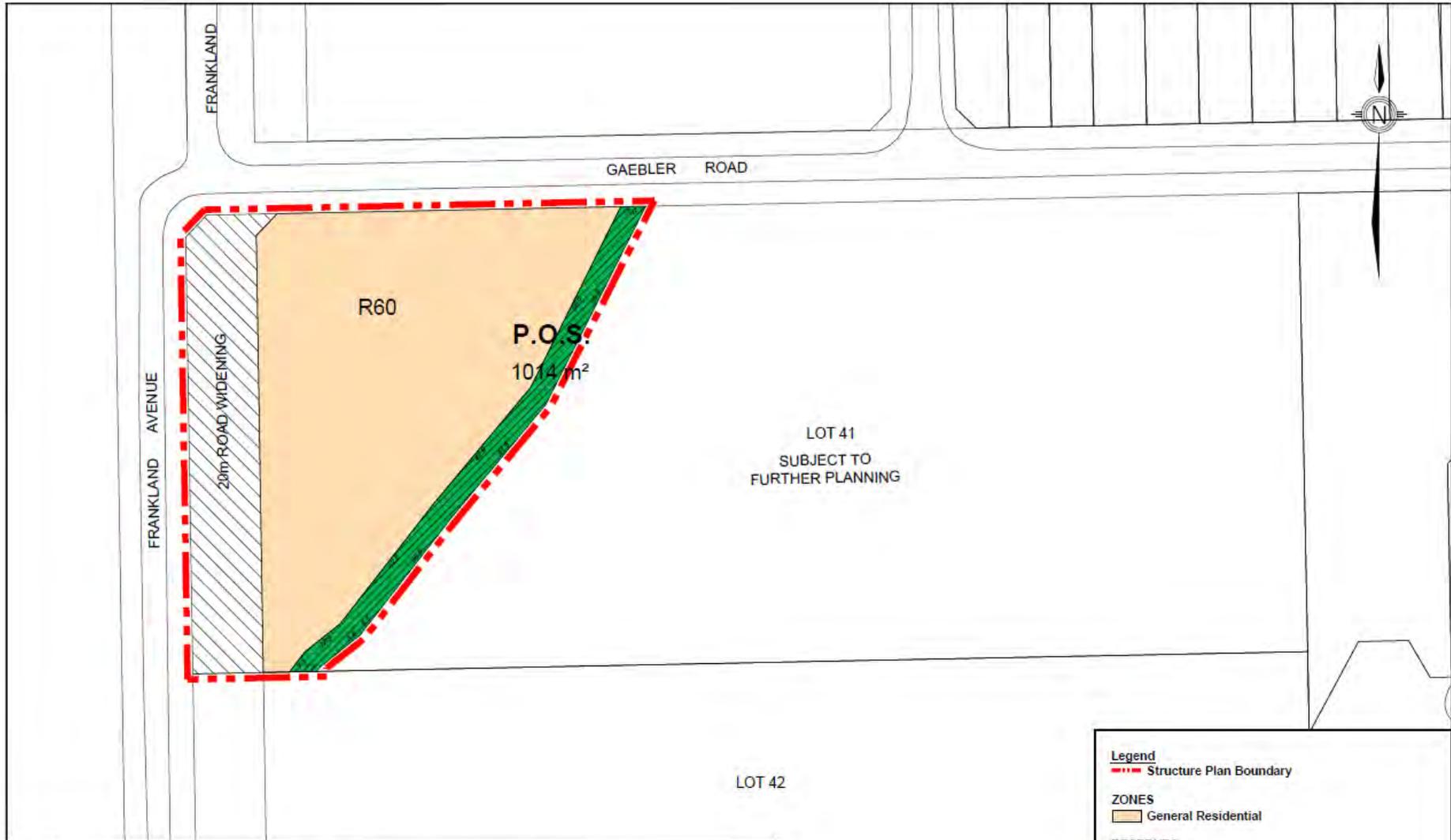
**OBRM BUSHFIRE PRONE MAPPING 7/12/15**



<https://maps.slip.wa.gov.au/landgate/bushfireprone/>

**Appendix B**

Local Structure Plan



**Legend**

- Structure Plan Boundary

**ZONES**

- General Residential

**RESERVES**

- Public Open Space

Source Information:  
 Site boundaries: Landgate/Whelans  
 Adjoining information: Landgate

<b>PROJECT</b>		<b>LOT 41 FRANKLAND AVENUE HAMMOND PARK</b>	
Job Ref.	131336-1	Date	10 NOVEMBER 2016
Comp. By.	LCFV	DWG Name.	131336-1-001e.dwg
Locality	HAMMOND PARK	Local Authority	CITY OF COCKBURN

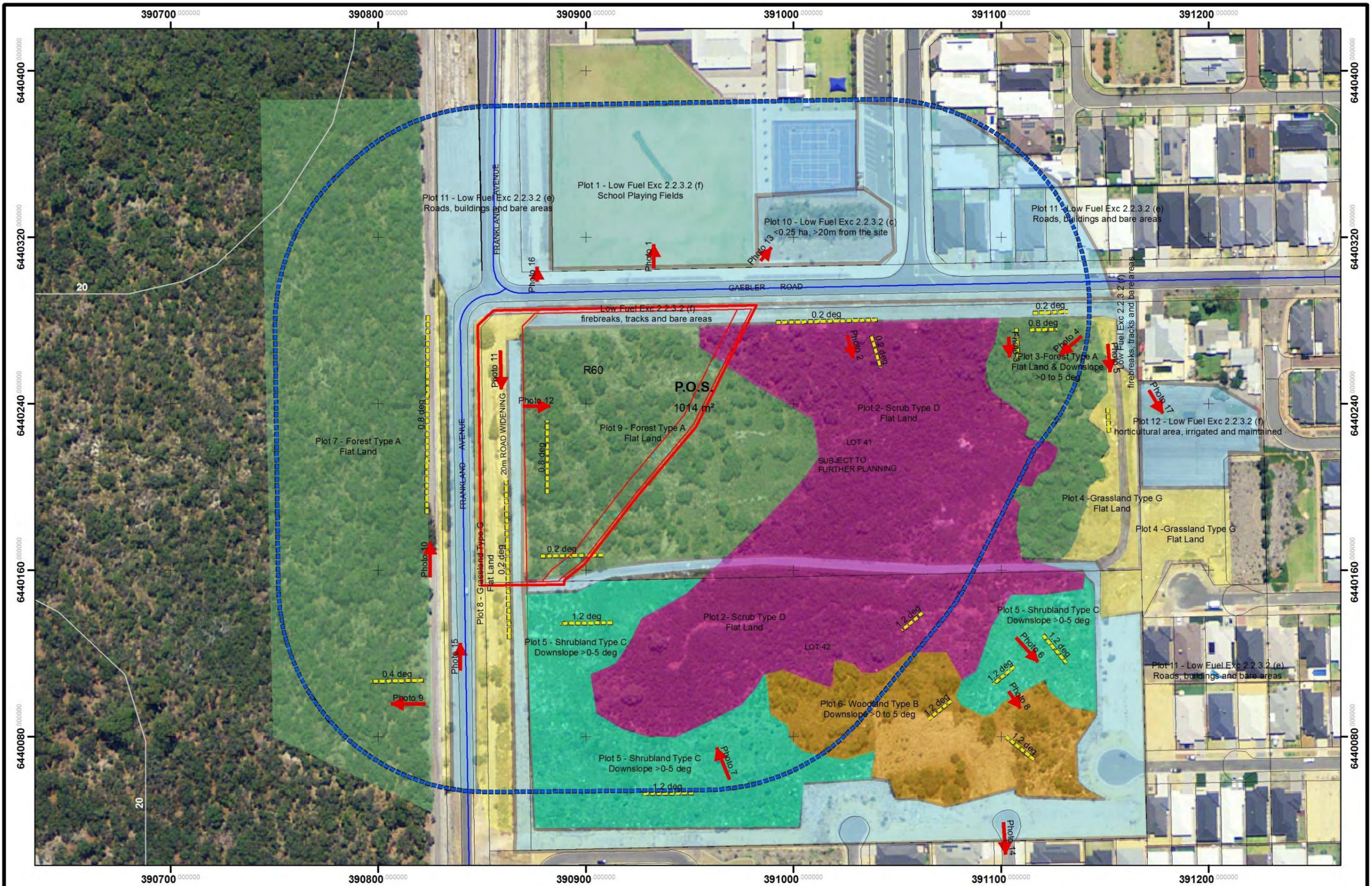
CLIENT	<b>BROADVISION PROJECTS PTY LTD</b>
<b>STRUCTURE PLAN MAP</b>	

	RPS Australia East Pty Ltd ACN 140 282 762 ABN 44 140 282 762		Level 2, 27-31 Troode Street West Perth WA, Australia, 6005 PO Box 170, West Perth WA 6872				
	©COPYRIGHT PROTECTS THIS PLAN Unauthorized reproduction or amendment not permitted. Please contact the author.		T+61 8 9211 1111 F+61 8 9211 1122 W rpsgroup.com.au				
Scale	1:1000	Sheet	A3	Plan Ref	<b>131336-1</b>	Rev	<b>E</b>



**Appendix C**

Vegetation Classes Map



**Legend**

- Subject site
- 100m Assessment boundary
- 5m Contours
- Photo points
- Slope degrees
- Forest Type A
- Woodland Type B
- Shrubland Type C
- Scrub Type D
- Grassland Type G
- Low Fuel Exc 2.2.3.2
- Cadastre

SCALE  
1:1,750 @ A3  
MGA GDA 94  
Zone 50

0 10 20 40 60 80 100 Meters

This BAL Contour Plan was prepared by:  
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Valid to: Feb 2017  
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Tel: 08 9842 1575  
Fax: 08 9842 1575

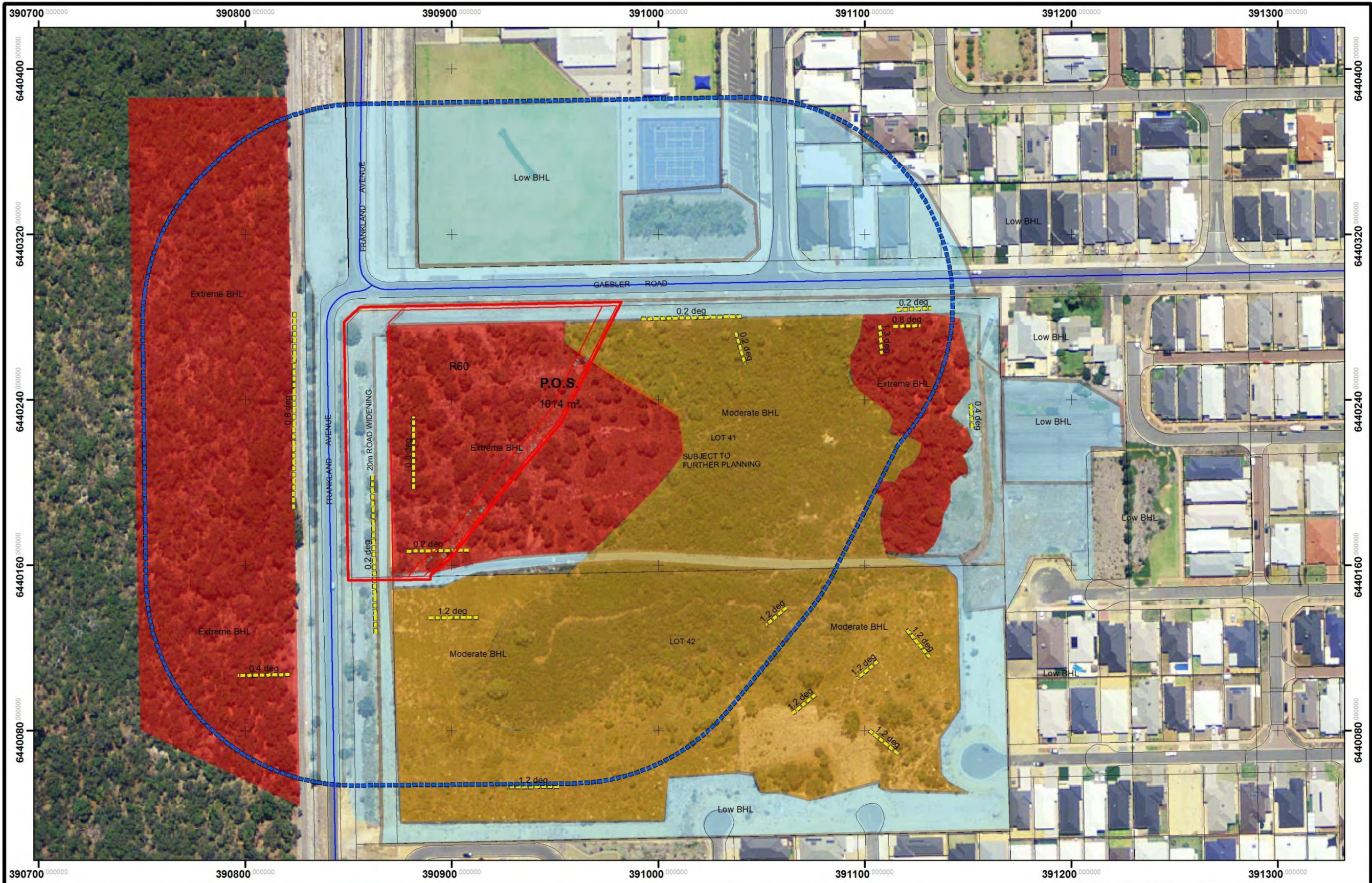
**CLIENT** Broadvision  
C/o Terranovis  
41 Frankland Avenue  
Hammond Park

**Vegetation Classes Map**

STATUS	FILE	DATE
FINAL	TER012	28/11/2016

**Appendix D**

Bushfire Hazard Level (BHL) Mapping



**Legend**

- Subject site
- 100m Assessment boundary
- Slope degrees
- Shrubland Type C
- Grassland Type G
- Extreme BHL
- Moderate
- Low BHL
- Cadastre

SCALE  
1:1,750 @ A3  
MGA GDA 94  
Zone 50



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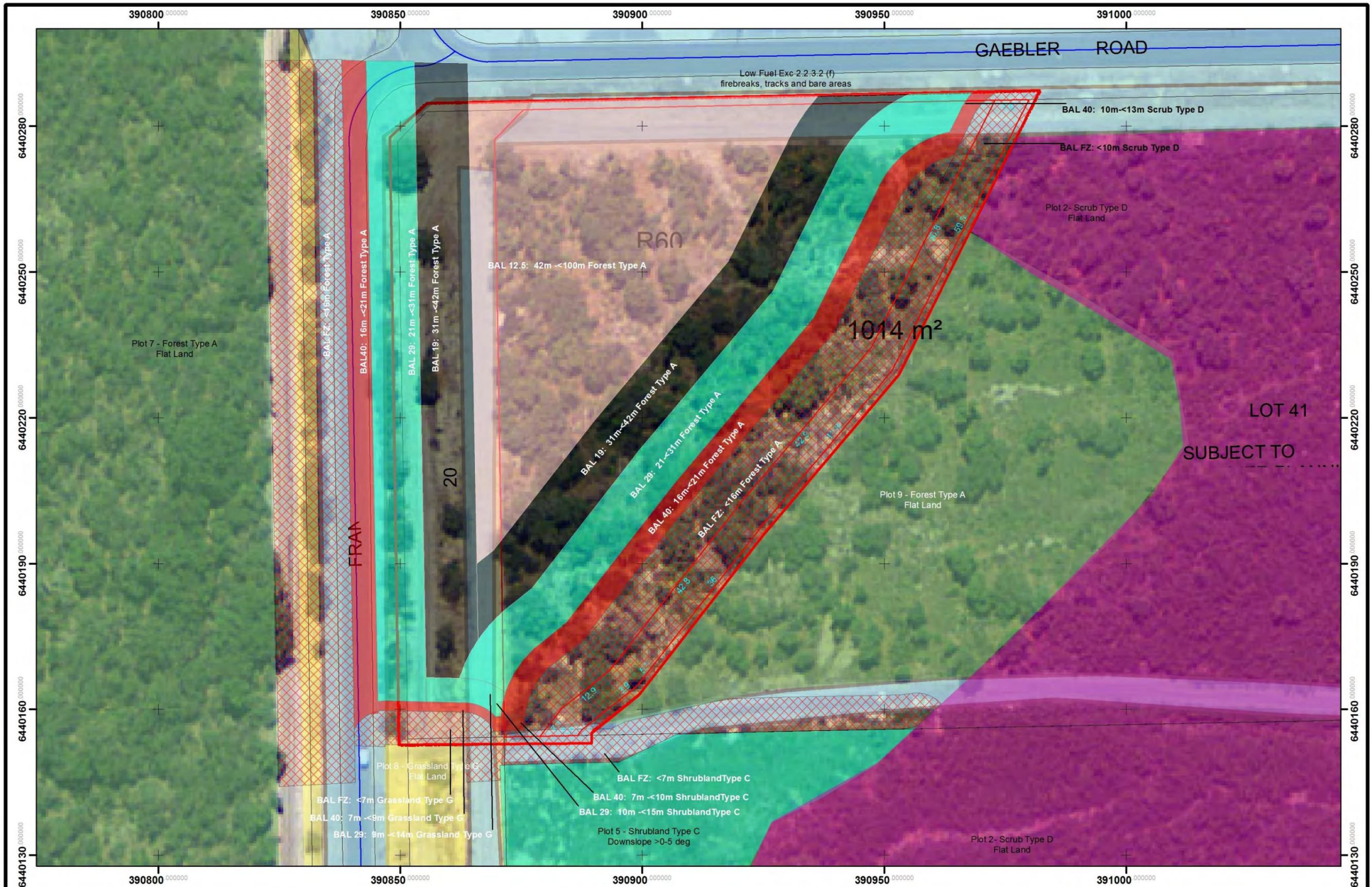
**CLIENT** Broadvision  
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41 Frankland Avenue  
Hammond Park

**Bushfire Hazard Level (BHL) Mapping**

STATUS	FILE	DATE
FINAL	TER012	28/11/2016

**Appendix E**

BAL Contour Plan



Legend		
	Subject site	
	100m Assessment boundary	
	5m Contours	
	BAL 12.5	
	BAL 19	
	BAL 29	
	BAL 40	
	BAL FZ	
	Forest Type A	
	Woodland Type B	
	Shrubland Type C	

SCALE  
1:750 @ A3  
MGA GDA 94  
Zone 50

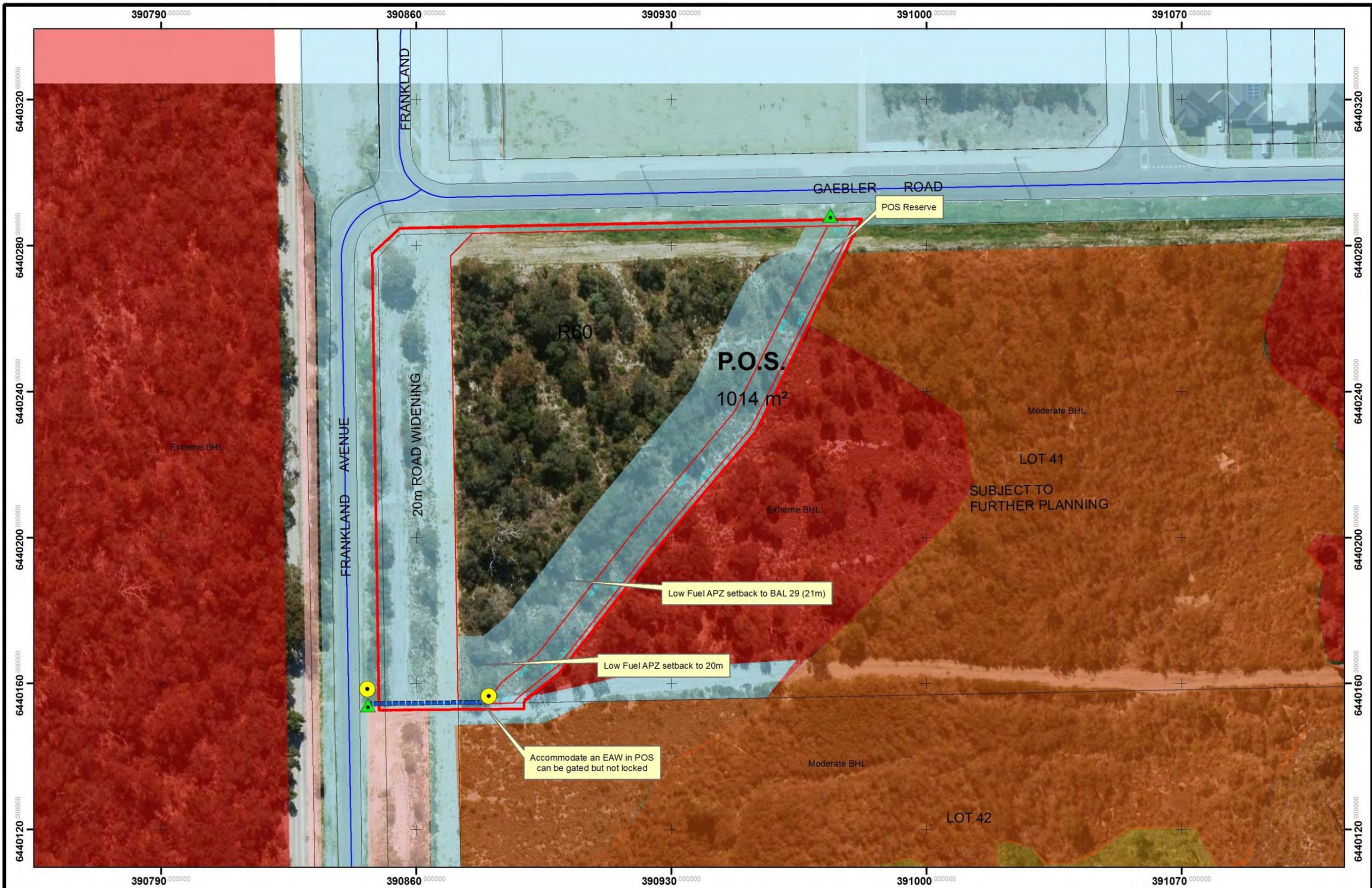
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CLIENT		Broadvison C/o Terranovis 41 Frankland Avenue Hammond Park	
<b>BAL Contour Plan</b>			
STATUS	FILE	DATE	
FINAL	TER012	15/12/2016	

**Appendix F**

Bushfire Management Plan



**Legend**

Subject site	EAW	Shrubland Type C
EAW Signage	5m Contours	Scrub Type D
Access point	Forest Type A	Grassland Type G
Cadastre	Woodland Type B	Low Fuel Exc 2.2.3

SCALE  
1:1,000 @ A3  
MGA GDA 94  
Zone 50



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<b>CLIENT</b>		
Broadvision C/o Terranovis 41 Frankland Avenue Hammond Park		
<b>Bushfire Management Plan</b>		
<b>STATUS</b>	<b>FILE</b>	<b>DATE</b>
FINAL	TER012	15/12/2016

**Appendix G**

**Information to the Homeowner & Developer**

(Note an APZ formerly called a BPZ)



## What is a Building Protection Zone?

### Key Points

- Fuel loads influence bushfire intensity.
- The lower the fire's intensity the less impact on the building.
- Creating a minimum 20 metre reduced fuel load area (building protection zone) will increase the protection of the building.
- Ember protection is important to protect the building.
- Constructing or retrofitting your home to meet the Australian Standard 9969 — *Construction of buildings in bushfire-prone areas*; and addressing bushfire risks in accordance with the *Planning for Bushfire Risk Management Guidelines* will ensure your house has the best bushfire protection.

### Definitions

- **Scrub crown** is the green, leaf material on the scrub plants.
- **Surface fire** is the fire burning the leaves and scrub on the top of the ground.
- **Mineral earth firebreak** is a firebreak without vegetation.
- **Ember attack** is where the bark and fine vegetation material is set alight, becomes airborne and is carried forward of the fire.

Version 6, September 2014

### Managing and reducing fuel loads

**Managing and reducing fuel loads for a minimum of 20 metres around a building will increase its likely survival from a bushfire.**

Known as the Building Protection Zone (BPZ), the aim of this area is to ensure that there will be no direct flame contact on the building from a bushfire. By utilising fuel management options it will also be possible to reduce the potential radiant heat impact on the building.



Above: Well prepared Building Protection Zone with reduced fuel.

If there is little or nothing to burn then the fire's impact will be reduced. This can be achieved by:

- Maintaining a minimum 2 metre gap between trees and the building. Make sure that no trees overhang the house.
- Ensuring tree crowns are a minimum of 10 metres apart.
- Ensuring there is a gap between shrubs and buildings of three times their mature height.
- Ensuring shrubs aren't planted in clumps.
- Keeping the grass short and prune the scrub so that it is not dense, nor does it have fine, dead aerated material in the crown of the scrub.
- Raking up leaf litter and twigs under trees and remove trailing bark.
- Pruning lower branches (up to 2 metres off the ground) to stop a surface fire spreading to the canopy of the trees.
- Creating a mineral earth firebreak.
- Having your paths adjacent to the building and have your driveway placed so that it maximises the protection to the house.

For more information contact the Environmental Protection Branch on 9395 9300 • e-mail: [environment@dfes.wa.gov.au](mailto:environment@dfes.wa.gov.au) or visit [www.dfes.wa.gov.au](http://www.dfes.wa.gov.au)

- Storing firewood away from the building.
- Ensuring fences and sheds are constructed using non-combustible materials, but preferably not located in the BPZ.
- Keeping your gutters free of leaves and other combustible material.
- Ensuring gas bottles are secured and positioned so that they will vent away from the building, if subject to flame contact or radiant heat.

## Ember attack

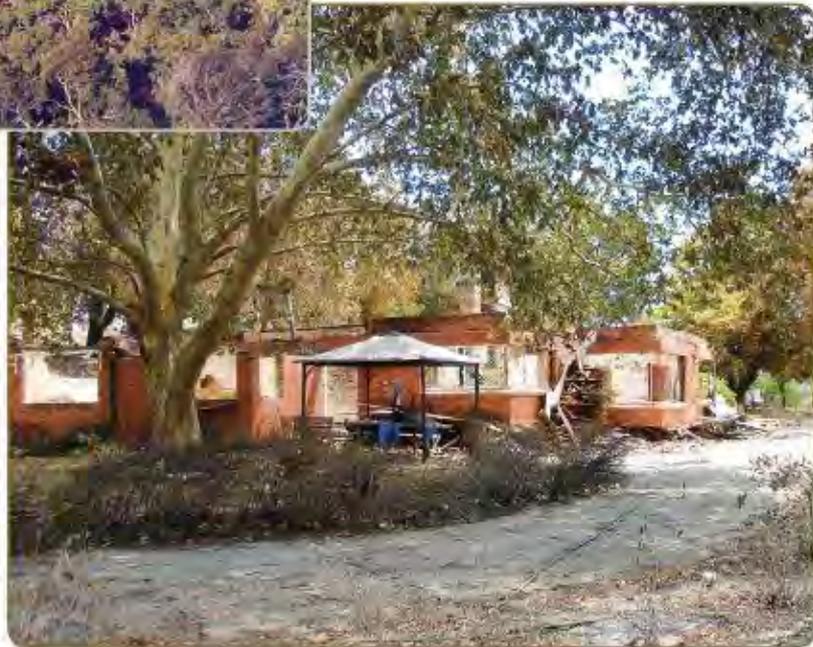
In a bushfire, most homes that are damaged or destroyed are from ember attack. These burning embers get into gaps within the building, such as into the roof cavity, and ignite the material within the cavity. It can take a number of hours before the burning becomes apparent and by that time the building may not be able to be saved.



Above: Reduced fuel in the Building Protection Zone contributed to the survival of this home in a bushfire.

Right: Home destroyed by bushfire, note the tree branches overhanging the house.

It is recommended that all homes that may be affected by embers be made ember proof. If a bushfire occurs in the general area, then the roof cavity and other crevices should be inspected to ensure that no embers have caused a fire. Be aware that there are electricity cables in the roof area and the introduction of water will be a safety issue.



 For more information contact the Environmental Protection Branch on 9395 9300, email: [environment@dfes.wa.gov.au](mailto:environment@dfes.wa.gov.au) or visit [www.dfes.wa.gov.au](http://www.dfes.wa.gov.au)

## ARE YOU BUSHFIRE READY?

areyouready.wa.gov.au

## PREPARING YOUR HOME AND PROPERTY FOR A BUSHFIRE

You should prepare your home to survive the passage of a bushfire, even if your plan is to leave. A well prepared and constructed house is more likely to survive a bushfire than an unprepared one. Firefighters cannot defend every property and are unlikely to defend a poorly prepared property; remember their lives are at risk too.



## DID YOU KNOW?

### Firebreaks have a number of purposes.

They are used to stop the spread of a bushfire and are also used by firefighters to gain access around all areas of your property and as a place from which to fight a fire.

Remember that firebreaks must be wide enough and have enough vertical clearance to let a firefighting truck pass.

Maintain your firebreaks to ensure your property can be defended during a fire.

- Create a minimum 20 metre building protection zone** around your home and other buildings. This area needs to be cleared of all rubbish, long dry grass, bark and material that may catch fire.
- Prune lower branches** (up to two metres off the ground) to stop a ground fire spreading into the canopy of the trees.
- Clear vegetation** around your property to create a fire break, particularly the overhanging branches. Make sure you meet your local government's firebreak requirements.
- Cut grass** to less than 10 centimetres high and prune shrubs to remove dead material.

For more information visit [www.dfes.wa.gov.au](http://www.dfes.wa.gov.au) or contact **DFES Community Engagement** 9395 9816



Government of Western Australia  
Department of Fire & Emergency Services



Department of Fire & Emergency Services

**PREPARE ACT SURVIVE**

**ARE YOU  
BUSHFIRE  
READY?**

[areyouready.wa.gov.au](http://areyouready.wa.gov.au)

**DID YOU KNOW?**

Your evaporative air conditioning unit can catch fire as a result of embers from bushfires, or even small back yard fires, getting into your unit. If a fire starts in your air conditioner, it can spread quickly throughout your home.

**If there is smoke nearby you should:**

- Run the air conditioner to wet the filter pads
- When smoke is over your home or ash starts to drop around your house, switch the air conditioner off
- If possible, continue to run water over the filter with the fan turned off
- If the water can't be run on its own, or if there is a power failure at the time, wet the air conditioner filter pads using a garden hose
- Keep checking your air conditioner and the area around your home for spot fires from embers until the danger has passed

It can be difficult for firefighters to put out a fire caused by embers getting into the roof space of your home. Knowing what to do to keep your evaporative air conditioner safe from fire can help save your property.

For more information on evaporative air conditioners see DFES Information Note on Ember Protection Screens.

**DID YOU KNOW?**  
If you live within 500 metres of bushland and have a roof mounted evaporative air conditioning unit, your home may be at increased risk of ember attack.



**If your home does catch fire, leave your home and call 000 immediately**

**WHAT IS EMBER ATTACK?**

Embers are pieces of burning bark, leaves or twigs that are carried by the wind around the main fire creating spot fires.

For more information visit [www.dfes.wa.gov.au](http://www.dfes.wa.gov.au) or contact DFES Community Engagement 9395 9816



Government of Western Australia  
Department of Fire & Emergency Services



**PREPARE ACT SURVIVE**

# APPENDIX 4

## Transport Assessment Report

# Proposed Local Structure Plan - Lot 41 Frankland Avenue, Hammond Park

## TRANSPORT ASSESSMENT REPORT

Prepared for  
TERRANOVIS PTY LTD

Prepared by  
Uloth and Associates  
12 December 2016

## TABLE OF CONTENTS

	<u>Page</u>
1. INTRODUCTION AND STUDY OBJECTIVES	1
2. STUDY FINDINGS AND CONCLUSIONS	2
2.1 Existing Situation	2
2.2 Southern Suburbs District Structure Plan - Stage 3	2
2.3 Proposed Local Structure Plan	2
2.4 Access Driveway Location	3
2.5 Public Transport and Pedestrian / Cyclist Facilities	3
3. OVERALL CONCLUSIONS AND RECOMMENDATIONS	4
TECHNICAL APPENDIX	
A.1 EXISTING ROADS AND INTERSECTIONS	A-1
A.2 DISTRICT STRUCTURE PLAN	A-2
A.3 PROPOSED DEVELOPMENT	A-2

## LIST OF FIGURES

	<u>Follows</u> <u>Page</u>
1. Locality Plan – Lot 41 Frankland Avenue, Hammond Park	1
2. Recommended Access Driveway Location Proposed Local Structure Plan Lot 41 Frankland Avenue, Hammond Park	4

## TECHNICAL APPENDIX

A.1 Existing Road and Intersections – In the Vicinity of Lot 41 Frankland Avenue	A-2
A.2 Approved District Structure Plan	A-2
A.3 Proposed Future Bus Routes	A-2
A.4 Proposed Local Structure Plan - Lot 41 Frankland Avenue, Hammond Park	A-2

## **1. INTRODUCTION AND STUDY OBJECTIVES**

RPS Environment and Planning Pty Ltd has prepared a Local Structure Plan on behalf of Terranovis Pty Ltd for Lot 41 Frankland Avenue in Hammond Park. The subject site, which is part of the Southern Suburbs District Structure Plan - Stage 3, is situated on the south east corner of the Frankland Avenue - Gaebler Road junction, as indicated in the Locality Plan in Figure 1. The site is located on the western side of Kwinana Freeway, approximately halfway between Russell Road and Rowley Road.

Uloth and Associates has been commissioned to prepare a Transport Assessment Report for submission with the proposed structure plan. The objective of this study is to identify the existing situation and proposed development, and to carry out a transport assessment for the proposed structure plan in accordance with the WAPC Transport Assessment Guidelines.



## 2. STUDY FINDINGS AND CONCLUSIONS

The study findings and conclusions regarding the proposed structure plan are presented and discussed in this chapter. Additional information is provided in the Technical Appendix.

### 2.1 EXISTING SITUATION

- The proposed structure plan area is bounded by Gaebler Road to the north, residential subdivisions to the east, Frankland Avenue to the west and undeveloped land (Lot 42) to the south, as shown in the aerial photo in Figure A.1 in the Technical Appendix.
- The site is currently vacant with no development and has remained generally unused. The subject land is generally uncleared with informal tracks located on the periphery of the lot boundary. There are currently no footpaths available around the development.
- Gaebler Road is a residential street, with an existing primary school on its northern side adjacent to Frankland Avenue and then residential development to the east of the school.
- Frankland Avenue west of the site is currently a 2 lane undivided road, however this will be upgraded to form the future Hammond Road extension between Russell Road and Rowley Road. Hammond Road is identified as “Other Regional Road” in the Metropolitan Region Scheme (MRS). Frankland Avenue intersects with Gaebler Road at the northwest corner of the site, with the priority movement turning 90 degrees from Frankland Road (north) into Gaebler Road.

### 2.2 SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN - STAGE 3

- The Southern Suburbs District Structure Plan - Stage 3 is shown in Figure A.2 in the Technical Appendix. The plan shows the planned upgrading of Hammond Road and shows Gaebler Road as an important east-west link. The plan also shows that the majority of the subject site (as well as much of the adjacent site to the south) is identified as Conservation Category Wetlands, with the western section of the site earmarked for Medium Density Residential development.
- The nearest local centre will be located less than 600 metres away from the site, on the corner of Gaebler Road and Irvine Parade, while a Neighbourhood Centre is planned approximately 700 metres south of the site at Wattleup Road.
- The plan also shows the existing primary school immediately north of the development site, as well as a high school and private primary school to the south east of the development site along Irvine Parade.
- Figure A.3 in the Technical Appendix shows two proposed bus routes servicing the District Structure Plan area with one route running north-south along Hammond Road while a second route is proposed to travel north-south midway between Hammond Road and Kwinana Freeway using the Barfield Road underpass to link to Mandogalup Station.

### 2.3 PROPOSED LOCAL STRUCTURE PLAN

- The proposed Local Structure Plan for Lot 41 Frankland Avenue is shown in Figure A.4 in the Technical Appendix.
- The plan proposes an R60 density residential area of approximately 8,050 square metres, which RPS Australia has indicated could yield up to 50 single dwellings. The plan also includes 890 square metres of Public Open Space to the east of the residential area, with the remainder of the site subject to further planning due to this area being identified as Conservation Category Wetland. Access to the residential portion of the site is expected to be via a single driveway of Gaebler Road.

- Using a residential trip generation rate of 8 trips per dwelling, it is estimated that the proposed development could generate a maximum of approximately 400 vehicle trips per day.
- For assignment purposes it is assumed that 30 percent of the development trips will travel to/from Russell Road via Hammond Road north, while 15 percent of trips will travel east to/from Barfield Road via Gaebler Road. The remaining 55 percent of trips will travel to/from the south via Hammond Road.

#### 2.4 ACCESS DRIVEWAY LOCATION

- Liveable Neighbourhoods specifies minimum intersection spacing of 20 metres between road centrelines, where a Laneway intersects with an Access Road. However, due to the proposed upgrade of Frankland Avenue to a four-lane regional road as part of Hammond Road extension, it is recommended to provide a minimum spacing of 40 metres from the edge of the road reserve to the edge of any proposed access driveway. This will also provide adequate queuing and storage distance for vehicles turning right from Gaebler Road into the access driveway.
- Even if the access driveway is at the eastern end of the proposed development, the intersection spacing towards the east will be a minimum of 85 metres, which far exceeds the minimum requirements.

#### 2.5 PUBLIC TRANSPORT AND PEDESTRIAN / CYCLIST FACILITIES

- As noted in Section 2.2, future bus routes are anticipated along Hammond Road adjacent to the local structure plan area, and to the east along Barfield Road. Bus stops are therefore expected to be located close to the site providing good public transport services for all local residents.
- Pedestrian and cyclist facilities should be provided along both Hammond Road and Gaebler Road adjacent to the site. Footpath connections should also be provided adjacent to the access driveway off Gaebler Road, as well as off Hammond Road at the southern end of the site, ensuring good pedestrian connectivity to and from the surrounding areas.

### **3. OVERALL CONCLUSIONS AND RECOMMENDATIONS**

The following recommendations are provided in regard to the proposed Local Structure Plan for Lot 41 Frankland Avenue:

- It is recommended that the proposed access driveway off Gaebler Road should be located no closer than 40 metres from the Hammond Road reserve, as indicated in Figure 2.
- It is also recommended to provide footpath connections adjacent to the access driveway off Gaebler Road, as well as off Hammond Road at the southern end of the site.



**Recommended Access Driveway Location**  
PROPOSED LOCAL STRUCTURE PLAN - LOT 41 FRANKLAND AVENUE

FIG.  
2

## **TECHNICAL APPENDIX**

The Technical Appendix documents the existing situation, the Southern Suburbs District Structure Plan - Stage 3 and the proposed Local Structure Plan.

## **A.1 EXISTING ROADS AND INTERSECTIONS**

Figure A.1 shows an aerial photo of the existing roads and intersections adjacent to the proposed structure plan area.

## **A.2 DISTRICT STRUCTURE PLAN**

The Stage 3 Southern Suburbs District Structure Plan is shown in Figure A.2, while the proposed future bus routes in the vicinity of the proposed local structure plan are shown in Figure A.3.

## **A.3 PROPOSED DEVELOPMENT**

Figure A.4 shows the proposed local structure plan for Lot 41 Frankland Avenue, Hammond Park as prepared by RPS Environment and Planning Pty Ltd.

0 100 200  
METRES  
SCALE 1 : 5,000  
SOURCE: NEARMAP PTY LTD



Existing Roads and Intersections  
IN THE VICINITY OF LOT 41 FRANKLAND AVENUE

FIG.  
A.1

**PLAN NOTES**

1. FUTURE RESIDENTIAL DEVELOPMENT SHALL NOT DIRECTLY ABUT ROWLEY ROAD. FUTURE LOCAL STRUCTURE PLANNING IS TO DEMONSTRATE A SUITABLE INTERFACE TREATMENT (E.G. ENLARGED SERVICE ROAD DESIGN WITH FRONTING RESIDENTIAL DEVELOPMENT AS A MINIMUM ) BEING PROVIDED TO THE FUTURE ROWLEY ROAD FREIGHT ACCESS ROUTE.
2. FUTURE ACCESS ROAD TO BE PROVIDED AS A FULL INTERSECTION UNTIL ROWLEY ROAD IS UPGRADED AND CONSTRUCTED TO A REGIONAL ROAD AT WHICH TIME THE INTERSECTION WILL BE CONVERTED AND MAINTAINED AS LEFT IN/LEFT OUT ACCESS ONLY. (SUBJECT TO MAIN ROADS WA APPROVAL).
3. AS PART OF THE UPGRADING OF ROWLEY ROAD, GRADE SEPARATED PEDESTRIAN AND VEHICULAR ACCESS IS TO BE PROVIDED AS A CONTINUATION OF BARFIELD ROAD, IN ORDER TO MAINTAIN CONNECTIVITY BETWEEN FUTURE DEVELOPMENT TO THE SOUTH OF ROWLEY ROAD. THIS MAY BE FURTHER RATIONALISED THROUGH SUBSEQUENT LOCAL STRUCTURE PLANNING TO DETERMINE HOW THIS SPECIFIC ACCESS IS CREATED.
4. FUTURE STRUCTURE PLANNING OF THE CELL SOUTH OF WATTLEUP ROAD MUST PROVIDE AN APPROPRIATE INTERFACE WITH RESIDENTIAL DEVELOPMENT NORTH OF WATTLEUP ROAD. THIS IS TO HAVE PARTICULAR REGARD TO THE POSITION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION IN RESPECT OF ITS POSITION ON THE ACCEPTABILITY (OR OTHERWISE) OF RESIDENTIAL DEVELOPMENT SOUTH OF WATTLEUP ROAD, AND ALTERNATIVE (NON-RESIDENTIAL) LAND USES THAT MAY BE REQUIRED. ANY IMPACTS ASSOCIATED WITH THE FUTURE DEVELOPMENT OF NON-RESIDENTIAL LAND USES IN THE CELL SOUTH OF WATTLEUP ROAD MUST BE FULLY CONTAINED WITHIN THE CELL BOUNDARIES.
5. NEIGHBOURHOOD CENTRE-THE DESIGN AND FUNCTION OF THE PROPOSED NEIGHBOURHOOD CENTRE SHALL BE BASED ON 'MAIN STREET' PRINCIPLES AND RELEVANT PROVISIONS OF LIVEABLE NEIGHBOURHOODS. ANY ASSOCIATED LOCAL STRUCTURE PLAN MUST ADEQUATELY DEMONSTRATE THROUGH CONCEPT PLANS AND OR DETAILED AREA PLANS THE MANNER IN WHICH THE CENTRE ADDRESSES THE REQUIREMENTS OF THE RELEVANT SECTIONS OF THE SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN - STAGE 3 REPORT, AND PARTICULARLY THE NEIGHBOURHOOD CENTRE CONCEPT PLAN PROVIDED WITHIN THE REPORT DOCUMENT.
6. NEIGHBOURHOOD NODES - THE DESIGN AND FUNCTIONALITY OF THE NEIGHBOURHOOD NODES SHALL BE DISTINCTLY DIFFERENT TO THE PRIMACY OF THE NEIGHBOURHOOD CENTRE. THESE LOCATIONS ARE TO PROVIDE FOR AN RANGE OF MORE LOCALLY FOCUSED ACTIVITIES AND FUNCTIONS. WHERE RETAIL IS PROPOSED, THESE ARE TO NOT EXCEED A MAXIMUM RETAIL FUNCTION OF 300SQM, WITH SUCH FUNCTION BASED UPON A 'CONVENIENCE STORE' TYPE USE.
7. CENTRAL PRECINCT - A COMPREHENSIVE LOCAL STRUCTURE PLAN WILL BE REQUIRED FOR THE CENTRAL NEIGHBOURHOOD CENTRE AND ADJACENT DEVELOPMENT. THE CITY WILL NOT CONSIDER INDIVIDUAL STRUCTURE PLANS IN THIS LOCATION DUE TO THE NEED TO ENSURE THE SUITABLE INTEGRATION OF DEVELOPMENT.

**GENERAL NOTES**

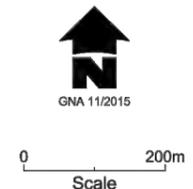
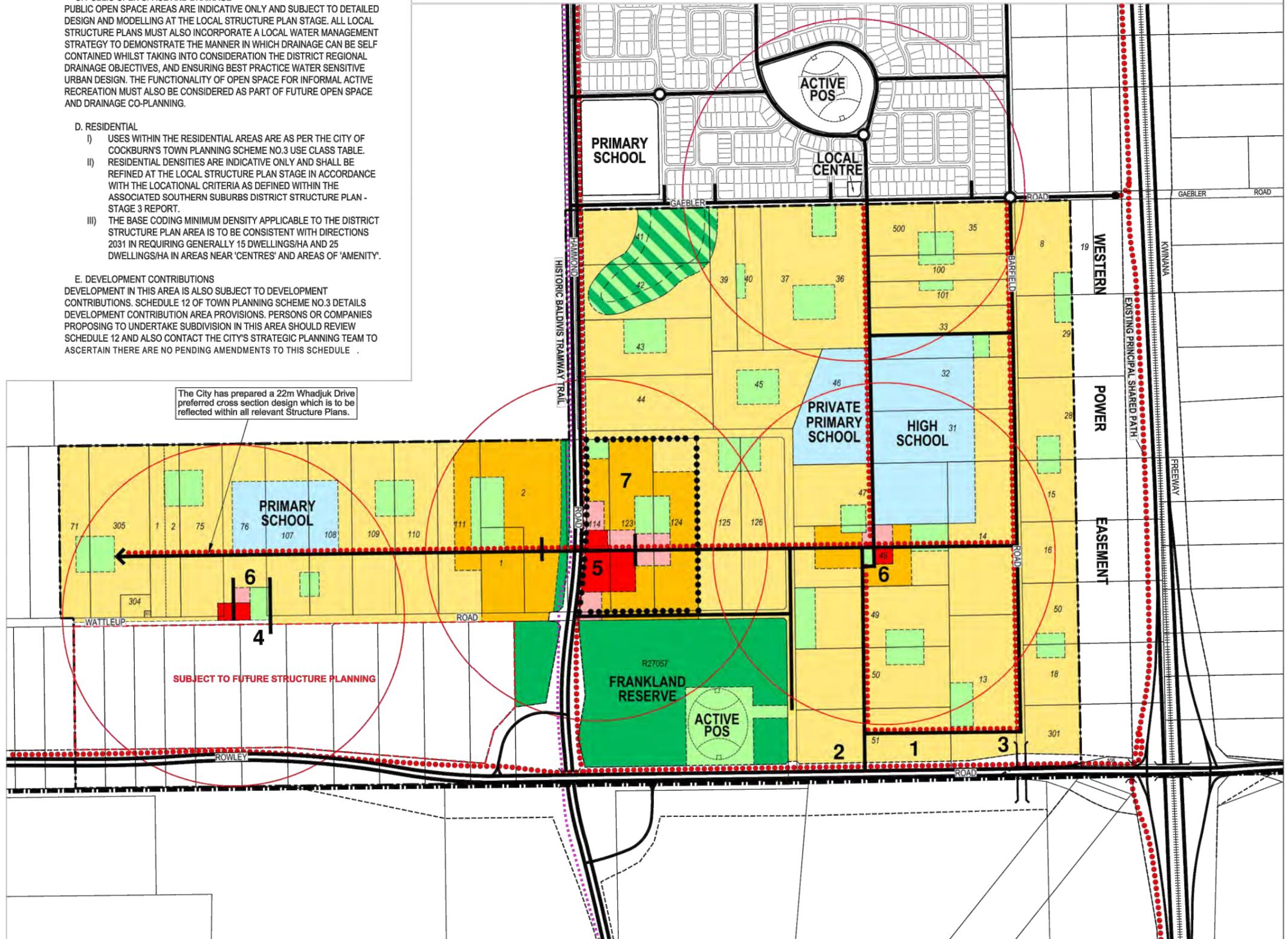
- A. ALL LOCAL STRUCTURE PLANS MUST INCLUDE AND BE INFORMED BY:**
- I) DETAILED LWMS BASED UPON REGIONAL DRAINAGE STUDY,
  - II) DETAILED NOISE MANAGEMENT STRATEGY WHERE LSPD JOINS ROWLEYROAD,
  - III) FIRE MANAGEMENT PLAN WHERE LSP IS LOCATED NEAR ROS OR SIGNIFICANT POS,
  - IV) FLORA AND FAUNA MANAGEMENT PLAN,
  - V) TRAFFIC MANAGEMENT PLAN,
  - VI) CONTAMINATED SITES & ACID SULPHATE SOILS MANAGEMENT PLAN WHERE REQUIRED,
  - VII) HERITAGE STUDY WHERE LSP INCLUDES FORMER HISTORIC TRAMWAY,
  - VIII) TRANSITION AND/OR INTERFACE STRATEGY IN RESPECT OF EXISTING RURAL USES,
  - IX) NEIGHBOURHOOD CENTRE CONCEPT PLAN AND DETAILED AREA PLAN WHERE INCLUDED WITHIN LSP AREA,
  - X) NEIGHBOURHOOD NODE CONCEPT PLAN AND DETAILED AREA PLAN.
- B. LOCAL STRUCTURE PLANS**  
SUBDIVISION AND DEVELOPMENT OF THE SUBJECT AREA IS TO BE IN ACCORDANCE WITH AN ENDORSED APPLICABLE LOCAL STRUCTURE PLAN.

**C. PUBLIC OPEN SPACE AND DRAINAGE**  
PUBLIC OPEN SPACE AREAS ARE INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN AND MODELLING AT THE LOCAL STRUCTURE PLAN STAGE. ALL LOCAL STRUCTURE PLANS MUST ALSO INCORPORATE A LOCAL WATER MANAGEMENT STRATEGY TO DEMONSTRATE THE MANNER IN WHICH DRAINAGE CAN BE SELF CONTAINED WHILST TAKING INTO CONSIDERATION THE DISTRICT REGIONAL DRAINAGE OBJECTIVES, AND ENSURING BEST PRACTICE WATER SENSITIVE URBAN DESIGN. THE FUNCTIONALITY OF OPEN SPACE FOR INFORMAL ACTIVE RECREATION MUST ALSO BE CONSIDERED AS PART OF FUTURE OPEN SPACE AND DRAINAGE CO-PLANNING.

- D. RESIDENTIAL**
- I) USES WITHIN THE RESIDENTIAL AREAS ARE AS PER THE CITY OF COCKBURN'S TOWN PLANNING SCHEME NO.3 USE CLASS TABLE.
  - II) RESIDENTIAL DENSITIES ARE INDICATIVE ONLY AND SHALL BE REFINED AT THE LOCAL STRUCTURE PLAN STAGE IN ACCORDANCE WITH THE LOCATIONAL CRITERIA AS DEFINED WITHIN THE ASSOCIATED SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN - STAGE 3 REPORT.
  - III) THE BASE CODING MINIMUM DENSITY APPLICABLE TO THE DISTRICT STRUCTURE PLAN AREA IS TO BE CONSISTENT WITH DIRECTIONS 2031 IN REQUIRING GENERALLY 15 DWELLINGS/HA AND 25 DWELLINGS/HA IN AREAS NEAR 'CENTRES' AND AREAS OF 'AMENITY'.

**E. DEVELOPMENT CONTRIBUTIONS**  
DEVELOPMENT IN THIS AREA IS ALSO SUBJECT TO DEVELOPMENT CONTRIBUTIONS. SCHEDULE 12 OF TOWN PLANNING SCHEME NO.3 DETAILS DEVELOPMENT CONTRIBUTION AREA PROVISIONS. PERSONS OR COMPANIES PROPOSING TO UNDERTAKE SUBDIVISION IN THIS AREA SHOULD REVIEW SCHEDULE 12 AND ALSO CONTACT THE CITY'S STRATEGIC PLANNING TEAM TO ASCERTAIN THERE ARE NO PENDING AMENDMENTS TO THIS SCHEDULE .

The City has prepared a 22m Whadjuk Drive preferred cross section design which is to be reflected within all relevant Structure Plans.



<p><b>Residential Density</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black; margin-right: 5px;"></span> High</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FFD700; border: 1px solid black; margin-right: 5px;"></span> Medium</li> </ul>	<p><b>Local Centre (Pedestrian Based Retail)</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FF0000; border: 1px solid black; margin-right: 5px;"></span> Local Centre (Pedestrian Based Retail)</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #FF69B4; border: 1px solid black; margin-right: 5px;"></span> Mixed Business/Commercial/ Home Based Business</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #ADD8E6; border: 1px solid black; margin-right: 5px;"></span> Community Facilities/ Schools etc</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Conservation Category Wetland* <small>*In accordance with DEC Geomorphic Wetlands Swan Coastal Plain dataset</small></li> </ul>	<p><b>Key Open Space Areas:</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #90EE90; border: 1px solid black; margin-right: 5px;"></span> Public Open Space</li> <li><span style="display: inline-block; width: 15px; height: 15px; background-color: #008000; border: 1px solid black; margin-right: 5px;"></span> Regional Open Space</li> </ul>	<p><b>Key Road Structure (Existing and Proposed)</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid black; margin-right: 5px;"></span> Major Shared Path</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Historic Baldvis Tramway Trail</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dotted black; margin-right: 5px;"></span> 400m Walkable Catchment</li> <li><span style="display: inline-block; width: 15px; height: 15px; border: 2px solid black; border-radius: 50%; margin-right: 5px;"></span> Central Precinct</li> </ul>
--	--	--	--

**FIG. A.2**  
**SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN**  
**- STAGE 3, HAMMOND PARK / WATTLEUP**

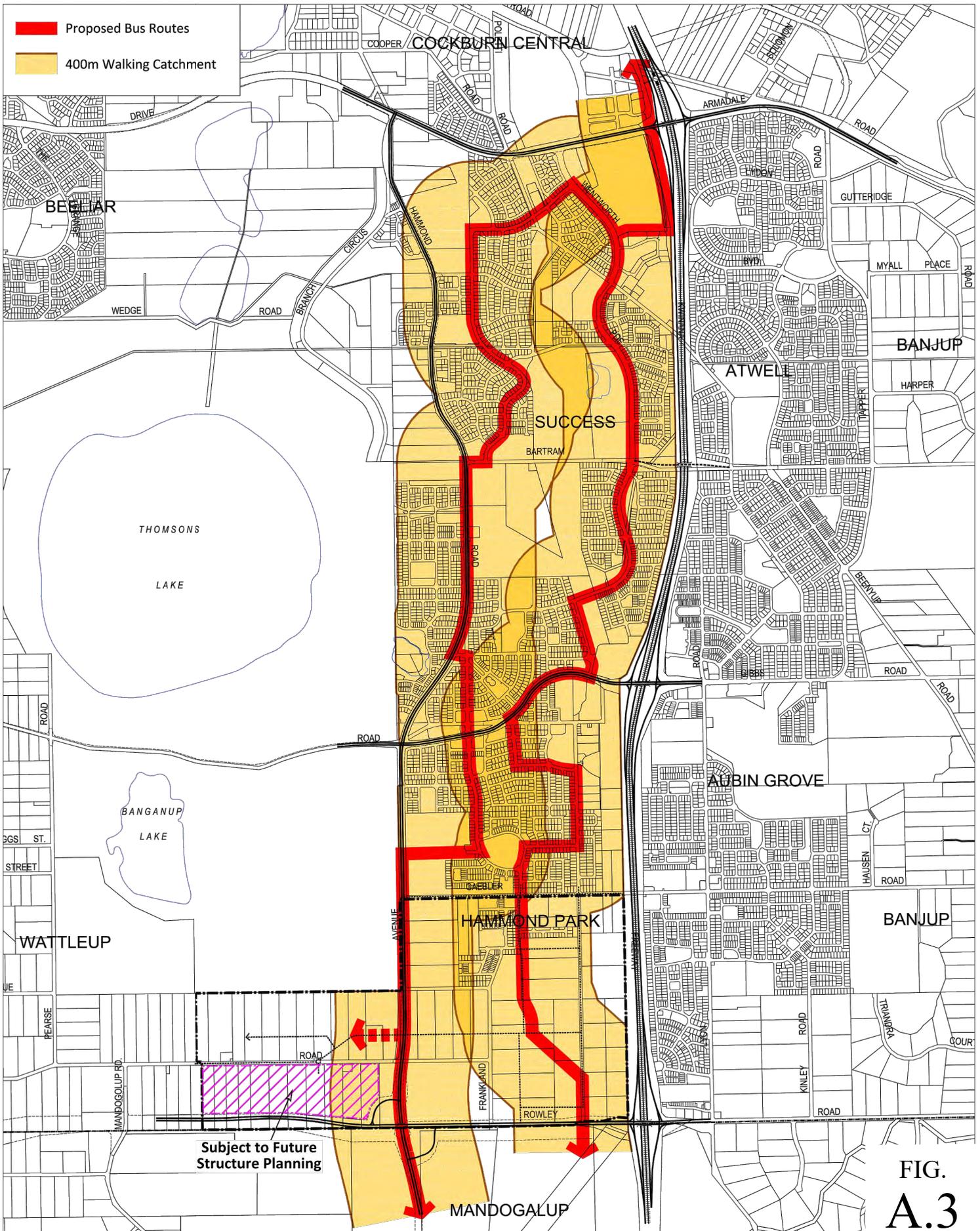


FIG. A.3

# PUBLIC TRANSPORT

## SOUTHERN SUBURBS DISTRICT STRUCTURE PLAN - STAGE 3, HAMMOND PARK

City of Cockburn



wetlands to waves

FIGURE 9



FRANKLAND

GAEBLER ROAD

FRANKLAND AVENUE

20m ROAD WIDENING

R60

P.O.S.  
890m<sup>2</sup>

LOT 41  
SUBJECT TO  
FURTHER PLANNING

LOT 42

**Legend**

 Structure Plan Boundary

**ZONES**

 General Residential

**RESERVES**

 Public Open Space

FIG.  
**A.4**

Source Information:  
Site boundaries: Landgate/Whelans  
Adjoining information: Landgate



PROJECT **LOT 41 FRANKLAND AVENUE  
HAMMOND PARK**

CLIENT **BROADVISION PROJECTS PTY LTD**



RPS Australia East Pty Ltd  
ACN 140 292 762  
ABN 44 140 292 762  
Level 2, 27-31 Troode Street  
West Perth WA, Australia, 6005  
PO Box 170, West Perth WA 6872

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W rpsgroup.com.au

Job Ref. 131336-1 Date 29 NOVEMBER 2016

Comp By. LCFV DWG Name. 131336-1-001f.dwg

Locality HAMMOND PARK Local Authority CITY OF COCKBURN

STRUCTURE PLAN MAP

Scale 1:1000

Sheet A3

Plan Ref **131336-1**

Rev **F**

## APPENDIX 5

### Approved Local Water Management Strategy



Your ref: Pro1070Rev5

Our ref: RF14578

PA: 012053

Enquiries: Mark Hingston

Development Engineering Consultants  
Suite 3, 123A Colin Street  
West Perth WA 6005

Attn: Stephen Allen

Dear Stephen

**RE: Lot 41 Frankland Avenue, Hammond Park – Local Water Management Strategy**

Thank you for the *Lot 41 Frankland Avenue, Hammond Park – Local Water Management Strategy (Rev 5)* dated January 2017. The Department of Water (DoW) has reviewed the revised strategy and is satisfied with the document, subject to any further comments from the City of Cockburn.

If you wish to discuss the above further please contact Mark Hingston at the DoW's Mandurah Office on (08) 9550 4222.

Yours sincerely

for **Brett Dunn**  
**Program Manager – Urban Water Management**  
**Peel Region**

January 19, 2017

Cc: **Sabbir Hussain**  
**City of Cockburn**  
**9 Coleville Crescent Spearwood**  
**Western Australia 6163**

**REPORT**

---

**TERRANOVIS PTY LTD  
LOT 41 FRANKLAND AVENUE, HAMMOND  
PARK**

**LOCAL WATER MANAGEMENT STRATEGY**

**JANUARY 2017**



DEVELOPMENT  
ENGINEERING  
CONSULTANTS

### Revision History:

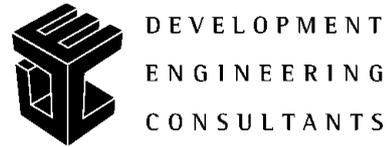
Revision	Description	Checked	Approved	Date
0	Original issue	JPF	SRA	1 <sup>st</sup> July 2016
1	Updated to reflect client discussions and further site data	SRA	SRA	5 <sup>th</sup> August 2016
2	Updated to suit further client feedback	SRA	SRA	16 <sup>th</sup> August 2016
3	Updated to suit DoW comments received 2 <sup>nd</sup> September 2016	JPF	SRA	13 <sup>th</sup> October 2016
4	Updated to suit Revised Planning	SRA	SRA	24 <sup>th</sup> November 2016
5	Updated to address Comments from DoW Dated 8 <sup>th</sup> December 2016	SRA	SRA	16 <sup>th</sup> January 2017



<b>Executive Summary</b>	<b>6</b>
▪ Basis of the Study	6
▪ Estate Scale	6
▪ Access Street Scale	6
▪ Allotment Scale	6
▪ Public Open Space Areas	6
<b>1 Introduction</b>	<b>7</b>
1.1 Drainage / Water Management Principles and Design Objectives	7
1.2 Planning Background	7
<b>2 Proposed Development</b>	<b>8</b>
2.1 Key Elements of the Structure Plan	8
2.2 Previous Land Use	8
2.3 Finished Lot Levels	8
<b>3 Design Criteria</b>	<b>8</b>
<b>4 Pre-development Environment</b>	<b>9</b>
4.1 Topography and Landform	9
4.2 Soil Characteristics	9
4.3 Geotechnical	9
4.4 Groundwater Aspects	10
▪ 4.4.1 Russell Road Arterial Drain Scheme	10
▪ 4.4.2 Predevelopment Groundwater Monitoring	11
4.5 Surface Water Aspects	11
4.6 Environmental Assets and Water-Dependent Ecosystems	12
4.7 Existing Infrastructure and Design Constraints	12
<b>5 Water Sustainability Initiatives</b>	<b>13</b>
5.1 General	13
5.2 Individual Lot Owner Initiatives	13
5.3 Estate Public Open Space (POS) Initiatives	13
▪ 5.3.1 Aims	13
▪ 5.3.2 General POS Initiatives	13
▪ 5.3.3 Irrigation	14
1) Water Sources and Required Allocations	14
2) Programming and Irrigation	14
<b>6 Stormwater Management Strategy</b>	<b>15</b>
6.1 Pre-Development Hydrology	15
6.2 Pre- & Post- Development Hydrology	15
6.3 1 in 1 year ARI event	16
▪ 6.3.1 General	16
▪ 6.3.2 Lots	16
▪ 6.3.3 Streets	17



▪	6.3.4 Non-structural measures	17
6.4	1 in 5 year ARI event	17
6.5	1 in 100 year ARI event	17
6.6	Finished Lot Levels (Relative to the 1 in 100 year ARI flood levels)	17
6.7	POS Credits	18
6.8	Best Management Practices Water Quality Targets	18
<b>7</b>	<b>Groundwater Management Strategy</b>	<b>19</b>
7.1	Groundwater Level Management	19
7.2	Actions to Address Acid Sulphate Soils or Contamination	19
<b>8</b>	<b>The Next Stage – Subdivisions and Urban Water Management Plans</b>	<b>19</b>
<b>9</b>	<b>Monitoring</b>	<b>20</b>
9.1	General	20
9.2	Contingency Response	21
<b>10</b>	<b>Implementation</b>	<b>21</b>
10.1	Commitments	21
10.2	Maintenance Schedules (Including Roles and Responsibilities)	22
10.3	Funding	22
10.4	Review	23
<b>11</b>	<b>References</b>	<b>23</b>
APPENDIX A – <i>Site Context</i>		
	L01 – Locality Plan	
	L02 – Aerial Photo	
	Proposed Structure Plan	
APPENDIX B – <i>Drainage Catchment Plans</i>		
	L03 – Predevelopment Catchment Plan	
	L04 – Post development Catchment Plan	
APPENDIX C – <i>Drainage Calculations</i>		
	Drainage Basin Calculations – 1 in 100 year ARI	
	At-lot Detention Calculations – Overall R60 Site – 1 in 1 year ARI	
	At-lot Detention Calculations – Single 170m <sup>2</sup> Lot – 1 in 1 year ARI	
APPENDIX D – <i>Detailed Plans</i>		
	L05 – Drainage Basin Details	
	L06 – Recommended Subsoil Drainage Strategy Plan	
	L07 – Recommended Subsoil Drainage Details	
APPENDIX E – <i>Groundwater Data</i>		
	Russell Road Arterial Drainage Scheme (2003)	
	Drawing C3 – Control Groundwater Levels	
	Drawing C4 – Proposed Catchments	
	Drawing C5 – Proposed Infrastructure	
	Monitoring Bore Logs – BES 2010	



BES Groundwater Report 2015 and Bore Location Plan  
Soil Log Profiles  
Department of Water Bore JM37 Records with AAMGL Plotted  
Thereon

**LOT 41 FRANKLAND AVENUE, HAMMOND PARK**  
**LOCAL WATER MANAGEMENT STRATEGY (LWMS)**

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## Executive Summary

### Basis of the Study

- The Structure plan only forms part of Lot 41 and the eastern balance of the site is subject to further study. This LWMS does not deal with the drainage requirements of the eastern area subject to further study.
- The area that is subject to further study contains a mapped CCWA dampland. The developer does not agree with the dampland classification and is continuing to study the vegetation, soil and hydrology of the dampland to better ascertain its status. The dampland is herein after referred to as the “mapped wetland” (MW).

### Estate Scale

- A single open space area is proposed as part of the structure plan on the eastern side of the development area which provides sufficient space for a drainage swale.
- The detention basin will be constructed in the POS and will provide soakage at source for the larger ARI events. Storms up to the 100 year ARI will be contained within the basin. The internal layout of the group housing site will be shaped to provide an overland flow path towards the POS area.
- Information packages will be provided to the lot purchaser/s to: (a) fully inform them of the requirement to install 1m<sup>3</sup> of storage per 50m<sup>2</sup> (Equivalent to a 1 by 1.5m dia. by 1.2m deep soakwell per 106m<sup>2</sup> of paved area) of site area prior to a surcharge overflow to the street drainage system; (b) encourage the use of rainwater tanks; (c) utilise water efficient devices and appliances throughout their homes; and (d) maximise the use of water- and nutrient-wise plants, and minimise the use of lawns.

### Access Street Scale

- There are no streets proposed as part of the structure plan although the R60 development site is likely to have private streets for access.

### Allotment Scale

- The lot owner/s will be required to install 1 by 1.5m dia. by 1.2m deep soakwell per 106m<sup>2</sup> of paved area to hold the 1 in 5 hour storm event on site without overflow.

### Public Open Space Areas

- The detention basin constructed within the POS area will be designed to infiltrate all storms following overflow from the on-site soakage up to and including the 100 year ARI.

## 1 Introduction

This LWMS report has been prepared to support the Local Structure Plan for Lot 41 Frankland Avenue, Hammond Park and will be used to guide the design and construction of the proposed drainage solutions for subdivision within the area.

Site context information is included in Appendix A, consisting of a Locality Plan (L-01), Aerial Photo (L-02) and the Proposed Structure Plan – RPS Drawing 131336-1 Rev E.

The site has frontages to the southern side of existing Gaebler Road and the eastern side of existing Frankland Avenue. It is bounded by existing and future residential development to the east and future residential development to the south.

### 1.1 Drainage / Water Management Principles and Design Objectives

The following water sensitive design criteria, principles and objectives are to be pursued and/or implemented as part of the proposed development:

- *Water Conservation and Water Efficiency*
  - Objective: To minimise the use of scheme water outside of the home and to use water as efficiently as possible – both within and outside of the home.
  - Objective: All lot purchasers will be encouraged to use water efficient devices and appliances throughout their homes, and to plant “water-wise” and “nutrient-wise” gardens.
- *Water Quantity Management*
  - Principle: To ensure that post-development discharge is retained on site.
  - Objective: All allotments to be a minimum of 0.3m above the 1 in 100 year ARI flood level.
  - Objective: Detention basin and internal soakwells to be collectively sized to ensure that all events up to the 1 in 100 year storm are contained on site without overflow.
- *Water Quality Management*
  - Principle: To improve the overall surface and groundwater quality of the water leaving the estate and if possible improve the quality of water leaving the development.
  - Objective: Ensure that surface water is routed to the detention basin and retained on site.
  - Objective: Provide treatment and soakage at source for the 1 year ARI – 1 hour storm event.

### 1.2 Planning Background

The subject land is Lot 41 Frankland Avenue, Hammond Park which is zoned “Urban” under the Metropolitan Region Scheme, and “Residential” under the City of Cockburn (CoC) Town Planning Scheme No. 3.

Previously, in 2012, a structure plan and LWMS had been prepared on the basis of the Mapped Conservation Category Dampland (herein referred to as the “mapped wetland” (MW)) on site (Wetland UFI 4104) being removed from the ‘Geomorphic

Wetlands, Swan Coastal Plain' dataset. The Department of Environment and Resources (DER) refused to change the CCD Classification.

This report is prepared such that the drainage outcomes will remain the same irrespective of the future investigations pertaining to the MW.

## 2 Proposed Development

### 2.1 Key Elements of the Structure Plan

The site is located within the suburb of Hammond Park within the City of Cockburn. Lot 41 covers an area of approximately 4.1ha of undeveloped land, although the study area covers some 1.15ha which includes the future widening of Frankland Ave. The site has frontages to the southern side of existing Gaebler Road and the eastern side of existing Frankland Avenue. It is bounded by existing and future residential development to the east and future residential development to the south.

The development proposal consists of some 1.15ha consisting of 0.26ha of widening of Frankland Ave, a single R60 residential site of some 0.79ha and a POS area of some 0.1ha adjacent to the MW. The development potential of the R60 site would be around 46 equivalent residential allotments averaging around 170 square metres in area.

### 2.2 Previous Land Use

The land is currently undeveloped and uncleared, and appears to have had no previous use.

### 2.3 Finished Lot Levels

Finished lot levels will be set on the basis that they are a minimum of 0.3m above the 100 year ARI TWL of the drainage basin and to ensure a major storm will be conveyed into POS.

An additional criterion is that lots are to be at least 1.5m above the controlled groundwater level (CGL). Fill will be provided across the residential site, and with subsoil drainage to maintain separation distance and the lot levels will be established to clear the GWL by some 1.5m at a minimum.

## 3 Design Criteria

The drainage requirements for developments within this area are controlled by the requirements of the City of Cockburn, which are outlined below.

Item	Description	Requirement	Source / Comment
1	Water quality	1 in 1 year ARI – 1 hour storm retained on site.	DoW requirement.
		1 in 20 year ARI – 5min storm retained on site.	Council requirement.
2	ARI for pipe design	1 in 5 year ARI.	Standard Council requirement.
3	ARI for detention basin design	Up to 1 in 100 year ARI infiltrated on site.	In excess of the Russell Road Arterial Drainage Scheme (RRADS) <sup>2</sup> adopted by Council.

Item	Description	Requirement	Source / Comment
4	Min. lot freeboard	0.3m above 1 in 100 year ARI flood level.	Standard Council requirement.
5	Basin criteria:		Standard Council requirement.
	Side slopes – in POS	Max. 1 in 6.	
6	Runoff coefficients		Per Council requirements and drainage modelling as per “at lot” calculations in Appendix C
	Road reserves	0.70	
	Lots	0.34 – 100yr 0.10 – 10yr 0 – 5yr0	
	POS		

## 4 Pre-development Environment

### 4.1 Topography and Landform

The site falls from a high point in the north-western corner at around RL23.0mAHD towards the low area constituting the wetland across the eastern half of the site lying at around RL21.5mAHD as shown in Drawing L-03 in Appendix B.

### 4.2 Soil Characteristics

The Perth Environmental Geology Mapping (Gozzard JR 1983 Fremantle Part Sheets 2033 I and 2033 IV)<sup>1</sup> indicates that the western part of the site is defined as Bassendean Sand (S8) – very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well-sorted, of eolian origin. It is noted to be a good groundwater recharge area although the soils are generally recognised as having poor ability to attenuate pollutants.

The Geology Mapping indicates that the eastern part of the site is defined as Peaty Clay (Cps) – dark grey and black, soft, variable organic content, some quartz sands in places, of lacustrine origin, although bore records do not indicate that this is the case.

In essence the developable area of the site consists of moderately well graded sands of high permeability meaning that soakage will be effective on the site.

Landgate’s publicly available Shared Location Information Platform (SLIP)<sup>5</sup> identifies the western portion of the subject site as having moderate to low risk of Acid Sulfate Soils (ASS) occurring within 3.0m of the natural soil surface, but high to moderate risk of ASS occurring beyond 3.0m of the natural surface. SLIP indicates that the eastern portion of the site has high to moderate risk of ASS occurring within 3.0m of the natural surface.

As the developable area of the site is to be filled, and the higher risk ASS area is west of the subject area – hence it is unlikely that ASS will be encountered as part of the subdivisional works.

### 4.3 Geotechnical

As part of the previous LWMS in 2012, bore logs were taken from groundwater bores installed on the three lots immediately south of Lot 41. The bore logs were consistent with both the Geology Mapping and the information available on SLIP. They

generally suggested the site was underlain by Bassendean Sands to 5m depth across the subject land, which was supported by inspection of the land.

It is proposed that further geotechnical investigations will be undertaken as part of the Urban Water Management Plan for the area to confirm the soil profile across the site.

#### **4.4 Groundwater Aspects**

##### **4.4.1 Russell Road Arterial Drain Scheme**

This area forms part of the Water Corporation controlled Southern Lakes Main Drainage catchment which consists of a groundwater controlled pumping arrangement. The whole of this area should drain north to Lake Copulup (also known as the Russell Road Buffer Lake) located just north of the intersection of Russell Road and Hammond Road in Hammond Park.

Subsequent to the Water Corporation proposal, the City of Cockburn commissioned the Russell Road Arterial Drainage Scheme<sup>2</sup> (RRADS) in 2003 to provide guidelines for the development levels of the area and for the drainage strategies to ensure that the groundwater level (GWL) in the general area was controlled using drainage basins set to defined levels. As part of the scheme, a drainage basin was proposed and has been constructed near Gaebler Road which controls the rise of the GWL in the connected area. The CGLs, catchments and infrastructure proposed by the RRADS are shown on Drawings C3-C5 in Appendix E.

The CGL's shown in the RRADS show the levels grading from RL19.5m AHD at the eastern boundary of the land grading to around RL19.0m AHD at the western boundary of the site, in comparison to the predicted likely AAMGLs as per the predevelopment groundwater monitoring which range from RL20.20m AHD to 19.80m AHD which is some 0.7 to 0.8m higher.

In investigation of this discrepancy, correspondence has been undertaken with the CoC which confirms that, contrary to the RRADS, a number of developments in the surrounding area have not implemented effective subsoil drainage systems into their designs and have elected to infiltrate all stormwater up to the 100 year ARI event. This in conjunction with the clearing of the existing vegetation in the area is likely to be the contributing factors which have resulted in the groundwater rise.

The drainage infrastructure proposed as part of the RRADS is shown in Drawing C5 in Appendix E. It details the Gaebler Road Groundwater Control Point Catchment near the intersection of Gaebler Road and Botany Parade, as well as the subsoil line connecting it along Macquarie Boulevard to the Russell Road Buffer Lake. In light of the increasing trend in groundwater, the area to the west of the GRGCP should be included in the groundwater control area and any infiltration drainage strategy without groundwater control may cause further groundwater rise.

Currently, the subsoil line proposed by the RRADS is built up to around 20m west of the intersection of Gaebler Road and Timms Lane, and connects to the groundwater control line through Costata Gate. The remainder of the portion of Gaebler Road grades to the existing soakage swale located on the western side of the primary school site which has a base level of around RL20.70. The level of the groundwater control line at Costata gate is at around RL20.55.

Given that more development expected in the upstream area, groundwater may rise further, although if effective subsoil systems per the RRADS are implemented this will be limited. To essentially “future proof” the area against the potential groundwater rise, it is proposed that the subsoil control system be interconnected with the western Gaebler Road drainage system. The recommended subsoil drainage strategy is detailed in Section 7.1 and in Drawings L06 and L07 in Appendix D.

#### 4.4.2 Predevelopment Groundwater Monitoring

A number of Groundwater monitoring bores were established over the site initially installed and logged from June 2006 to October 2007, and again in August 2010. Subsequent to that from 2010 to 2015 further monitoring was carried out by Bailey Environmental. They were located on the periphery of the subject area, both to the south and east, which provides a good insight into levels over the area. Data from nearby Department of Water (DoW) monitoring bores was also used in the predevelopment groundwater study; the most relevant being bore JM37 located some 350m south of site. The monitoring bore locations are shown on Drawing L03 in Appendix B, and monitoring bore records are included in Appendix E. A graph of the historical GWL for JM37 is also included in Appendix E, which gives a more complete picture of the historical GWL in the area.

The results of the groundwater study indicated that the GWL in the area has been increasing since around 2002, and has exceeded the RRADS CGL since around 2007. Current levels in the vicinity of Lot 41 are some 1.0m higher than those detailed in the RRADS.

For the purposes of development certainty, only the trend of the closest DoW bore, JM37, was applied to the monitoring bore results to estimate the likely AAMGL’s over the site

In order to determine the AAMGL beneath the site, the site measured GWL at the groundwater peaks of 2007 and 2010 was compared to JM37, and the difference between the water levels at that time and the AAMGL calibrated against the records for JM37 was applied to the measured levels to ensure that they were adjusted to be representative of the AAMGL record.

The current AAMGL contours are shown on the pre- and post development catchment plans in Appendix B.

#### 4.5 Surface Water Aspects

The site is relatively flat, with the majority of the area grading at approximately 1%. The steepest area is in the south-west corner and grades at around 1.5%.

As shown in Drawing L03 in Appendix B, there is a high point in the north-western corner of the site at around RL23.0mAHD which falls towards the MW to the east which sits at around RL21.5mAHD. This means that almost all the surface water from this site will grade in an easterly direction.

The soil underlying the western portion of the site is generally very permeable and there is no visible or anecdotal evidence that runoff occurs meaning that the majority of rainfall onto the subject site will infiltrate.

#### **4.6 Environmental Assets and Water-Dependent Ecosystems**

As detailed on the Geomorphic Wetlands, Swan Coastal Plain (DPAW-017)<sup>6</sup> map available on Landgate's SLIP, the Conservation Category Dampland (Wetland UFI 4104) (MW) is located on the eastern half of the site, and extends into Lot 42 Frankland Avenue to the immediate south of site.

As part of the RRADS detention basin design criteria, flows from the Gaebler Road basin catchment are required to detain and treat stormwater flows up to the 5 year ARI event, with those exceeding the 5 year ARI able to overflow into the wetland. Based on site observations and discussions with the city, it appears that all surrounding drainage basins have been sized to suit the 100 year ARI meaning that none of this catchment will overflow into the MW. Given the uncertainty of the MW the same approach has been proposed for this development.

Other water bodies in the vicinity include Banganup Lake some 1.5km west, towards which the groundwater beneath the site currently grades; and Thomson's Lake some 2km north-west of the subject land.

#### **4.7 Existing Infrastructure and Design Constraints**

Sufficient capacity is available in the adjoining development to service the development of the subject land.

The site currently falls within the gravity sewer catchment connected to the Bibra main sewer. The site will require connection into the 300mm diameter reticulation sewer running north along Frankland Avenue and east along Gaebler Road. The existing sewer is located in the Lot 41 verge along both the western and northern boundaries, so no road crossing will be required.

The sewer lies at approximately RL21.75m AHD in the south-western corner, at around RL21.35m AHD in the north-western corner and at RL20.76m AHD at the northern boundary of the site opposite Murrumbidgee Drive. Extension to the residential site is likely to require some filling although this will be resolved at detailed design stage.

A 250mm reticulation water main is located along the northern verge of Gaebler Road to the north of the site; however, only as far as Murrumbidgee Drive. The site will require connection into this main, which will be extended west along the remaining Gaebler Road boundary, and south along the Frankland Avenue boundary. The works will require the crossing of Gaebler Road, and will otherwise be in the Lot 41 verge. A stub will be left at the Lot 41/42 boundary for future connection into the existing main in Frankland Avenue to the south of site. It is important to note that the Water Corporation has advised that the extension of a planned trunk main may be required in the future.

The sewer and drainage are likely to be the primary influences on fill levels, which will be similar to natural surface levels at a minimum level of around RL22.50m AHD.

## **5 Water Sustainability Initiatives**

### **5.1 General**

The current state government requirement to increase the efficiency of water use in new developments to a target of less than 100kL/person/year is proposed to be implemented within the development.

Given the relatively small lots within the proposed development, rainwater tanks are unlikely to be beneficial therefore it is suggested that in addition to the inherent water saving resulting from smaller yards and reduced watering requirements, further savings will be achieved by:

- Increased water efficiency in the household by encouraging the use of water-wise appliances through regulation and financial incentives.
- Use of low water requirement plants and minimising turf areas for gardens and POS areas.

### **5.2 Individual Lot Owner Initiatives**

Water conservation will be encouraged by the developer through the promotion of native, water-wise gardens and water efficient household devices and appliances. All requirements for the purchaser will be outlined in their purchase contract and associated information handouts.

### **5.3 Estate Public Open Space (POS) Initiatives**

#### **5.3.1 Aims**

The drainage impacts of the POS will be managed to ensure that:

- The maximum depth of water within drainage basins during a 100 year ARI storm is limited to 1.2m.
- Flush kerbs will be constructed abutting POS areas with direct runoff for infiltration in lower areas.

Any proposed landscaping development of the POS areas will address the following objectives:

- Minimising irrigation and fertiliser demands via appropriate species selection.
- Managing fertiliser application to minimise impacts on water quality.
- Weed Management.
- Fauna Protection.

#### **5.3.2 General POS Initiatives**

At this stage there is no concept plan outlining the proposed development of the POS; although it is proposed that the POS will incorporate WSUD principles.

The treatment of the POS areas will typically consist of native planting and mulching. All areas will be designed to minimise long term irrigation requirements with predominantly native plantings incorporated into the landscape design.

At UWMP stage, concept landscape plans will be prepared in accordance the Department of Water's (DoW) and City of Cockburn requirements which will address the objectives outlined in Section 5.3.1.

### 5.3.3 Irrigation

#### 1) Water Sources and Required Allocations

For the POS irrigation the overall water use is limited to a maximum of 7,500kL/hectare/annum in accord with the Department of Water requirements. Given that the total area to be irrigated over the development is approximately 0.10Ha, a maximum water of some 750kL/annum is required.

In reality, the POS area will be contiguous with any future development of the MW and as a result is proposed to be landscaped using native vegetation which will require water for establishment, but little or none thereafter.

Given that there is some uncertainty in terms of whether any bore will be permitted due to available allocation or the proximity to the MW, it is proposed to water from the Water Corporation mains until the planting is established, and then slowly withdraw the watering in the longer term.

The requirement for construction groundwater is unknown at present and will vary depending on the time of year the works are done, the required staging, the existing cadastral boundaries. Given the relatively small area of the site, construction water is proposed to be sourced from a Water Corporation mains hydrant.

#### 2) Programming and Irrigation

Establishment irrigation for the native POS planting areas is expected to be used for a period of between 2 and 3 years after planting before being disconnected.

Typically, watering will start with 10mm three times per day for initial establishment over a period of around 1 month, depending on the weather and the time of the year. This should then be reduced to 10mm once per day for a period of around 2 months; again, dependent on the time of year. The watering is then reduced to 10mm applied two to three times per week.

Irrigation will be programmed and maintained to minimise the water used across the site through monitoring and adjustment, and a water-wise watering regime.

The system will be checked regularly to detect faults and ensure water is being used effectively and efficiently. In general the system will be checked at a frequency of:

- November to April – Once per fortnight.
- May to October – Once per month.

All sprinklers will be checked to fully pop-up and retract, as well as provide adequate coverage, and bubblers and nozzles will be checked to be free of blockages. Particular attention will be paid to irrigation of transplanted mature trees and street trees to ensure they are receiving adequate water.

The watering regime for planted areas shall reflect the plants' needs appropriate to the plant type and natural rainfall, in accordance with the Water Corporation of WA "Waterwise" guidelines. Watering will be monitored throughout the year and adjusted accordingly to ensure appropriate watering. Watering (other than testing) will only take place within the hours stipulated by the Water Corporation (currently 6.00pm to 9.00am).

In general the Irrigation Schedule will be as outlined below, which is based on the landscape hydrozones:

- Lower water use shrubbery is scheduled to receive a lesser amount of water than higher water use shrubbery.
- Irrigation is to be progressively withdrawn from areas of native shrubbery over 3-5 years.

## **6 Stormwater Management Strategy**

### **6.1 Pre-Development Hydrology**

As outlined in Section 4, the residential site consists of sand with good soakage characteristics. As outlined in Section 4.5 there is little or no runoff from the existing site and as a result, it has been assumed that there is no predevelopment flow from the predevelopment area.

The site consists of a single catchment which grades to the natural low area on the eastern portion of the site which is currently at around RL21.50mAHD. A plan detailing the predevelopment flow paths and catchment boundaries is shown in Drawing L03 in Appendix B.

### **6.2 Pre- & Post- Development Hydrology**

The proposed drainage strategy is to infiltrate all stormwater on site as close to the source as possible, and to implement a subsoil system in order to maintain a suitable groundwater separation for the long term.

The CoC has advised that the Frankland Avenue road widening is to be drained separately as part of the regional drainage strategy. As such, the drainage basin within this development does not allow for the Frankland Ave catchment. Drawing L04 in Appendix B and the proposed structure plan in Appendix A both respectively show the catchment and road widening areas.

The site is proposed to be cut and filled to minimise grades and match in with adjoining developments and existing infrastructure and to facilitate sewerage and drainage.

To suit the general lay of the land, the site is proposed to be shaped into one catchment as per Drawing L04 in Appendix B, which will grade the land generally from west to east in a north eastern direction to the drainage basin abutting Gaebler Road.

Planning of the site has utilised a single open space area, in which a basin will be constructed to hold the major storm following surcharge from soakwells.

Internal lot drainage systems will be sized to cater for the 1 in 5 year ARI storm. Beyond this water will surcharge and flow via internal private road systems to the drainage sale in the POS where the 100 year storm will be retained.

The detail of the drainage basin and its arrangement within the POS is shown in Drawing L05 in Appendix D.

The areas required to contain flows from the post development catchments are summarised in Table 6.1 – refer also to Appendix B for the catchment plan L04 and Appendix C for detailed calculations:

**Table 6.1 – Drainage Basin Areas/Catchment**

<b>Basin Details</b>	<b>Quantum</b>
Gross Catchment (Ha)	1.27
Impervious Catchment (100yr) (Ha)	0.27
Storage provided by basin (100yr) (m <sup>3</sup> )	160
Site Area Required (100yr) (m <sup>2</sup> )	776
TWL (100yr) (mAHD)	21.35
Storage provided (5yr) (m <sup>3</sup> )	0
Site Area Required (5yr) (m <sup>2</sup> )	0
Storage provided (1yr) (m <sup>3</sup> )	0
Site Area Required (1yr) (m <sup>2</sup> )	0
LWL (mAHD)	21.00
Outflow for 100yr (L/s)	0

- Note that storage and area quoted is gross for each storm event. E.g. the 100 year encompasses the 5 and the 1 year, the 5 year encompasses the 1 year.

### **6.3 1 in 1 year ARI event**

#### **6.3.1 General**

The 1 in 1 year ARI event is typically considered to be the storm where most nutrients and particulate matter is generated from.

It is proposed that the 1 in 1 year ARI – 1 hour storm will be contained on site through soakwells, baseless manholes and the end of line soakage basin as outlined in the following sections.

#### **6.3.2 Lots**

The residential site will provide storage through the use of soakwells at the individual dwelling scale in conjunction with open-based pits in laneways. It has been assumed that each residential site will be constructed with a total of 1m<sup>3</sup> of storage per 50 m<sup>2</sup> of site area, which equates to the full detention of the 5 year ARI storm without outflow. This is also on excess of Council's standard requirement to hold the 1 in 20 year ARI storm of 5 minute duration without overflow.

This volume rate equates to around two 1.5m diameter by 1.2m deep soakwell for an average lot size of 170 m<sup>2</sup> in an R60 site, one of which would be located within the building area and the other would be within the access roadway.

### 6.3.3 Streets

No public streets are proposed as part of this development; although all events up to and including the 5 year ARI will be detained on site within Lots and private streets as outlined in Section 6.2. No bio-retention areas will be required as part of the development detention system.

### 6.3.4 Non-structural measures

Non structural measures will also be employed to reduce the sources of nutrients within the catchment. These measures involve providing advice to lot purchasers and stakeholders to reduce the application of garden fertilisers and eroded particulate matter, particularly from the new urban areas during the housing construction phase and in establishment of gardens.

Minimisation of nutrient loading can obviously be achieved through:

- Education of local residents and Council maintenance personnel.
- Implementing frequent street and stormwater maintenance programs, particularly during housing construction.
- Planting and using appropriate native species.

## 6.4 1 in 5 year ARI event

In the event of a greater storm than the 1 in 5 year ARI, soakwells on lots will surcharge onto the internal access ways, which will in turn grade towards to front retaining wall and the drainage swale on the eastern boundary of the development.

The water will flow into lineal basin area providing the additional storage for the critical 100 year ARI storm without outflow.

To reduce the likelihood of mosquito breeding the basin is to be designed to hold water for no greater than 3 days after cessation of rainfall. The calculations in Appendix C support this factor.

## 6.5 1 in 100 year ARI event

For storms greater than the 5 year ARI, depending on the length of the storm, some afflux onto the roadways may occur for short periods of time leading to greater afflux for longer periods for the major event.

For the 100 year ARI event, flows will surcharge and run overland. All roads within the development will be designed to accommodate and direct extreme event flows towards the detention basin.

## 6.6 Finished Lot Levels (Relative to the 1 in 100 year ARI flood levels)

As outlined in Section 2.3, the land is proposed to be filled a minimum of 300mm above the top water level of the drainage basin. In all cases, lots will be set to ensure conveyance for major storms will be along the roadways without flooding homes.

## **6.7 POS Credits**

As outlined in the structure plan document all POS credit calculations have been based upon current “Liveable Neighbourhood” policy guidelines, where 100% of the area covered by the 1 in 1 year ARI event of each compensating basin is typically not included as a “usable” POS area. The 1 in 5 year ARI event is designated as a restricted area normally attracting a 100% credit for the area between the 1 year and the 5 year ARI levels provided this comprises less than 20% of the total POS allocation.

The affected areas of the drainage basins are detailed in Table 6.1.

## **6.8 Best Management Practices Water Quality Targets**

The DoW’s Stormwater Manual provides guidelines and information on best management practices that may be applied at land development and construction sites to improve stormwater management and environmental performance.

Poorly managed land development sites can often be a major source of stormwater pollution. Certain construction activities can allow pollutants to be transported (via existing stormwater systems or overland flow) to adjoining receiving water bodies.

The major sources of pollutants from construction activities in this instance will potentially be from:

- Eroded materials in the interim period between opening up the surface of the site and implementing the drainage management measures.
- Litter and waste storage areas – that allow materials to be blown by wind or washed away by rainfall into existing stormwater systems.
- Wash-down areas – poor practices can allow materials to enter stormwater systems.
- Placement and storage of delivered products – particularly sand and soil stockpiles where such materials may be tracked by vehicles onto roads, or blown or washed onto roads which then get into existing stormwater systems.
- Dewatering activities – which can cause sedimentation of downstream water bodies.

Consequently, no construction activities will commence on the site until an appropriate approved Environmental Management Plan (EMP) is prepared that fully addresses:

- litter and waste management practices (non-hazardous and hazardous materials);
- vehicle and equipment washing-down practices;
- water conservation practices;
- product placement and storage practices;
- dewatering activities (if applicable); and
- Any other practices that may adversely impact upon receiving water bodies.

This will be prepared by the contractor undertaking the civil works on the subdivision together with the engineering consultant.

The Best Management measures proposed for this area are proposed to be:

- Non-structural measures to reduce applied nutrient loading.
- On site retention of 1 in 1 year ARI – 1 hour storm.

## **7 Groundwater Management Strategy**

### **7.1 Groundwater Level Management**

As described in Section 4.4.1, the AAMGLs at the site are higher than expected by the RRADS. As such, there is a need for groundwater controls across the site area.

The groundwater along Gaebler Road is only controlled back to the regional scheme from some 380m east of the site at around RL20.60mAHD. The existing drainage line along Gaebler Road to the west is not interlinked with the groundwater control system but is set at an invert of around RL19.60mAHD meaning that the pipes are submerged, but the water is controlled by the bubble up level in the drainage swale of some RL20.70mAHD. It is recommended that the two systems are interlinked as detailed in Drawing L06 in Appendix B to ensure that the potential rise in groundwater levels is limited to a maximum of 20.90mAHD.

The development level of Lot 41 is proposed to be at RL22.50mAHD minimum, meaning that the current AAMGL beneath the development area is some 2.3m minimum beneath the site to expected AAMGL's. This will be further limited to some 1.6m in the event that the control pipe becomes the limiting factor.

Subsoil drainage will be installed within the POS on the western side of Lot 41 to ensure that any potential rise in groundwater can be controlled as outlined above.

The recommended subsoil interconnection strategy plan is shown in Drawing L06 in Appendix E, showing how the site will integrate with the existing subsoil system. A proof of concept subsoil layout is shown in Drawing L04 in Appendix B, showing how the subsoil within the development will function.

### **7.2 Actions to Address Acid Sulphate Soils or Contamination**

The ASS mapping available on Landgate's SLIP<sup>5</sup> identifies the western portion of the subject site as having moderate to low risk of ASS occurring within 3.0m of the natural soil surface, and the eastern portion of the site as having high to moderate risk of ASS occurring within 3.0m of the natural surface.

Although it is likely that all excavations will be within 3.0m of the surface, and there is little or no risk of the development proposal encountering any ASS soils, if dewatering is required, the pH of the groundwater will be measured to ensure any indicators of ASS can be quickly resolved.

A dewatering plan will be prepared by the contractor and will provide for contingency measures incorporating the use of lime treatment to dewatering discharge or lime treatment of sands is required.

## **8 The Next Stage – Subdivisions and Urban Water Management Plans**

The structure plan area is under the ownership of a single land owner, which simplifies the physical implementation of the proposal. Detailed design could slightly alter some aspects of the proposal; however it will still hold the same central tenets of

the drainage strategy and will be resolved at Urban Water Management Planning Stage prior to subdivision works.

A single Urban Water Management Plan (UWMP) will be required for the subdivision proposal, which will generally fit within the framework of this Local Water Management Strategy.

The UWMP will build on the concepts of this report providing further details on the concepts outlined herein and addressing the following major points:

- Further detail in the design and final location of the detention basin to suit surrounding structures and existing natural surface levels.
- Further detail on the design of the internal soakwell drainage system and overflow mechanisms.
- A detailed landscape proposal for the open space area and the incorporation of the detention basin within this area.
- Additional geotechnical investigation.

Once this data is received, the approach outlined herein will be reviewed with detailed work required to:

- Finalise the design of the basin in the POS including landscaping.
- Detail the drainage basin including the inlet configuration and edge treatments to ensure the overall functional and aesthetic outcomes are satisfactory.
- Review the drainage calculations relative to final planning proposals for the site to ensure that the land use assumptions within the drainage calculations herein are consistent.

## **9 Monitoring**

### **9.1 General**

The prime concern for the nutrients emanating from the development is the health of the subsurface environment. For Pre- and Post-Development monitoring it is proposed to monitor the nutrient levels using the existing groundwater bores as shown in the plan in Appendix B.

Water will be sampled quarterly, typically in January, March, July and September.

The monitoring is proposed to be carried out for two years following completion of the last Stage of civil construction or until hand over of the POS to the City of Cockburn, whichever occurs first.

Hand over to the City of Cockburn will occur two years after completion of establishment works. In the interim period, the developers will accept responsibility for the maintenance and monitoring of the landscaping and monitoring works.

The level will be measured and samples will be sent to a NATA registered laboratory to undertake the following tests:

Total Phosphorous	TP
Total Nitrogen	TN
Filterable Reactive Phosphorous	FRP
Nitrate and Nitrite	NO <sub>x</sub>
Ammonia-Nitrogen	NH <sub>3</sub>
Total Kjeldahl Nitrogen	TKN
Salinity	EC or TDS
pH	

An annual report will be submitted to the City of Cockburn and the DoW until hand over. Annual Reports will be provided each December commencing in the first December after the first stage of the development is completed.

## 9.2 Contingency Response

The results will be compared between the initial results to those measured each year.

In the event that it is identified during the developers monitoring period that samples measured from the bores exceeds the initial measurements by 10% for two consecutive samples, Council and DoW will be notified and the matter will be investigated and rectified at the developers cost.

In the event that any water quality concerns were identified, corrective action could be initiated by, but not limited to:

1. Reduction in POS irrigation or fertiliser application rates including the review of required use, timing or manner in which the fertilisers were being applied.
2. Soil amendment / augmentation in high nutrient inundation areas.
3. Increased planting of water- and “nutrient-thirsty” plants in groundwater recharge areas.

Further details of the corrective actions to be agreed with Council and DoW will be provided at UWMP stage.

## 10 Implementation

### 10.1 Commitments

The developers are committed to

- 1) Physical outcomes – To be undertaken at the time of construction.
  - Ensuring that all stormwater drainage from the estate is infiltrated on site.
- 2) Non-structural measures – To be undertaken as part of sales documentation, by providing Information Packages to all lot purchasers to:

- Fully inform the lot owner/s of the requirement to install a minimum of 1 by 1.5m by 1.2m soakwell per dwelling unit of approx. 170m<sup>2</sup> of site area prior to outflow into the street drainage system.
  - Utilise water efficient devices and appliances throughout their homes, and to encourage all purchasers to install water- and nutrient-wise plants.
- 3) Further investigation and reporting:
- Prepare an Urban Water Management Plan to support detailed subdivision planning.
  - Monitoring of groundwater for two years post development.
  - Undertake further geotechnical investigations.
  - Prepare a landscape proposal for the POS and drainage basin.

### 10.2 Maintenance Schedules (Including Roles and Responsibilities)

Maintenance schedules and arrangements will be resolved as part of the Urban Water Management Planning and will be dependent on the detailed design and operation of the mechanisms required. As a brief summary, Table 10.1 has been included to provide guidelines for likely maintenance responsibilities.

**Table 10.1 – Proposed Maintenance Program**

#	Drainage Element	Possible Maintenance and Inspection Frequency	Responsibility
1	Rainwater tank(s); trapped underground soakage / connection pit(s)	Annual inspection and clean-out (as necessary) – just prior to winter rains.	Lot Owner
2	Detention basin	<p><u>During developer maintenance period:</u> Inspect, clean-out and maintain plants ~fortnightly intervals (depending on loading) – as part of POS maintenance works.</p> <p><u>After developer maintenance period:</u> Inspect, clean-out and maintain plants (as required) as part of standard Council POS maintenance program.</p>	Developer Council
3	Drainage pipes and pits	<p><u>During developer maintenance period:</u> Inspect, clean-out and maintain structures annually – just prior to winter (and then again in Aug / Sept if necessary).</p> <p><u>After developer maintenance period:</u> Inspect, clean-out and maintain structures at least annually – just prior to winter – but inspection frequency will need to be higher during home construction phase.</p>	Developer Council
4	Trapped pits and GPT	<p><u>During developer maintenance period:</u> Inspect, clean-out and maintain pits tri-annually – just prior to winter and then around June / July and again in Oct / Nov for the first two years.</p> <p><u>After developer maintenance period:</u> Inspect, clean-out and maintain pits tri-annually – just prior to winter and then around June / Aug – but inspection frequency will need to be higher during home construction phase.</p>	Developer Council
5	Base of detention basin	Initial formal inspection and assessment of performance of bases (say) at around year 3 and then every 5 – 10 years.	Council

### 10.3 Funding

The cost for the implementation of the capital water management measures will be borne by the developers. Maintenance and monitoring costs will be borne by the

developers for the periods as outlined in the maintenance schedule table in Section 10.2 above.

#### **10.4 Review**

Following the approval of this document, it is not expected that the LWMS for this development will need to be reviewed as this forms the broad structure of the approach for the drainage in the area.

In general minor amendments can be made at UWMP stage, provided they meet the outcomes sought within this report. In the event that the management measures used within the state have significantly changed or the first subdivision application following the expiration of 4 years from the first subdivision approval whichever is the later, the measures used for management of stormwater should be reviewed.

### **11 References**

1. Gozzard JR 1983 Fremantle Part Sheets 2033 I and 2133 IV.
2. Russell Road Arterial Drainage Scheme, David Wills and Associates, 2003
3. Australian Rainfall and Runoff: A Guide to Flood Estimation Volume 1, Institute of Engineers, 1987
4. Perth Groundwater Atlas, Waters and Rivers Commission, October 1997.
5. Acid Sulphate Soil Risk Map, Swan Coastal Plain (DER-003), Shared Location Information Platform, Landgate, last updated 2016
6. Geomorphic Wetlands, Swan Coastal Plain (DPAW-017), Shared Location Information Platform, Landgate, last updated 2016
7. IntraMaps, City of Cockburn, accessed May 2016

## **APPENDIX A – SITE CONTEXT**

- **L01 – Locality Plan**
- **L02 – Aerial Photo**
- **Proposed Structure Plan**



**LEGEND**

 LWMS BOUNDARY  
 WETLAND & BUFFER ZONE



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B	08/07/2016	JEG	PLAN AMENDED
A	26/6/16	JEG	INITIAL ISSUE
NO.	DATE	BY	REVISION

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 WESTERN AUSTRALIA  
 Ph: (08) 94 81 1900  
 Fax: (08) 94 81 1700

PROJECT: **LOT 41 FRANKLAND AVENUE HAMMOND PARK**  
 W.A.P.C. No. -

DRAWING: **LOCALITY PLAN**  
 SCALE: 1:2000  
 DATE: 16/6/16

SCALE	DRAWN	CHECK	REV No.
1:2000	JEG	SRA	D
DATE	DESIGNED	APPROVED	
16/6/16	JEG	SRA	
PROJECT NUMBER		DRAWING NUMBER	
<b>PRO1070</b>		<b>L01</b>	



LEGEND

-  LWMS BOUNDARY
-  WETLAND & BUFFER ZONE



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B	08/07/2016	JEG	PLAN AMENDED				SRA
A	20/6/16	JEG	INITIAL ISSUE				SRA

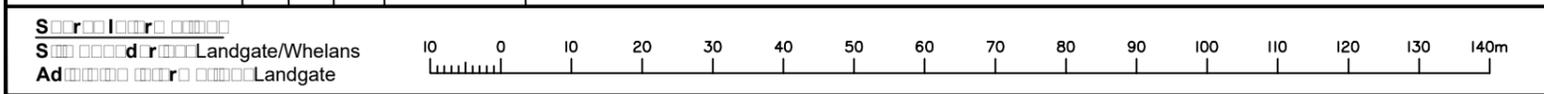
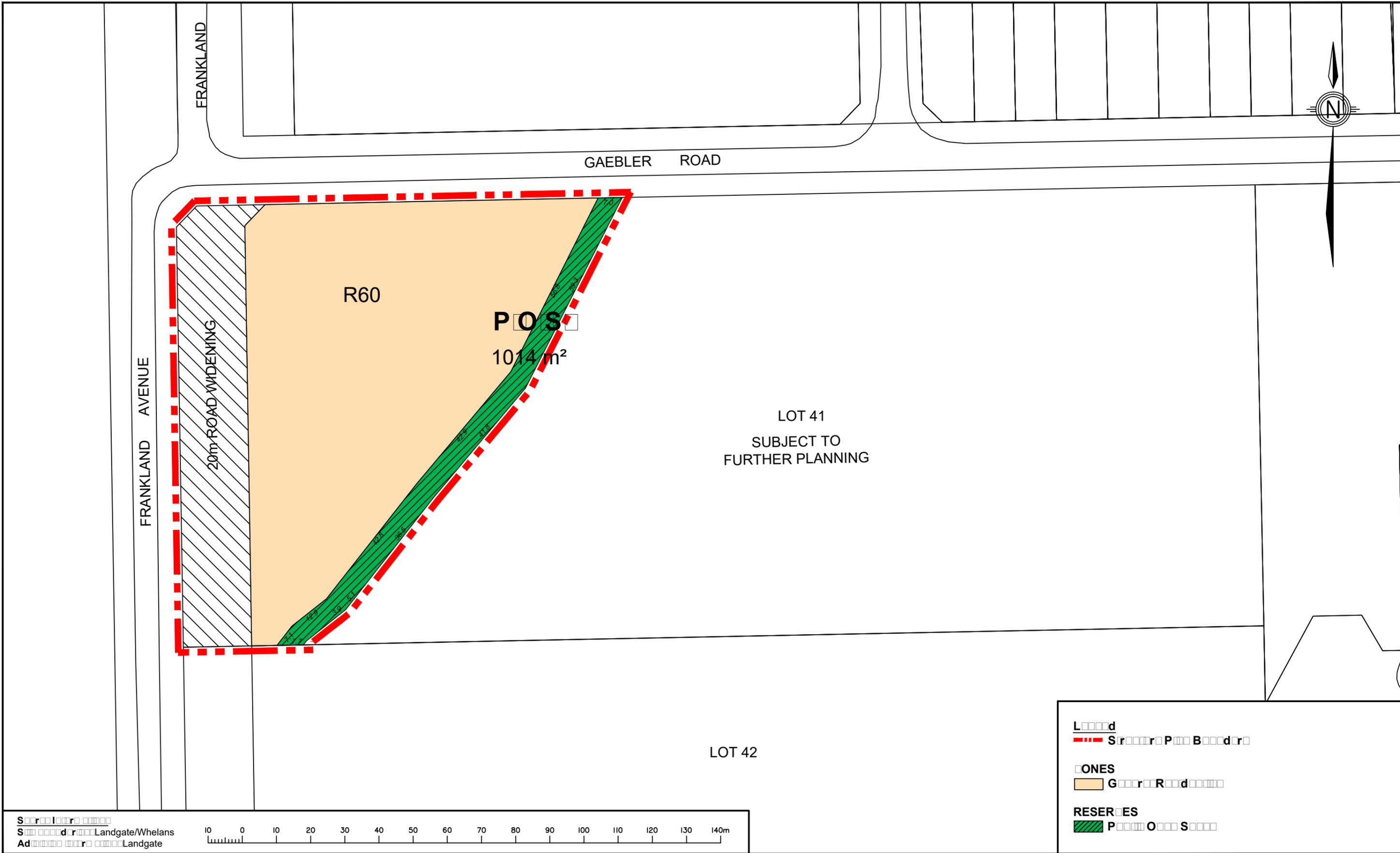
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 Ph: (08) 9481 1900  
 Fax: (08) 9481 1700

PROJECT: **LOT 41 FRANKLAND AVENUE HAMMOND PARK**  
 W.A.P.C. No. -

DRAWING: **AERIAL PHOTO**

SCALE	1:2000	DRAWN	JEG	CHECK	SRA	REV No.	D
DATE	16/6/16	DESIGNED	JEG	APPROVED	SRA		
PROJECT NUMBER		DRAWING NUMBER					
<b>PRO1070</b>		<b>L02</b>					



**Legend**

Structure Plan Boundary  
 General Residential Zone (R60)  
 Proposed Open Space Reserve (POS)

<b>PROJECT</b> LOT 41 FRANKLAND AVENUE HAMMOND PARK	
Job Ref. 131336-1	Date 10 NOVEMBER 2016
Comp By. LCFV	DWG Name. 131336-1-001e.dwg
Locality HAMMOND PARK	Local Authority CITY OF COCKBURN

<b>CLIENT</b> BROADVISION PROJECTS PTY LTD
<b>STRUCTURE PLAN MAP</b>

RPS Australia East Pty Ltd  
ACN 140 292 762  
ABN 44 140 292 762

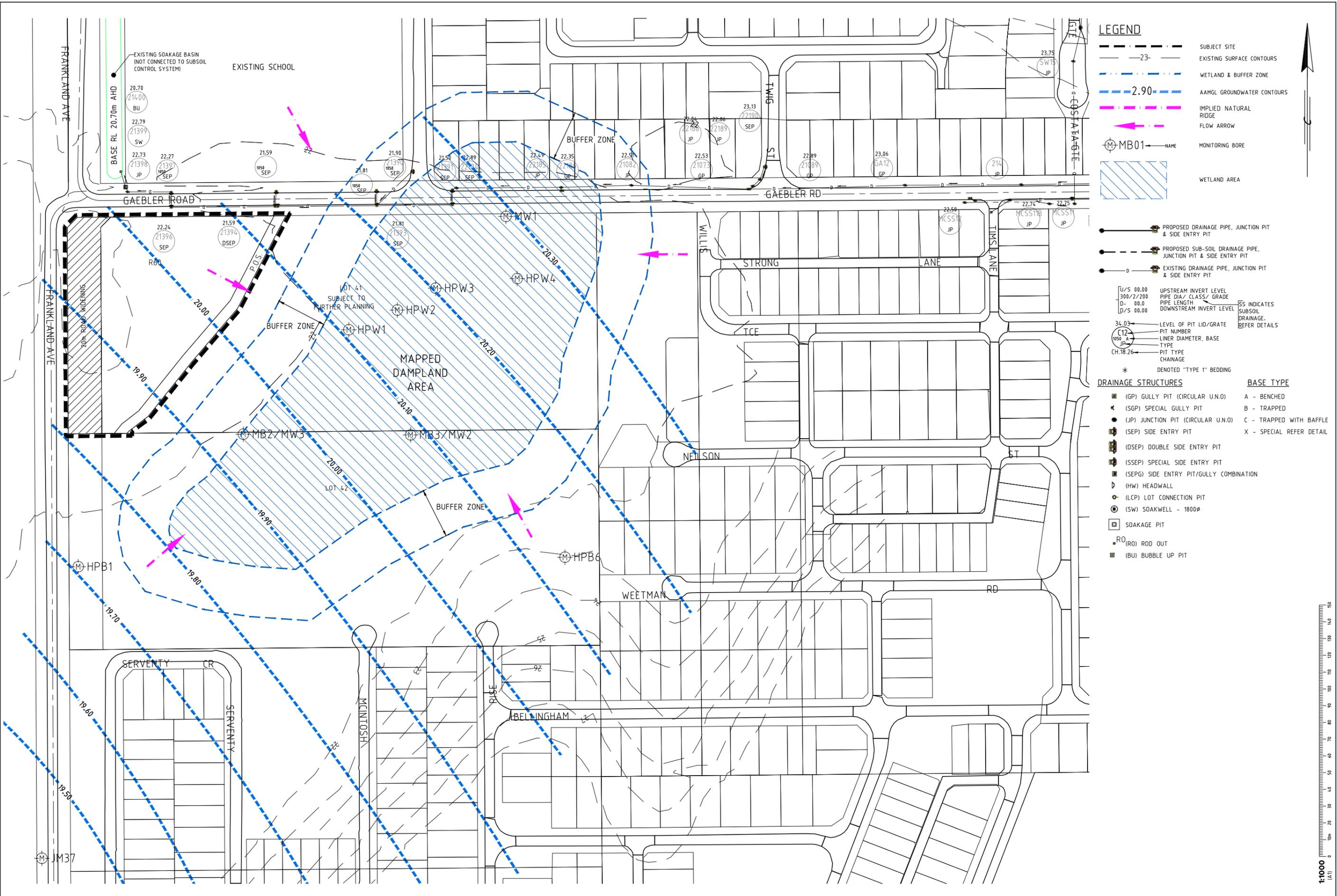
Level 2, 27-31 Troode Street  
West Perth WA, Australia, 6005  
PO Box 170, West Perth WA 6872

T +61 8 9211 1111  
F +61 8 9211 1122  
W rpsgroup.com.au

Scale <b>1:1000</b>	Sheet <b>A3</b>	Plan Ref <b>131336-1</b>	Rev <b>E</b>
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## **APPENDIX B – DRAINAGE CATCHMENT PLANS**

- **L03 – Predevelopment Catchment Plan**
- **L04 – Post Development Catchment Plan**



### LEGEND

- SUBJECT SITE
- EXISTING SURFACE CONTOURS
- WETLAND & BUFFER ZONE
- AAMGL GROUNDWATER CONTOURS
- IMPLIED NATURAL RIDGE
- FLOW ARROW
- MONITORING BORE
- WETLAND AREA

- PROPOSED DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
- PROPOSED SUB-SOIL DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
- EXISTING DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT

U/S 00.00 UPSTREAM INVERT LEVEL  
 300/2/200 PIPE DIA./CLASS/ GRADE  
 D- 00.0 PIPE LENGTH  
 D/S 00.00 DOWNSTREAM INVERT LEVEL

SS INDICATES SUBSOIL DRAINAGE. REFER DETAILS  
 34.03 LEVEL OF PIT LID/GRATE  
 C12 PIT NUMBER  
 1950.4 LINER DIAMETER, BASE  
 JP TYPE  
 CH.18.26 PIT TYPE CHAINAGE  
 \* DENOTED "TYPE 1" BEDDING

### DRAINAGE STRUCTURES

- (GP) GULLY PIT (CIRCULAR U.N.O)
- (SGP) SPECIAL GULLY PIT
- (JP) JUNCTION PIT (CIRCULAR U.N.O)
- (SEP) SIDE ENTRY PIT
- (DSEP) DOUBLE SIDE ENTRY PIT
- (SSEP) SPECIAL SIDE ENTRY PIT
- (SEPG) SIDE ENTRY PIT/GULLY COMBINATION
- (HW) HEADWALL
- (LCP) LOT CONNECTION PIT
- (SW) SOAKWELL - 1800Ø
- SOAKAGE PIT
- (RO) ROD OUT
- (BU) BUBBLE UP PIT

### BASE TYPE

- A - BENCHED
- B - TRAPPED
- C - TRAPPED WITH BAFFLE
- X - SPECIAL REFER DETAIL



NO.	DATE	BY	REVISION
E	24/11/16	JEG	LAYOUT AMENDED
D	7/10/16	JEG	PLAN AMENDED
C	5/8/16	JEG	ADDITIONAL INFORMATION
B	08/07/2016	AMP	PLAN AMENDED
A	26/6/16	JEG	INITIAL ISSUE

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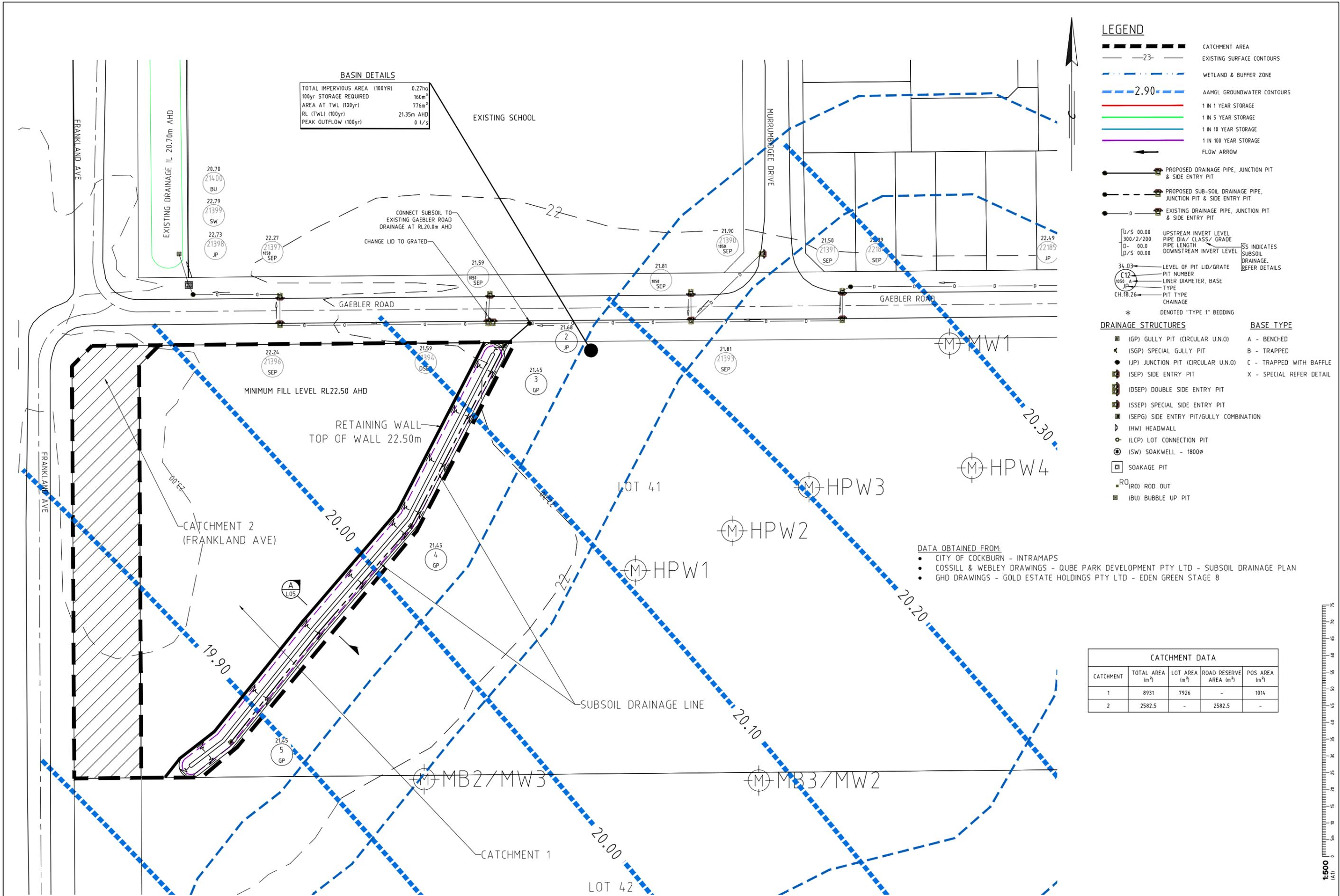
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ENGINEERING  
CONSULTANTS

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WESTERN AUSTRALIA  
Ph: (08) 9481 1900  
Fax: (08) 9481 1700

PROJECT: **LOT 41 FRANKLAND AVENUE  
HAMMOND PARK**

DRAWING: **PRE-DEVELOPMENT  
CATCHMENT PLAN**

SCALE	DRAWN	CHECK	REV. No.
1:2000	JEG	SRA	E
DATE	DESIGNED	APPROVED	
16/6/16	JEG	SRA	
PROJECT NUMBER	DRAWING NUMBER		
<b>PRO1070</b>	<b>L03</b>		



**BASIN DETAILS**

TOTAL IMPERVIOUS AREA (100YR)	0.27ha
100yr STORAGE REQUIRED	160m <sup>3</sup>
AREA AT T.WL (100yr)	776m <sup>2</sup>
RL (TWL) (100yr)	21.35m AHD
PEAK OUTFLOW (100yr)	0 l/s

- LEGEND**
- CATCHMENT AREA
  - EXISTING SURFACE CONTOURS
  - WETLAND & BUFFER ZONE
  - AAMLG GROUNDWATER CONTOURS
  - 1 IN 1 YEAR STORAGE
  - 1 IN 5 YEAR STORAGE
  - 1 IN 10 YEAR STORAGE
  - 1 IN 100 YEAR STORAGE
  - FLOW ARROW
- PROPOSED DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
  - PROPOSED SUB-SOIL DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
  - EXISTING DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
- |           |                         |  |
|-----------|-------------------------|--|
| U/S 00.00 | UPSTREAM INVERT LEVEL   | SS INDICATES SUBSOIL DRAINAGE. REFER DETAILS |
| 300/2/200 | PIPE DIA./ CLASS/ GRADE |  |
| D- 00.0   | PIPE LENGTH             |  |
| D/S 00.00 | DOWNSTREAM INVERT LEVEL |  |
- 34.03 LEVEL OF PIT LID/GRATE
  - C12 PIT NUMBER
  - 1056 LINER DIAMETER, BASE
  - JP TYPE
  - CH.18.26 PIT TYPE
  - CHAINAGE
- \* DENOTED "TYPE 1" BEDDING

**DRAINAGE STRUCTURES**

<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (GP)	GULLY PIT (CIRCULAR U.N.O)	A - BENCHED
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (SGP)	SPECIAL GULLY PIT	B - TRAPPED
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (JP)	JUNCTION PIT (CIRCULAR U.N.O)	C - TRAPPED WITH BAFFLE
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (SEP)	SIDE ENTRY PIT	X - SPECIAL REFER DETAIL
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (DSEP)	DOUBLE SIDE ENTRY PIT	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (SSEP)	SPECIAL SIDE ENTRY PIT	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (SEPG)	SIDE ENTRY PIT/GULLY COMBINATION	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (HW)	HEADWALL	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (LCP)	LOT CONNECTION PIT	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (SW)	SOAKWELL - 1800Ø	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span>	SOAKAGE PIT	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (RO)	ROD OUT	
<span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> (BU)	BUBBLE UP PIT	

**DATA OBTAINED FROM:**

- CITY OF COCKBURN - INTRAMAPS
- COSSILL & WEBLEY DRAWINGS - QUBE PARK DEVELOPMENT PTY LTD - SUBSOIL DRAINAGE PLAN
- GHD DRAWINGS - GOLD ESTATE HOLDINGS PTY LTD - EDEN GREEN STAGE 8

**CATCHMENT DATA**

CATCHMENT	TOTAL AREA (m <sup>2</sup> )	LOT AREA (m <sup>2</sup> )	ROAD RESERVE AREA (m <sup>2</sup> )	POS AREA (m <sup>2</sup> )
1	8931	7926	-	1014
2	2582.5	-	2582.5	-

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B	08/07/2016	JEG	PLAN AMENDED	SRA																																																	
A	06/6/16	JEG	INITIAL ISSUE	SRA																																																	
SCALE	1:500	DRAWN	JEG	CHECK	SRA	REV No.	F																																														
DATE	16/6/16	DESIGNED	JEG	APPROVED	SRA																																																

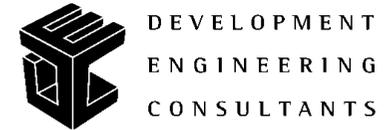
CAD DRAWING DO NOT MANUALLY ALTER Z:\Proposals\PRO1070 - Terranovis Pty Ltd - Lot 41 Frankland Avenue, Hammond Park\Design\Drawings\PRO1070\_L04.dwg 25/11/2016

## **APPENDIX C – DRAINAGE CALCULATIONS**

- **Drainage Basin Calculations – 1 in 100 year ARI**
- **At-lot Detention Calculations – Overall R60 site – 1 in 1 year ARI**

## Development Engineering Consultants - Drainage Basin Spreadsheet

**Project:** Lot 41 Frankland Avenue, Hammond Park  
**Client:** Terranovis Pty Ltd  
**Location:** POS Parallel with GH Site  
**Designer:** SRA



**Data to be Input**

Rainfall ARI (Years)	100
1 in 1 Year Impervious Catchment(Ha)	0.23
Required BioRetention Area (2% ) (m <sup>2</sup> )	0
Required Storage(1 in 1Yr 1 Hr)(m <sup>3</sup> )	35
Available Storage(m <sup>3</sup> )	160
Soakage Outflow(l/s/m <sup>2</sup> )	0.02

Catchment Details	Roads	Hammond Road	Lots (Connected)	Lots (Unconnected)	POS*	Basin Area	Total
<b>Gross Catchment Area</b>	<b>0.00</b>	<b>0</b>	<b>0</b>	<b>0.7926</b>	<b>0.4750</b>	<b>0.0000</b>	<b>1.27</b>
Run-Off Co-efficient(C <sub>10</sub> )	0.70	0.50	0.45	0.10	0	1.00	
ARI Multiplier	1.00	1.00	1.22	3.40	1.41	1.00	
Run-Off Co-efficient(C <sub>y</sub> )	0.70	0.50	0.55	0.34	0.00	1.00	
<b>Impervious Area(Ha)</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.27</b>	<b>0.00</b>	<b>0.00</b>	<b>0.27</b>

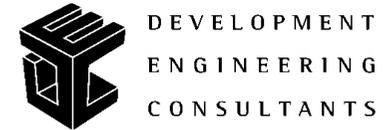
0.21      Effective C

**Data From A,R & R Volume 2**

Location	Hammond Park WA	RR Width(m)	Length(m)	Area (Total)
Map 1	<sup>2</sup> <sub>1</sub>	21.2	0	-
Map 2	<sup>2</sup> <sub>12</sub>	4.4	0	-
Map 3	<sup>2</sup> <sub>172</sub>	1.3	0	-
Map 4	<sup>50</sup> <sub>1</sub>	35.7	0	-
Map 5	<sup>50</sup> <sub>12</sub>	6.8	0	-
Map 6	<sup>50</sup> <sub>172</sub>	2.25	0	-
Map 7	G	0.65	0	-
Map 8	F2	4.86	0	-
Map 9	F50	17.2	0	-

## Development Engineering Consultants - Drainage Basin Spreadsheet

**Project:** Lot 41 Frankland Avenue, Hammond Park  
**Client:** Terranovis Pty Ltd  
**Location:** POS Parallel with GH Site



Tc(mins)	Tc(hrs)	I(mm/hr)	Q(l/s)	Total V in	Preliminary Height(m)	Q out (Soakage)(l/s)	V out (Soakage)	Net Storage (After Soakage)	Time of Water in Basin(hrs)	V out (Req'd)	Q out(l/s)
20	0.33	98.31	74	88	0.10	2.90	3.48	85	8.5	0	0.0
30	0.50	74.76	56	101	0.10	2.90	5.22	96	9.6	0	0.0
45	0.75	55.84	42	113	0.10	2.90	7.83	105	10.8	0	0.0
60	1.00	45.01	34	121	0.10	2.90	10.44	111	11.6	0	0.0
120	2.00	28.33	21	153	0.10	2.90	20.88	132	14.6	0	0.0
240	4.00	17.63	13	190	0.10	2.90	41.76	148	18.2	0	0.0
480	8.00	10.96	8	236	0.10	2.90	83.52	153	22.6	0	0.0
960	16.00	7.08	5	305	0.10	2.90	167.04	138	29.2	0	0.0
2880	48.00	3.73	3	483	0.10	2.90	501.12	-18	46.3	0	0.0
4320	72.00	2.86	2	556	0.10	2.90	751.68	-196	53.2	0	0.0

### Calculation of Storage in Above Ground Basin

#### Lower Tier Drainage Basin Dimensions:

Side Slopes 1: Length(m)    Breadth(m)

6	145	1
---	-----	---

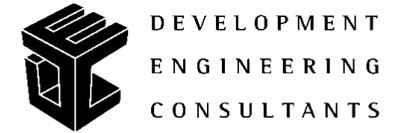
RL(Base)                      21

TWL(mAHD)	Height(m)	A(TWL)	Equip Fenced Site		Vol(m <sup>3</sup> )	Treatment Storage above		The Designated Height allows Storage for
			Area	Average Area		LWL		
21	0	145	441	580	0	0	Static Water Level	
21.07	0.07	268	568	826	14	14	1 in 10 year	
21.35	0.35	776	1089	1824	160	160	1 in 100 year	

**TOTAL STORAGE TO TOP OF LOWER TIER                      160      m<sup>3</sup>**

## Development Engineering Consultants - At-lot Drainage Spreadsheet

**Project:** Lot 41 Frankland Avenue, Hammond Park  
**Client:** Terranovis Pty Ltd  
**Location:** At-Lot Detention Calculations to Establish Runoff Coefficient  
**Designer:** JPF



### Unconnected R60 Lot - Storage applied on '1m<sup>3</sup> per Xm<sup>2</sup>' basis

#### Data to be Input

Rainfall ARI (Years) 100  
 1 in 1 Year Impervious Catchment(Ha) 0.642  
 Required Storage(1 in 1Yr 1 Hr)(m<sup>3</sup>) 98.869

Catchment Details	Paved Area	Unpaved area	Total
<b>Lot Area (SQM)</b>			<b>7926.00</b>
<b>Proportion Paved</b>	<b>90%</b>	<b>10%</b>	<b>100%</b>
<b>Area Paved (Ha)</b>	<b>0.713</b>	<b>0.079</b>	<b>0.793</b>
Run-Off Co-efficient(C10)	0.90	0.00	
ARI Multiplier	1.00	1.20	
Run-Off Co-efficient(Cy)	0.90	0.00	
<b>Impervious Area(Ha)</b>	<b>0.642</b>	<b>0.000</b>	<b>0.642</b>

ARI	Effective C	Multiplier
1	0	0.00
2	0	0.00
5	0	0.00
10	0.1	1.00
20	0.19	1.90
50	0.28	2.80
100	0.34	3.40

0.81 Effective C

#### Volume and Dimensions of Available Storage

Area above Ground inundated to 0.03m 0.03  
 Deep (Back Yard and Front Yard) -  
 Storage provided manholes and pipe -  
 Number of Soakwells 26.00  
 Diameter of Soakwells 1.80  
 Depth of Each Soakwell 2.40  
 Storage required Soakwells **158.79**  
 Storage Provided 158.79  
 Soakage Rate (l/s/m<sup>2</sup>) 0.02

**NOTE: All water is retained in soakwells to 1 in 5 year ARI without surcharge. For greater ARI storms water will surcharge and flow into the laneway drainage network.**

**Volume of storage required is 1m<sup>3</sup> per 49.92 m<sup>2</sup>**

## Development Engineering Consultants - At-lot Drainage Spreadsheet

**Project:** Lot 41 Frankland Avenue, Hammond Park

**Client:** Terranovis Pty Ltd



**Data From A,R & R Volume 2**

Location	Hammond Park WA
Map 1    2 <sub>I</sub> <sub>1</sub>	21.2
Map 2    2 <sub>I</sub> <sub>12</sub>	4.4
Map 3    2 <sub>I</sub> <sub>72</sub>	1.3
Map 4    50 <sub>I</sub> <sub>1</sub>	35.7
Map 5    50 <sub>I</sub> <sub>12</sub>	6.8
Map 6    50 <sub>I</sub> <sub>72</sub>	2.25
Map 7    G	0.65
Map 8    F2	4.86
Map 9    F50	17.2

Tc(mins)	Tc(hrs)	I(mm/hr)	Q(l/s)	Total V in	Q out (Soakage)(l/s)	V out	Net Storage	Vout (Required)	Q out(l/s)	Effective Run-off C
10	0.167	149.43	266.49	159.8937104	7.11	4.264900523	155.6288098	-	0.00	0.00
20	0.333	98.31	175.32	210.3811804	7.11	8.529801046	201.8513793	43.06	35.89	0.17
30	0.500	74.76	133.31	239.9666308	7.11	12.79470157	227.1719292	68.38	38.00	0.23
60	1.000	45.01	80.27	288.9680868	7.11	25.58940314	263.3786836	104.59	29.06	0.29
120	2.000	28.33	50.53	363.8073886	7.11	51.17880627	312.6285824	153.84	21.37	0.34
240	4.000	17.63	31.44	452.6673366	7.11	102.3576125	350.309724	191.52	13.30	0.34
480	8.000	10.96	19.55	563.0358421	7.11	204.7152251	358.320617	199.53	6.93	0.29
960	16.000	7.08	12.63	727.3030119	7.11	409.4304502	317.8725617	159.08	2.76	0.18
1440	24.000	5.63	10.04	867.8756816	7.11	614.1456753	253.7300064	94.94	1.10	0.09
2880	48.000	3.73	6.66	1150.447692	7.11	1228.291351	-77.84365811	-	0.00	0.00
4320	72.000	2.86	5.11	1324.297208	7.11	1842.437026	-518.1398178	-	0.00	0.00

## **APPENDIX D – DETAILED PLANS**

- **Drawing L05 – Drainage Basin Details**
- **Drawing L06 – Recommended Subsoil Drainage Strategy Plan**
- **Drawing L07 – Recommended Subsoil Drainage Details**

**LEGEND**

**DRAINAGE STRUCTURES**

- (GP) GULLY PIT (CIRCULAR U.N.O)
- (SGP) SPECIAL GULLY PIT
- (JP) JUNCTION PIT (CIRCULAR U.N.O)
- (SEP) SIDE ENTRY PIT
- (DSEP) DOUBLE SIDE ENTRY PIT
- (SSEP) SPECIAL SIDE ENTRY PIT
- (SEPG) SIDE ENTRY PIT/GULLY COMBINATION
- (HW) HEADWALL
- (LCP) LOT CONNECTION PIT
- (SW) SOAKWELL - 1800Ø
- SOAKAGE PIT
- (RO) ROD OUT
- (BU) BUBBLE UP PIT

**BASE TYPE**

- A - BENCHED
- B - TRAPPED
- C - TRAPPED WITH BAFFLE
- X - SPECIAL REFER DETAIL

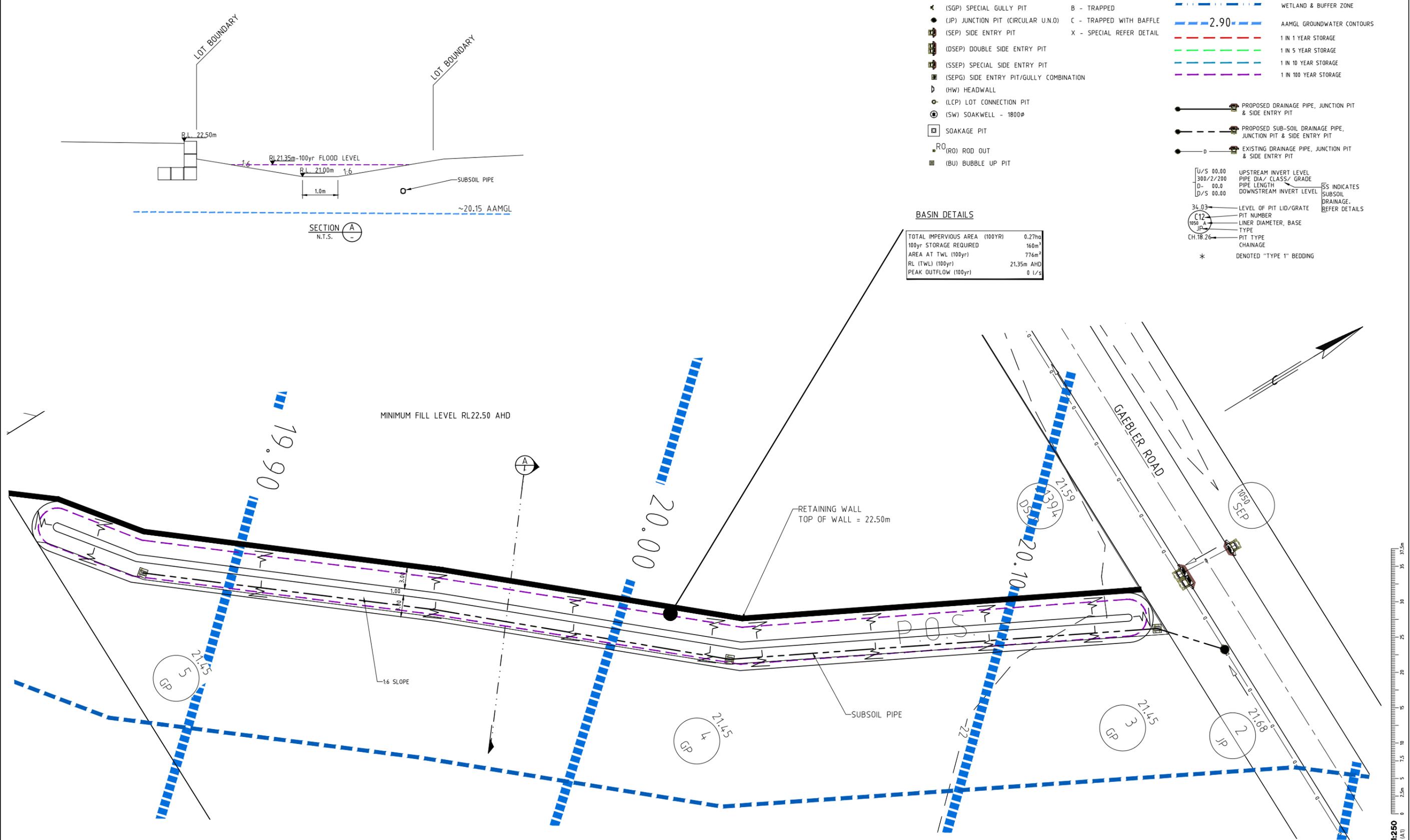
- CATCHMENT AREA
- EXISTING SURFACE CONTOURS
- WETLAND & BUFFER ZONE
- AAMGL GROUNDWATER CONTOURS
- 1 IN 1 YEAR STORAGE
- 1 IN 5 YEAR STORAGE
- 1 IN 10 YEAR STORAGE
- 1 IN 100 YEAR STORAGE

- PROPOSED DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
- PROPOSED SUB-SOIL DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
- EXISTING DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
- UPSTREAM INVERT LEVEL  
PIPE DIA./ CLASS/ GRADE  
PIPE LENGTH  
DOWNSTREAM INVERT LEVEL
- SS INDICATES SUBSOIL DRAINAGE. REFER DETAILS
- LEVEL OF PIT LID/GRATE
- PIT NUMBER
- LINER DIAMETER, BASE TYPE
- PIT TYPE
- CHAINAGE
- \* DENOTED "TYPE 1" BEDDING

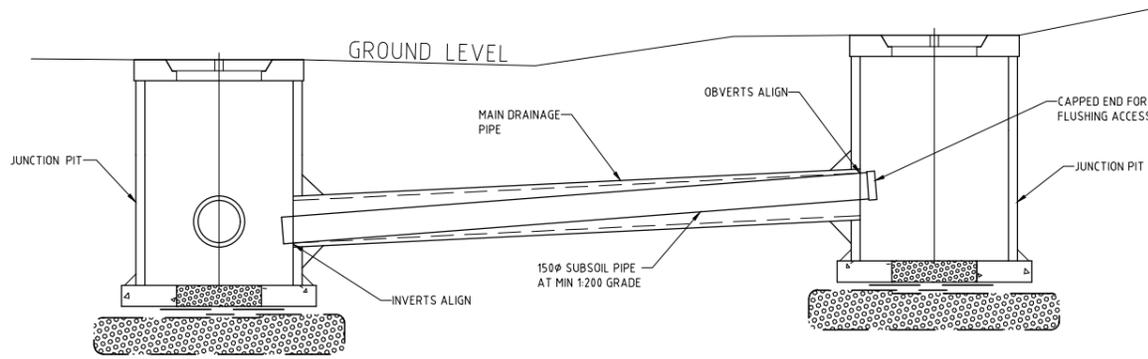
**BASIN DETAILS**

TOTAL IMPERVIOUS AREA (100YR)	0.27ha
100yr STORAGE REQUIRED	160m <sup>3</sup>
AREA AT TWL (100yr)	776m <sup>2</sup>
RL (TWL) (100yr)	21.35m AHD
PEAK OUTFLOW (100yr)	0 l/s

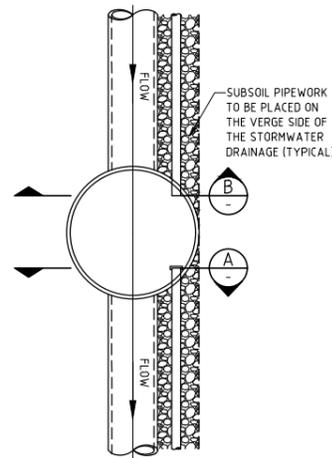
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N.T.S.



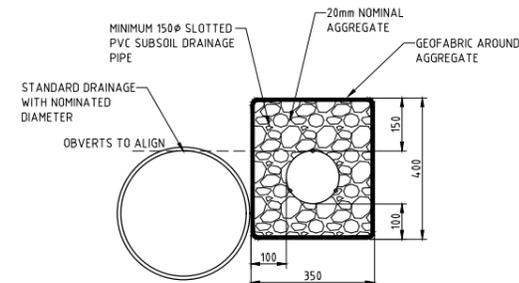




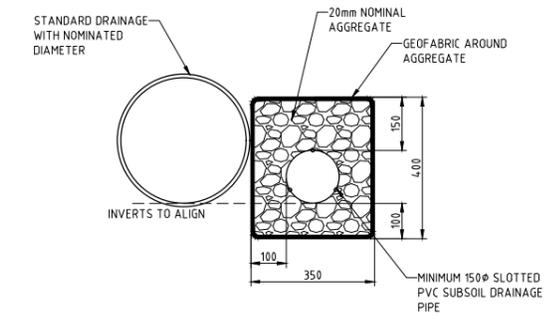
**STD DRAINAGE ELEVATION**  
(TYPICAL TRAPPED BASE SHOWN)  
1:25



**STANDARD SUBSOIL DRAINAGE PLAN**  
SCALE: NTS



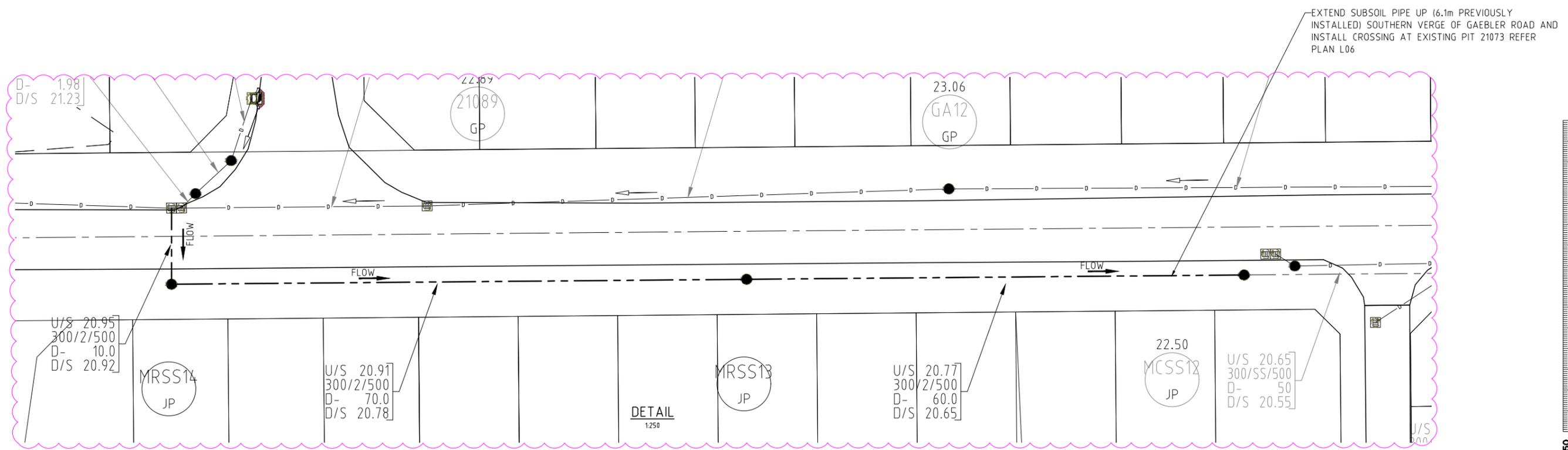
SECTION A  
SCALE: 1:10



SECTION B  
SCALE: 1:10

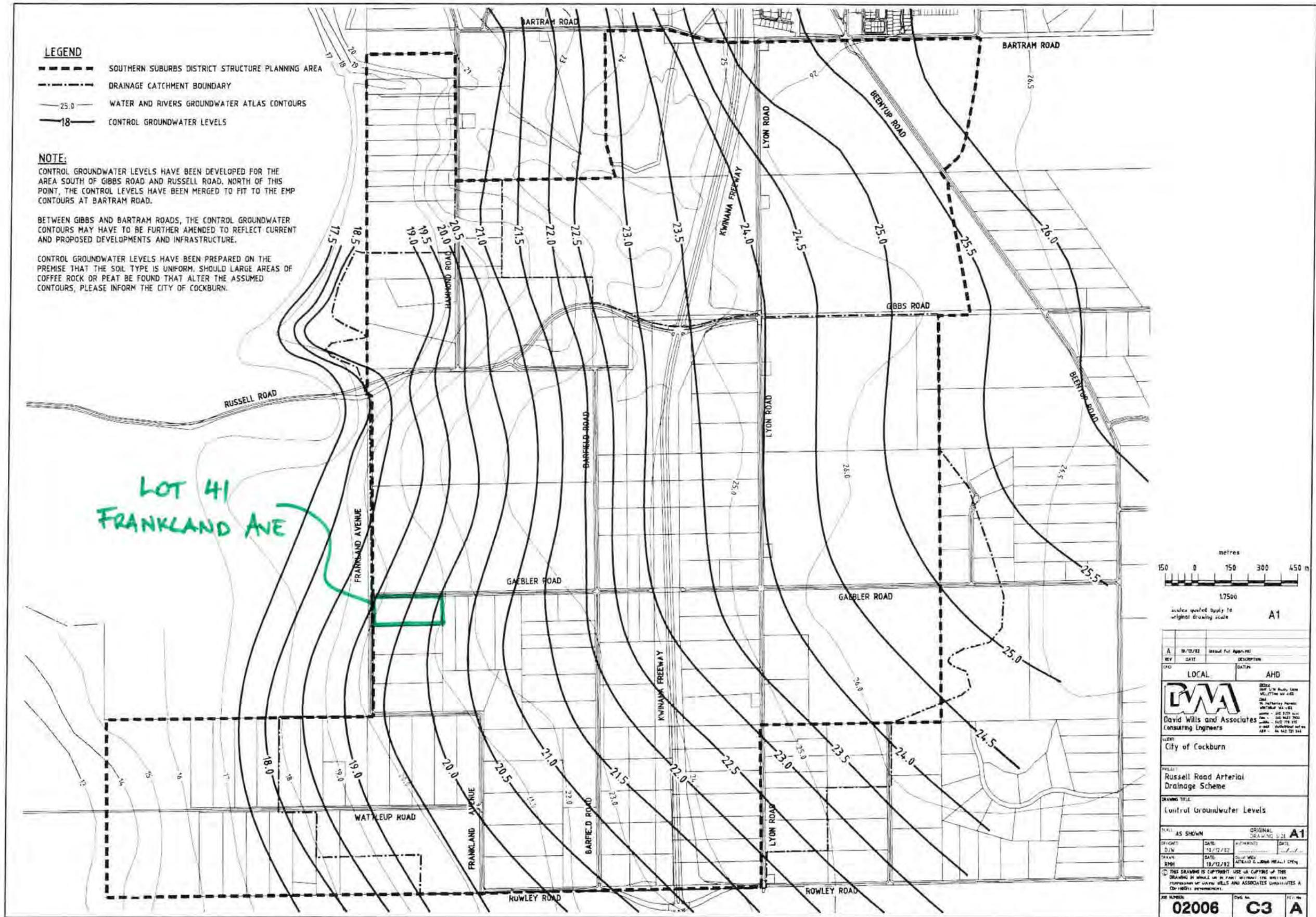
- LEGEND**
- SUBJECT SITE
  - EXISTING SURFACE CONTOURS
  - WETLAND & BUFFER ZONE
  - AAMGL GROUNDWATER CONTOURS
  - 1 IN 1 YEAR STORAGE
  - 1 IN 5 YEAR STORAGE
  - 1 IN 10 YEAR STORAGE
  - 1 IN 100 YEAR STORAGE
- PROPOSED DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
  - PROPOSED SUB-SOIL DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
  - EXISTING DRAINAGE PIPE, JUNCTION PIT & SIDE ENTRY PIT
- U/S 00.00 UPSTREAM INVERT LEVEL
  - 300/2/200 PIPE DIA/ CLASS/ GRADE
  - D- 00.0 PIPE LENGTH
  - D/S 00.00 DOWNSTREAM INVERT LEVEL
- LEVEL OF PIT LID/GRATE
  - PIT NUMBER
  - LINER DIAMETER, BASE
  - TYPE
  - PIT TYPE CHAINAGE
- \* DENOTED "TYPE 1" BEDDING

- DRAINAGE STRUCTURES**
- (GP) GULLY PIT (CIRCULAR U.N.O)
  - (SGP) SPECIAL GULLY PIT
  - (JP) JUNCTION PIT (CIRCULAR U.N.O)
  - (SEP) SIDE ENTRY PIT
  - (DSEP) DOUBLE SIDE ENTRY PIT
  - (SSEP) SPECIAL SIDE ENTRY PIT
  - (SEPG) SIDE ENTRY PIT/GULLY COMBINATION
  - (HW) HEADWALL
  - (LCP) LOT CONNECTION PIT
  - (SW) SOAKWELL - 1800Ø
  - SOAKAGE PIT
  - (RO) ROD OUT
  - (BU) BUBBLE UP PIT



## **APPENDIX E – GROUNDWATER DATA**

- **Russell Road Arterial Drainage Scheme (2003)**
  - **Drawing C3 – Control Groundwater Levels**
  - **Drawing C4 – Proposed Catchments**
  - **Drawing C5 – Proposed Infrastructure**
- **Monitoring Bore Logs – BES 2010**
- **BES Groundwater Report 2015 and Bore Location Plan**
- **Soil Log Profiles**
- **Department of Water Bore JM37 Records with AAMGL Plotted Thereon**



**LEGEND**

- SOUTHERN SUBURBS DISTRICT STRUCTURE PLANNING AREA
- - - DRAINAGE CATCHMENT BOUNDARY
- 25.0 — WATER AND RIVERS GROUNDWATER ATLAS CONTOURS
- 18 — CONTROL GROUNDWATER LEVELS

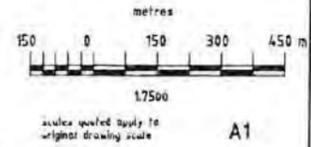
**NOTE:**

CONTROL GROUNDWATER LEVELS HAVE BEEN DEVELOPED FOR THE AREA SOUTH OF GIBBS ROAD AND RUSSELL ROAD. NORTH OF THIS POINT, THE CONTROL LEVELS HAVE BEEN MERGED TO FIT TO THE EMP CONTOURS AT BARTRAM ROAD.

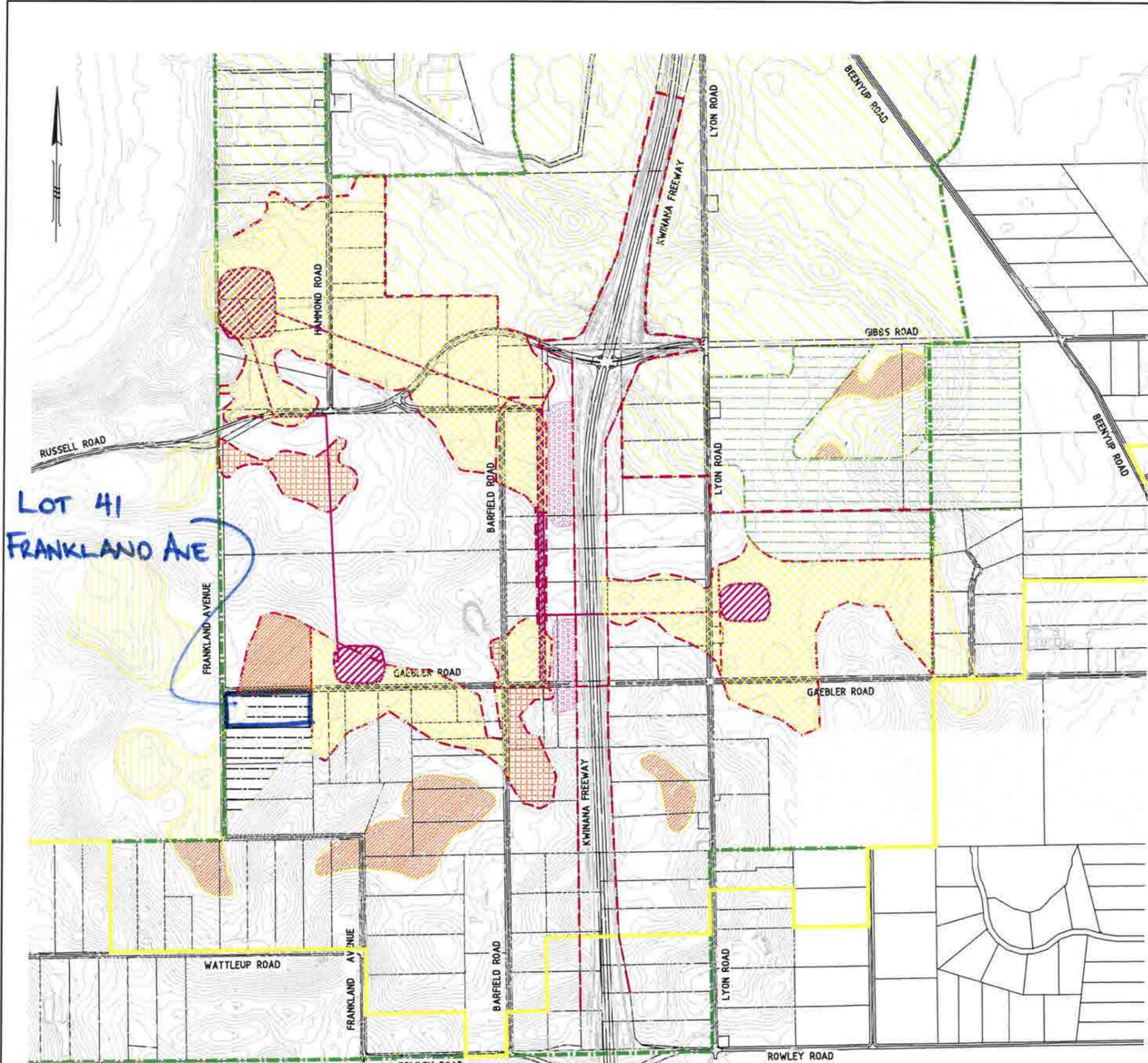
BETWEEN GIBBS AND BARTRAM ROADS, THE CONTROL GROUNDWATER CONTOURS MAY HAVE TO BE FURTHER AMENDED TO REFLECT CURRENT AND PROPOSED DEVELOPMENTS AND INFRASTRUCTURE.

CONTROL GROUNDWATER LEVELS HAVE BEEN PREPARED ON THE PREMISE THAT THE SOIL TYPE IS UNIFORM. SHOULD LARGE AREAS OF COFFEE ROCK OR PEAT BE FOUND THAT ALTER THE ASSUMED CONTOURS, PLEASE INFORM THE CITY OF COCKBURN.

LOT 41  
FRANKLAND AVE



REV	DATE	ISSUED FOR APPROVAL	DESCRIPTION
A	18/12/12	Issued For Approval	
CD		LOCAL	AHD
<b>DWA</b>			
David Willis and Associates Consulting Engineers			
City of Cockburn			
PROJECT: Russell Road Arterial Drainage Scheme			
DRAWING TITLE: Control Groundwater Levels			
SCALE	AS SHOWN	ORIGINAL DRAWING	A1
DRAWN	DATE	BY	DATE
RMH	18/12/12	ATKALD & LYON	18/12/12
THIS DRAWING IS COPYRIGHT. USE OR COPYING OF THIS DRAWING IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF DAVID WILLIS AND ASSOCIATES CONSTITUTES A CRIMINAL OFFENCE.			
JOB NUMBER	02006	DWG NO.	C3
REV.			A



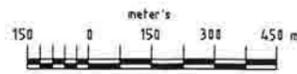
**LEGEND**

- SOUTHERN SUBURBS DISTRICT STRUCTURE PLANNING AREA
- DECLARED WATER CORPORATION DRAINAGE BOUNDARY
- RUSSELL ROAD ARTERIAL DRAIN CATCHMENT BOUNDARY
- PROPOSED DRAINAGE SYSTEM
- BASIN SUB CATCHMENT
- NATURAL SURFACE CONTOURS
- EXISTING AREA WITHIN 3m OF CONTROL LEVEL AND SHOULD BE CONNECTED TO A GROUNDWATER CONTROL POINT. SEE NOTE 2.
- BUSH FOREVER / WETLAND SITE.
- MINIMUM AREAS TO BE FILLED TO CREATE 3m SEPARATION TO CONTROL GROUNDWATER LEVEL AND DISPOSE STORMWATER BY RUNOFF INFILTRATION.
- EXISTING AREA HAS LESS THAN A 3m SEPARATION TO CONTROLLED GROUNDWATER LEVEL. SUGGEST AREA IS FILLED AND DISPOSE STORMWATER RUNOFF BY ON SITE INFILTRATION.
- EXISTING AREA WITHIN 3m OF CONTROL GROUNDWATER LEVEL. NOT TO BE FILLED AS MAJOR POWER LINES EXIST IN THIS LOCATION.
- BARTRAM ROAD ARTERIAL DRAIN CATCHMENT.
- AREAS BEYOND RUSSELL ROAD ARTERIAL DRAINAGE SYSTEM WHERE SEPARATION BETWEEN EXISTING GROUND LEVELS AND CONTROLLED GROUNDWATER LEVELS IS LESS THEN 3m.
- GROUNDWATER CONTROL POINT (DETENTION BASIN).

**NOTES:**

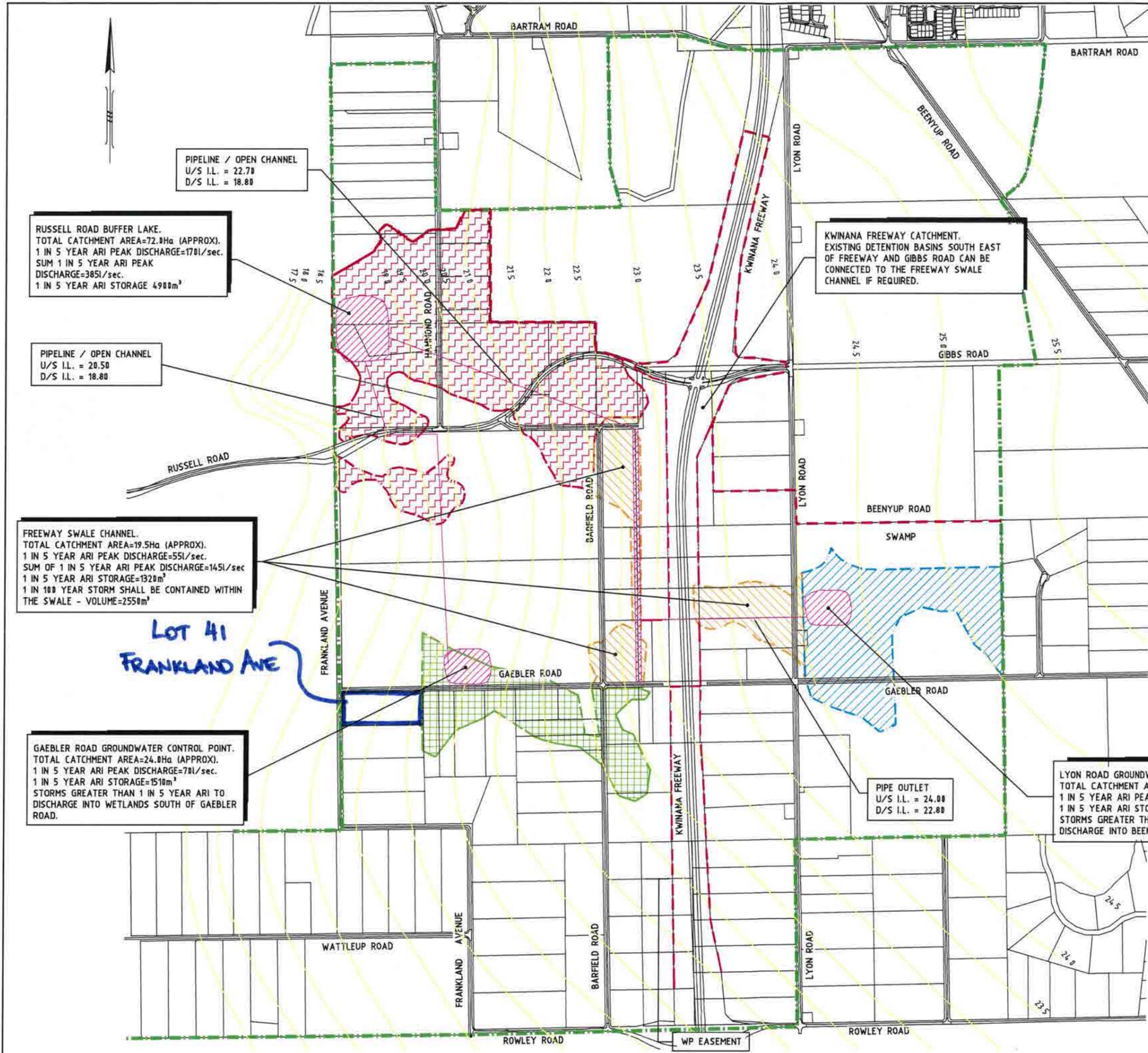
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH 02006 - C5 TO GIVE DETAILS OF THE STORMWATER DRAINAGE SYSTEM.
2. A GROUNDWATER COLLECTION POINT MUST BE CONSTRUCTED IN THE VICINITY OF THE LOCATION SHOWN. THE SIZE AND EXTENT OF THE CATCHMENT CAN BE AMENDED TO SUIT THE RECONTOURED EARTHWORKS FOR THE SITE.  
  
SUB-SOIL DRAINS MUST BE CONSTRUCTED IN ALL AREAS WHERE SEPARATION BETWEEN THE FINISHED LOT LEVELS AND CONTROLLED GROUNDWATER IS LESS THAN 3m. THE SUBSOIL DRAINS SHALL BE CONNECTED TO THE GROUNDWATER COLLECTION POINT.
3. UNLESS INDICATED OTHERWISE, THE BALANCE OF THE RUSSELL ROAD ARTERIAL DRAINAGE CATCHMENT CAN DISPOSE OF STORMWATER RUNOFF BY INFILTRATION IF THE SEPARATION BETWEEN FINAL LOT LEVELS AND CONTROLLED GROUNDWATER LEVEL IS GREATER THEN 3.0m.

LOT 41  
FRANKLAND AVE



scales quoted apply to 1:7500 original drawing scale

REV	DATE	DESCRIPTION						
B	28/04/13	Catchment's Redefined						
A	23/04/13	Separation from dug LA						
<table border="1"> <tr> <td>LOCAL</td> <td>AHD</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td colspan="2">           David Wills and Associates            Consulting Engineers         </td> </tr> </table>			LOCAL	AHD			David Wills and Associates Consulting Engineers	
LOCAL	AHD							
David Wills and Associates Consulting Engineers								
CLIENT: City of Cockburn								
PROJECT: Southern Suburbs District Structure Area								
DRAWING TITLE: Proposed Russell Road Arterial Drainage Scheme Catchments								
SCALE:	ORIGINAL DRAWING SIZE:	A1						
DESIGNED:	DATE:	AUTHORISED:						
D/W	11/12/12	/ /						
DRAWN:	DATE:	DATE:						
0204	11/12/12	11/12/12						
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REV No:	02006	C4						
REV No:		B						



**LEGEND**

- GROUNDWATER CONTROL CONTOUR
- SOUTHERN SUBURBS DISTRICT STRUCTURE PLANNING AREA
- RUSSELL RD BD. CATCHMENT CONTROL GROUNDWATER LEVELS
- BASIN SUB CATCHMENT
- RUSSELL ROAD BUFFER LAKE CATCHMENT
- GAEBLER ROAD GROUNDWATER CONTROL POINT CATCHMENT
- LYON ROAD GROUNDWATER CONTROL POINT CATCHMENT
- FREEWAY SWALE GROUNDWATER CONTROL POINT CATCHMENT

**NOTES**

1. STORMS GREATER THAN A 1 IN 5 YEAR ARI MAY DISCHARGE EXCESS STORMWATER INTO A DESIGNATED ADJACENT AREA, SUBJECT TO SUITABLE DRAINAGE FREEBOARD BEING MAINTAINED.
2. LOCATION OF GROUNDWATER CONTROL POINT (DETENTION BASIN) IS INDICATIVE ONLY AND SHALL BE INTEGRATED INTO THE SUBDIVISIONAL LAYOUT.
3. THE CATCHMENT AREAS WILL BE REQUIRED TO BE REFINED AS DETAILED DESIGN IS PERFORMED. THE CATCHMENT AREA FOR EACH GROUNDWATER CONTROL POINT CAN VARY, BUT THE PEAK OUTFLOW CANNOT BE INCREASED.
4. DETENTION BASIN OUTFLOW VALUE IS THE PEAK DISCHARGE FOR A 1 IN 5 YEAR ARI STORM EVENT AND CANNOT BE EXCEEDED.
5. THE STORAGE VOLUMES ARE INDICATIVE ONLY AND ARE TO BE ADJUSTED IN THE DETAILED DESIGN PHASE. THE DETENTION BASIN DESIGN VALUES DO NOT INCLUDE ALLOWANCES FOR "BANK STORAGE" OR INFILTRATION.
6. THE PEAK 1 IN 5 YEAR ARI DISCHARGE CAN BE REDUCED TO A MINIMUM OF 6 l/sec PER IMPERVIOUS HECTARE. STORAGE VOLUMES SHALL BE INCREASED ACCORDINGLY.
7. THE 1 IN 100 YEAR ARI PEAK DISCHARGE FROM A DETENTION BASIN INTO THE ARTERIAL DRAINAGE SYSTEM SHALL NOT BE GREATER THAN 1.4 TIMES THE 1 IN 5 YEAR ARI VALUE. OVERFLOW INTO THE DESIGNATED ADJACENT AREA IS IN ADDITION TO OUTFLOW AND IS LIMITED ONLY BY THE SYSTEM HYDRAULICS.
8. 1 IN 100 YEAR STORAGE VOLUME WILL BE DEPENDENT UPON THE RATE OF OVERFLOW AND THE RISE IN WATER LEVEL IN THE BASIN. THE VALUE SHALL BE DETERMINED IN THE DETAILED DESIGN PHASE.
9. THE ROUTE OF THE PROPOSED DRAINAGE SYSTEM IS INDICATIVE ONLY AND SHALL BE INTEGRATED INTO THE SUBDIVISIONAL LAYOUT DURING THE DETAILED DESIGN PHASE.
10. THE SUGGESTED INVERTS OF THE DRAINAGE SYSTEM SHALL BE RETAINED UNLESS OTHERWISE APPROVED BY THE CITY OF COCKBURN.

PIPELINE / OPEN CHANNEL  
U/S I.L. = 22.70  
D/S I.L. = 18.80

RUSSELL ROAD BUFFER LAKE.  
TOTAL CATCHMENT AREA=72.0Ha (APPROX).  
1 IN 5 YEAR ARI PEAK DISCHARGE=170l/sec.  
SUM 1 IN 5 YEAR ARI PEAK DISCHARGE=385l/sec.  
1 IN 5 YEAR ARI STORAGE 4900m<sup>3</sup>

PIPELINE / OPEN CHANNEL  
U/S I.L. = 20.50  
D/S I.L. = 18.80

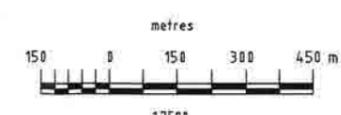
FREEWAY SWALE CHANNEL.  
TOTAL CATCHMENT AREA=19.5Ha (APPROX).  
1 IN 5 YEAR ARI PEAK DISCHARGE=55l/sec.  
SUM OF 1 IN 5 YEAR ARI PEAK DISCHARGE=145l/sec  
1 IN 5 YEAR ARI STORAGE=1320m<sup>3</sup>  
1 IN 100 YEAR STORM SHALL BE CONTAINED WITHIN THE SWALE - VOLUME=2550m<sup>3</sup>

**LOT 41  
FRANKLAND AVE**

GAEBLER ROAD GROUNDWATER CONTROL POINT.  
TOTAL CATCHMENT AREA=24.0Ha (APPROX).  
1 IN 5 YEAR ARI PEAK DISCHARGE=70l/sec.  
1 IN 5 YEAR ARI STORAGE=1510m<sup>3</sup>  
STORMS GREATER THAN 1 IN 5 YEAR ARI TO DISCHARGE INTO WETLANDS SOUTH OF GAEBLER ROAD.

PIPE OUTLET  
U/S I.L. = 24.00  
D/S I.L. = 22.80

LYON ROAD GROUNDWATER CONTROL POINT.  
TOTAL CATCHMENT AREA=38.9Ha (APPROX).  
1 IN 5 YEAR ARI PEAK DISCHARGE=90l/sec.  
1 IN 5 YEAR ARI STORAGE=2950m<sup>3</sup>  
STORMS GREATER THAN 1 IN 5 YEAR ARI TO DISCHARGE INTO BEENYUP ROAD SWAMP.



scales quoted apply to original drawing scale. A1

REV	DATE	ISSUED FOR	DESCRIPTION
A	28/11/13	Issued for Approval	
DATE		LOCAL	AHD
DATE			
David Wills and Associates Consulting Engineers			
CLIENT City of Cockburn			
PROJECT Southern Suburbs District Structure Area			
DRAWING TITLE Proposed Russell Road Arterial Drainage Infrastructure			
SCALE		ORIGINAL DRAWING SIZE <b>A1</b>	
DESIGNED	DATE	AUTHORISED	DATE
DJW	28/11/13		
DRAWN	DATE	DATE	DATE
J Ergic	28/11/13	David Wills	28/11/13
© THIS DRAWING IS COPYRIGHT USE OR COPYING OF THIS DRAWING IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF DAVID WILLS AND ASSOCIATES CONSTITUTES A COPYRIGHT INFRINGEMENT			
JOB NUMBER	DWA No.	REV No.	
<b>02006</b>	<b>C5</b>	<b>A</b>	

Depth to GW (mbgl)			
	MW1	MW2	MW3
27-Jun-06	2.26	2.14	2.61
05-Oct-06	1.95	1.85	2.30
20-Mar-07	2.58	2.47	2.92
27-Apr-07	2.61	2.49	2.93
24-May-07	2.62	2.84	2.58
20-Sep-07	1.69	1.64	2.07
26-Oct-07	1.66	1.62	2.04

Source: ENV (2007)

All in mAHD	MW1	MW2	MW3
<b>Ground Level</b>	<b>21.601</b>	<b>21.297</b>	<b>21.681</b>
27-Jun-06	19.34	19.16	19.08
05-Oct-06	19.65	19.45	19.38
20-Mar-07	19.02	18.83	18.76
27-Apr-07	18.99	18.81	18.75
24-May-07	18.98	18.46	19.11
20-Sep-07	19.91	19.66	19.61
26-Oct-07	19.95	19.68	19.65
<b>Calculated AAMGL</b>	<b>19.80</b>	<b>19.57</b>	<b>19.51</b>
<b>Separation Distance from AAMGL</b>	<b>1.801</b>	<b>1.727</b>	<b>2.171</b>

Bore ID	Easting	Northing	Monitoring Events	
			02-Feb-10	30-Aug-10
HPB1	390859	6440075	2.72	2.41
HPB2	390870	6439955	3.33	2.54
HPB3	390870	6439829	2.30	2.10
HPB4	391160	6439840	12.08	11.80
HPB5	391159	6439948	8.78	8.62
HPB6	391149	6440083	3.90	3.50
HPW1B	391019	6440218	-	1.70
HPW2B	391047	6440230	-	1.48
HPW3B	391072	6440244	-	1.46
HPW4B	391119	6440250	-	1.52

Source: BES (2010)

Our Ref: J15016

10 November 2015

Mr Warren Spencer  
Terra Novis Pty Ltd  
PO Box 1320  
CANNING BRIDGE WA 6153

Dear Warren

**Lot 41 Gaebler Rd, Hammond Park  
2015 Groundwater Monitoring**

As instructed I measured water levels in the bores on and adjacent to Lot 41 Gaebler Road on 18 September 2015. The attached Figure 1 shows the bore locations. Some bores that had previously been measured have been destroyed by site works.

Table 1 shows the water levels in the bores and compares them with previous readings.

**Table 1 Groundwater Levels**

Bore	2/02/10	30/04/10	30/08/10	11/06/12	29/08/12	9/10/12	4/09/13	7/10/13	18/09/15
HPB1	19.02		19.33	19.40	19.64	19.59	20.04	20.23	20.02
HPB6	19.20		19.58	19.74	19.97	19.96	20.35	20.64	20.37
MB2			19.64	19.76	19.97	19.83	20.29	20.58	20.33
MB3			19.54	19.67	19.89	19.67	20.25	20.49	20.26
HPW1		19.03	19.68	19.79	20.01	19.70	20.37	20.61	20.35
HPW2		19.26	19.73	19.87	20.06	19.84	20.43	20.66	20.40
HPW3		19.34	19.80	19.94	20.13	20.00	20.55	20.77	20.51
HPW4		19.20	19.88	20.01	20.20	20.15	20.57	20.79	20.51
JM37 (DoW)			19.06	19.15	19.38	19.36		19.96	19.78

The 2015 data show the same general groundwater gradient across the site as in previous years. The groundwater levels, while lower than in September 2014 (reflecting a dry winter), continue to show a general rising trend that has been apparent since 2003 in the DoW monitoring bore JM37, located in Frankland Avenue. This rise may be due to a reduction in abstraction by market gardens and/or the clearing of native vegetation

to the east. The rising trend is likely to taper off as the urbanisation of the area finishes and garden bores become established.

I have added the levels collected this winter to my database for the site, which can be used in future to inform site design and water level criteria if required.

I trust the above is satisfactory. Please don't hesitate to contact me if you require any further information.

Yours sincerely

**BAYLEY ENVIRONMENTAL SERVICES**



**PHIL BAYLEY**

att: **Figure 1      Monitoring Bores**

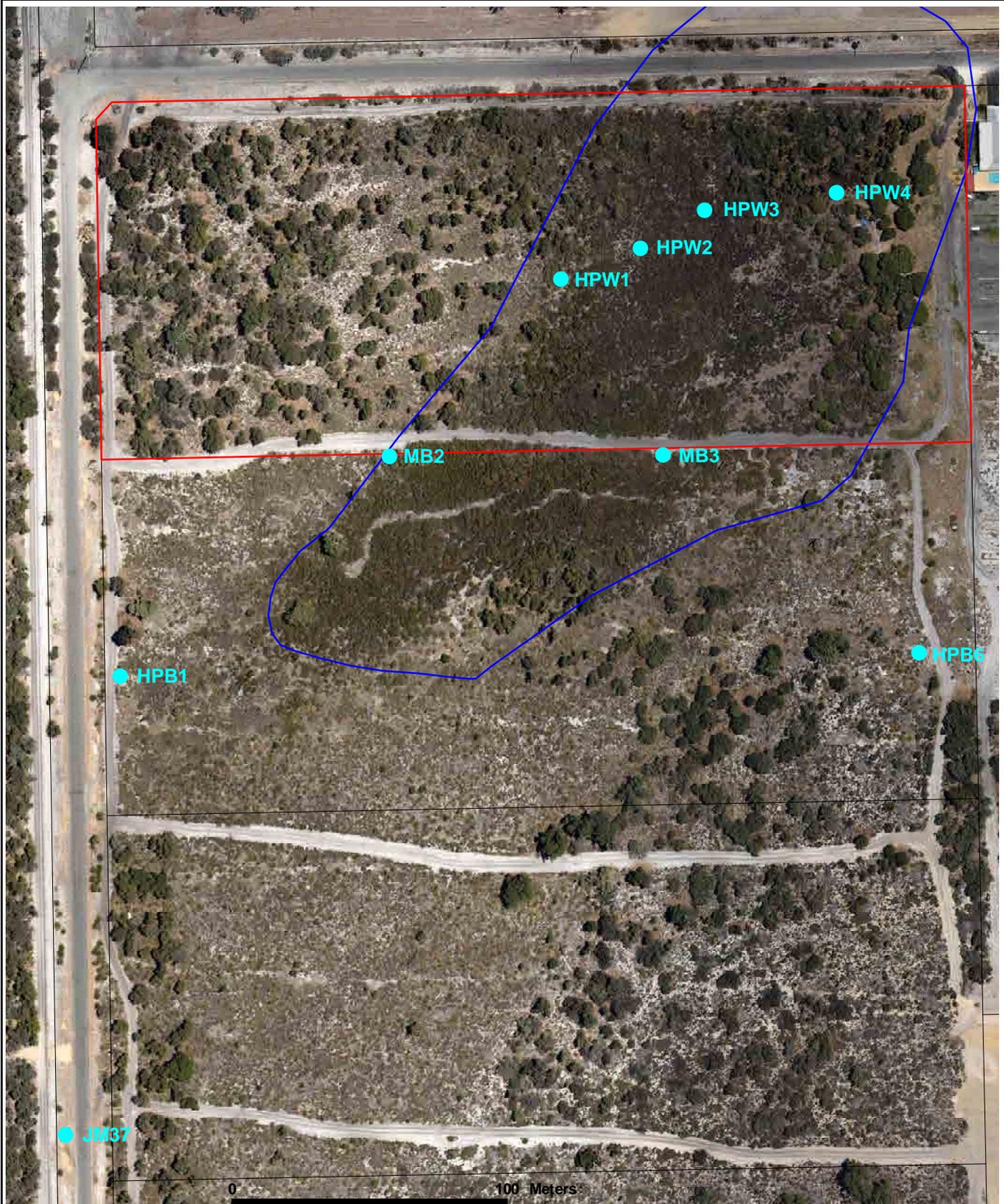


Figure 1

MONITORING BORES

# BORE LOG

PROJECT NUMBER:	J10002
LOCATION ID:	HPB1
DATE:	2/02/2010
EASTING:	390859
NORTHING:	6440075
METHOD:	Solid-Stem Auger Rig
TOTAL DRILLING DEPTH (mbgl):	6.0
REFUSAL (Y/N):	N
TOTAL BORE DEPTH (mbgl):	5.10
DEPTH TO WATER (mbgl):	2.82

SOIL PROFILE			SAMPLE DATA	
DEPTH (mbgl)	SOIL DESCRIPTION	GROUND WATER	SAMPLE ID	INTERVAL (m)
0 - 1.0	pale grey slightly silty sand			
1.0 - 2.0				
2.0 - 3.0				
3.0 - 4.0				
4.0 - 5.0				
5.0 - 6.0				



Comments:

Top of casing (toc) set at 0.50 magl.

Bore screened from 2.1 to 5.1 mbgl.

Photo shows soil profile from top to bottom at ~1m intervals

# BORE LOG

PROJECT NUMBER:	J10002
LOCATION ID:	HPB2
DATE:	2/02/2010
EASTING:	390870
NORTHING:	6439955
METHOD:	Solid-Stem Auger Rig
TOTAL DRILLING DEPTH (mbgl):	6.0
REFUSAL (Y/N):	N
TOTAL BORE DEPTH (mbgl):	4.80
DEPTH TO WATER (mbgl):	3.35

SOIL PROFILE			SAMPLE DATA	
DEPTH (mbgl)	SOIL DESCRIPTION	GROUND WATER	SAMPLE ID	INTERVAL (m)
0 - 1.0	pale grey slightly silty sand			
1.0 - 2.0				
2.0 - 3.0	pale grey/brown sand			
3.0 - 4.0	dark brown loamy sand			
4.0 - 5.0				
5.0 - 6.0	brown silty sand			



Comments:

Top of casing (toc) set at 0.40 magl.

Bore screened from 1.8 to 4.8 mbgl.

Photo shows soil profile from top to bottom at ~1m intervals

# BORE LOG

PROJECT NUMBER:	J10002
LOCATION ID:	HPB3
DATE:	2/02/2010
EASTING:	390870
NORTHING:	6439829
METHOD:	Solid-Stem Auger Rig
TOTAL DRILLING DEPTH (mbgl):	6.0
REFUSAL (Y/N):	N
TOTAL BORE DEPTH (mbgl):	5.30
DEPTH TO WATER (mbgl):	2.25

SOIL PROFILE			SAMPLE DATA	
DEPTH (mbgl)	SOIL DESCRIPTION	GROUND WATER	SAMPLE ID	INTERVAL (m)
0 - 1.0	pale grey sand			
1.0 - 2.0				
2.0 - 3.0	pale grey/brown sand (damp)			
3.0 - 4.0				
4.0 - 5.0	pale brown sand (wet)			
5.0 - 6.0				



Comments:

Top of casing (toc) set at 0.55 magl.

Bore screened from 2.3 to 5.3 mbgl.

Photo shows soil profile from top to bottom at ~1m intervals

# BORE LOG

PROJECT NUMBER:	J10002
LOCATION ID:	HPB4
DATE:	2/02/2010
EASTING:	391160
NORTHING:	6439840
METHOD:	Solid-Stem Auger Rig
TOTAL DRILLING DEPTH (mbgl):	15.0
REFUSAL (Y/N):	N
TOTAL BORE DEPTH (mbgl):	13.80
DEPTH TO WATER (mbgl):	12.20

SOIL PROFILE			SAMPLE DATA	
DEPTH (mbgl)	SOIL DESCRIPTION	GROUND WATER	SAMPLE ID	INTERVAL (m)
0 - 3.0	pale grey sand			
3.0 - 5.0	pale yellow sand			
5.0 - 11.0	yellow-orange sand			
11.0 - 15.0	white sand (wet)			



Comments:

Top of casing (toc) set at 0.60 magl.

Bore screened from 10.8 to 13.8 mbgl.

Photo shows soil profile from top (right) to bottom (left) at ~1m intervals.

# BORE LOG

PROJECT NUMBER:	J10002
LOCATION ID:	HPB5
DATE:	2/02/2010
EASTING:	391159
NORTHING:	6439948
METHOD:	Solid-Stem Auger Rig
TOTAL DRILLING DEPTH (mbgl):	11.0
REFUSAL (Y/N):	N
TOTAL BORE DEPTH (mbgl):	10.14
DEPTH TO WATER (mbgl):	8.80

SOIL PROFILE			SAMPLE DATA	
DEPTH (mbgl)	SOIL DESCRIPTION	GROUND WATER	SAMPLE ID	INTERVAL (m)
0 - 2.0	pale grey sand			
2.0 - 5.0	pale yellow sand			
5.0 - 8.0	yellow sand			
8.0 - 11.0	pale grey/brown sand (wet)			



Comments:

Top of casing (toc) set at 0.86 magl.

Bore screened from 7.14 to 10.14 mbgl.

Photo shows soil profile from top (right) to bottom (left) at ~1m intervals.

# BORE LOG

PROJECT NUMBER:	J10002
LOCATION ID:	HPB6
DATE:	2/02/2010
EASTING:	391149
NORTHING:	6440083
METHOD:	Solid-Stem Auger Rig
TOTAL DRILLING DEPTH (mbgl):	6.0
REFUSAL (Y/N):	N
TOTAL BORE DEPTH (mbgl):	5.35
DEPTH TO WATER (mbgl):	3.90

SOIL PROFILE			SAMPLE DATA	
DEPTH (mbgl)	SOIL DESCRIPTION	GROUND WATER	SAMPLE ID	INTERVAL (m)
0 - 4.0	pale grey sand			
4.0 - 5.0	pale brown sand			
5.0 - 6.0	dark brown sand			



Comments:

Top of casing (toc) set at 0.86 magl.

Bore screened from 7.14 to 10.14 mbgl.

Photo shows soil profile from top (right) to bottom (left) at ~1m intervals.

# Department of Water

HYPLOT V133 Output 04/05/2016

Period 42 Year 01/01/1975 to 01/01/2017

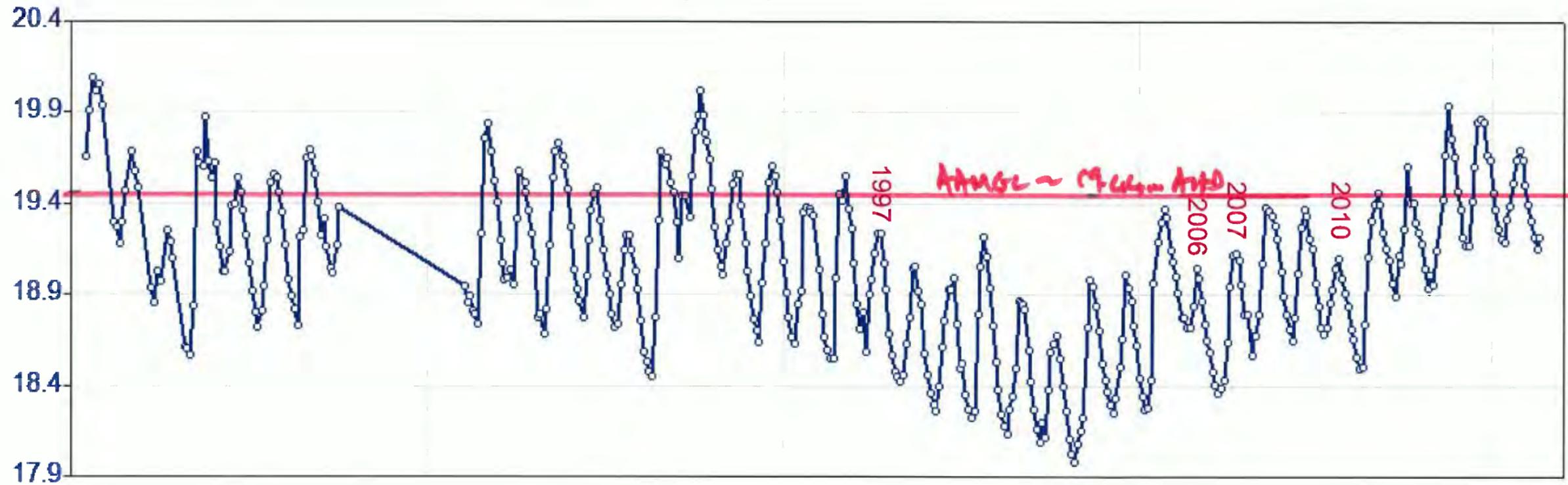
1975-2017

61410087

JM37

Level(mAHD) Discrete

GWL

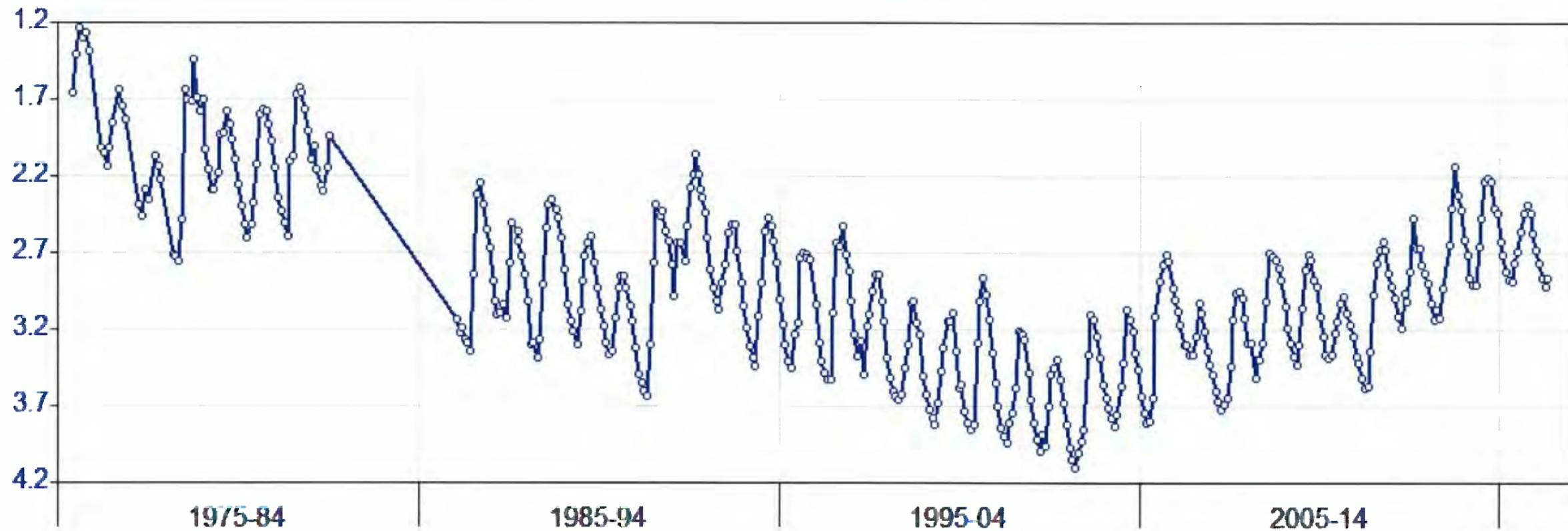


61410087

JM37

Level(m)SWL Discrete

GWL



# APPENDIX 6

## Engineering Services Report



## **TERRANOVIS PTY LTD**

### **LOT 41 FRANKLAND AVENUE, HAMMOND PARK**

#### **ENGINEERING SERVICES REPORT**

##### **1. General:**

The above land is to be developed into a R60 group housing site on the western half of the land. The remainder of the land is currently classified as Dampland and therefore is unable to be developed at this time; however, this classification is expected to change in the near future to allow the site to be developed to its full potential. The development area is 1.2119ha.

This report covers existing and proposed services plus proposals for earthworks, retaining walls, roads, drainage, groundwater, water supply, power supply, gas, telecommunications and sewerage as required for current urban development standards.

##### **2. Executive Summary**

The land the subject of this report is located on the south east corner of Frankland Avenue at the junction with Gaebler Road, in the City of Cockburn suburb of Hammond Park. Both roads are sealed roads; Frankland to rural standard, and Gaebler to recent urban standard. New urban developments have been constructed on the east, north and south of the site.

The land is covered with mostly low to medium height Banksia scrub. The land is vacant and not currently utilised. The western side is reasonably flat, with a slight fall into a low area in the eastern portion of the site.

The land form on the western portion of the land is free draining Bassendean sands at depth suitable for urbanisation, with sandy peaty clay underlying the sand on the low eastern half at various depths of a minimum 2m. The site varies in height from RL 23.00m AHD along the western edge to RL22.00m AHD along the eastern edge. The groundwater level is shown as varying from RL 19.60 m AHD on the western edge to RL 21.00 m AHD on the eastern edge by the Groundwater Atlas of the Department of Water 1997. The land can be connected to all services, by extension and upgrading from existing infrastructure, or by provision of new infrastructure as set out below. Sewer, water, power and telephone services already exist in Gaebler Rd adjacent to the site.

A LWMS for the land has been prepared; Revision 3 of which has just been re-submitted to the CoC. All stormwater from the development for storms up to the 1 in 100 year storm will be contained on site as set out in the LWMS.

The LWMS shows an AAMGL of RL 19.80m AHD at the south-western corner of the site rising to RL 20.20m AHD at the north-eastern corner of the site.

It is assumed the development area will be filled to a minimum level of RL 22.50m AHD to give at least 300mm clearance over the 1 in 100 year detention basin level and a minimum clearance to the AAMGL of 1.5m to enable the future lot soakwells, as required by the LWMS, to work efficiently. Such on site soakage will be augmented by future subsoil drainage when the site is developed.

A detention basin will be constructed at the northern end of the POS adjacent to the Dampland area adjacent to Gaebler Rd, which will contain the 1 in 100 year storm.

Some sub soil drainage is proposed within the road reserve some 350m to the east of the proposed detention basin, linking existing drainage infrastructure along Gaebler Rd to limit any rise in groundwater. This will provide the site with the necessary separation distance to groundwater in the long term, hence future-proofing the integrity of the design.

### 3. Site

The development site, with an area of some 1.2119ha, according to the RPS site plan, is located on the east side of Frankland Avenue and the south side of Gaebler Rd. It is currently vacant bush land covered with low to medium height Banksia scrub and regrowth.

The Environmental Geology Map of the Geological Survey of Western Australia classifies the western half of the site as “S8” Bassendean Sand suitable for urbanisation. The eastern half is classified as “Cps” Peaty clay and not compatible with urbanisation. The current process is listed as “groundwater recharge” and “flooding” respectively.

Contrary to the above, recent site investigation data shows little evidence of peaty soil at shallow depths. As a result, it is expected that with the necessary engineering the eastern half of the site will be developed in the future.

The post development water table is as detailed in the LWMS for the site, with a calculated AAMGL of RL 20.20m AHD at the north eastern corner of the site, falling to RL 19.80m AHD at the south western corner of the site.

The site is adjacent to Water Corporation sewer and water services in Gaebler Rd, and current subdivisions south of the site along Frankland Ave have extended the sewer past the site. An extension of all public utility services required to be constructed for the development can readily be extended along the abutting Frankland and Gaebler streets.

### 4. Development Proposal

It is proposed to develop the land as an R60 residential group housing site.

Frankland Ave running north along the western boundary of the site will become the extension of Hammond Rd, and will be a district distributor connecting Beelias Drive to the future western extension of Rowley Rd south of the site.

The development will be provided with all normal services, with links to abutting developments (existing and proposed) for sewer, water, power, roads, gas and telephone services with all drainage to be retained on site, using best management practices.

The development will entail earthworks (mainly fill) to provide a level free draining site at least 1.5metres above the AAMGL as determined by the LWMS. Drainage will be managed by on-site disposal via soakwells for each lot storing at least the 1 year 1 hour storm.

## 5. Earthworks & Retaining Walls

The LWMS has determined that the site has to be filled to a minimum level of RL 22.50m AHD.

There is an earthworks embargo for this site during the months of November to March.

Earthworks on site will entail removal of topsoil, cut and fill, with imported fill envisaged at this stage to fill the site to RL 22.50m AHD, and stabilisation of the finished development level with topsoil and hydromulch. This fill height may require construction of boundary retaining walls up to one metre in height.

## 6. Roads

All roads will be constructed to City of Cockburn standards and approval, including kerbing and piped drainage plus provision of footpaths as required.

The existing Frankland Ave is a 6m wide sealed rural type road in poor condition, without any formal drainage.

In the future, Frankland Ave is to be rebuilt as a dual carriageway to become the southern extension of Hammond Rd, as a district distributor. A road widening has been allowed along the western boundary of the site for this purpose. It is expected that construction of this road will be funded by Council infrastructure levies from local urban developments, including this development.

Gaebler Rd has recently been upgraded to full urban standard along the site frontage by the developer of the land on the north side of the road for its whole length to Frankland Ave. It is expected that the developer of lot 41 will be required to contribute to this upgrading, inclusive of roadworks, drainage, kerbing, and footpaths.

## 7. Drainage

The development site will be self-contained as far as stormwater drainage is concerned. The soil characteristics of the site will allow site soakage, based on the geology and the depth to the control groundwater level (CGL). Site drainage will be by soakage into soakwells for each residential lot, as the depth to the AAMGL will be the minimum of 1.5m for soakwells to operate efficiently. Road drainage will discharge to a swale basin. Subsoil drainage will be installed as a control to limit groundwater rise.

Some offsite works 350m east of the site in Gaebler Rd are required by the LWMS to link existing drainage infrastructure along Gaebler Rd with the intention of limiting future groundwater rise.

## 8. Groundwater

The post development level at the site has been determined by the LWMS at RL20.20m AHD at the north-eastern corner of the development site, falling to RL 19.80m AHD at the south-western corner of the development site.

When the residential area of site is filled to the recommended level of RL 22.50m AHD, it will be at least some 2.3 metres above the AAMGL calculated by the LWMS.

There is potential for further groundwater rise in the area on account of future development and stormwater infiltration. The subsoil works proposed by the LWMS will limit this possible rise to a maximum of RL 20.90m AHD, hence providing a minimum 1.6m separation distance from groundwater in the worst case scenario.

## 9. Power

It appears that sufficient power supply exists in the area to supply the development. A 132kVA high voltage aerial power line is located along the northern verge of Gaebler Rd, connecting to Frankland Ave north. This line will remain, and will not affect this development.

Currently no underground high voltage reticulation power lines exist in the section of Frankland Ave along the site's western boundary or Gaebler Rd on the northern boundary, except for a low voltage connection to the street lighting. An underground supply will be installed as part of the new development as required by Western Power approval along Gaebler Rd from Murrumbidgee Ave on the north side of Gaebler Rd, and also along the east side of Frankland Ave abutting the site. It is likely that a new transformer and possibly a switch station will be required for the R60 site.

## 10. Water Supply

At present there is no reticulated water supply to the site.

A 250mm reticulation water main is located along the northern verge of Frankland Ave to the east of the site as far as Murrumbidgee Ave. This main will be extended to, and past the site to serve this development and will, in the future be connected to the existing water main in Frankland Ave south of the site by others. The Water Corporation has advised that some upgrading of this supply may be required with a planned trunk main extension by the Water Corporation when required.

## 11. Sewer

The site is not currently connected to sewer.

The site currently falls within a gravity sewer catchment connected to the Bibra Main Sewer north of the site.

A 300mm reticulation sewer has been constructed along Gaebler Rd and Frankland Ave past the site, and connection will be made to this.

## 12. Telephone & NBN

Telstra services exist in the area along both Gaebler Rd and Frankland Ave. These are most likely to be able to be extended to service this proposed development. Some upgrading may be required.

If Telstra is to be the servicing authority, Telstra normally requires twelve months' notice of development starting to ascertain any upgrading requirements.

In accordance with recent requirements, the developer is required to install NBN “pipe and pit” to allow for future installation of cables for the NBN. The design of the “pipe & pit” is the responsibility of the developer, and will be designed in conjunction with the underground power network, and installed during the construction phase of the development.

### 13. Gas

Gas mains are available in this area. There is a high pressure main located in Gaebler Rd adjacent to the eastern half of the site as far as Murrumbidgee Ave. Gas can be extended from this into the development.



DEVELOPMENT ENGINEERING CONSULTANTS PTY LTD

THIS REPORT IS DATED 15<sup>TH</sup> SEPTEMBER 2016.

Sub #	Name & Address	Support or Oppose	Comments	Officer response
1.	Withheld	Support	We need a petrol station as the closest one is on Beeliar Drive. Not particularly bothered about medical as we have several nearby same as fast food outlets, we have enough of those nearby.	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
2.	Rachel Trenka 61 Gaebler road Hammond park	Oppose	With the other development going through, there is no need. Nor do I agree with putting a service station opposite a primary school. Would decrease house value of surrounding properties. An already busy street would increase and ruin our neighbourhood feel. Stop being kid safe / friendly.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.  Property Values are not a valid planning consideration.
3.	Paige 19 neilson street HAMMOND PARK	Oppose	I am opposing the proposal due to it being completely inappropriate in the area, this is a lovely suburb with young families, I do not wish to live a few doors down to a service station, omitting gases into the surrounding area as well as new pylon structures. I am expecting a new baby in the coming month and this is not why I chose to live in this area and not something I want to raise my baby around. It will negatively affect my property value. I can't imagine any one in this beautiful suburb would want that absolute atrocity to go ahead. Shame on the council for even proposing it.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.  Property Values are not a valid planning consideration.
4.	Nicholas Merenda 156 Frankland Avenue HAMMOND PARK	Support	I love the idea of having everything within a short distance, between this and the new establishment which was recently approved a bit further south, we would have access to everything we need within a 500m radius.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.

5.	Anonymous	Support	<p>It will be great for the area. Fuel Stations and fast food are out of the way for many locals. And it will bring more Jobs closer to schools for those looking for their first job.</p>	<p>Noted. Service Stations/Fast Food Outlets should be provided within planned 'Local Centres,' consistent with the planning framework.</p> <p>Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.</p>
6.	Anonymous	Support	<p>I think this is a fantastic project, Hammond Park lacks so many ammenities. The person station is a huge one, speak to every resident of Hammond park and they will say we need a petrol stations, the closest station is. 10 min drive either north or south.</p> <p>Also the area where it is proposed at the moment looks terrible. Hammond Road is very underdone and looks as if it's not suburbia with the weird turn to get onto the road, the dirt tracks, no propert gutters and foot paths. A lot of Hammond Park looks so unfinished and unattractive and I feel this will start to finish things off.</p> <p>I think it will create a nice welcoming vibe and community feel to the area.</p>	<p>Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.</p>
7.	Jamie Mansfield 70 Johnsonia Bend HAMMOND PARK	Support	<p>The establishment of increased local amenities not only enhances the convenience for residents by reducing the need to travel to other areas for basic essentials like fuel and food but also contributes to the economic vitality of the community.</p>	<p>Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.</p>

			Furthermore, the development of local businesses to meet these essential needs results in increased local employment opportunities.	
8.	Anonymous	Oppose	Traffic in an area with young children, Increase in crime, Unhealthy diet encouragement across the road from impressionable children, light pollution, noise pollution, damage to environment	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
9.	Anonymous	Support	This application will bring more live to the area and having to drive to gateway or beiliar to shop or eat or fill petrol is a pain	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
10.	Anonymous	Support	Because there is nothing around Hammond park and would be so much better	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
11.	Anonymous	Support	There are no convenient service stations or car wash facilities within the area, i would regularly use both.	Noted. Service Stations & Motor Vehicle Wash uses should be provided within planned 'Local Centres,' consistent with the planning framework.
12.	Anonymous	Oppose	It is socially irresponsible to have fast food outlets opposite or close to a primary school when we should be promoting healthy	Noted. It is acknowledged that the land uses proposed were not previously contemplated for

			<p>lifestyles. It would also add to congestion in the area with the primary school traffic already causing issues.</p> <p>Modifying the plan to just a servo / car wash and maybe a medical centre may pass the community needs and wants but we don't need more fast food outlets in the area as there are plenty of options a short drive away.</p>	this location and the impact of those uses may cause amenity concerns for the community.
13.	Linda Healey 15 Armand Drive AUBIN GROVE	Support	<p>Couldn't agree more that this is exactly what our surrounding suburbs need!</p> <p>We are lacking amenities with more and more housing estates being built around us in every direction and no where enough amenities.</p>	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
14.	Allan Burns 15 Armand Drive AUBIN GROVE	Support	100% we need more amenities	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
15.	Anonymous	Oppose	It doesn't suit the demographic of the area and the location does not make sense. It's proposed location is in the middle of a suburb, across from a Primary School. This sort of 24 hour fuel station and fast food drive-through (x3) would make more sense on Russell Road where cars and trucks are driving through.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
16.	Anonymous	Support	SUPPORT! I even I wish there were commercial spot available to have a mechanic business in the area in one of the new developments!	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
17.	Sheryar Shah 7 Almond Close,	Support	We need more amenities in the area.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.

	Hammond Park			
18.	Anonymous	Oppose	<p>Increased traffic noise/light pollution and rubbish near primary school, marsupial reserve and residential streets. Concerns about increased crime and antisocial behaviour at night time inherent with 24H operation. Increased urban noise and lighting associated with 24h retail operation. Service station better suited to primary access routes away from primary schools.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, light pollution is a valid consideration, as it impacts fauna and nearby residential.</p> <p>Noted, the land uses proposed are likely to generate additional waste by way of their nature.</p>
19.	Michael Crawley 12 Blackstock Street HAMMOND PARK	Oppose	<p>I believe there is enough commercial development in the area with the new supermarket, also there will be a lot of increased traffic outside the school which will be dangerous for both pupils and parents.</p> <p>Parking is heavy when school zones are in operation and this will only increase.</p> <p>The traffic will be increased along gaebler road where speeding is already an issue and is only a single lane road.</p> <p>Thanks Michael</p>	<p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>

20.	Beck Bogdan 44 Cousins Street HAMMOND PARK	Oppose	A number of reasons There is a major complex at Cockburn Gateways. IGA with vacant stores and a pub at MacQuarie and Russell Already a health clinic with a cafe at Marquis and Whadjuk Complex with supermarket and fastfood proposed for Whadjuk. There is no need for that many fast food options in such a small space esp so close to so many school.	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
21.	Amy Howitt Way MANDOGAL UP	Support	I think this is a fantastic application and it will greatly benefit the immediate community and surrounding areas. We are in desperate need for a fuel station in the area and placing it on a central road like this is a great use of the space and future thinking. The additional of restaurants, cafes, car wash and medical centre will really vitalise the area and provide much needed services. The jobs this will create for residents and locals will be far reaching. I really hope this application is successful.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
22.	Anonymous	Support	Hammond park needs more amenities	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
23.	Anonymous	Support	This has been long overdue. Hammond park is growing with huge popularity and I support this as it would be a great benefit	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
24.	Anonymous	Support	I support this decision as Hammond park is a growing suburb. This idea is great as the closest fast food outlets, petrol station etc are either across the freeway or having to travel a fair distance. I support this plan and hope it commences construction	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
25.	Anonymous	Support	Convenient for local community	Noted.

26.	Anonymous	Support	I think it will be a good addition to the area filling a gap of much needed infrastructure.	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
27.	Elisha Middleton 4 Ironbark Terrace HAMMOND PARK	Oppose	This is a close knit community. I want it to remain safe and family friendly. I'm absolutely horrified at the proposal to put fast food restaurants (especially 24 hours) and a service station in the area, and especially directly opposite a primary school. I think it is utterly irresponsible and quite disgusting.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
28.	Char 143 Frankland Avenue HAMMOND PARK	Oppose	Too close to residential area. Making it too busy for a family suburb. Introduce too many hazards to the environment, be it traffic, noise pollution, unsavoury behaviour around fast food and service station environments. Disrupting the neighbourhood and making it not long family friendly.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
29.	Anonymous	Support	There isn't a close service station anywhere! The stress I feel driving to the servo on E hoping I don't break down in the 10-15minutes it takes me to get there.	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
30.	Anonymous	Oppose	The placement of a service station next to the Hammond Park Primary School is going to cause large amounts of traffic to an already extremely busy street and intersection. The primary school has been lobbying for a cross walk for the kids at that end of the school for a number of years due to near misses and kids being hit by cars. Putting a service station there will pull a huge number of cars into that immediate area due to the lack of service stations on both sides of the freeway. Inundating the already busy roads, where cars already do not obey the speed	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.

			limits. I fear approving this application will have disastrous effects on the Primary School and local traffic.	
31.	Janelle Martinz 91 Gaebler Road HAMMOND PARK	Support	The suburb needs further amenities like this to service the area without needing to travel over 5 minutes by car to reach services	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
32.	Anonymous	Support	This is great as we have nothing like this in the immediate area. We will need to travel less as we will have easy access to these amenities instead of driving to Jandakot or Success.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
33.	Anonymous	Support	I endorse this proposal, having observed a significant deficiency in access to a petrol station, medical facilities, and fast-service restaurants since my recent move to the area. The addition of a petrol station would be particularly advantageous, given the absence of one in close proximity for urgent needs.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
34.	Anonymous	Support	Love the idea. The area population is expanding fast we need more local shops on top of the one that's already been approved on wattleup. It also provides some job options for the young youth wanting after school and weekend jobs within walking distance.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
35.	Anonymous	Support	We need closer accessible services	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
36.	Anonymous	Support	For anything associated with car service and fuelling the residence have to travel a great distance. Which can be a hassle. Also, grocery store and medical centres are far. I believe this plan will accommodate all the residents livinv in the area, especially the one with kids.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.

37.	Anonymous	Oppose	<p>The Planning Application DAP23/004 for a commercial development at 9501L Gaebler Road, Hammond Park should not proceed due to significant concerns regarding traffic congestion, the close proximity of numerous existing homes, and the potential for increased antisocial behavior stemming from 24/7 access.</p> <p>The proposed development would exacerbate traffic issues in the area, impacting both residents and commuters.</p> <p>Moreover, its close proximity to residential neighborhoods raises valid concerns about noise pollution and decreased quality of life for local residents.</p> <p>Furthermore, round-the-clock access to the commercial premises may lead to antisocial behavior, posing safety risks and discomfort to the community.</p> <p>It is imperative to prioritize the well-being and safety of residents while considering alternative development options that mitigate these concerns effectively, such as residential development instead.</p> <p>I urge you to reconsider the commercial development of this site.</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
38.	Anonymous	Oppose	<p>I do not support this development.</p> <p>1. Even if the comments about anti-social behaviour are not considered i still insist Mcdonalds 24hr and petrol station will attract more antisocial individuals, the area will be heavily affected by litter, nearby properties and parked vehicles are likely to be broken into more frequently than it is now.</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.

			<p>2. Traffic. The proposed development locates opposite to the school. Please visit the school at pickup time. Kids running the streets, cars getting in and out, road becomes heavily congested.</p> <p>Speaking outside of the school pickup/dropoff time, the stretch of Hammond Rd between Gaebler rd and Russell Rd is ideal for drag racing, no one follows 50 speed limit there, even at school time. There is a bus stop on the other side 27644 Hammond Rd before Eucalyptus Dr, there is no proper access to this bus stop, no footpath, kids also use it. Once the proposed eating/service station are open, the traffic will increase significantly hence more speeding offences, loud exhausts and music from those vehicles will cause lots of disturbance.</p> <p>Please keep macdonalds and petrol station away from the heart of the suburb. Wattleup is way more convenient location for dining/shopping/service station.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
39.	Anonymous	Support	I support this proposal because I think Hammond Park is in need of further amenities, 1 being a petrol station - as the closest one is in Success or Beeliar. I believe this proposal will also boost house prices & help support the convenience of residents.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
40.	Anonymous	Support	Great addition and much needed for the ever expanding community in this area of the City of Cockburn.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
41.	Scott Hughes 34 johnsonia bend HAMMOND PARK	Support	Our suburb could use some more services.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.

42.	Anonymous	Oppose	Proximity to services. Don't need 3 fast food outlets, replace one with a gym.	Noted.
43.	Anonymous	Support	The area desperately needs a petrol station	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
44.	Anonymous	Unsure	The area needs services such as these. My concern lies only with the location. Parking and access around the school is already extremely difficult. The roads are dangerous for the kids now with many not slowing down in the school zone. A large increase in traffic around there increases the risk to the kids.	Noted.
45.	Tenae milne 41 bellingham rd hammond park	Support	We really need a gas station; it's long overdue. I seen startbuck on the plan this would also be amazing! We could also use an Australian post office. 110% make this happen it is very needed!	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
46.	Anonymous	Support	Would be fantastic to have these ammenities close by. I would love to see the proposal go ahead.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
47.	Anonymous	Support	It will be convenient to have a petrol station nearby. The infrastructure needs to be created not to impede the living areas. Considerations for the noise and increased traffic should be made.	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
48.	Anonymous	Oppose	Theres going to be petrol station at gimlet close at the new estate wattleup road. Theres going to be hammond park shopping centre near frankland centre with woolies and fastfood. We dont need same facility at every 5-10mins distance. Lastly, in front of a school is never a great idea.	Noted.

49.	Anonymous	Support	There are no service stations nearby and with the growth of the suburb, we really need more of this stuff here. Aside from IGA, to get to a shopping centre we have to go through traffic lights and cross major roads and intersections. This would be so practical and would get so much business.	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
50.	Anonymous	Oppose	I don't believe these facilities being located across the road from a primary school is ideal. Would be better suited close the the Rowley Rd/Freeway on ramp, further from residential properties. Also, the submission mentions no impact between the school parking and the facilities but has a comment about not much parking being done on the south side of the school - they have clearly never been there at 3pm where there are hundreds of cars on the south side of the school. Parents parking on the vacant land would then use the parking at the facilities. Hammond Road is not equipped to facilitate the increased traffic and is still a good 5 years away from redevelopment, maybe after this is done it would do better.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
51.	Sergey 24 Alberod street HAMMOND PARK	Oppose	It will bring more people to petrol station and food 24/7, from almost 2 suburbs including Atwell, I believe the crime of our suburb will go up. Fuel will make massive pollution for our suburb and people living next to it. In my observation would be better to build park for dogs and kids as most of people using school ground as dog park. I have attached screen shoot of best location between two suburbs in kind of natural space, but I'm not sure if government aloud build in that area, Thank you Sergey <a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/2833d68d9e75ffc8e1dc588fa6bddd39d462591a/original/1706604793/e036e99673461066b97834e6043d7ded_IMG_2557.jpeg?1706604793">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/2833d68d9e75ffc8e1dc588fa6bddd39d462591a/original/1706604793/e036e99673461066b97834e6043d7ded_IMG_2557.jpeg?1706604793</a>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.  Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.

52.	Anonymous	Support	will be good for economic growth for the younger generation	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
53.	Anonymous	Oppose	<p>Large commercial area across the road from school generating a severe health and safety risk to primary school children</p> <p>Commercial development surrounded by suburban houses, generating significant noise and suburban disrupt.</p> <p>Commercial development has planned access on Gaebler Road, which is a main pedestrian thoroughfare during peak hour schooling times, this development would significantly increase the risk to children, parents and pedestrians at all times. There has been a child hit by a car on Gaebler Road in recent history, and this development would only increase that danger to residents.</p> <p>Potentially generate disruption to schooling and learning during development, construction and commercialisation.</p> <p>Significant increase in traffic on a main suburban road, with a significant number of houses, increasing the risk of car accident, and therefore being a significant health and safety risk to residents</p> <p>24hr service station and car wash would generate disruptions at all times of day and night, disrupting the livelihood of residents in close proximity.</p> <p>Significant rise in crime within the Hammond park community within the last 12-24 months. This would further contribute to a</p>	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.

			<p>likely increase in crime and antisocial behaviour further adding to ongoing community concerns.</p> <p>This is a significant development not suited for a tight suburban community with close proximity to residential homes and youth schooling.</p>	
54.	Anonymous	Support	<p>This is great project for the community, easy to access and convenient.</p>	<p>Noted, however the development is being proposed outside of the designated local centres for Hammond Park.</p>
55.	Anonymous	Oppose	<p>This is a residential area!! Having a petrol station so close to homes is unsafe. The traffic around the school is already unsafe by adding an influx of customers will only cause more issues. The building works will be extremely disruptive to residents as well as the natural land being demolished! The noise pollution should also be factored in for residents living so close. This is a disgrace to even be considered.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>
56.	Anonymous	Oppose	<p>Basically I'd like to point out that there's a few issues with this project:</p> <ol style="list-style-type: none"> <li>1. Parking during school events and before and after school is already difficult and with high volume vehicle movements on Gaebler and Hammond Roads.</li> <li>2. The precautionary principle of risk should be considered for potential fuel and oil contamination of the Jandakot water mount aquifer.</li> <li>3. Numerous cited research papers highlight the risk to children's health due to fast food establishments located close to schools, leading to adverse outcomes for children in regards to nutrition standards, weight gain and developing unhealthy eating habits.</li> </ol>	<p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>

			<p>You basically cannot get closer to a school for these fast food outlets and service station who all sell fast or junk foods and drinks high in fat, sugar and salt.</p> <p>4. Another medical centre? we have many already in Hammond Park and adjacent suburbs. How about an urgent care clinic or something more useful for health needs of the residents.</p> <p>Research paper examples:  <a href="https://cancerwa.asn.au/wp-content/uploads/2022/07/Trapp-2021.-Association-between-food-outlet-availability-near-school-and-junk-food-consumption.pdf">https://cancerwa.asn.au/wp-content/uploads/2022/07/Trapp-2021.-Association-between-food-outlet-availability-near-school-and-junk-food-consumption.pdf</a>  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10108019/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10108019/</a>  <a href="https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf">https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf</a></p>	
57.	Anonymous	Support	Hammond park is a growing suburb that needs more amenities to accommodate the increasing population	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
58.	Anonymous	Support	I think this will be great for Hammond park.	Noted.
59.	Anonymous	Oppose	I believe providing such facilities will result in the suburb being more crowded, loud and the crime will increase.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
60.	Anonymous	Support	Just built in Hammond Park and the suburb really needs more shops and a fuel station. 10 minute drive to the closest. Suburb needs to catch up to the times with the amount of new homes.	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.

61.	Anonymous	Support	This is a much needed service area for Hammond park and the surrounding suburbs. The lack of petrol stations or fast food joints nearby has always been a pain living in this area for the past 10 years. More services and amenities for the local people is the exact thing everyone has been asking for.	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
62.	Anonymous	Oppose	Too many residential residential dwellings in very close proximity to have fast food restaurants and a petrol station. Already too much traffic through these residentially streets with the development of the Hammond Park Secondary College and homes built.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
63.	Anonymous	Oppose	Too close to housing and schools, it will make the area heavily congested.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
64.	Anonymous	Oppose	A few points to consider  1. The Harry Waring marsupial Reserve is located opposite the proposed development. Bright lights and increase in traffic could disrupt the nocturnal animals behaviour. 2. Traffic flow is already at peak capacity during school pickup and drop off. With limited parking around the school. Increase in traffic would cause even more of a hazard to pedestrians entering and leaving Hammond park primary school. 3. Fast food outlets opposite a primary school is linked to unhealthy habits. Please see attached links to research papers	Noted, light pollution is a valid consideration, as it impacts fauna and nearby residential.  Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would

			<p>completed by WA Health and the Cancer Council in regards to this.</p> <p>4. The Jandakot water table was always the reason a petrol station could not be built in Hammond park. Is this now not considered an issue?</p> <p><a href="https://cancerwa.asn.au/wp-content/uploads/2022/07/Trapp-2021.-Association-between-food-outlet-availability-near-school-and-junk-food-consumption.pdf">https://cancerwa.asn.au/wp-content/uploads/2022/07/Trapp-2021.-Association-between-food-outlet-availability-near-school-and-junk-food-consumption.pdf</a></p> <p><a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10108019/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10108019/</a></p> <p><a href="https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf">https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf</a></p>	<p>impact the expected traffic volumes of a residential area.</p> <p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p>
65.	Anonymous	Support	<p>I would like to see more amenities including shops. While Hammond Park has grown in population significantly still it is lacking in amenities. We have to commute to other suburbs . This means more usage of car and fuel and more flow of traffic . Having amenities closer would save time, car usage and fuel consumption.</p>	<p>Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.</p>
66.	Luke Cowdray 10/18 Deanmore Bend HAMMOND PARK	Oppose	<p>Hammond park is a very close knit community known for peaceful environment, clean and family friendly.</p> <p>These proposed fast food chains are detrimental not only to the health but is a ugly site to see in the community. Especually across the road from a primary school.</p> <p>More thoughtfull development should be considered in alignment with community values.</p> <p>This looks cheap and nasty would love to see commercial projects that are for the betterment of the community such as fitness/gyms, healthy food cafes restaurants, parklands and a vibrant atmosphere.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>

			This proposal will not be for the benefit of the area but for big corporations profits.	
67.	Anonymous	Support	Much needed for the area, fast food creates jobs for the young folk, petrol station is needed our closest one is cockburn central.. medical centre isn't really needed with a few nearby.. a tavern with a kids play area would be amazing for the social/community aspect. I do think hammond road needs completing urgently for traffic purposes.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
68.	Anonymous	Support	This would be the closest fuel station and fast food outlet to my residence. These essentials should be as close as possible.	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
69.	Anonymous	Oppose	The Planning Application DAP23/004 for a commercial development at 9501L Gaebler Road, Hammond Park should not proceed due to significant concerns regarding traffic congestion, the close proximity of numerous existing homes, and the potential for increased antisocial behavior stemming from 24/7 access. The proposed development could exacerbate traffic issues in the area, impacting both residents and commuters. Moreover, its close proximity to residential neighborhoods raises valid concerns about noise pollution and decreased quality of life for local residents. Furthermore, round-the-clock access to the commercial premises may lead to antisocial behavior, posing safety risks and discomfort to the community. It is imperative to prioritize the well-being and safety of residents while considering alternative development options that mitigate these concerns effectively.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.  Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
70.	Zoe Whitfield 18/35 Barfield Road	Oppose	The location is too close to the school, where traffic is already a safety hazard, and children have been injured. Even when the second school opens in 2025 this development would still pose a significant safety issue. It is too close to the bush reserve thus is a contamination and fire risk. Food outlets and associated	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.

	HAMMOND PARK		advertising and junk foods so close to the school directly oppose health standards required in the canteen and health messages taught in the school.	
71.	Anonymous	Oppose	Concerned about kids/pedestrian safety with additional traffic near a very busy primary school. More than enough fast food in the area already.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
72.	Lauren 22 juncea way HAMMOND PARK	Oppose	There is a school going to be opposite it which my kids go to but also that road around there has already had so many accidents involving school kids and problems with the traffic and speeding etc, adding more traffic to the area will not be good for the families or children.. also introducing more fast food restaurants is not a good idea for such young and impressionable minds of children to see. Kids are trying to eat healthy especially at school so giving them easier access to unhealthy food is not needed. A drs surgery is a good idea but not a petrol station we have enough of those already. This a young family community the type of proposed shops for this area are not a good choice. If it does happen i hope they either change to more family friendly commercial outlets such as drs , physio , vets, etc not commercial fast food outlets. Thank you	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.  Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
73.	Anonymous	Oppose	Do not agree with having a 24hr service station within the suburb and next door to a very busy primary school. Along with a 24hr fast food outlet which would only increase traffic into the suburb, when keeping these kind of facilities along Russell road or Hammond road would be much more suitable.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.

			<p>The facilities are needed in the area but a much more suitable location along a major arterial road would be much better suited and allow for easier access in and out of the service station and fast food outlet.</p> <p>A site along Wattalup road would be much better suited and more of a useful location given the high traffic flow with the addition of trucks who could also use the facility.</p>	
74.	Anonymous	Oppose	<p>This is a terrible place for a service station and fast food outlets. Right opposite a primary school. Can you imagine how bad the e traffic/parking will be not to mention how dangerous for young children crossing the road. Surely there is a better place for this. It is not the right place opposite a primary school</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>
75.	Anonymous	Oppose	<p>The proposed location of this development is right across from an incredibly busy school, on a road with a school zone and VERY limited parking already for the 900+ student volume. To put multiple fast food outlets here as well as a service station etc would cause a huge amount of traffic in the school zone that is already so congested during school pick up and drop off times, not to mention dangerous. As well as this, putting these amenities right in the middle of the suburb will create large</p>	<p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p>

			amounts of additional traffic and congestion. Please do not consider this proposal. There is already plans for a similar development further south in Hammond Park as I understand it which would be much better placed.	It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
76.	Anonymous	Oppose	Concerns regarding child safety with the increase in traffic and unknown persons without a working with children check near the neighbouring primary school.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
77.	Bonnie Newman 75 Johnsonia Bend HAMMOND PARK	Oppose	Increased traffic going through the suburb. Fast food across the road from a primary school. Increased antisocial behaviour which is already an issue in our suburb. Another shopping precinct is already being built in the suburb.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
78.	Anonymous	Oppose	Wrong application for a family area and not good being across from a primary school	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
79.	Anonymous	Oppose	To have fast food and a service station across from the primary school seems dangerous. Also the amount of traffic it will bring to the residential area, right near schools will be unsafe. There are already issues with the amount of cars and safety for kids	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.

			with no school guards close to the school nor traffic management systems there has already been accidents of kids being hit by cars and a lot of near misses. Great idea but wrong location.	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
80.	Anonymous	Oppose	<p>We do not need a that many fast food outlets in our suburb. With the new supermarket preposal on Wadjuk I feel this is excessive.</p> <p>A petrol station would be nice, but not in a residential area.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>
81.	Anonymous	Support	<p>Good to have a petrol station and more amenities in our suburb.</p>	<p>Noted, however the development is being proposed outside of the designated local centres for Hammond Park.</p>
82.	Anonymous	Oppose	<p>This will have too big an impact on school parking which is already a shambles</p> <p>Traffic flow in the area is terrible and the amount of near misses will increase as upper primary kids race across the road to these shops after school.</p> <p>Assume it will also create problems for the school at lunchtimes, watching for upper primary kids sneaking over to the shops at lunch time.</p> <p>It may also create a place for predators to sit and stalk children in plain sight in the school playground at break times.</p>	<p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>

			<p>If the other development on Whadjuk Drive is already approved for inclusion of fast food, this should make this unnecessary.</p> <p>You encourage us to be healthier by saying this....so we put it back to you... "Your move Cockburn"</p>	
83.	<p>Lauren Thompson 77 Murrumbidgee Drive HAMMOND PARK</p>	Oppose	<p>This is too close to a primary school. The additional traffic is unsafe for young children walking to and from school. We have already had incidence where children have been hit by cars on this road. This is also too close to residential properties. Not that's 3 fast food chains are needed in the area but if it has to go into the suburb this type of application would be better suited on wattleup road where it is not so built up.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
84.	Anonymous	Support	<p>Hammond Park desperately needs a petrol station. This will tidy up the area and make it so that people don't need to travel out of the suburb to get fuel, wash their car or something to eat.</p>	<p>Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.</p>
85.	Anonymous	Oppose	<p>This proposal is opposite a primary school and i feel is the wrong location for such a busy proposed site as it is right in the middle of a residential area.</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p>
86.	Anonymous	Support	<p>We need a petrol station close by, and I think it will make the suburb more lively and</p>	<p>Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.</p>
87.	Anonymous	Support	<p>Good amenities</p>	<p>Noted.</p>

88.	Anonymous	Oppose	<p>I have concerns about this project's location, especially its proximity to residential areas and a primary school. A 24x7 operation could potentially cause disruptions for nearby residents, attract unwanted and anti social elements, and raise safety and security issues for children and others in the area.</p> <p>Furthermore, it's worth noting that there are already multiple 24x7 operating food outlets and service stations in the close vicinity. Introducing another one on narrow single-lane roads is likely to further increase the issue of traffic congestion in the area. This could lead to inconvenience for both residents and customers, potentially causing further disruptions to the daily lives of those living nearby.</p> <p>Therefore, the overall impact of above on this local area should be taken into account when considering the feasibility of this project.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>
89.	Anonymous	Support	<p>We do need a gas station and shops in Hammond Park as every time we have to travel to success or other suburbs to buy groceries or fuel the car. We really need development in this area.</p>	<p>Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.</p>
90.	Anonymous	Oppose	<p>The impact on the surrounding nature reserves is unacceptable. The pollution in the air, and from the rubbish will be detrimental to our already limited natural land and residents in the area</p>	<p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p> <p>Noted, the land uses proposed are likely to generate additional waste by way of their nature.</p>
91.	Anonymous	Oppose	<p>Hammond Park is currently a family friendly suburb striving to maintain a peaceful, healthy environment for our children to</p>	

			<p>grow up in. A development of this nature, so close to a large Primary School, family homes &amp; adjacent natural bush will affect all of this. It is already a nightmare for parents to find parking when delivering &amp; collecting children from school. Many children use Gaebler Rd to travel to &amp; from school either by foot or on bikes &amp; scooters. This development will put those children in danger with the extra traffic &amp; make crossing the road difficult.</p> <p>The local community has had to contend with multiple incidents of unsociable behaviour &amp; crime as a result of non residents briefly moving into the area. A development such as this with 24 hour services, immediately adjacent to a Primary School would surely attract other such undesirables &amp; ruin such a lovely peaceful suburb.</p>	
92.	Anonymous	Oppose	Too close to Hammond Patk Primary School.	Noted.
93.	Anonymous	Oppose	Too close to the Primary School which is already chaos with traffic morning and afternoon, the Primary School to me is the main reason the location for what is proposed is very unsuitable	
94.	Anonymous	Oppose	Close to school and residences, will increase crime rate significantly	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
95.	Anonymous	Oppose	Close to primary school	Noted.
96.	Anonymous	Oppose	I strongly oppose this submission. I do not believe our community needs more fast food outlets, especially so close to a primary school. I actually work at Hammond Park Primary School and would find this commercial set-up highly inappropriate to be adjacent to a primary school. As educators and as a community we need to teaching our young people and promoting to them about the importance of healthy eating behaviours. Putting fast food outlets opposite a primary school	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be</p>

			is downright delinquent as it promotes unhealthy eating habits and provides easy access to unhealthy foods. The City of Cockburn should be saying no to this. Not only this but there are environmental and wildlife concerns, social issues, increase in traffic in the neighbourhood, safety issues with extra traffic in our streets near a primary school and an obesity epidemic affecting our young people. There are plenty of food and fuel options within 10 minutes of Hammond Park. The City of Cockburn should be saying NO.	considered as part of the assessment of the proposal.
97.	Anonymous	Oppose	Completely irresponsible placing this busy project so close to an already extremely busy and traffic struggling school.	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
98.	Anonymous	Oppose	<p>This development isn't required in Hammond Park, especially with the approved development on Wattleup Roadless already going ahead, which is less than 1km away, basically on the same road. That development will already have multiple fast food outlets and a Woolworths.</p> <p>There are multiple vacant businesses in 'The Hive' complex where the IGA, which haven't been filled in more than 2 years. Not to mention the GP there moved out of the suburb. Building a new facility for it doesn't resolve the practitioner shortage in the region.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted and agreed that the commercial nature of the development is out of character with the surrounding area.</p>

			<p>Furthermore, why would we need three fast food outlets across the road from a Primary School... I thought the City of Cockburn was trying to promote healthy lifestyles, how does this fit with the mandate?</p> <p>Anyone that lives near or goes to that school will tell you how dangerous the Hammond Rd x Gaebler Roads are there. This development will only make that worse.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>
99.	Anonymous	Oppose	<p>Increase in traffic and associated vehicle noise along with emissions. Environmental factors associated with petrol storage and explosion, flammability.</p> <p>Impact on local wildlife including the Harry Waring Marsupial Reserve. The effects of noise pollution and rubbish have on native wildlife populations.</p> <p>The spread and management of the rubbish produced by fast food outlets throughout the neighbourhood and affects on stormwater drainage.</p> <p>24/7 fast food outlets attract a large amount of young adults late at night hanging around and making a nuisance of themselves. There have been numerous incidents of violence at Cockburn which is not wanted in a quiet suburb with a demographic of young families with small children.</p> <p>I do not find it a problem to drive a couple of kilometres away to get petrol and fast food when the need arises. I am strongly against this development and I've lived happily in the suburb for 10 years without such developments at my doorstep.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p> <p>Noted, the land uses proposed are likely to generate additional waste by way of their nature.</p>
100.	Anonymous	Oppose	<p>Whilst new amenities to the area are always a good consideration. This is far too close to the local primary school. There has been numerous requests to the local council to address road safety, both in terms of excessive speeds on the roads this new proposal will be located and crossings for</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p>

			children, however yet is to be done about either. An average sized suburb has an Iga. Cafes and medical centres, is there really a need for three fast food restaurants, or a 24/7 petrol station. It is a family area, families who are raising children in healthy environments where fueling vehicles through the night and eating fast food shouldn't be promoted. Crime is high, this will bring more people in at night and will cause further chaos to the area, particularly at school times.	
101.	Simon Haydock 15 Dickerson Loop HAMMOND PARK	Support	I have been hoping there would be a petrol station close to my home for some time. Also love the Starbucks idea. Would be looking for some footpaths to be created from Dickerson Loop to the proposed location though, as currently there are 0.	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
102.	Joanne Gunn 19 Neilson Street HAMMOND PARK	Oppose	Family suburb. This is opposite a primary school. Impacts on the suburb, especially surrounding streets are all negative. More traffic in a built up area with 3 schools. Huge risk of children being involved in accidents involved with increasing cars. Increasing crime, litter and noise pollution. Council should not be supporting more fast food outlets or traffic. Environmental impacts are all negative. There is not one positive factor in this proposal in this location. I can't believe putting this development on this location would benefit anyone. If people can't drive to an already established shopping area to buy fast food or buy petrol and are willing to risk accidents on roads to school children and all the negative detrimental impacts this will bring to the families that live in this area then we really are the generation of selfishness and laziness. My mind is blown. What have we become.	Noted and agreed that the commercial nature of the development is out of character with the surrounding area.  Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.  Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.

103.	Anonymous	Support	Will be convenient amenities for local area. Currently there isn't a petrol station in the suburb of Hammond Park. The additional shops and Doctors surgery will also be beneficial to local area. The area has been growing with a number of new estates so more shops, a petrol station and additional Doctors surgery will be in line with population growth in the area. Will save having to go to Success or Cockburn.	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
104.	Anonymous	Oppose	Inappropriate location due to proximity the suburbs busiest primary school	Noted.
105.	Anonymous	Oppose	<p>The location of this proposal is absurd... why would you put fast food places and a service station across the road from a Primary School. This development does not fit with the community sentiment or lifestyle the suburb presents.</p> <p>The increased traffic alone would be impactful on the area. Not to mention all the commercial vehicles (i.e deliveries, fuel trucks, etc) driving down residential streets. Surely there is a more appropriate location for such a development. Parking at the school is already a problem and this development will only make it worse.</p> <p>There a numerous service stations within a 5 minute (and less) drive of the area, so why is one required in the middle of the suburb?</p> <p>The environmental impact study also shows numerous vegetation types which fall under the endangered and critically endangered categories, including a protected wetlands.</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p>
106.	Chloe Moloney 42 Barfield Road	Oppose	Right next to a school? Generating even more traffic in an already dangerous thoroughfare? Absolutely not!!!	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.

	HAMMOND PARK			<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
107.	Anonymous	Oppose	I live directly across the road. This is the middle of suburbia. You will bring crime, so so so so so much traffic, dangerous due to petrol station. I will move out of Hammond park if this goes ahead	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
108.	Chad Critch 5 Gaebler Road HAMMOND PARK	Oppose	These services do not need to be plopped down in the middle of suburbia! This is ridiculous, right by a school, the amount of traffic is going to be insane. Imagine all the light pollution for houses, traffic literally 24 hours a day! Rubbish all over the streets, big commercial trucks coming and going, idling at all hours. This is absurd.	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p> <p>Noted, the land uses proposed are likely to generate additional waste by way of their nature.</p>
109.	Anonymous	Support	Its really handy to have service station nearby	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.

110.	Michael 143 Frankland ave HAMMOND PARK	Oppose	There is no requirement as there is a shopping precinct nearby off Russell road and Gateway shopping centre is within 8 minutes. Litter and odour/noise from the fuel station and fast food will affect the Harry Waring Marsupial reserve being so close. The roads nearby (Frankland, Gaebler and south end of Hammond road) will not handle the increase in traffic and they are already busy roads. It may attract unsavoury characters into a family friendly neighbourhood. Being directly across from a school will affect the ability for parents to pick their children up and for children to cross the road safely. It will also mean children at the school will be affected by the smell/noise pollution. Is it wise to have fast food so close to a school? This will add extra stress to parents.	<p>Noted, the land uses proposed are likely to generate additional waste by way of their nature.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
111.	Anonymous	Oppose	There is a lot of traffic around the school and I feel this is only going to cause accidents and more traffic. The plan for 3 fast food joints across from a primary school is also not needed. I think the whole idea is not great around a primary school where there is already constant traffic! It's going to ruin the nice relaxed area around the school	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
112.	Yogesh K 45 serventy crescent, Hammond Park	Support	We need a servo as there is none close to Hammond Park / Aubin grove and need to travel 7 kms to fill up in Cockburn. Also, some food outlets in the area will also be useful for people without a car. The medical facility is also a value add to reduce the wait time for sick patients.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
113.	Alan Gill	Oppose	While the risk of contamination is low, it seems unwise to place a petrol station adjacent to a Conservation Category Wetland	Noted, it is acknowledged that the proposal will have an environmental impact that should be

	17 Delaronde Drive SUCCESS		<p>and immediately to the east of a Bush Forever site. My primary objection to this development is on environmental grounds.</p> <p>My secondary objection to the development is due to the proximity of the school. Placing three fast food outlets across the road from a primary school undermines public health messaging around healthy eating and obesity.</p>	<p>considered as part of the assessment of the proposal.</p> <p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p>
114.	Elena Josephine Fletcher 15 Teramo Street HAMMOND PARK	Oppose	<p>It is not in the right place we have russell street with shop and also wattlepup road coming in 2025 with shops we don't need this in the middle of hammond park where family homes are</p>	<p>Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.</p>
115.	Anonymous	Oppose	<p>I am strongly apposed to the development of industry in this area. I purchased my house 3 years ago and the main reasons for choosing Hammond Park was that the house was located in a cul-de-sac and it was away from business only surrounded by residential properties.</p> <p>To develop a 24/7 petrol station and fast food business will bring in non locals in to the area and along with this comes crime and increase traffic into a quite suburb.</p> <p>I work for WA Police and crime statistics on the website for the last financial year show that similar suburbs like Hammond Park that have these industries in residential areas increases crime.</p> <p>Waikiki had 316 offences of Stealing, Robbery and Burglary and Yokine had 501 offences compared to Hammond Park which had 168 offences. I understand there are many factor that contribute to these but it will only aid to an increase.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>

			<p>I'm not apposed to developing this area but for more residential properties. I want to keep Hammond Park a safe and quite neighbourhood for its residents.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/0dcc4afba5e7a7f079908699c3171bcc0fecf20e/original/1706663737/ca9c49d9a0a7f83d3bc1284bd16b7427_Crime_Statistics_Comparison.jpg?1706663737">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/0dcc4afba5e7a7f079908699c3171bcc0fecf20e/original/1706663737/ca9c49d9a0a7f83d3bc1284bd16b7427_Crime_Statistics_Comparison.jpg?1706663737</a></p>	
116.	Anonymous	Oppose	<p>I agree we need a petrol station in the area, however, this corner is already a very busy intersection and with it right by the school it will only become more of a safety issue. Please look elsewhere in the area.</p> <p>Fast food is a ridiculous idea, how are we meant to support healthy eating to our children if this is across the road from their school.</p>	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
117.	Abhishek 5 Leichhardt Crossing HAMMOND PARK	Oppose	<p>This development is good for Hammond park residents but the location of this is not at all I am happy about. This place is very close to the primary school and having these kind of things near the school is not safe.</p>	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
118.	Anonymous	Support	<p>Very convenient for local in the area</p>	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
119.	Anonymous	Support	<p>Good amenities for local community.. really needed</p>	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.

120.	Anonymous	Oppose	<p>This site is not ideal for what you are wanting to put here.</p> <p>There are already issues with traffic management and parking on Gaebler Rd due to the primary school opposite (HPPS) which have been brought the council's attention repeatedly over the last couple of years. Last year a HPPS child was hit by a car on Gaebler Rd on his way to school. The proposed application will bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd. When is the council going to get serious about the safety of our children?</p> <p>The proposal wants to bring a medical centre to this location. There is already a medical centre 500 metres away on Marquis St, so this is unnecessary. There is also an abandoned medical centre at the Hive (IGA) - Cnr of Russel Rd and Macquarie Blvd, again very close to Gaebler Rd. The site remains vacant and has done so for some time. If there was a need or demand for further space to place another medical centre, or even another business, then this is already available.</p> <p>This year Hammond Park Primary School canteen was forced to make changes to their menu to comply with healthy eating regulations issued by Dept of Education. It is rather ironic and inconsistent that the Council is considering putting in fast food chains directly across from the school. What kind of message does this send? Again, don't put capitalism and corporate profits before the health and safety of our children.</p> <p>We do not want this development here in our suburb. Please consider the health and safety of our children.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>
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121.	Anonymous	Support	Hammond Park is lacking facilities	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
122.	Anonymous	Oppose	<p>Location is too close to a primary school. This will make already difficult parking conditions at the school even more problematic.</p> <p>Fast food outlets next to primary schools does not promote healthy eating for our children.</p> <p>Another commercial development with fast food restaurants has been approved a very short distance away.</p> <p>Servo will increase traffic and potential speeding on already dangerous roads (Gaebler and Hammond) (at least 2 accidents/near accidents involving children in past 12 months)</p>	<p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>
123.	Anonymous	Support	I welcome the convenience of a petrol station, medical centre and take away food options close to home.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
124.	Anonymous	Oppose	<p>Hammond Park is a quiet, relatively crime free suburb. We have access to groceries at Harvest Lakes or the Hive IGA and petrol, while sourced a little further afield, is plentiful (Cockburn Gateways, Beeliar Drive, Armadale Road to name a few).</p> <p>This proposed plan would make a massive impact and it is so large in scale for an area which is not that much in need of it. Adding a Woolworths further up the street is on the books as well. I am not against progress, but the scale for this proposal is ill-conceived, especially with the 24 hours of operation element.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would</p>

			<p>Crime Stats speak for themselves when you compare Hammond Park to suburbs with similar areas including petrol stations and fast food. I have attached a file highlighting robbery, stealing and property damage stats which cause me some concern.</p> <p>Increasing traffic (and by traffic, I mean human and vehicular) through our quiet and safe suburb will see an increase in crime, stranger danger for our schools and loitering/begging as we sadly already see this at both Harvest Lakes and the Hive IGA.</p> <p>There is no shame in wanting to live in a quiet suburb, and they are becoming less and less. This change would directly impact my day to day life and enjoyment of the place I live in.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/0dcc4afba5e7a7f079908699c3171bcc0fecf20e/original/1706677837/d890e23f5381894676bcd1da08855a7_Crime_Statistics_Comparison.jpg?1706677837">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/0dcc4afba5e7a7f079908699c3171bcc0fecf20e/original/1706677837/d890e23f5381894676bcd1da08855a7_Crime_Statistics_Comparison.jpg?1706677837</a></p>	<p>impact the expected traffic volumes of a residential area.</p>
125.	Anonymous	Support	<p>Hammond Park has been developing over the last 10 years and there are few amenities. If you want anything decent you will have to drive to another suburb or go to Cockburn central. Definitely support for a petrol station.</p> <p>You will have resistance from families due to lack of parking at the primary school.</p>	<p>Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.</p>
126.	Jason Byway 20 Reschen Chase HAMMOND PARK	Support	<p>Recently moved into the suburb and developments like this excite me. While I support the development overall, there remains some outstanding access issues that this will also exacerbate if not included as part of the submission. The intersection of Hammond Rd and Gaebler Rd is a dangerous intersection given the blind spot it presents when continuing south along Hammond. Given the busy intersection, particularly at school start/finish times, it creates the high potential for crashes or risk to children without improvements to the intersection. It should be required that the intersection at</p>	<p>Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not</p>

			<p>minimum upgraded (if not the duplication of Hammond Rd in entirety) so that the further increase of traffic that this will bring doesn't increase the potential danger.</p>	<p>previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
127.	Anonymous	Support	<p>The closest amenities North are e Cockburn Gateways and the traffic is a nightmare. This would ease congestion there. Closest South is Kwinana. I have lived in this suburb 14 years and a fuel station would be greatly appreciated. Fast food options are a bonus.</p> <p>This suburb has been overrun with school Mums that think they run the suburb and all that happens within it. As a parent of children at the primary school opposite the proposed site I have no issue in it being near the school. The parents claiming it promotes poor eating choices are clearly stating they have no control of their children and their movements. That's a them problem, the rest of the suburb should not be disadvantaged because of them. I 100 percent support this proposed plan.</p>	<p>Noted, however the development is being proposed outside of the designated local centres for Hammond Park.</p>
128.	Anonymous	Oppose	<p>1) Lack of mayor surrounding Roads (traffic) and safety walk to primary school: i.e as Gaebler rd is currently being used as shortcut for drivers going to Freo or west industries to avoid Kwinana traffic.</p> <p>intersection in Gaebler rd and Hammond road, will create a congestion jam for other nearby local streets. based this on current drop off/on time on the primary school which not only use the Eucaliptus Drive entrance as the main one, but there are two other main entrances, through Gaebler rd and through Murrumbidgee, this increase in traffic will also increase in rate of accidents, as it has been already raised by the community to the city of Cockburn, as kids/parents coming (walking) southbound to the school needs to come across these roads, and a lot of daily crossing/walking people to get to botanic park.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p>

			<p>2) another point against, a Petrol station being build near a bushfire Prone Area, Hammond park has been affected by bushfires in the recent years, including community evacuation in 2023.</p> <p>3) kids from year 5 can easily accessing fast food chain (bringing that to school) as it will be close to school, no all kids are taken to the school by their parents.</p> <p>I'would be happy with any other commercial development but other than a petrol station or fast food chains,</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>
129.	Anonymous	Oppose	<p>A service station in a residential area will only detract from the value of the houses nearby. 24/7 facilities such as the petrol station and carwash invite crime into the neighbourhood. The irony of placing a medical centre next to 3 fast food premises is somewhat amusing.</p> <p>All of the premises proposed are readily accessible within a 10 minute drive and serve no interest in the local community (except the medical centre). Even the medical centre is surplus to needs. There is one two minutes down the road, another proposed on Wattleup Rd, and the existing one on Russell Rd.</p> <p>The location of fast food directly opposite a school is also a very poor look for the council and could be seen as promoting corporate greed over the health of the next generation.</p>	<p>Property Values are not a valid planning consideration.</p> <p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p>
130.	Brad Petersen 27 Gaebler rd HAMMOND PARK	Oppose	<p>I'm in favor of this type of development for Hammond Park but believe this site is not appropriate.</p> <p>Gaebler rd is a long straight road which invites road users to speed there have been several incidents in the past couple of years where pedestrians have been hit. Fast food and a petrol station will more than likely increase road traffic along Gaebler rd and decrease the safety of pedestrians and other road users. This is especially important as it's planned across the road from</p>	<p>Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p>

			<p>a Primary school. This point has been raised multiple times already from residents and fallen on deaf ears, it's only a matter of time until there's a fatality.</p> <p>It will reduce the available parking for parents at drop off and pick up for HPPS.</p> <p>Although a future improvement of Hammond road is planned, the current state of the road would not support the extra traffic.</p> <p>Surely a more suitable location for a development like this would be on the corner of Hammond road and Russell, Wattleup or Rowley rd.</p> <p>There's already fast food being built on Wattleup/Whadjuk. Why do we need more?</p> <p>There is a medical centre less than 1km away already, surely we don't need another one</p>	<p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p>
131.	Mehraab 1 ASHENDON Boulevard HAMMOND PARK	Oppose	<p>This is next to a school as it is the school lacks basic parking and traffic mitigation.</p> <p>Giving this commercial development is going to make more nuisance. I am not opposing development but this is not the right place for that big a project</p>	<p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would</p>

				impact the expected traffic volumes of a residential area.
132.	Michelle gianoli 10 roper boulevard HAMMOND PARK	Support	Hammond park needs this. Love the Starbucks idea and Woolworths def need a petrol station	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
133.	John R 35 Cousins street HAMMOND PARK	Oppose	<p>We do not need an increase of traffic near the primary school. Primary school kids starting ir finishing school should not be subjected to fast food outlets.</p> <p>A petrol station will bring non local traffic to the area where young kids are going to school.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
134.	Sarah Paton-Diggins 77 Barfield road HAMMOND PARK	Oppose	<p>There are a range of commercial restaurants, petrol stations and carwashes within a reasonable distance of this suburb already. North and South.</p> <p>This area would be better suited for a nature reserve or community garden.</p> <p>More shops, food outlets etc will just pull patronage from the locally owned shops and doctors that we already support.</p> <p>This development is also too close to a school and press the young students at risk of distraction, as well as exposure to crime (petrol stations often being targeted for robbery).</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.

			Please reconsider.	
135.	Anonymous	Oppose	Because it's right next to a primary school where unfortunately two children have already been hit by cars. Increased traffic to area and it's in the middle of a suburb move it on to Russell rd	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
136.	Richard Pithouse 14 caridean way HAMMOND PARK	Oppose	There is not much bush left in Hammond Park, so I do not approve of the location for this proposal, which will mean destroying that patch of bush. The suburb is hot because of the lack of trees, green vegetation, increasing artificial grass and concrete. Please don't destroy one of the only patches of native bush remaining.	Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.
137.	Taylor Gee 48 johnsonia bend HAMMOND PARK	Support	Hammond Park is fast growing suburb and really needs more facilities such as these for residents. Well overdue. looking forward to this going ahead!	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
138.	Anonymous	Support	Well overdue, plans look great and the area will benefit from more access to medical + service station as the area is heavily populated with not enough around.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
139.	Anonymous	Oppose	Not a good location for this type of Developement. This would be better suited out or on outskirts of the suburb like Russel rd.	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
140.	Anonymous	Oppose	Imagine the amount of crime rate going up. Unhealthy eating option for kids. Safety of kids near the school	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.  Noted. It is acknowledged that the land uses proposed were not previously contemplated for

				this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
141.	Adrian Coetzee 28 Willis Terrace HAMMOND PARK	Support	We have lived here for over 10 years, and a petrol station is the one amenity missing. The concern the I have though is that the parents dropping and collecting school children utilise the kerb on the site where this proposal is going to be placed. What provision will be made to accommodate the traffic flow as not to disrupt the area, as well as handling the school drop-off?	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
142.	David Manning 23 Flametree Bend HAMMOND PARK	Oppose	Will cause too much traffic chaos across the road from a primary school when the road layout isn't good enough already. Lots of kids have to walk to school because there is inadequate parking. Not a good look for the school canteen to have to go to healthy options then 3 junk food places open across the road.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
143.	Anonymous	Oppose	1) Lack of mayor surrounding Roads (traffic) and safety walk to primary school: i.e as Gaebler rd is currently being used as shortcut for drivers going to Freo or west industries to avoid Kwinana traffic. intersection in Gaebler rd and Hammond road, will create a congestion jam for other nearby local streets. based this on current drop off and pick up times on the primary school which not only use the Eucaliptus Drive entrance as the main one, but there are two other main entrances, through Gaebler rd and	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.

			<p>through Murrumbidgee, this increase in traffic will also increase the rate of accidents, as it has been already raised by the community to the city of Cockburn, as kids/parents coming (walking) northbound to the school needs to come across these roads, and a lot of daily crossing/walking people to get to botanic park.</p> <p>2) another point against, a Petrol station being build near a bushfire Prone Area, Hammond park has been affected by bushfires in the recent years, including community evacuation in 2023.</p> <p>3) kids from year 5 can easily accessing fast food chain (bringing that to school) as it will be close to school, not all kids are taken to the school by their parents.</p> <p>4.) Contamination, not only soil and subsoil (underwater table contamination) from fuel, air polution created for more traffic and smell from fuel and fast food burn oil, visual contamination from all advertising specially the nonhelathy fast food chains...</p> <p>5.) no need for fast food outlet in front of a school promoting kids to ask for it and having it handy specially crossing such as busy road that is already.</p>	<p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p>
144.	Anonymous	Support	Hammond Park needs access to more facilities.	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
145.	Anonymous	Oppose	It's too close to HPPS and it will create too much additional traffic. During school drop offs and pick ups the area where this is planned to be built is full of parked cars going to the school	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would</p>

				<p>impact the expected traffic volumes of a residential area.</p> <p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p>
146.	Anonymous	Oppose	Absolutel disaster... this is a residential street. What on earth are you thinking. Unsafe, crime levels with rise, more burnouts, noise, pollution, smell, trucks going through residential streets	<p>The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City is advertising the application pursuant to the requirements of planning legislation.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>
147.	Lisa Baler Court HAMMOND PARK	Oppose	The area is busy enough. I do not agree with fast food eatery's across from a Primary School. We need more green spaces	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
148.	Anonymous	Support	Close petrol station, close cafe to walk to have breakfast/ a coffee	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
149.	Anonymous	Support	Its good for business. Closer shopping for families.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.

150.	Anonymous	Oppose	It's already a extremely busy road ,a kid got hit by a car with the heavy traffic we already have and there's no parking for the school already there's already a shopping centre in Hammond park pubs and there's a servo in Cockburn shops and a new one just past Russell rd	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
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151.	Anonymous	Oppose	<p>Following the review of the proposed development we object to the proposal</p> <p><b>1. With respect to the planning report:</b></p> <ul style="list-style-type: none"> <li>The local structure plan applied in 2017 had set forth residential development site. There has been no discussion, information, or considerations as to how constraints applicable could be managed in alternative ways, or solutions to achieve this outcome as part of this proposal. Scrutiny should be undertaken to assess these constraints and whether a residential development was or could be feasible as the priority for any application for the proposed development.</li> <li>A further consideration is the significant timeframe for the proposed Hammond Road to enable and facilitate improved traffic management and station. Given a timeframe of 2030, it is unclear whether this timeframe is realistic or road funded and may cause a risk or detriment to traffic flow and development site. A planning consideration must include a condition requiring the road upgrade to coincide with this development and we recommend a planning approval dependency, with the road upgraded funded by the developer.</li> <li>The time of operation on a 24x7 basis by the fuel station, McDonalds and what appears to be an unusual consideration to planning approvals given residential neighbourhoods. There appears to be no evidence or comparable equivalent planning approvals within the state or the City of Cockburn where businesses are permitted to operate within a 200m distance. We urge the planning authority and developers go back and provide sufficient comparison sites and review planning approvals where fuel stations, 24x7 basis that produce sustained mechanical noise to planning body to identify any restrictions applied as part of previous approvals. This does not align with other local developments and creates significant detriment to land holders within a 1,000m radius. A better consideration would be to limit operating hours for all business to cease operation prior to 10pm evening and before 7am.</li> <li>A recommendation was sought for an ESD professional to collate Framework and develop an ESD narrative for the development. This does not appear to be in the attachments as having been achieved and should be assessed and considered in the context of the proposed development.</li> </ul>	<p>Noted. The proposal contradicts the previously advertised 2017 structure plan, which is a 'seriously entertained planning proposal', to be given regard during assessment. The proposal is inconsistent with this structure plan, as it proposes 'Commercial' rather than 'Residential' land uses.</p> <p>Please refer to the detailed planning assessment within the City's Responsible Authority Report, and the City's recommendation.</p> <p>In relation to matters of probity, Declarations of Due Consideration and Disclosures of Interest are declared prior to the panel determining development applications.</p>
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			<ul style="list-style-type: none"><li>• The CPTED review has limited to a timeframe of 2022 and fails to consider near misses including a car hitting a student during the 2023 year. A review reperformed with current information that may critically impact the cons implementation of safety design considerations and should not be appro assessed and any additional implementations added.</li><li>• There is acknowledgement of condition of planning approval for wetland outcome which must be acknowledged and accepted.</li><li>• There is a statement regarding net benefits to the community which have on evidence nor has this considered the impact of competition to medica</li></ul>	
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			<p>which we detail in the retail needs assessments. These benefits should be further detail assessed before considering approval of this application.</p> <ul style="list-style-type: none"> <li>• With respect to 7.5 operational policy, the consideration does not address matters: <ul style="list-style-type: none"> <li>○ The timing of out of school care (OOSC) drop offs and pick ups would conflict with AM and PM peaks for the proposed development location of the OOSC towards the development i.e. entry from Gabler road on the proposed site. We recommend visual inspection and additional traffic modelling for these events have not been considered in this traffic flow analysis must be performed prior to considering approval of this application.</li> <li>○ The increase in car traffic in 2023 has not been considered due to the detailed report to 2022. As a result, there is heavy ramping up of traffic on Gabler road on the proposed site. We recommend visual inspection of school timeframes of the flow of traffic, parking and the likelihood of accidents used by parents attending the school, prior to considering approval of this application.</li> <li>○ This does not consider the proximity of the Hammond Park Secondary School and the likely use of scooter transport to and from the area. The impact of this transport type and forecast growth resulting in congestion has not been assessed. The developer along with main roads should conduct further assessment, prior to considering approval of this application.</li> <li>○ The report fails to acknowledge the conflict of 'cheaper' Tuesday afternoon school of vehicles across Perth increases during the proposed AM and PM school times coincide with school pick up times and OOSC times for the fuel station. The modelling of increased traffic, accidents has not been modelled in the report.</li> </ul> </li> <li>• With respect to 7.6 many considerations have not been undertaken by the applicant including: <ul style="list-style-type: none"> <li>○ Modelling of sites within 200m of a service station and how many vehicles on 24x7 basis or with other time of operation restrictions, including measures to reduce noise and pollutants.</li> <li>○ This also doesn't include reference to the operation of a car wash which presents elevated noise challenges within the area operating on a 24x7 basis.</li> <li>○ Additionally, the consideration of road safety measures whereby speed limits are physically limited to reduce hooning likely to increase due to the</li> </ul> </li> </ul>	
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			<ul style="list-style-type: none"><li>○ These considerations must be reviewed in detail prior to consideration of application.</li><li>● With respect to traffic management, the traffic impact assessment has not made incorrect statements regarding:<ul style="list-style-type: none"><li>○ Parking not being problematic in the areas – this relies on outdated information and requires reassessment and visual inspection.</li><li>○ The lack of road safety design features has not been considered in the assessment of speeding vehicles attending the site due to hill locations and layout without physical speed reduction measures such as speed bumps and lowering roundabouts.</li><li>○ There does not appear to be advice from main roads considered in the assessment of application.</li></ul></li><li>● There appears to be no consideration to address the limited sight lines in the assessment of implementation of changes to the road network to reduce the likelihood of collisions.</li></ul>	
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			<ul style="list-style-type: none"> <li>• With respect to section 8.3 noise, a planning approval condition should be included stating that an acoustic analysis must be undertaken and must conform to or less than the parameters in the reports provided.</li> <li>• There is reference to referral to the Commonwealth EPBC Act for clearing which should be enjoined to the approval of this proposal and not separated from it, to ensure that the development at Cockburn meets its community expectations on responsibility for ecological and environmental sustainability.</li> <li>• The conclusion references the development will deliver access to important amenities in the areas that have been demonstrated to be lacking. This does not include a detailed reference to: <ul style="list-style-type: none"> <li>○ The 4 medical centres within short proximity to the proposed site and its retail catchment zone.</li> <li>○ The 8 cafes within a short proximity to the proposed site, with more than 10 in the retail catchment zone.</li> <li>○ The 9 fooderies (not including cafes) within a short proximity to the proposed site with more than 20 in the retail catchment zone which includes a number of foodies.</li> </ul> </li> <li>• The conclusion also states no negative impacts on adjoining properties, but should consider: <ul style="list-style-type: none"> <li>○ Pollutants and aromas from the development as part of this assessment should be commissioned to assess the impact prior to considering approval application.</li> <li>○ Whilst within permitted levels, mechanical noises on a 24x7 basis could cause health issues for the community including those suffering from asthma, reduction of property values, limiting the ability for residents to sleep at night for passive cooling. Detailed consideration of these factors should be considered prior to considering approval of this application.</li> </ul> </li> </ul>	
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			<p><b>2. With respect to the traffic impact assessment report, in addition to matters raised above:</b></p> <ul style="list-style-type: none"> <li>The 2.10 crash assessment uses dated information (up to 2022) when traffic incidents have not been revealed nor measures which would be taken to avoid and limit the impact of these matters.</li> <li>The sightline assessment identifies a material issue where no valid solution has been provided.</li> <li>The report does not consider scooters and bike as traffic flow which would be a concern for the students likely to attend from Secondary School and local roads via bicycle to the freeway onramps.</li> <li>6.3 assumptions are limited to 2022 data which do not reflect accident data for students.</li> </ul> <p><b>3. With respect to the acoustic report, in addition to matters raised above:</b></p> <ul style="list-style-type: none"> <li>The mechanical services have not yet been selected. A conditional plan may be required of the sound power levels not to exceed the items described as part of a mechanical service design needs.</li> </ul> <p><b>4. With respect to the retail needs report, in addition to the matters raised above:</b></p> <ul style="list-style-type: none"> <li>The report does not provide an assessment to the categories of development proposed. A more detailed assessment regarding the existing business</li> </ul>	
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			<p>cafes, medical centres should be assessed, especially for impact to existing bus loss of trade and turnover impact for these businesses as per figure 18 of the r detailed assumptions for review. This may result in one or more businesses no viable, adversely impacting jobs and community harmony of the development completed prior to consideration of approval of this application.</p> <ul style="list-style-type: none"> <li>• There is reference to the proposed medical centre providing for 65 FTE jobs, ho not clear where these staff will be found noting the profound skills shortage in Australia for skilled professionals. The assumptions need to be based on facts a assessment for the viability of these numbers must be provided prior to consid approval.</li> <li>• 6.2 benefits have not been based on fact – there are no retail goods provided - services or food outlets. Additionally, competition is either none or overly satu the small business community, likely resulting in small businesses folding due t addressable market. Detail should be provided or benefits clearly validated pri consideration of this application.</li> </ul> <p><b>We request that should any consideration for a commercial development as propos is subject to the following:</b></p> <ol style="list-style-type: none"> <li>1. Any business does not operate 24x7 and limited to 10pm closure, 8am opening</li> <li>2. There is sufficient design to road safety measures to reduce speed to the surro with physical limitations.</li> <li>3. Any business has limited noise and environment adverse impact i.e. does not p mechanical instruments in their design.</li> <li>4. It is unlikely to generate community disbenefit i.e. a target of theft (ATM, chem store), etc.</li> </ol> <p><b>We further request for probity reasons, that any person who has either responsibility over the decision for the application clearly declare any potential, perceived or actual interest with respect to this development application.</b></p> <p>Should any conflict be declared, any such person should recuse themselves from the p identify a suitable substitute without conflict. These decision makers should be monito the conflict yearly over a 5-year period. This is reflective of the support of an applicatio community resistance, limited benefits and significant adverse impact to the communit residents.</p>	
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152.	Anonymous	Oppose	My kids go to the school that is opposite and there has already been kids hit by cars right near the school. By increasing the traffic flow / access to unhealthy eating & bringing up the crime rates in our suburb is not something I think we will benefit from. This is a ridiculous idea, why would you want to put something like that in the middle of a family area. More parks / ovals / skate parks to generate kids healthy lifestyles is much better. Or even the bush land for the native animals. This money driven idea is stupid. I strongly oppose the idea.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
153.	Anonymous	Support	Hammond park residents have to make a bit of travel to get these kind of basic services which are in every other suburb but our own.	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
154.	Anonymous	Oppose	<p>Traffic congestion and safety concerns: The 24-hour operation of the service station, fast-food outlets, and motor vehicle wash is likely to contribute to increased traffic in the area, especially considering the drive-through facilities. This could lead to congestion and potential safety hazards, impacting both pedestrians and motorists.</p> <p>Noise and light pollution: Continuous operation, particularly 24-hour services, may result in excessive noise and light pollution, disrupting the peace and quiet of the neighborhood. This can negatively affect the well-being and quality of life for residents in the vicinity.</p> <p>Environmental impact: The proposed development, including a medical center and drive-through facilities, may generate increased waste, including packaging materials and medical disposables. Proper waste management needs to be addressed to prevent environmental degradation. There is a national reserve right next to the proposed plan.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>Noted, light pollution is a valid consideration, as it impacts fauna and nearby residential.</p> <p>Noted, the applicant is responsible for submitting a Noise Management Plan which must address noise related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact expected noise levels and traffic numbers within a residential area.</p>

			<p>Limited accessibility planning: While access from both Hammond Road and Gaebler Road is proposed, there might be concerns about whether the existing road infrastructure can handle the increased traffic flow, leading to potential transportation issues.</p> <p>Impact on local businesses: The presence of three fast-food outlets could negatively affect existing local businesses, leading to economic imbalances in the community.</p> <p>In summary, my opposition to the commercial development is based on concerns related to traffic, noise and light pollution, environmental impact, accessibility planning, and potential harm to existing businesses. I believe a more balanced and sustainable development plan should be considered, taking into account the well-being of the community and the preservation of the local environment.</p>	
155.	Jeffrey Lee 19 Capello Lane HAMMOND PARK	Oppose	<p>'--&gt;Service Station (24-hour operation) Three Fast Food Outlets (varying hours, including up to 24-hour-operation and drive-throughs)</p> <p>Its very near to the hammond park primary school and people all over from hammond park or even aubin grove will come to this area to get food and petrol. i do not think it is a very good idea for the kids and also the traffic.</p> <p>It is unfair for the kids in terms of safely too. How about the air pollution and also the crime? parking issue? so many factors..why must it be near to a school???</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p> <p>Noted, the proposal is inconsistent with the Environmental Protection Authority's recommended buffer distances to sensitive land uses (such as residential and school sites). This has been given consideration in the City's assessment.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p>

			<p>Looking at the picture..what would think of the traffic condition? the choke point is bad even without these buildings...</p> <p>Lastly, i believe this area is a wet land hence why would it be ok for petrol.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/949aeecf826132e8283e4abc324f03a2073300a4/original/1707099546/74b59ea8c045f2bd762fd93db11a4754_Screenshot_20240205_101154.jpg?1707099546">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/949aeecf826132e8283e4abc324f03a2073300a4/original/1707099546/74b59ea8c045f2bd762fd93db11a4754_Screenshot_20240205_101154.jpg?1707099546</a></p>	<p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
156.	Atalie P 14 Cooli Street HAMMOND PARK	Oppose	<p>I feel that the amenities are welcomed to the area, however, the location of the proposed fast food (in particular) development being right across the road from a Primary School is not ideal to say the least. Our canteen has been denied supplying ham in the menu, however we're possibly going to have one of the largest fast-food businesses within eyesight of the playground.</p> <p>Not to mention the already busy and dangerous traffic at peak times around drop off and pick up. It will be so congested, and a huge safety risk for young students commuting to and from school.</p> <p>There are many open spaces in the area that I feel would be a lot more suitable than this position.</p> <p>I absolutely would love a petrol station and car wash, and of course I'm a huge Starbucks fan, but the McDonalds and KFC I just don't feel with so many young families with young kids in our area is a great influence and in our kids best interest for their health and well-being.</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p>

			<p>Do we also know how the pollution from the fast food businesses would affect the school students being in such close proximity?</p> <p>Thank you for your time.</p>	
157.	Anonymous	Oppose	<p>The area gets congested already because of the school in the vicinity.</p> <p>The traffic going to the new parts of Hammond Park is quite heavy</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
158.	Laura 28 eucalyptus drive HAMMOND PARK	Oppose	<p>Too close to primary school, fast food not needed that close to school, increased traffic around the area. Already have been several kids hit by cars along that road.</p> <p>I write to you to seek assistance with an objection to Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development within the City of Cockburn.</p> <p>The subject sites proximity to Hammond Park Primary School raises multiple significant concerns including:</p> <ul style="list-style-type: none"> <li>· Negative health impacts</li> <li>· Increased and dangerous traffic congestion</li> <li>· Lack of a local structure plan to inform decisions of land use.</li> </ul>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>

		<p>The reasons for my objections include:</p> <p>Negative health impacts</p> <ul style="list-style-type: none"> <li>· The subject site directly contradicts evidence and good practice strategies stated within the Evidence brief: food, built environments and obesity published by the Department of Health (WA) in 2022. The publication specifically states that we should: <ul style="list-style-type: none"> <li>o Change planning laws, zoning restrictions and land use policies and strategies to limit unhealthy food outlets and to support access to healthy food options, including near schools</li> <li>o Implement restrictions on opening hours of unhealthy food outlets near schools.</li> <li>o Ensure healthy food outlet positioning is competitive and well balanced with other food outlets</li> <li>o Locate healthy food outlets within 800 m of home, school, and work to increase healthy food intake</li> <li>o Co-locate healthy food outlets with other key destinations to facilitate multiple activities as part of one trip e.g. within activity centres and near schools.</li> </ul> </li> </ul> <p>There is clear evidence that accessibility of fast-food outlets impacts on dietary intake, obesity and purchasing habits. The proximity of the fast-food outlets directly opposite and within less than 100m of the southern entrance to Hammond Park</p>	
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			<p>Primary School will expose young students to unhealthy food options daily.</p> <p>Increased levels of traffic congestion</p> <ul style="list-style-type: none"> <li>· The proposed development will create a significant increase in traffic including large fuel tankers using residential roads. The subject site will pose a threat to young students accessing school and their homes.</li> <li>· The subject site proposes drive through fast-food outlets which serve take-away coffee which will create traffic congestion during peak drop off and pick up times increasing congestion and risking public safety.</li> <li>· The access points are located within a school zone and are not appropriately located in a position as to prevent queuing and reduce overspill into the road network.</li> <li>· The proposed site does not have sufficient sight distance for Access C. It is possible that a car coming around the corner from Hammond Road will not have enough safe stopping distance when cars are stopped or spilled out onto the carriageway waiting to enter the site (Figure 3-4 Sightline Assessment - 300305045   Transport Impact Assessment Proposed Mixed Use Development, Lot 9501 Gaebler Road, Hammond Park)</li> <li>· The Planning Report neglects to highlight the reliance on Gaebler Road for verge parking and as a primary access point for the Kiss and Ride (north-bound) on Murrumbidgee Drive which would become even more congested and dangerous for families.</li> </ul>	
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			<ul style="list-style-type: none"> <li>· A development of this type is better suited to sites on Rowley and Wattleup Road with better access and proximity to freeway channels.</li> </ul> <p>Lack of local structure plan</p> <ul style="list-style-type: none"> <li>· Typically, a property subject to a 'Development' zoning under the Local Planning Scheme, should have a Local Structure Plan (LSP) prepared to inform the decision of land use, development and subdivision.</li> <li>· The absence of a recent LSP, coupled with demographic changes in the suburb since 2017, underscores the need for a comprehensive re-evaluation.</li> <li>· The site's potential should be harnessed for residential purposes or as a hub for healthy community activity which fosters local resident engagement and enjoyment.</li> </ul> <p>I implore you to consider the long-term consequences of not assisting in an objection to this Planning Application.</p> <p>The well-being of our community and the safety of our children must be prioritised.</p> <p>I trust that you will consider these concerns thoughtfully and actively assist with an objection.</p>	
159.	Anonymous	Support	<p>We are in desperate need of a service station in Hammond Park, very happy with the ideas of fast food, doctors, car wash &amp; grocery store to be close to home also. I also believe it will make the corner of Hammond Park &amp; Gaebler Road safer.</p>	<p>Noted, however the development is being proposed outside of the designated local centres for Hammond Park.</p>

160.	Hitesh Tulsani 3a Barfield Rd Hammond Park	Support	A local service station with fast food cafe is much needed in this suburb. Will definitely provide flexibility compared to Cockburn Central	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
161.	Anonymous	Support	The suburb is in desperate need for a fuel station and with the addition of fast food and doctors offices it'll provide an added boost to the suburb	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
162.	Anonymous	Support	-	Noted.
163.	Anonymous	Support	I am very supportive of having McDonalds, Starbucks and a Petrol station particularly in the area. The closest petrol station is 10 minutes away and thats just too far when you could be in an emergency.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
164.	Anonymous	Oppose	Happy with the development but not the proposed tenancies no fast food restaurants in such close proximity to the school. Would rather a gym facility or aquatic centre.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
165.	Anonymous	Support	I think this is a great proposal for our community. A 24 hour doctors surgery will take the pressure off Fiona Stanley hospital and allow parents to take sick children to the doctors when they become unwell after all of the other doctor surgeries have closed. This will also create jobs for our local youth who may not be able to get to a job outside of Hammond Park during the day when parents are at work themselves.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
166.	Anonymous	Support	I think it will bring more local business into Hammond Park and i love the idea of a petrol station being close by.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.

167.	Daniel Henry 206 Barfield Road HAMMOND PARK	Support	I'm all for the proposed characteristics, for convenience. A closer Service Station especially, who's going to say no to another Medical Centre?  Looks like a good location, can only help local residents.	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
168.	Anonymous	Support	I think it a service station is needed in the area and the added extras will just help boost accessibility for people and the housing prices	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
169.	Anonymous	Oppose	Parking is bad in that area already due to lack of space near the school. Would like to keep Hammond Park a quiet suburb	Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.
170.	Anonymous	Oppose	Although I think a fuel station is needed in the area I believe that the proposed location is not appropriate as it is opposite a primary school and the parking and traffic at peak times is already an issue.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
171.	Tamara Ansell 15 Cooli Street Hammond Park	Oppose	The location will bring unnecessary traffic into the area diverting traffic towards a school that already has traffic issues. Crime will also increase. Needs to go on Russell or Rowlely road not in the middle of a peaceful suburb	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
172.	Anonymous	Support	There are no fast food or petrol stations at all in that general area. We have to go up to cockburn gateway for petrol or drive thru food. Strongly support this!	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
173.	Rebecca Hawkins	Oppose	This development is planned for across the road from the busiest Primary School in the suburb – in 2024 there are approximately 920 children attending Hammond Park Primary	Noted. It is acknowledged that the land uses proposed were not previously contemplated for

	<p>14 Prato Vista HAMMOND PARK</p>	<p>School. The increased traffic would endanger children as they are coming to and from school - there was a child hit by a car just near this section of the road last year and at least one other near miss. Parking is already an issue for school parents, with the majority of parents having to park along the road verge on the southern side of Gaebler road - right where the development is proposed for - this will place further traffic pressure, which is likely to lead to more accidents or near misses. The proposal states that most of the school traffic is to the north and east of the school – this is simply not true – council members would only need to head to Gaebler Road during either drop off or pick up times to see that the stretch of the south side of Gaebler Road parallel to the school and a further 50-100m to the east is flooded with parked cars.</p> <p>The Wattleup Neighbourhood Centre has already been approved less than a kilometre away, on Whadjuk Drive and this is set to have a shopping precinct and fast food outlets. There is Hammond Park Family Practice less than a kilometre away from the proposed site as well. There is a significant number of fast food outlets less than 10 minutes drive at Cockburn Central - there is a rising obesity epidemic in Australia - we do not need more access to these kinds of outlets. Not to mention there is significant evidence (see links at the end of this comment) that indicates the negative impacts of fast food outlets being close to schools. The school canteen has had to change the menu this year to comply with the WA School Food &amp; Drink Criteria - ham is no longer allowed - and yet this proposal would see 2 fast food outlets across the road from the primary school.</p> <p>Hammond Park is a predominantly family area - whilst a service station would be beneficial to the suburb, the proposed</p>	<p>this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>
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			<p>location is a poor choice due to the proximity to the primary school and the current structure of the intersection of Gaebler Road and Hammond Road. It would impact the tranquillity of the suburb with the increased traffic levels. The environmental impacts of a fuel station and fast food outlets would be detrimental and long lasting. The proposed development is across the road from a nature reserve which houses native flora and fauna – the noise, pollution and increased traffic could only negatively impact the area.</p> <p>Would you like fries with that? Investigating fast-food outlet availability near schools in Perth, Western Australia - PMC (nih.gov)</p> <p>Trapp-2021.-Association-between-food-outlet-availability-near-school-and-junk-food-consumption.pdf (cancerwa.asn.au)</p> <p>Evidence brief: food, built environments and obesity (health.wa.gov.au)</p>	
174.	Anonymous	Unsure	<p>We are in desperate need of a service station in the area, also adding some retail will allow opportunities for youth in the area to have employment closer to home.</p> <p>However I am concerned with the close proximity to the primary school, traffic (where Hammond road is used as a drag strip and no one obeys the 40km school zone as it is and also the fact that there is literally no parking for the school so the whole strip of reserve is used for parking will be taken away.</p>	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
175.	Anonymous	Support	Boost property sales and convenience	Property Values are not a valid planning consideration.
176.	Dean Thompson	Oppose	Too close to the primary school	Noted.

	77 Murrumbidgee drive HAMMOND PARK			
177.	Anonymous	Oppose	Fast food option right across from a school doesn't seem the best idea. Then there's the high traffic volume, safety concerns for kids walking to and from school.	Noted.
178.	Anonymous	Oppose	<ul style="list-style-type: none"> <li>'- terrible location next to a primary school.</li> <li>- road is already unsafe for children with kids being hit by cars recently and on more than one occasion.</li> <li>-24hr fast food and or petrol station will increase crime and theft in the area.</li> <li>- Something like this proposal could be beneficial in the area but not in this location or 24hr.</li> <li>- other proposal for fast food minutes away already in place</li> </ul>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
179.	Anonymous	Support	Desperate for a petrol station in the area, need more amenities in the area will also bring jobs for our youths in the area.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
180.	Anonymous	Oppose	<p>The location for this proposed development is a poor choice due to the proximity to Hammond Park Primary School, the Harry Waring Marsupial Reserve and the already approved Wattleup Neighbourhood Centre.</p> <p>The school currently has over 900 students and this number isn't projected to drop significantly for several years, despite Jilbup Primary opening this year. Traffic conditions around the school are less than ideal and if this proposed development goes ahead, the health and safety of the students would be negatively impacted. There was an accident last year where a</p>	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.

			<p>child was hit by a car and taken to hospital not far from where the development is proposed, and there have been other near misses near the junction of Gaebler Road and Hammond Road. This would surely increase with the development increasing traffic levels in the area.</p> <p>The addition of fast food restaurants this close to the school is completely irresponsible. The negative health impacts of fast food outlets being near to schools is documented in the literature and given the rising obesity epidemic in this country more of these outlets is not what is needed. There is ample access to fast food outlets within a 10 minute drive of Hammond Park and with the 2 that are set to be built as a part of the Wattleup Neighbourhood Centre, the addition of a further 2 outlets to the area is absolutely not warranted and is bordering on unethical.</p> <p>This development will negatively impact the quiet and tranquil atmosphere of the suburb. This is a family orientated area and the increase to the traffic, noise, pollution and potentially crime that would come with this development is not beneficial to the community.</p>	
181.	Anonymous	Support	Convenient when needed to fill the fuel and hungry in the middle of the night. Doctor is always fully booked too everywhere so having more around our house is good	Noted.
182.	Anonymous	Support	We desperately need these things and would be a great for the community	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.

183.	Chris Clay 4 Varese Place, Hammond Park	Support	<p>Hammond Park is seriously lacking amenity. No service station. No major supermarket or shopping centre. Minimal take-away options.</p> <p>This development is positioned on a future dual carriageway that will connect wattleup Rd to Russel road providing for great access.</p> <p>The school next door is a primary school, not a high school and would not attract or distract the pupils</p>	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
184.	Anonymous	Oppose	Too close to school and right in the middle of residential suburb	Noted.
185.	Anonymous	Oppose	<p>Due too already parking issues and congestion at the primary school attends daughter, I feel it will increase more traffic that can impact on the safety of the children and community members.</p> <p>Also with a environmental prospective, adding the fuel/fast food etc to carbon emissions.</p>	<p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p>
186.	Nick Moore 14 Johnsonia Bend HAMMOND PARK	Unsure	<p>I don't see the need for more fast food places when the planning shows some going in down near wattleup road, would prefer physical restaurants/takeaway rather than fast food and the rubbish it brings.</p> <p>I like the addition of the petrol station and the medical centre. I'm concerned about the 24hr car wash and noise. Either get rid of it or limit the operation times.</p>	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
187.	Anonymous	Oppose	<p>Strongly opposed to a petrol station in the back streets of hammond park particularly close to the primary school it should be next to the Rowley road or the train station</p> <p>Also 3 fast food outlets is ridiculous</p>	Noted, the development is being proposed outside of the designated local centres for Hammond Park.

			<p>Look at all the trouble that McDonalds brings to Cockburn central</p> <p>Especially being close to the primary school</p> <p>Yes something is needed closer but this is not the right location for it. Near the highschool would have been better</p>	
188.	Anonymous	Support	Hammond park is in desperate need of a fuel station. For a suburb so central to everything, the one thing it's missing is a fuel station so residents don't have to drive up to gateways shopping centre. I feel like this would complete Hammond park!	Noted. Service Stations should be provided within planned 'Local Centres,' consistent with the planning framework.
189.	Anonymous	Support	All amenities listed will be a great asset for the community, especially a fuel station.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
190.	Anonymous	Support	I think this is a great idea, this will bring the property value of the surrounding houses up as well as give more convenience. Having a GP just around the corner is an excellent idea. These are things Hammond Park needs. There are no fast foods and no fuel station and no car washes. This solves multiple of Hammond Parks problems.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
191.	Anonymous	Oppose	Very unhappy with this development being so close to a primary school. We are all trying to educate children about the importance of healthy living and you are putting 3 fast food outlets within walking distance to a school. Also it will create a place for young adolescents to hang out which can lead to undesirable behaviour.	<p>The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City advertised the application pursuant to the requirements of planning legislation.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may</p>

				cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
192.	Simon Hurley 71 Murrumbidgee drive HAMMOND PARK	Unsure	I am very excited for development in this area. I was extremely disappointed to find out that 60% of the construction will be fast food outlets ( Mcdonalds, KFC and Starbucks) next to the primary school !!!! I seriously dont understand how developers feel this is ok to sacrifice community health over profits. The development itself looks to be well planned out but the choice of businesses is comical. Seems to be a concerted effort to destroy the health of the younger generation. I hope that the development goes ahead but with different tenants.	Noted.
193.	Evelyn Hurley 71 Murrumbidgee drive HAMMOND PARK	Oppose	I am only opposed to the fast food commercial outlets. With 25% of children in Australia now overweight or obese its hard to understand why these outlets have been chosen opposite a primary school. Couldn't there have been better primary health planning? Is that why the medical centre is near by?	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
194.	Anonymous	Support	This plan will be Boosting local jobs and community involvement, although I think the position of the planned infrastructures could be better in a different location in the same locality.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
195.	Anonymous	Oppose	It's opposite directly to a school. Location for me is wrong.	Noted.
196.	Anonymous	Oppose	This project will damage the tranquillity of the suburb. It will increase the crime rate around the proposed development and this project will increase the fire risk at Harry Waring Marsupial Reserve.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.

			This site was never mentioned as a commercial site during the suburb's development.	
197.	Mark Holst 47 Macquarie Boulevard HAMMOND PARK	Oppose	<p>This is a very poor choice of location given the proximity to Hammond Park Primary School.</p> <p>1. The roads in this area are already very busy and dangerous for parents and children. Adding a commercial development will only exacerbate the situation with the expected increase in vehicles through the area.</p> <p>2. Shops installed in proximity to the school will present issues with school students 'hanging out' before and after school. Especially with a service station available students will be mixing unsupervised with a large number of unknown adults moving thorough the area. This is a very significant safety concern for the school and associated community.</p> <p>This lot should only be considered for residential development or commercial development that will be compatible with the school.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area and social impacts.</p>
198.	Anonymous	Oppose	<p>With the Woolworths shopping precinct, there will already be fast food stores in the area.</p> <p>I don't believe fuel stations should be built within the area.</p> <p>24 hr station and fast food will have a detrimental impact on native wild life opposite</p>	Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.
199.	Anonymous	Support	Hammond Park need the Servo and maybe local post office. Thanks	Noted.
200.	Anonymous	Oppose	Concerns for children at school.. disagree with fuel station and car wash	Noted.
201.	Anonymous	Oppose	Not an appropriate location being nestled between residential dwellings, a primary school and natural bushland. its completely insensitive to the young children who attend that school ( don't	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.

			<p>need another temptation for children to start hanging out at the local take away place, let alone the pollutants of a service station- right next to a natural reserve.</p> <p>There is already a small commercial block a couple of streets down next to wattleup rd why can it be consolidated there? At least it's away from a primary school and somewhat next to a larger sporting facility.</p> <p>Be an absolute shame to see this land be carved up that way.</p> <p>Instead in its place a skate park/ nature reserve that you can actually enjoy/ walk through. Anything to allow the younger generation to be encouraged to enjoy the outdoors and connect back to nature and community.</p>	
202.	Anonymous	Oppose	As a resident of Hammond Park suburb, I strongly oppose the above proposal due to children's safety who are studying in primary school.	Noted.
203.	Anonymous	Support	As I will be living there, hope has as much as facilities develop	Noted.
204.	Hilda Janzen 2 Atkins Pde HAMMOND PARK	Oppose	<p>a) development too close to primary school. Both traffic and people loitering will put young children at risk.</p> <p>b) fast food developments should not be adjacent to a school.</p> <p>c) there is a medical centre at Aubin grove, which is approx 7 minutes away</p> <p>d) the corner/intersection of Gabler road and Hammond road, beside the school, is currently an engineering fail. This would make is worse.</p> <p>e) the current set up at the primary school is insufficient for the drop off and pick up traffic. Adding the traffic from the development would put children, parents, patrons and vehicles at risk.</p> <p>f) the proposed development, with 24hr businesses is going to increase incidents of home and vehicle theft.</p>	<p>Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.</p> <p>Property Values are not a valid planning consideration.</p>

			g) the proposed development would decrease the market value of homes within a several block radius, due to traffic, noise and increased incidents of theft and inappropriate behaviour,	
205.	Bhavna 6 Burdekin Vista Hammond Park	Unsure	The idea of a commercial development is great but this is no different to wait is barely a 10 min drive away bear Cockburn Gateway. Do we really need another McDonald's, KFC and a petrol station? A more vibrant restaurant and Cafe scene or a community hub would be much better. And if it is going to be built, can it all at least be built so that you can at least walk from one shop to another? It's so ridiculous to have so much parking between each retail outlet. It means that I need to drive the small distance from the KFC to the McDonald's instead of just simply walking. Please just create centralised parking and footpaths between each shop. Perth is already too car centric, we need to be moving away from that!	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
206.	Anonymous	Oppose	It would result in more traffic chaos and the development is opposite a primary school which is already busy during school times. A commercial precinct predominantly fast food and a petrol station is not suitable considering the proximity to the primary school and potential risk of accidents, or fire from commercial operations. There are fast food outlets such as KFC and McDonald 6 kms away which sufficiently cater for people within the 10 km radius.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
207.	Anonymous	Oppose	We don't need fast food or 24 hour operating businesses in the middle of residential area. There is also already issues with parking in that area for the school and this will cause more traffic/parking issues.	Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.
208.	Damon	Oppose	A development like this would be a welcome addition to the suburb in a suitable location.	Noted. The City has identified Hammond Road as a future road upgrade project.

	17 Campana Rise HAMMOND PARK		The chosen location is not great, it would add an influx of traffic to the suburb (when people already use the road as a cut through to Rowley) which would bring unnecessary risks to the children attending the school - there have already several incidents with children being hit. If Hammond road was dual lane and went through to Rowley (and the only access point) separate school and development traffic then it may work.	
209.	Anonymous	Oppose	<p>I oppose this development for a number of reasons.</p> <p>There are already ample fast food outlets nearby, Hammond park does not need additional food outlets that will increase traffic to the detriment of the residents nearby.</p> <p>Hammond road already has issues with speeding motorists, with its design of a long straight stretch which attracts hoons at present.</p> <p>With the attraction of 24 hr food outlets this would increase the occurrence of anti social behaviour in the suburb.</p> <p>There are sufficient petrol stations nearby , there is no requirement for another one in the area.</p> <p>I would hope that council understands that this development would have an extremely negative impact socially on the area in so many ways especially as close to schools and not allow for it to proceed</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
210.	Anonymous	Unsure	I am for the Starbucks, service station and general use of property. I am not happy about the 24hr nature as I believe it may bring trouble with congregation of teens & fast food opposite a school. The current school parking issue will need to	Noted. The development is being proposed outside of the designated local centres for Hammond Park.

			be addressed with 360 deg parking around the school to compensate for the current use of this land	Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.
211.	Anonymous	Oppose	It is too close to school and residential area. Having a fast food restaurant and petrol station will create a lot of traffic and will get too rough as well. Hammond Park at the moment is a lovely family suburb leave it that way.	Noted.
212.	Anonymous	Oppose	<p>This is not the right location for this development. It should not be placed in the middle of a suburb next to a large primary school and surrounded by residences.</p> <p>My grandchildren attend Hammond Park Primary School. The proposed development poses a number of health and safety risks for my grandchildren and the other almost 1000 children that attend this school, not to mention the many thousands of children that will attend this school in the future.</p> <p>Research shows that there is an increased risk of cancer, particularly childhood cancers, with exposure to Benzene emissions from petrol stations placed in close proximity to residences and schools. The increased traffic will also contribute to poor air quality in the area.</p> <p>Fast food restaurants promote overweight, obesity, and inadequate fruit and vegetable intake amongst children. These are all recognised risk factors for poor health outcomes for children. Placing fast food restaurants next to a school is an attempt to hook children on fast food at a young age, and is akin to the irresponsible marketing ploys we have seen of fast food companies in the past.</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.

			<p>There are already issues with traffic management in this area as well. Last year a child was hit by a car on Gaebler Rd right outside the school. Placing these businesses here will increase the traffic through the area, and increase the likelihood of further accidents.</p> <p>Please do the right thing and put these children and their families first, not money!</p>	
213.	Anonymous	Oppose	<p>Safety concerns for school children.</p> <p>There is already insufficient parking for parents along Gaebler Rd.</p> <p>Also, peak hour traffic encourages cars to cut through Hammond Road causing further congestion and safety concerns for children and parents during school pickup.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p> <p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p>
214.	Anonymous	Oppose	<p>The Planning Application DAP23/004 for a commercial development at 9501L Gaebler Road, Hammond Park should not proceed due to significant concerns regarding traffic congestion, the close proximity of numerous existing homes, and the potential for increased antisocial behavior stemming from 24/7 access. The proposed development could exacerbate traffic issues in the area, impacting both residents and commuters. Moreover, its close proximity to residential neighborhoods raises valid concerns about noise pollution and decreased quality of life for local residents. Furthermore, round-the-clock access to the commercial premises may lead to antisocial behavior, posing safety risks and discomfort to the community. It is imperative to prioritize the well-being and safety of residents while considering alternative development options that mitigate these concerns effectively.</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School and surrounding residents including traffic, fumes, noise and rubbish.</p>

			<p>A fuel station across the road from a school, where children play everyday is certainly not a good idea.</p> <p>Fuel smells, bowser noise affects the school directly but also local residents.</p> <p>Constant noise from car washers, drive through speakers all hours affects all local residents.</p> <p>Litter from the fast food outlets everywhere.</p> <p>Highly increased traffic.</p> <p>Fast food smells.</p> <p>Sleeping with the windows open for fresh cool air will be a thing if the past.</p> <p>It is simply the wrong spot for this development.</p> <p>Rowley Road intersection with the freeway would be more appropriate. 24 hour high traffic, noise, smells and litter are part and parcel of freeways. It would have no impact with these businesses built there.</p> <p>My family are directly impacted by this and it saddens me to think such a lovely community will be ruined.</p> <p>Small homes/Accomodation for seniors would be more suited and that would blend well with the area.</p> <p>I hope commonsense prevails and this planning application is rejected.</p> <p>Thank you</p>	
215.	Barry Lawrence 70 Bellingham Road HAMMOND PARK	Oppose	<p>Based on the information in the Cockburn Council Documents Library put forward for this development, on discussions with other residents in the affected area and on our own thoughts on it, we comment as follows:-</p> <p>BUSHFIRE</p>	<p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p>

		<p>a. A previous application was progressed to the point where the WAPC requesting modifications, but no further work was undertaken by the applicant as it was evident that the constraints applicable at the time, primarily bushfire, were too considerable for a residential development to be viable at the subject site.</p> <p>If a residential development is not viable at the site, how can a service station, fast food outlets, etc. be viable from a bushfire point of view?</p> <p>b. The subject site is identified as being bushfire prone due to vegetation being retained within the nominated wetland area and also the Harry Waring Marsupial Reserve on the opposite side of Hammond Road.</p> <p>c. The Harry Waring Marsupial Reserve is a forever bush land site and so there will always be a potential bush fire problem on this site. However, this problem is significantly increased with the additives of vehicle fuels, cooking oils, etc.</p> <p>d. The Forest and Scrub vegetation poses the greatest risk to the development project. To the west of the development site is the Harry Waring Marsupial Reserve. It is assumed that the existing Forest and Scrub vegetation will remain and this</p>	<p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p> <p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p> <p>Noted and agreed that the commercial nature of the development is out of character with the surrounding area.</p>
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			<p>vegetation is extremely flammable.</p> <p>e. The land is in a designated bushfire prone area, as designated by an Order made by the Fire and Emergency Services Commissioner.</p> <p><b>ROADS</b></p> <p>a. Gaebler Road is narrow, with one lane each way. It would need to be widened to two lanes each way. Houses are already built on both sides of the road up to Murrumbidgee Drive. Hammond Road will also need to be widened.</p> <p>b. Neither Gaebler Road nor Hammond Road are designed to take heavy traffic - by weight or by volume.</p> <p>c. It is unsafe for large, heavy vehicles such as tankers and delivery trucks, to be travelling past and around a school and through the residential areas. This is courting a disaster.</p> <p><b>WETLAND</b></p> <p>a. There is an existing wetland on site and so an associated wetland buffer is required.</p> <p>b. The interface of the proposed development with the wetland will consist of fencing in order to prevent patrons</p>	
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		<p>accessing and degrading the wetland area. The wetland requires protection from physical disturbances.</p> <p>c. The wetland is a potential community asset and should be respected and developed over time. Possible damage could occur to the wetland from spillage, leakage, run off, cleaning of driveways with chemicals, etc.</p> <p>d. Any leakage into the underground water would contaminate the wetland.</p> <p>e. Rubbish, such as bottles, food packaging, etc. may end up being disposed of over the fence and into the wetland.</p> <p>SCHOOL</p> <p>a. Given the site's proximity to the Hammond Park Primary School, the interrelationship between the proposed development and the school warrants careful consideration.</p> <p>b. The parents currently park on both sides of Gaebler Road to drop off and pick up students. A number of students are required to cross both Hammond Road and Gaebler Road to get to and from school.</p> <p>c. Students walk along Hammond Road to get to the southern residential areas and so will obviously walk through/past the</p>	
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		<p>development.</p> <p>d. Students are likely to frequent the proposed development without a consenting adult. It is very unlikely that students will not frequent the site - day or night.</p> <p>e. The development is a convenient place for “predators” to contact the students and “sell them illicit substances” or for worse deeds.</p> <p>f. The school drop off/pick up times coincide with the opening times of the various businesses, especially as some will operate 24 hours a day.</p> <p>g. There will be increased traffic, especially heavy vehicles, around the school and at all times of the day and night.</p> <p>GENERAL</p> <p>a. The development is on the outer edge of residential area, with development on one side only and not centred in it.</p> <p>b. Barfield Road would be a better, more central, and more accessible site. It is also closer to the freeway for delivery of fuel,</p> <p>and supplies to the various business, especially at night. Large tankers and delivery vehicles around the students are not a</p>	
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			<p>good idea. They also create a lot of noise at night.</p> <p>c. There will be smells from burgers and chicken being made, as well as from fuel tankers delivering fuel and the general dispensing of fuel.</p> <p>d. The noise and light pollution levels will be high, especially at night, with fuel and other deliveries; people calling out their orders at the fast food outlets; car washing and blowing dry of cars; hooting; cars accelerating away from outlets; etc.</p> <p>e. The noise and light pollution will also affect the birds and animals in the Harry Waring Marsupial Reserve and the wetland.</p> <p><b>BIRDS, ANIMALS AND VEGETATION</b></p> <p>a. The area is covered by the Banksia Woodland Threatened Ecological Community (TEC) and is a foraging habitat for Black Cockatoos.</p> <p>b. Three of the five vegetation types on site contain Banksia trees with their condition being very good to excellent.</p> <p>The 1.67ha area of the Banksia woodland vegetation meets criteria for the Banksia Woodland TEC with 1.27ha of this area proposed to be cleared to facilitate the proposed development. The extent of the clearing will lead to a</p>	
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		<p>'significant impact' on the TEC.</p> <p>c. The site contains 1.67ha of foraging habitat for Carnaby's and Baudin's Black Cockatoos and 0.51ha of foraging habitat for Forest Red-tailed Black Cockatoos.</p> <p>d. The site is currently not a roosting or breeding site for Black Cockatoos. However, the development of the site would lead to the clearing of 1.27ha of foraging habitat and two mature Jarrah trees that are a potential future breeding habitat.</p> <p>e. Are Quenda habiting the site or passing through it?</p> <p>IN THE SURROUNDING AREA</p> <p>a. There are 8 or more service stations within a 5km to 7km radius?</p> <p>b. There are about 14 fast food outlets within a 5km to 7km radius.</p> <p>c. There are more than 10 medical centres within a 5km to 7km radius and another is already proposed for Hammond Road.</p> <p>Where are they going to get sufficient GPs from?</p> <p>d. There is a proposed Hammond Road/Wattleup Road shopping centre, which will be very close to this development and</p>	
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			<p>could negate its future viability.</p> <p>e. There are other proposed centres within a 5km radius of this proposed development.</p> <p>CONCLUSIONS</p> <p>a. Although it might be convenient for some people, there is not really a need for this development in this location, especially as there are several current or proposed same/similar businesses within 5km to 7km of the proposed development.</p> <p>b. If such a development is thought to be required, it could be better located elsewhere in Hammond Park, such as in Barfield Road.</p> <p>c. Such a development should never be so close to a primary school; extremely sensitive bushland and wetland or the habitat of endangered birds and marsupials.</p>	
216.	Anonymous	Oppose	Wrong area. Would cause too much congestion and traffic in a neighbourhood and I don't support there being fast-food places right next to a school. It's unhealthy.	Noted.
217.	Anonymous	Oppose	This will be an issue with obesity and the choice for healthier options. Safety concern due to being too close to a school.	Noted.
218.	Satnam Singh 218 FRANKLAND	Oppose	Most of cases everything is decided by developers . Developers keeps everything in their pocket regardless someone denies this fact .i oppose this project because of city of Cockburn's double standards, Lack of clear future of Rowley road ,	The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City advertised the

	AV, HAMMOND PARK		Hammond road and poor engineering. It is very hard to trust city of Cockburn. Totally shame . Playing with tax payer money .	application pursuant to the requirements of planning legislation.
219.	Rory Hunter 1 Twig Street, Hammond Park	Oppose	<p>I have 3 concerns over the proposal.</p> <p>1. I am concerned about the increase in the volume of traffic past my property. The Transport Impact Assessment does not extend to Twig St although it does suggest a 20% increase in traffic volume east along Gaebler Road. Twig St is used frequently by vehicles cutting through from McQuarie Boulevard onto Gaebler, and from Murrumbidgee during school peak times. This will only increase as a result of this development.</p> <p>Twig Street used to be a cul-de-sac. I would hope the council would consider returning it to a cul-de-sac to prevent this development impacting negatively on Twig Street and Johnsonia Bend.</p> <p>2. I am also concerned over the risk of pollution to groundwater. There are no design drawings demonstrating how the fuel storage will be designed to prevent spillage or leakage to the environment and the groundwater. With the water table being 1.5 - 2.5m below ground level the fuel tanks will be below groundwater level and any rupture or damage that results in a leak will immediately contaminate the water, wetland and aquifer.</p> <p>In addition, the excavations for the construction of the fuel storage will encounter groundwater and therefore abstraction will likely be required to enable construction. Has the impact of this abstraction on groundwater levels been assessed and the resulting impacts to the associated flora and fauna in the wetland? Will the council be requesting any specific level of design to prevent impacts to the groundwater? Will there be a</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p>

			<p>management plan in place to monitor for leakage, and who will have the responsibility for implementing this?</p> <p>3. Finally we are aware of Cockburn Council rules for the primary school canteen which doesn't allow ham/hot dogs/processed meat to be provided to school children, and so it seems very inconsistent for the same local govt to be approving KFC and McDonalds outlets facing the school. The argument that kids won't use the development as they are too young and primary school age is misguided - many kids from Yr 4 up to Yr 6 make their own way home and so will be attracted to the site and will be crossing the now busier road.</p>	
220.	Anonymous	Oppose	<p>Dear City of Cockburn,</p> <p>RE: Community feedback regarding Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development</p> <p>I am writing to express our strong opposition to the proposed development of a petrol station and fast food restaurants in close proximity to our primary school (Hammond Park Primary School) and residential area.</p> <p>As a member of the community and a parent, I am deeply concerned about the potential negative impact this development could have on the well-being and safety of our children, as well as the overall quality of life in our neighbourhood.</p> <p>First and foremost, the proximity of a petrol station poses significant safety risks to our children. The increased traffic, emissions, and potential for accidents associated with such a</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, the applicant is responsible for submitting a Noise Management Plan which must address noise related issues.</p> <p>Noted, light pollution is a valid consideration, as it impacts fauna and nearby residential.</p>

			<p>facility could jeopardize the safety of students walking to and from school or playing in the area.</p> <p>Furthermore, the presence of fast food restaurants nearby raises concerns about the health and dietary habits of our children. Research has consistently shown the detrimental effects of fast food consumption on children's health, including increased risk of obesity, diabetes, and other related health issues.</p> <p>Moreover, the noise, light pollution, and potential for litter associated with these establishments are not conducive to a peaceful and harmonious residential environment. Our neighbourhood should be a place where families feel safe and comfortable, not overwhelmed by the negative externalities of commercial development.</p> <p>I urge you to reconsider the approval of this development project and to prioritize the well-being and safety of our community, especially our children. There are plenty of alternative locations for such businesses that would not pose the same risks to our neighbourhood.</p> <p>Thank you for your attention to this matter. I look forward to your response and hope that you will take our concerns into serious consideration.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/9a8407060ac570e31c7b2721985e3d79b4393c9a/original/1708006496/8bcd167c33f5c0647bf18b61fc8e0f8_Residential_proximity_to_petrol_stations_and_risk_of_childhood_leukemia_and_proximity_of_fast_food_restaurants_to_school_associated_to_adolescent_obesity_-_PMC.pdf?1708006496">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/9a8407060ac570e31c7b2721985e3d79b4393c9a/original/1708006496/8bcd167c33f5c0647bf18b61fc8e0f8_Residential_proximity_to_petrol_stations_and_risk_of_childhood_leukemia_and_proximity_of_fast_food_restaurants_to_school_associated_to_adolescent_obesity_-_PMC.pdf?1708006496</a></p>	
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221.	Alex Robinson 17 Irvine parade HAMMOND PARK	Oppose	<p>My concerns for this development are the health and safety of the kids at the school and local houses in the area. The impact on long term health affects due to the close proximity of the school are too high.</p> <p>The supporting photo is proof that being so close to a school where children spend majority of their earlier years increase the chance of mortality.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/a83a1580706a84849160572998298d8384b799b4/original/1708036428/6656420200c6582b1c7647a54899f4f5_CC34D530-5956-4D76-A0F8-3C0722D13F1B.jpeg?1708036428">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/a83a1580706a84849160572998298d8384b799b4/original/1708036428/6656420200c6582b1c7647a54899f4f5_CC34D530-5956-4D76-A0F8-3C0722D13F1B.jpeg?1708036428</a></p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
222.	Anonymous	Oppose	It is disgusting that you think putting a Mac Donald's opposite a school is a good thing for the community. Why not a cafes that close at a reasonable time, fruit shop and medical centre	The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City advertised the application pursuant to the requirements of planning legislation.
223.	Anonymous	Oppose	The set up should not be in the middle of a residential suburb. It will attract more traffic and people who are not from our area. A small strip mall, supermarket, cafe would make more sense. Fast Food and Petrol stations should be located next to major highways, not in the middle of a suburb. I bet the developers don't have this kind of set up anywhere near their palatial mansions in the western suburbs! I'm shocked it's even being considered, which highlights the level of care or lack there of the council has of it's residents.	The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City advertised the application pursuant to the requirements of planning legislation.
224.	Alphonsus Neo 11 Costata gate HAMMOND PARK	Oppose	<p>It encourage Loiterrring from Highschool and higher level of primary school students</p> <p>Primary School traffic is bad enough and additional traffic in the area is not necessary</p> <p>it encourage unnecessary commercial night activities in the area.</p> <p>Shop and eatery in cockburn gateway is close enough.</p> <p>It create unnecessary competition to the local businesses.</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.

225.	Anonymous	Oppose	I believe this is not good for our kids and community. We already have a oppose group going on who has submitted all documents as well.	Noted.
226.	Anonymous	Support	Our suburb can't just be houses, schools, roads and bush. Hammond Park has had that much residential development over the last few years to amass a much larger community. How can we have a large community, without amenities on our doorstep.	Noted.
227.	Anonymous	Support	We need a service station in the area.	Noted.
228.	Sin Yee Ho 17 Ironbark Terrace HAMMOND PARK	Oppose	<p>It is less than 700 metres away. Our poor kiddos less than 12 years old will have to endure daily smell of petrol. This is unacceptable in terms of health and many other factors</p> <p>"Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that "petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia" (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p>

			<p>environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: [https://www.aihw.gov.au/.../australias-health-performance...](https://l.facebook.com/l.php?u=https%3A%2F%2Fwww.aihw.gov.au%2Freports-data%2Faustralias-health-performance%2Faustralias-health-performance-framework%3Ffbclid%3DIwAR0qPri08feC6RdocHfwzNQesbjQAE8KmbZLSGbdLMesjwqkHM5SZtNc2AA&amp;h=AT2Omry9y5-ltOOCuHoBzf-StQENjvD25XXk9u8VLOen06tNW6PdTMG4_mUlrX36ICPyFkbLQ98000NgoMUa_OUcmoAaG4xRF-03CorNTPxF_MZBuLIE2JpzHbnOwYBTq_Gs&amp;__tn__=-UK-R&amp;c[0]=AT2Ib9XNIrp6rt5xrec5ojaTuA0h9BG493h6iloCRPormJvGI4sMSgvSF2_cHhSIEyZ65cF_nhDM6YLced03XS0XTzzLPyJQvH5rzxMsaREk6wKEONVbQL3LW5UPvASiBcwiRNopKngpzzGMhDzoo hxjcGc9aQric6tWyPRjfQI03rBo4kXhujlcqHCj8WXwrBjiZGR14ejCxbjNadjl8oE)</p> <p>So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will</p>	
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			bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd.	
229.	Anonymous	Support	Needed infrastructure and services	Noted.
230.	Anonymous	Oppose	<p>I am fully against this development in this location in Hammond park.</p> <p>Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that “petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia” (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Please refer to the City’s recommendation report which provides more information on buffer requirements to sensitive land uses.</p>

			<p>outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-health-performance...">https://www.aihw.gov.au/.../australias-health-performance...</a></p> <p>So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd.</p> <p>From my research it seems the risks of what is proposed here are greatest for children. Close to 1000 students attend Hammond Park Primary School every day. How many of them are you willing to risk? Is it worth it for your convenience? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds?</p> <p>Yes, there are risks in our everyday world, in everything we do. However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development in this particular location."</p> <p>I much better development for this suburb would involve having a couple of nice cafes or a restaurant serving healthy food for our children. Possibly a gym which the suburb is lacking, a lovely bakery etc etc.</p> <p>Thank you.</p>	
231.	Anonymous	Oppose	It's too close to primary school.	Noted.
232.	Anonymous	Support	Hammond has no services atm, this development is needed for such a large estate.	Noted.

233.	Anonymous	Oppose	The location is not good!	Noted.
234.	Lorraine alder 37 Bellingham road HAMMOND PARK	Support	Much needed services in area	Noted.
235.	Anonymous	Oppose	Since the expansion of Hammond Park, Hammond Road (opposite our home) has had a massive increase in traffic and has also seen hoon drivers doing donuts on the road at the entrances to Roper Bld and Eucalyptus Dr. This proposal will only increase this behaviour. It is also opposite the grounds to the primary school where people take their kids to play and walk their dogs. It is a lovely peaceful spot. We have IGA down the road and Cockburn/Success & Harvest Lakes shopping areas are only a few mins away. There is also fear crime levels will rise too, as it has since Aubin Grove train arrived. Please don't ruin our suburb. We don't need Maccas, 7-11 or KFC etc on our doorstep.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
236.	Anonymous	Oppose	It is completely deplorable to even consider putting in multiple fast food businesses right next to a Primary school. Children are vulnerable and impressionable and with the obesity crisis in children increasing, this will most certainly add to those figures. After having schools hands tied in regard to serving cheese and ham sandwiches, to even suggest multiple fast food chains near children is absurd. This application really needs to be reconsidered for the welfare of children, their families and their future.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
237.	Anonymous	Support	I'm all for getting more shops to make life easier for everyone living in the area. It's about time we had more options nearby for picking up what we need without having to travel far. Plus,	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.

			having more shops means more local jobs and a livelier community vibe.	
238.	Anonymous	Support	I am excited about the convenience of finally having these facilities close to home and also the added bonus of part time jobs for our youth	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
239.	Anonymous	Support	Convenience, accessibility to services, prospective improvement to property value	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.  Property Values are not a valid planning consideration.
240.	Amity Shenton 21 Gaebler Road HAMMOND PARK	Oppose	Please read the attached document which explains the dangers and risks this commercial development will have on our community and on our children.  There are many factors that need to be brought into consideration, our children's health should be considered the absolute priority.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.  Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.

			<p><b>Service Station (24 hour operation)</b></p> <p>A multitude of meta-analysis conducted in Italy, Switzerland, Germany, the United States (and more) between 1985 and 2023 have systematically proven the following:</p> <ol style="list-style-type: none"> <li>a. There is a link between residential proximity to petrol stations and risk of acute childhood leukemia (Malavolti, et al., 2023)</li> <li>b. Petrol/Service stations emit benzene and other contaminants which when released into the air affect a surrounding area of approximately 500m (Mazzei et al., 2021).</li> <li>c. The closer children live to petrol stations, the greater the exposure to air contaminants, which increases the risk of childhood leukemia significantly (Kwon, et al., 2006).</li> <li>d. Other cancers have also been linked to petrol station contaminants, including adult leukemia, central nervous system tumours, and acute myeloid leukemia (Karalexi, et al., 2021).</li> <li>e. Low levels of exposure to petrol station contaminants are still under investigation due to concerns of other tumours that are shown to develop within people who live/work within close proximity of service stations (Mazzei et al., 2021), (Brossclin et al., 2009).</li> <li>f. Meta analysis studies are continuing to be published internationally due to the high volume of acute health conditions which are linked to populations closest to petrol stations (Barros, et al., 2019).</li> </ol> <p>Question 1. Do the involved commercial developers understand the risks and accept the dangers of building a service station within a residential zone?</p>	
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		<p>Question 2. Hammond Park Primary School is situated less than 500m away from the proposed location of the service station. How will the health and safety of all Hammond Park Primary School students be absolutely guaranteed?</p> <p>Question 3. Will the relevant body of authority be able to confirm with absolute confidence that there is no risk to the students and families in the surrounding area of the proposed service station location?</p> <p>Question 4. If the construction is approved and the service station is built within 500m of residential homes and school buildings, will the relevant body of authority prepare themselves for the possible major lawsuits that will occur if even <u>one</u> child becomes unwell due to irresponsible development planning and construction?</p> <p><b>Access from Hammond and Gaebler Road</b></p> <p>The proposal guarantees a massive increase of traffic on Gaebler and Hammond Road, unfortunately putting young school children at the most risk.</p> <ul style="list-style-type: none"> <li>g. Busier roads and extra car fumes will increase allergies and eczema in children (Walter et al., 2019). <i>A personal issue for me as I specifically chose this school for my asthmatic children who also struggle with allergies).</i></li> <li>h. Many countries are now creating “buffer zones” to ensure limited traffic around schools and daycare centres due to the increased health risks associated with car fumes (Han et al., 2022).</li> <li>i. These buffer zones are becoming more popular as recent research has shown the direct correlation of traffic pollution near schools and reduced student academic performances (Gartland et al., 2022).</li> </ul> <p>Question 5. Does it seem responsible or reasonable to put more traffic around a primary school which holds nearly 1000 students? Especially as those risks have already been investigated, analysed, and proven unsafe.</p>	
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			<p><b>Three Fast Food Outlets (varying hours, including up to 24-hour-operation and drive throughs)</b></p> <p>This development proposal wishes to establish three fast food outlets in direct view of Hammond Park Primary School, directly promoting unhealthy eating to nearly 1000 young children nearly every day:</p> <ul style="list-style-type: none"> <li>j. It has been proven on an international scale that fast food restaurants near schools have a direct effect on pupils health, learning, and is linked to adolescent obesity throughout Australia (Trapp et al., 2023).</li> <li>k. Exposure to unhealthy food advertisement increases food intake in children and adults (Boylard et al., 2016).</li> <li>l. Adolescent brains are heavily influenced by the distracting colours and marketing of fast food outlets; schools that are situated in close proximity to fast food outlets have less academic achievements and show a decline in educational standards in comparison to schools who have no fast food influence or exposure towards the school grounds (Trapp et al., 2021), (Richmond et al., 2022)</li> <li>m. Western Australia Council for State School Organisations has been calling for a ban on fast food outlets near schools due to issues with physical, social, and psychological health of students (Hiatt, 2020).</li> <li>n. As the obesity crisis in Australia grows with 70% of adults being overweight or obese, and 25% of children being overweight or obese; healthy living and eating still fails to be prioritised over fast food outlets (Trapp et al., 2022)</li> </ul> <p>Question 6. Are the relevant bodies of authority aware of the risks and dangers they will be bringing to the Hammond Park community?</p> <p>Question 7. Will there be any effort in ensuring and prioritising the health and safety of Hammond Park's children?</p> <p><b>Question 8.</b> In consideration to everything written and explained above:</p> <p>How does any organisation, any company, any development team, think that this proposal is safe, acceptable, or responsible?</p>	
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			<p>This proposal for commercial development, DAP23/004 - 9501L, has already caused our community much distress. There are many different reasons why many of our community members are so strongly opposed, and we are very grateful for the chance to tell you our reasons and our fears.</p> <p>My reasons are quite personal.</p> <p>Cancer has been a large part of my life, first with my Father, then my Mother, and then two months after meeting the Father of my children, he was diagnosed with cancer and had his leg amputated shortly after. I spent the first few years of my adult life in hospital rooms and acting as a carer as he went through multiple operations, chemotherapy, radiation, and more.</p> <p>The effect of cancer is staggering, heartbreaking, and it is a pain that continues for years afterwards.</p> <p>My eight year old son and my six year old daughter live with me, our home is less than 500m from the proposed construction location. If the commercial development proposal is passed, it will have a massive effect on my family and many other members of this community.</p> <p>I will not have my children spending the majority of their days in extreme exposure of air contaminants, traffic fumes, and fast food marketing displays. Not only do my children have the genetic disposition that makes me fear for their health; they also have asthma and allergies which will be directly impacted by the pollution from this commercial development and increased traffic.</p> <p>Please understand how serious this is to all the families that live in close proximity to the proposed construction location. Consider the risks to the 1000 young children that attend the school directly across the road from the proposed site.</p> <p>Please take note that many members of this community will not accept any outcome other than the relocation of the proposed commercial development. The health and safety of our children is too important, and no risk to their wellbeing will be accepted or tolerated.</p>	
241.	Anonymous	Support	Good for the community.	Noted.
242.	Anonymous	Support	Having petrol stations and fast-food shops will be a great addition for the suburb.	Noted.

243.	Anonymous	Support	This development is necessary to the overall bettering of our suburb - despite the numerous oppositions, couples and individuals exist that do not have children also, as a developing suburb I find it ridiculous that the conversation for a petrol station is required considering the distance we are required to travel for one at current.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
244.	Anonymous	Support	The area now is massive there are so many residents and its only growing	Noted.
245.	Zoe 20 Wylie Vista Mandogalup	Support	Great progress. Closer to fuel and shops. Job opportunities for locals residents.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
246.	Anonymous	Oppose	I am living in Western Australia. Hammond park primary school need your help...we have a developer trying to flatten the land and develop a petrol station and fast food chains across the school. It is less than 700 metres away. Our poor kiddos less than 12 years old would be suffering over the daily smell of petrol. This is unacceptable in terms of health and many other factors <<<"Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that "petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia" (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School. Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.

		<p>childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009). In relation to the risks associated with fast-food restaurants, "students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight" (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-healthperformance...">https://www.aihw.gov.au/.../australias-healthperformance...</a> So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd. From my research it seems the risks of what is proposed here are greatest for children. Close to 1000 students attend Hammond Park Primary School every day. How many of them are you willing to risk? Is it worth it for your convenience? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds? Yes, there are risks in our everyday world, in everything we do. However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development in this particular location." &gt;&gt;&gt; Thank</p>	
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			<p>you. And lastly, recently there was a oil leakage across east. Imagine if this happened across our school.</p> <p><a href="https://www.abc.net.au/.../act-ampol-petrol.../100185886">https://www.abc.net.au/.../act-ampol-petrol.../100185886</a> Last but not least, Also- in 2018, a similar case happened near Eden primary school and it was voted out. Please do it again, for the kids of the future. Parents fume over servo near Bassendean school   PerthNow <a href="https://thewest.com.au/.../parents-fume-over-servo-near...">https://thewest.com.au/.../parents-fume-over-servo-near...</a> Thank you very much Concerned Father</p>	
247.	Anonymous	Support	The community need nearby petrol station and ammenities, we have went too long without access to fuel.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
248.	Anonymous	Support	I think its a great development that will bring more jobs and resources to the area	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
249.	June 53 Gaebler Road HAMMOND PARK	Oppose	<p>There is no need of Fast food chains around this area, we have harvest lake, Cockburn central, some closed to IGA, and others to be built soon at Whadluk Dr.</p> <p>Petrol Station close to a Primary School and close to a bush fire prone zone is a NO! in all ways.</p> <p>Heavy traffic congestion at Gaebler Road, as Hammond Road will not support the required density of traffic as it is, currently no approved planning to extend Hammond Road, Hammond Road extension need to be completed first.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>Noted. The City has identified Hammond Road as a future road upgrade project.</p>
250.	Aaron 15 Dianella road HAMMOND PARK	Support	We need the facilities	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.

251.	Michelle 15 Dianella road HAMMOND PARK	Support	We need something like this in our suburb, love the one on Farrington Rd north lake.	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
252.	Anonymous	Support	Increase convenience	Noted.
253.	Anonymous	Support	Greater amenities for the suburb	Noted.
254.	Anonymous	Support	The area needs the proposed building and the petrol station is a necessity to the up and growing area. The jobs it will create are added bonus.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
255.	Anonymous	Support	We need these services in Hammond Park	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
256.	Anonymous	Support	Employment opportunities will be great	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
257.	Anonymous	Oppose	The petrol station is extremely closed to the Hammond Park Primary School. It is harmful for the children's health and safety. Thurs, I strongly against this proposal.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.
258.	Anonymous	Oppose	Proximity to the school and the impact of unhealthy food options on the future health of children in our state	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.

259.	Anonymous	Support	We need a service station in Hammond Park.	Noted.
260.	Anonymous	Support	This would add value to the area, it creates local jobs. There aren't many local fuel or coffee shops in the area which is also another great perk.	Noted, however the development is being proposed outside of the designated employment areas and local centres for Hammond Park.
261.	Anonymous	Oppose	That is not an ideal spot for what is being proposed. This section was classified wetlands alyet suddenly can be built on. That particular spot is right near the school, this is going to attract more traffic to an area that should be quieter. Also a fuel station right near a reserve isn't ideal in case of fires. This just isn't an ideal location.	Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.
262.	Tim 16 Gosse street MANDOGAL UP	Support	Hammond Park is a grate suburb and this will make it so amazing.. It will.be so much better not to travel to Cockburn. This is what Hammond Park is missing #Develophammondpark#	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
263.	James Stuart Murray 24 Barwon Turn HAMMOND PARK	Oppose	I think Fast food outlets across from a primary school along with a fuel station is a terrible idea and shows total disregard to kids health.It is a very busy area with school drop offs and pick ups already.I also believe in the middle of a suburb is the wrong area.We have already seen the changes to school canteens with not being allowed ham etc,having 3 fast food outlets beside the school is a disgrace.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
264.	Anonymous	Support	There is no service station convenient from Russell road. I work in henderson and live between Russell and beeliar so supplying a service station here would be more convenient. As well as fast food place, it would save driving to busy places like gateways or cockburn central	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
265.	Anonymous	Oppose	Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may

		<p>stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that “petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia” (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-health-performance...">https://www.aihw.gov.au/.../australias-health-performance...</a></p> <p>So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental</p>	<p>cause health concerns for the community, including students attending the Hammond Park Primary School. Please refer to the City’s recommendation report which provides more information on buffer requirements to sensitive land uses.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>
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			<p>pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd.</p> <p>From my research it seems the risks of what is proposed here are greatest for children. Close to 1000 students attend Hammond Park Primary School every day. How many of them are you willing to risk? Is it worth it for your convenience? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds?</p> <p>Yes, there are risks in our everyday world, in everything we do. However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development in this particular location.</p>	
266.	Anonymous	Support	I think the area is in need of this development there is not enough food outlets close by.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
267.	Luke 26 irvine parade HAMMOND PARK	Support	I think it will be great to have these type of shops closer to home	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
268.	Stacey 9 eucalyptus drive HAMMOND PARK	Oppose	Massive health risk to children that attend the primary school across the road. The fumes from a fuel station, the increase in traffic with child walking to school. There has already been a child ran over on Galbler road last year.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community,

			<p>The fast food right next to primary school children.</p> <p>It's not in the right place</p>	including influence on students attending the Hammond Park Primary School.
269.	Anonymous	Support	Great idea!! We all love it	Noted.
270.	Anonymous	Oppose	I don't think is a good idea in front of a school, in the middle of the suburb also that kind of shops always bring delinquency around	Noted.
271.	Anonymous	Support	<p>Area needs amenities, our closest service station is too far away, fast food/coffee outlets and medical centre will bring jobs to the local community especially the teenagers at the fast food restaurants (nearest is cockburn centre). Once the dual carriageway of hammond road is completed that will be a blessing. After reading and hearing views from locals in our community groups theres alot of postive comments but i see alot of the opposed votes have come from parents of kids that attend hammond park primary, reading there concerns personally I don't think they will be affected from :-</p> <p>A- increase in traffic.. nullified by hammond road upgrade.</p> <p>B- lack of parking(currently they park on sand verge across from school)- over 130 bays being provided.</p> <p>C- fast food unhealthy for kids.. onus on parents giving primary kids money( lunch box is pre packed/ school dinners are pre paid).</p> <p>D- fumes from petrol station.. school will be over 400m away.. more fumes from passing traffic on hammond road in all honesty.</p> <p>All we need after this development is a tavern with a kids area on the rowley road end and a couple of soccer cages( nearest one is vision park yangebup)</p>	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
272.	Anonymous	Oppose	My boy's attend to Hannond Park Primary School (Kindy & Year 4) and I am not comfortable with the amount of toxic fumes a	Noted, the proposal is inconsistent with the Environmental Protection Authority's

			fuel station would emit into the air being so close to the School. Please find a more suitable location for a fuel station.	recommended buffer distances to sensitive land uses (such as residential and school sites). This has been given consideration in the City's assessment.
273.	Anonymous	Oppose	Traffic is an issue at the school during school terms, the proposal will bring more vehicles into the area and potentially make walking to school / crossing the road more dangerous for school children. The proposal could also give rise to an increase in anti-social behaviour in the area, especially for establishments that is open for 24 hour operations.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
274.	Anonymous	Oppose	Hammond Park is a quiet but beautiful neighborhood. A heartland. Where kids run or cycle. Parents, young adults and elderly walk or jog on the pavements along Gaebler road to exercise & enjoy fresh air every evening.  We do not need to have a fuel station and fast food chains in the middle of a quiet, comfortable neighborhood. We do not need the heavy traffic or the busy that will come along with it. Move those plans near bigger, busier roads or highways. Not smack in the middle of our quiet but beautiful neighborhood where people reside in.	Noted and agreed that the commercial nature of the development is out of character with the surrounding area.
275.	Anonymous	Support	This would be great for the development of Hammond Park, so handy and amazing for jobs. I think it is a great use of space and Hammond Park will benefit from this advancement!	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.
276.	Anonymous	Support	I'm all for this amazing development! With the explosion of residents these additions would be great for the community and we need stuff like this. Starbucks would be amazing, this	Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.

			development would be great for residents and job opportunities for the teens in the area. hammond park has been in need for a development like this for a long time.	
277.	Anonymous	Support	would be great to expand the area and get the community together, can benefit the kids with from the closer schools with jobs and would just be great for my morning coffees!	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
278.	Anonymous	Support	I think it would be an exceptional expansion to the area, I think everyone in the area would benefit from it! especially the Starbucks and the fuel station! Hammond park has been needing development like this for a while.	Noted.
279.	Anonymous	Support	Great addition for the area, would love a Starbucks, great for everyone in the area! Would be a really important part in the development of Hammond Park.	Noted.
280.	Anonymous	Oppose	Having a petrol station close to the school is unsafe, it's unhealthy to be smelling those fumes everyday. It will increase the traffic in the area where there is already issues with the traffic flow around school increasing the risk of a child being hit by a vehicle and making getting to school a lot more dangerous and unsafe.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
281.	Anonymous	Support	I really think this is what this suburb needs and been waiting for this to get approved. We have to travel all the way to Cockburn. Central for fuel and food. I hope this goes ahead	Noted.
282.	Anonymous	Oppose	Traffic congestion, fast food near a primary school. I'm all for growth of the suburb but find a different location. NOT HERE!	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.

283.	Anonymous	Support	I think this will be a great addition to the suburb and bring some amenities and life into it.	Noted.
284.	Anonymous	Oppose	Environmental risks to children at Hammond Park Primary School.	Noted.
285.	Anonymous	Oppose	<p>"Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that "petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia" (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>In relation to the risks associated with fast-food restaurants, "students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight" (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>

			<p>outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-health-performance...">https://www.aihw.gov.au/.../australias-health-performance...</a></p> <p>So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd.</p> <p>From my research it seems the risks of what is proposed here are greatest for children. Close to 1000 students attend Hammond Park Primary School every day. How many of them are you willing to risk? Is it worth it for your convenience? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds?</p> <p>Yes, there are risks in our everyday world, in everything we do. However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development.</p>	
286.	Anonymous	Oppose	<p>We heard new system set out for school canteens to ensure kids are offered healthy choices but why build commercial with four fast foods close to primary school. This will encourage kids to eat unhealthy. The smell is not pleasant too. On top of that the existence for that commercial will likely increasing the crime rate especially during school holiday for the area.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>
287.	Anonymous	Oppose	-	<p>Noted.</p>

288.	Anonymous	Support	Convenience for the people of Hammond Park, creating local jobs, etc.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
289.	Anonymous	Support	i think it would be good to have a doctor this close especially since the one at the park give got removed and we need a little cafe and food place close and there is no where do fuel close in the area.	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
290.	Anonymous	Support	Not many facilities in Hammond Park. Tired of driving to the maze that is South Central and cockburn gateways is far too busy. Closest petrol station to me is over 3km.	Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.
291.	Anonymous	Oppose	The evidence supporting increased childhood leukaemia risk and proximity to petrol stations is vast. The sound pollution, air pollution, traffic pollution this development will bring is so disheartening. The health of over 900 children at Hammond park primary school will suffer.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
292.	Anonymous	Oppose	Not a suitable location, too close to the school. Bad traffic	Noted.
293.	Anonymous	Support	As a resident of Hammond Park who recently moved into the area I fully support the proposal. I was surprised to find how far away a service station was and how little there is in the way of service south of Russell Road.  The proposal is an overall good one for the local community. Opposition based upon a dislike of fast food and supposed negative effects for children is misplaced. Nothing about providing a choice of food outlets, none of which you have to	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.

			<p>patronise if you do not want, justified not going ahead with the proposal.</p> <p>The area is sorely lacking in facilities like this and it should be strongly supported despite vocal opposition.</p>	
294.	Anonymous	Support	<p>This proposal is exactly what the Hammond Park and surrounding communities need. Local stores like those proposed will encourage families to stay in, and move to, the area as it will be a more liveable space.</p> <p>Easy access to local conveniences will be a huge draw card for the area and will make it competitive with North of the river suburbs which have local stores engrained in the areas.</p> <p>The proposal not only supports Hammond park but Mandogalup residents as well as surrounding suburbs. This is a move into contemporary living, conveniences that are lacking so far in the community.</p> <p>This will also encourage locals to remain in the area and elevate pressures on Cockburn Central for petrol and fast foods which are currently the closest stores. My household absolutely supports this proposal and strongly believes this forward thinking is needed for the community.</p>	Noted, however the development is being proposed outside of the designated local centres for Hammond Park.
295.	Anonymous	Oppose	<p>I do not want it so close to a school and around the corner from my house. There is a MacDonalds and kfc 1km away!!! No need to have more so close.</p>	Noted.
296.	Anonymous	Oppose	<p>Way too close to the school my daughter attends. We are all trying to give our children a good food foundation.</p> <p>Having the 'Golden Arches' twinkling at the children from across the school oval normalises this type of food.</p> <p>McDonalds and KFC have their place in the world, but not next to a school.</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.

			There are going to be 2 fast food outlets at the new shops. I think this is unnecessary.	
297.	Anonymous	Oppose	It's in very close proximity to the primary school. I am concerned about increased traffic on an already busy road. It would be much more appropriate spot just off Rowley road and not in the middle of the suburb.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
298.	Anonymous	Oppose	Health concerns, to close to school, increased traffic with no date for the road works, data provided was taken during covid this is incorrect for current times, to close to nature areas, view of children playing in the oval and from classes.	Noted.
299.	Anonymous	Support	Would to see more development in the area.	Noted.
300.	Anonymous	Oppose	The health risk is my main concern because we do have some fairly nasty toxins coming from petrol stations that are going to be right next to the school oval where kids play not only school timings after school hours aswell.	Noted, the proposal is inconsistent with the Environmental Protection Authority's recommended buffer distances to sensitive land uses (such as residential and school sites). This has been given consideration in the City's assessment.
301.	Anonymous	Support	Would be nice to see more development in the area.	Noted.
302.	Anonymous	Oppose	I do not want a fuel station that close our children's school, it is unsafe.	Noted.
303.	Anonymous	Support	Need a petrol station closer to my house	Noted.
304.	Anonymous	Support	Amazing, service station and food needed close by! Awesome idea and creates jobs	Noted.
305.	Anonymous	Support	I'd like a car wash and petrol station closer to home. I'm not keen on a KFC and McDonald's but I still support the proposal.	Noted.

306.	Sylwia Jackadder ave HAMMOND PARK	Oppose	Only support Starbucks and car wash and petrol station not the fast food place and nothing should be open 24/7 in the middle of the suburb	Noted.
307.	Anonymous	Support	Convenience	Noted.
308.	Anonymous	Support	Having a fuel station is convenient for the community. We also need a larger Medical centre in the area. A car wash is also very convenient to have in the area.	Noted.
309.	Anonymous	Oppose	Oppose only for petrol station because it is not good for primary kids health and it will also increase heavy traffic on roads near to school. Lot of kids commute on their own to the school either walking or on bike. Amenities are good to have in our suburb but location near to school is not good.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
310.	Anonymous	Oppose	It will increase the traffic and crime rate in Hammond Park	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
311.	Caress Watson 22 ironbark terrace HAMMOND PARK	Support	Need more facilities in this ever growing suburb. Creat jobs for the teenagers.	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
312.	Sarah Walkley-Byng	Oppose	Whilst I do agree hammond park needs a petrol station and take away conveniences, I STRONGLY oppose to this proposed development being built across the road from my sons primary school. The noxious and poisonous fumes from the petrol	Noted, the proposal is inconsistent with the Environmental Protection Authority's recommended buffer distances to sensitive land uses (such as residential and school sites). This

	49 jackadder Avenue hammond park		station coupled with access to fast food is not only dangerous to ALL our children's health but grossly incompetent from a planning perspective as traffic at the school is already diabolical. We have been trying to get traffic control measures put in place from the local govt but the red tape has been steadfast. Seemingly, fast food and fuel takes priority over the health and well being of our children.	has been given consideration in the City's assessment.
313.	Joanne Carroll 16 Woodrow Avenue HAMMOND PARK	Oppose	A petrol station across the road from a primary school is a huge health risk to our children	Noted, the proposal is inconsistent with the Environmental Protection Authority's recommended buffer distances to sensitive land uses (such as residential and school sites). This has been given consideration in the City's assessment.
314.	Anonymous	Oppose	Unsafe for kids at Hammond Park Primary	Noted.
315.	James 181 frankland avenue HAMMOND PARK	Oppose	I am against the fast food/service station being so close to a school plenty of other areas that they can be established the smell it will generate close to the schools/residential will impact people near it. I am for the medical center as that will help locals.  Also the traffic it will produce will be ridiculous, it's bad as it is with drivers taking the shortcut through Hammond road from Russel road to skip the traffic on Kwinana, the road infrastructure needs to be a top priority before anything else before an accident happens.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.  Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
316.	Josie Adhis 14 Quartermaine Blvd	Oppose	My children go to Hammond Park Primary School. If this development proceeds, my kids will not be able to ride to school, as the roads will be busy.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.

	MANDOGAL UP		<p>Petrol station will produce harmful fumes. Prolonged exposure, will affect the children of Hammond Park.</p> <p>Fast foods cafes may offer convenience, but will tempt kids coming from school. This will lead to health problems in the future.</p>	It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
317.	Anonymous	Oppose	The negative health effects of both the petrol station and fast food outlets plus traffic	Noted.
318.	Anonymous	Oppose	Health of children being across from petrol station. Increased traffic. Safety and security of children when external school fence around oval is low and not locked while children at school. Health issues of fast food.	Noted.
319.	Anonymous	Oppose	Close to school. Will attract too much traffic which is potential enabler for accidents.	Noted.
320.	Anonymous	Support	Ammenities closer in suburb	Noted.
321.	Anonymous	Oppose	I don't want the petrol station. The fumes will be harmful to my children going to the primary school. The increase in traffic will be catastrophic - we have already had fatal accidents with cars hitting children on their way to our from school.	Noted, the proposal is inconsistent with the Environmental Protection Authority's recommended buffer distances to sensitive land uses (such as residential and school sites). This has been given consideration in the City's assessment.
322.	Anonymous	Oppose	It's too close to the primary school and would cause unnecessary traffic during school drop off and pick up times. Fast food restaurants near schools is not a great idea	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>

323.	Anonymous	Oppose	It's too close to the school. Having 24 hours petrol pump and MacDonald will attract too many people and cars which will endanger kids safety. Plus generally 24 hours Mac Donald's attract unpleasant person which will disturb the peaceful environment of the beautiful community	Noted.
324.	Joel 20 Wylie Vista MANDOGAL UP	Support	Great progress for the area	Noted.
325.	Anonymous	Oppose	The traffic and parking surrounding the already overcapacity primary school is already unsafe. Adding these facilities is only going to make things worse, plus a service station in the centre of a suburb is a bad idea. It would be better placed on Wattleup road. Starbucks has no place in WA.	Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.
326.	Anonymous	Support	Long overdue for this area	Noted.
327.	Anonymous	Support	My daughter goes to Hammond Park Primary School and I think it will be great to have facilities there to use occasionally after I pick her up from School.	Noted.
328.	Anonymous	Support	Job creation, increased property value, convenience.	Noted, however property values are not a valid planning consideration.
329.	Anonymous	Oppose	Fuelcand take out should not be built so close to a school and also living not far from the development concerned about it bringing in traffic and reducing already limited parking	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
330.	Anonymous	Oppose	Fast food restaurants across the road from a primary school is ridiculous. Does the Council not care about the health and safety of children? Not to mention the traffic and parking issues that already exist.	The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City advertised the application pursuant to the requirements of planning legislation.

331.	Anonymous	Oppose	<p>1. Fast food restaurants in close proximity to the Hammond Park Primary school is promoting unhealthy lifestyle (see attached pdf file)</p> <p>2. There are many existing restaurants within a 5 kilometer radius, the community does not want more.</p> <p>3. Petrol station is close proximity to the primary school and to Harry Waring Marsupial Reserve. It is a catastrophically environmental danger to the community and the reserve in the event of a fire or petrol spill/leakage.</p> <p>4. The pollutants comprising of volatile organic carbons and vapors emitted from the petrol station are detrimental to the health of school children and the suburb at large.</p> <p>5. This building submission will disrupt the tranquilities of the suburb and does not add harmonic values to the community wellbeing.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/d2a0c89cc9c1dcf785df80dd34e61040244422e4/original/1708220082/5585c2958dbdf6c11edb8231019d6cbd_WA_Reform_planning_legislative_framework_.pdf?1708220082">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/d2a0c89cc9c1dcf785df80dd34e61040244422e4/original/1708220082/5585c2958dbdf6c11edb8231019d6cbd_WA_Reform_planning_legislative_framework_.pdf?1708220082</a></p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p>
332.	Anonymous	Oppose	<p>Fast Food outlets across the road from a Primary School creates a whole range of social and health issues for the suburb. An increase of traffic is also concerning with lots of young children around.</p>	Noted.
333.	Anonymous	Support	<p>We need some amenities in the suburb. Good for suburbs growth and also create jobs for people who wants to work near their home.</p>	Noted.
334.	Steven Bellas 21 Gaebler Rd HAMMOND PARK	Oppose	<p>RIDICULOUS to propose building multiple fast food outlets and a petrol station across the road from a school. Are those children worthless?</p> <p>Advertising works, people are paid good money to ensure it does. We have an obesity epidemic which will not be helped by</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p>

			<p>kids seeing the signs all day and begging parents to grab maccas etc on the way home after school. Disgusting.</p> <p>On top of that, benzene is proven to be carcinogenic and living near a fuel station is shown to increase risk of childhood leukemia! See link or attached PDF for just one example <a href="https://pubmed.ncbi.nlm.nih.gov/37249787/">https://pubmed.ncbi.nlm.nih.gov/37249787/</a></p> <p>We all know sniffing petrol destroys even ADULT brains - we do NOT want that across the road from a PRIMARY SCHOOL. <a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/7c2edb4e7f5e17f93cb2ecf13e6d9d82ed93c723/original/1708225570/63d6566fb1119ef8ae707c9f7689c1c6_Residential_proximity_to_petrol_stations_and_risk_of_childhood_leukemia_-_PubMed.pdf?1708225570">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/7c2edb4e7f5e17f93cb2ecf13e6d9d82ed93c723/original/1708225570/63d6566fb1119ef8ae707c9f7689c1c6_Residential_proximity_to_petrol_stations_and_risk_of_childhood_leukemia_-_PubMed.pdf?1708225570</a></p>	<p>Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p>
335.	Grant McKenzie 11 Scolley Road MEDINA	Oppose	<p>It's too close to Hammond Park primary school. The traffic on the streets bordering the school is already horrendous at pick up and drop off times. Adding extra traffic and fast food restaurants next to the school is a recipe for disaster.</p> <p>Kids are going to be running across the road to McDonald's, extra cars will be in the area looking out for food, not kids.</p> <p>Move the proposed site a block away from the school at least. I live in Medina, but send my two kids to Hammond Park primary school.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
336.	Russell Martin Rubery HAMMOND PARK		<p>The proposal to develop a shopping complex near Hammond Park Primary School, featuring fast-food giants like McDonald's, KFC, Starbucks, and a 24-hour 7-Eleven service station, raises significant concerns about the well-being of children and the safety of the school environment. This opposition is grounded</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community,</p>

		<p>in evidence-based research and a commitment to prioritizing the health and safety of our community's youngest members.</p> <p>One of the primary concerns is the potential for increased traffic congestion near the school. Studies have consistently shown that high traffic areas pose significant risks to children's safety when commuting to and from school. The addition of a complex with popular fast-food outlets and a 24-hour service station is likely to attract a constant flow of vehicles, exacerbating congestion and putting children at risk of accidents.</p> <p>Furthermore, the presence of fast-food chains near the school poses a direct threat to the health and well-being of students. Numerous studies have demonstrated the adverse effects of fast food consumption on children's health, including increased risk of obesity, diabetes, and cardiovascular diseases.  <a href="https://www.phrp.com.au/issues/march-2020-volume-30-issue-1/childrens-trips-to-school-dominated-by-unhealthy-food-advertising-in-sydney-australia/">https://www.phrp.com.au/issues/march-2020-volume-30-issue-1/childrens-trips-to-school-dominated-by-unhealthy-food-advertising-in-sydney-australia/</a> Exposing impressionable young minds to such readily available, unhealthy food options undermines efforts to promote healthy eating habits and combat childhood obesity.</p> <p>Research also indicates a correlation between poor dietary habits and decreased academic performance among school-age children. (Link to study: <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4998375/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4998375/</a> ) By allowing fast-food chains to operate in close proximity to the school, we risk impairing the educational outcomes of our students, as unhealthy food choices can negatively affect cognitive function and concentration levels.</p>	<p>including students attending the Hammond Park Primary School.  Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p>
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			<p>Moreover, the introduction of large-scale commercial enterprises like McDonald's, KFC, Starbucks, and 7-Eleven may disrupt the sense of community cohesion around the school. Instead of fostering a safe and nurturing environment for learning, the presence of these establishments could lead to increased litter, noise pollution, and other environmental nuisances detrimental to the well-being of students, teachers, and local residents.</p> <p>In light of the evidence presented, it is clear that the proposed development of a shopping complex near the primary school, featuring fast-food giants and a 24-hour service station, poses significant risks to the safety, health, and academic well-being of children. As concerned members of the community, it is imperative that we prioritize the long-term welfare of our children and advocate for alternative development plans that promote a safe and supportive educational environment.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/cbb5b6b1e7ce2450779b2f6251aa0f8e3c1f7127/original/1708227649/ece2c0b47ed4fb3032d9df82e9615422_2022-Trapp-Would-you-like-fries-with-that-FFO-near-Perth-Schools.pdf?1708227649">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/cbb5b6b1e7ce2450779b2f6251aa0f8e3c1f7127/original/1708227649/ece2c0b47ed4fb3032d9df82e9615422_2022-Trapp-Would-you-like-fries-with-that-FFO-near-Perth-Schools.pdf?1708227649</a></p>	
337.	Anonymous	Oppose	<p>I am writing to express my deep concern and opposition to the proposed construction of a 24-hour service station, KFC, and McDonald's in close proximity to Hammond Park Primary School.</p> <p>As a resident and parent within the community, I believe that this development poses significant risks to the safety, health, and well-being of our children.</p> <p>First and foremost, the construction of a 24-hour service station raises serious concerns about increased traffic congestion and potential accidents near the primary school. The constant flow</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p>

		<p>of vehicles in and out of the service station, particularly during late hours, presents a clear safety hazard for students and pedestrians alike. Given the young age of the children attending Hammond Park Primary School, it is essential to prioritize their safety by preventing the establishment of such a high-traffic facility nearby.</p> <p>Furthermore, the inclusion of fast-food outlets like KFC and McDonald's in the proposed development is deeply troubling. Research has consistently shown the adverse effects of fast food consumption on children's health, including an increased risk of obesity, diabetes, and cardiovascular diseases. Exposing impressionable young minds to unhealthy food options in such close proximity to their school undermines efforts to promote healthy eating habits and combat childhood obesity.</p> <p>Moreover, the presence of fast-food chains near the school may have a detrimental impact on the academic performance and overall well-being of students. Studies have demonstrated a link between poor dietary habits and decreased academic achievement among school-age children. By allowing fast-food outlets to operate near Hammond Park Primary School, we risk impairing the educational outcomes of our students and perpetuating a cycle of poor health and academic underachievement.</p> <p>As a concerned member of the community, I urge the Hammond Park City Council to reconsider the proposed construction of the 24-hour service station, KFC, and McDonald's near Hammond Park Primary School. Instead, I encourage the exploration of alternative development plans that prioritize the safety, health, and educational needs of our children. Thank you for considering my concerns. I trust that</p>	<p>Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p>
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			you will make the right decision for the well-being of our community.	
338.	Anonymous	Oppose	3 fast food chains are a ridiculous thing to build across from a primary school especially since the canteen has had to incorporate new restrictions for healthy eating at the school. And parking at the school is already a nightmare we do not need more people trying to park near it and taking away spaces from parents.	Noted.
339.	Anonymous	Oppose	<p>We wish to object to Planning Application DAP 23/004 – 9501L Gaebler Rd Hammond Park for the following reasons:</p> <p>1. Local Structure Plan has not been prepared demonstrating that the proposal represents the best outcome for the land and the community</p> <p>The subject site had previously been the subject of a Local Structure Plan (LSP) in 2017 which was seeking residential development at the subject site. The Planning Report lodged by the applicant notes “This LSP was progressed to the point of the WAPC requesting modifications but no further work was undertaken by the applicant as it was evident that the constraints applicable at the time, primarily bushfire, were too considerable for a residential development to be viable at the subject site. This resulted from the implementation of State Planning Policy 3.7 – Planning in Bushfire Prone Areas which occurred during the assessment process of the proposed LSP.”</p> <p>Other than “difficulty” in implementing State Planning Policy 3.7, the applicant has not demonstrated anything to substantiate that the proposed development represents the best use for the land from a community perspective.</p>	<p>Noted and agreed that the commercial nature of the development, including pylon signage, is out of character with the surrounding area and a commercial zone designation has not informed by a comprehensive structure plan.</p> <p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Please refer to the City’s recommendation report which provides more information on buffer requirements to sensitive land uses.</p> <p>Noted and agreed that traffic, stormwater management, contaminant management and bushfire mitigation are valid considerations that must be addressed in order to support the proposal.</p>

			<p>2. The scale of proposed signage (in particular pylon signs) is not consistent with the general character of the area.</p> <p>Given the amount and scale of corporate signage proposed to be affixed to buildings, it is considered that the proposed pylon signs are unnecessary or at least out of scale with the surrounding area.</p> <p>DAP/23/02556 9043, 9053 and 305 Whadjuk Drive, Hammond Park (which also abuts residential areas) requires at condition - 5. "Prior to issue of a Building Permit, plans and signage strategy are to be updated to amend the pylon signs as follows;  - Whadjuk Drive 12m pylon reduced to 6m in height; and - Wattleup Road 10m Pylons (x2) reduced to 4m in height."</p> <p>This supports the position that the scale of the proposed pylon signs (at 10 metres) is excessive and out of scale with surrounding land uses.</p> <p>3. Proposed uses are not consistent with State Government Policy relating to fast food in vicinity of schools.</p> <p>The Cancer Council acknowledges the link between the location/proximity of stores to schools making students "more likely to purchase fast/junk foods."</p> <p>The proximity of these stores to schools and hence the market branding visibility on a daily basis influences the attitudes of young people and the pressure they bring to bear on parents/guardians.</p>	
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		<p>4. Inadequate “on site” containment of storm water to minimise risk of contamination of adjoining wetland.</p> <p>The Local Water Management Strategy submitted by the applicant notes that the land includes Conservation Category Wetland, but only recommends “Stormwater Management • 1Event per Year (1EY) storm treatment off carparks and roads is achieved through bioretention gardens with excess water infiltrated using below ground storage.”</p> <p>With various severe weather impacts currently (and likely to be in the future) experienced as a result of climate change the proposal is considered insufficient. This position is supported by DAP/23/02556 9043, 9053 and 305 Whadjuk Drive, Hammond Park (which does not abut a Conservation Category Wetland) – at condition 29 requiring “. All stormwater to be contained on site. Stormwater drainage to be able to contain a 1 in 100 year, critical storm event.”</p> <p>5. Pedestrian Traffic Management</p> <p>It is considered the application presented does not adequately consider the safety of pedestrians on the southern side of Gaebler Road.</p> <p>Diagrammatic representations shown in the Development Application only show a portion of footpath on the south side of Gaebler Road extending westward as far as the driveway/crossover leading to the 7/11 store. This requires any pedestrians wanting to continue westerly to Hammond Road and then proceed south on the footpath on Hammond Road to first have to cross back to the north side of Gaebler Road. This location is in close proximity to the intersection of Hammond</p>	
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			<p>and Gaebler Roads in an area of high vehicle movement and limited sight distances.</p> <p>If the application has to be supported, it is considered that the applicant should be required to provide a shared path and dual use path, adjacent to the development site, on Gaebler Road connecting to the existing and future path network on Hammond Road</p> <p>6. Bushfire Attack Level (BAL) Assessment and no additional self-contained water supply</p> <p>The applicant has lodged a Planning Report which in part notes “the constraints applicable at the time, primarily bushfire, were too considerable for a residential development to be viable at the subject site. This resulted from the implementation of State Planning Policy 3.7 – Planning in Bushfire Prone Areas which occurred during the assessment process of the proposed LSP.”</p> <p>If the BAL assessment compliance has been an issue in the past, what is the difference between a residential building and a 24 hour operating fuel outlet or Fast Food Outlets?</p> <p>The applicant does not appear to have demonstrated how the proposed land uses have a lower level of risk or will reduce the spread of fire (especially given the storage of flammable liquids on site).</p> <p>It is considered that the mitigation of fire involving highly combustible fuels introduced, should not be dependent upon state infrastructure water availability.</p>	
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			<p>If the application must be supported, then the provision of water should be the responsibility of the applicant given they are introducing further risks to the locality.</p> <p>This should be through the provision of a strategic water supply (tank or tanks) for firefighting purposes to be installed within the proposed development that is additional to any water supply that is required for drinking and other domestic purposes.</p>	
340.	Anonymous	Oppose	We do not need fast food and petrol near primary schools	Noted.
341.	Anonymous	Support	Need more amenities and growth. Housing pricing will also increase.	Noted.
342.	Anonymous	Oppose	<p>I oppose this development as it currently stands.</p> <p>I would be supported the extension/widening of Hammond Road is completed prior to the development.</p> <p>While the extension of Hammond Road is used to support many development applications. There is no timeline for when this extension may occur and it is likely the development will be complete before the road extension.</p> <p>The section of Hammond Road west of the primary school is used as a pick up and drop off location. A large number of cars park to the left of the road and on the verge causing a congestion. This is the same for the section of Gaebler Road opposite the proposed development.</p> <p>The corner of Gaebler Road and Hammond Road is a sharp and narrow corner with many blind spots. The construction and eventual opening of this development will only make this</p>	<p>Noted, Hammond Road is identified as a future road upgrade project for the City's implementation. It is currently unknown when this upgrade will occur.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>

			<p>corner more congested and dangerous. While I am unaware of any accidents taking place on this corner, I have had many near misses when drivers have taken the corner wide.</p> <p>This development will only add to the congestion if the Hammond Road extension and widening is not completed first.</p> <p>The carpark of this development will most likely become an impromptu pick up and drop off location for Hammond Park Primary.</p> <p>While I am supportive of the development of Hammond Park, the extension of Hammond Road and Whadjuk Drive should be prioritised to ensure Hammond Park remains a safe and enjoyable place to live.</p>	
343.	Peter Mola 7 gaebler road HAMMOND PARK	Oppose	<p>Gaebler road towards the school is already a busy/dangerous road as it is.. Cars are already speeding down gaebler and doing burnouts on the corner of gaebler and hammond.. a 24hr hun will increase these actions... I dont not support fast food outlets near schools especially a primary school.. most of the outlets that have been put forward are 24hrs which will attract undesirables to the area.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the area.</p>
344.	Anonymous	Oppose	<p>Having a service station and fast food outlets so close to a primary school is not healthy - young children are easily influenced and seeing fast food outlets daily will tempt them on their walks home and cause unhealthy habits.</p> <p>It will also increase traffic immensely - a child was hit by a car on Gaebler Road last year and the chance of this happening again will increase significantly.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would</p>

			<p>A service station and amenities are required in Hammond Park, just not in the middle of the suburb opposite a school. Surely locations on main roads Wattleup Rd or Russell Rd would be better for everyone.</p>	<p>impact the expected traffic volumes of a residential area.</p> <p>Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.</p>
345.	<p>SHANOJ SEKARAN 57, Gaebler Road HAMMOND PARK</p>	<p>Oppose</p>	<p>Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that “petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia” (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Please refer to the City’s recommendation report which provides more information on buffer requirements to sensitive land uses.</p>

			<p>vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-health-performance...">https://www.aihw.gov.au/.../australias-health-performance...</a></p> <p>So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb .</p>	
346.	Anonymous	Oppose	<p>The traffic in that area is terrible already, putting it right across from a school that has already had many near misses from children v cars will just add to the traffic issues.</p> <p>I am also opposed to having fast food outlets and fuel stations right across the road where children can see and smell them when they are in class and out to play.</p> <p>While I do believe they would benefit from some more amenities, as we are aware how much pressure is on the current shops on Russell road, I do not believe this is a suitable location.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
347.	Anonymous	Support	<p>It's infrastructure especially the service station that is needed and in my opinion is in the perfect spot on a feeder rd school bushland to 2 sides of development which is better than having houses surrounding 4 sides of the development and its what's badly needed in this area will benefit a lot of locals</p>	Noted.
348.	Anonymous	Support	<p>Support these facilities in this area, request trees be included within the verge landscaping treatment.</p>	Noted.
349.	Mark Bush 10 Namoi St HAMMOND PARK	Support	<p>Great for the community Service station and the additional amenities</p>	Noted.

350.	Anonymous	Oppose	Common sense to not build across from a school and wildlife park. Especially when transport services are already lacking in the area.	Noted.
351.	Karla 1 Georgia way SUCCESS	Support	This will be great the jobs and convenience of a petrol station that side of Russell road this will also give local kids jobs and independence to be active riding and walking there with friends	Noted, however the development is being proposed outside of the designated employment areas for Hammond Park.
352.	Anonymous	Oppose	Smell of both fuel and take away places so close to the primary school. I also live near a carpark which is constantly being used by teenagers and P players to smoke pot and use nangs and I can only imagine this would bring more bad behavior	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
353.	Anonymous	Support	The propos development means easier access and convenience to the resident of hammond park suburb.	Noted.
354.	Anonymous	Oppose	<p>Thank you.</p> <p>And lastly, recently there was a oil leakage across east. Imagine if this happened across our school.</p> <p><a href="https://www.abc.net.au/.../act-ampol-petrol.../100185886">https://www.abc.net.au/.../act-ampol-petrol.../100185886</a></p> <p>Last but not least,</p> <p>Also- in 2018, a similar case happened near Eden primary school and it was voted out. Please do it again, for the kids of the future.</p> <p>Parents fume over servo near Bassendean school   PerthNow</p> <p><a href="https://thewest.com.au/.../parents-fume-over-servo-near...">https://thewest.com.au/.../parents-fume-over-servo-near...</a></p> <p>And bush fire..the recent fire as we saw it is very dangerous. What if there is a fire at the bush / reserve and spread to the petrol station then ...which is across the hammond park pri sch?!</p>	<p>Noted. The City has reviewed the Eden Hill proposal.</p> <p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p>

			PREVENTATION IS better than cure...	
355.	Anonymous	Oppose	<p>I strongly oppose a Petrol station and the fast food outlets as they are too close to our primary school. Traffic management is already an ongoing issue which I believe will become worse with this style of development. Surely the recently approved development adjacent to the new football and baseball fields would be a better location for this style of development.</p> <p>The Proximity of petrol station to the Harry Waring nature reserve immediately adjacent which is regularly at risk from bushfire, as well the risk to the water table through a spill is extremely concerning. Wet winters have seen our park, school oval and botany oval regularly waterlogged or flooded.</p>	<p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School, including traffic related concerns.</p> <p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p>
356.	Angela Tibbits 44 Johnsonia Bend HAMMOND PARK	Oppose	<p>The location is the issue. The development will bring heavy traffic from surrounding suburbs into an area which is surrounded by a primary school with over 900 students, housing and marsupial reserve. If the development was on the corner of Rowley road or on Wattleup road near the sporting complex it would be easier to access from Aubin Grove and Honeywood suburbs. There has already been near miss accidents with pedestrians on Gaebler Road, High speeding and weekend burnouts on Frankland Avenue/Hammond Road. This area already has increased traffic to the 2 primary schools and 1 high school. Placing a development like this will only add to the traffic load. Poor choice of location.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p>
357.	Anonymous	Oppose	<p>I have concerns with the location of a petrol station right near to the school. Traffic, fumes and potential for a major incident. We need a petrol station but is there a more safer and optimal location.</p> <p>It is busy road as it is, this can only add to the dangers for children at the school</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would</p>

				impact the expected traffic volumes of a residential area.
358.	Chris Patroni 32 Eucalyptus Drive HAMMOND PARK	Oppose	Would make the traffic situation around the primary school much worse. Dangerous for kids and parents with the extra traffic trying to get to and from the school. Fumes from the petrol station not safe near school	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.
359.	Anonymous	Oppose	To whom it may concern  I am a community member, home owner and mum of school aged children that attend Hammond Park Primary School. I wish to object to planning application DAP23/004 as I do not believe it is in the best interests of my family and local community.  This planning application is concerning for the following reasons: - it will be harmful to the health of residents via increased consumption of fast foods - undue and harmful subliminal messaging to school children that fast food is a healthy and nutritional diet - increased traffic and risk of incidents and accidents through multiple school zones will increase the risk to our children - reduced parking and access for the school - increased crime and security incidents by "attracting" thoroughfare traffic to residential streets.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.  Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  Noted, light pollution is a valid consideration, as it impacts fauna and nearby residential.  Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.

			<ul style="list-style-type: none"> <li>- increased thoroughfare traffic through the suburb will directly impact my street (Frankland Avenue)</li> <li>- Frankland Avenue is already dangerous with vehicles exceeding the speed limit on a frequent basis, often making it difficult and unsafe to exit my own driveway.</li> <li>- Harmful fumes and constant smells from the proposed development components</li> <li>- Environmental light pollution 24hrs a day to residents and the neighbouring Harry Waring Marsupial Reserve</li> </ul> <p>I would like to live in an environment that promotes healthy living and wish that the City of Cockburn would support the health of its local residents by opposing fast food outlets and fuel stations being in the centre of a residential community and adjacent to schools and childcare facilities.</p> <p>I do not believe that the proposed location is suitable for this development. The City of Cockburn needs to put the safety of our children and community ahead of commercial gain and unhealthy convenience. Hammond Park used to be a spacious suburb with natural undeveloped pockets of flora and fauna. All effort should be made to retain what we have left!</p>	
360.	Anonymous	Support	Can't stop progress	Noted.
361.	Anonymous	Oppose	<p>The presence of large vehicles manoeuvring in and out of the petrol station compounds the danger, especially during busy school drop-off and pick-up times.</p> <p>Environmental Impact: Petrol stations are associated with various environmental hazards, including air and water pollution, soil contamination, and the emission of greenhouse gases. The proximity of such a facility to a primary school not only exposes children to these pollutants but also sets a detrimental example regarding environmental stewardship and</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>In relation to academic performance, the presence of nearby fast food land uses are unlikely to significantly impact student academic</p>

		<p>sustainability and I do not see how this would be beneficial in any way to the local environment or close the primary school.</p> <p>Impact on Academic Performance: Poor nutrition and health issues resulting from frequent consumption of fast food can negatively impact children's cognitive development and academic performance. By allowing the construction of a fast food outlet near a primary school, we risk undermining the educational outcomes and overall well-being of the students not only leading to problems with physical and potentially mental health but also the children's long term outcomes in life. It does not put the best interests of our children at the heart of any decision.</p> <p>Community Values and Priorities: The decision to permit the construction of a fast food outlet and petrol station near a primary school would neglect broader community values and priorities. Instead of prioritising the health and safety of our children, such developments prioritise convenience and profit over children's education and outcomes in life. This sends a message that short-term economic gains outweigh the long-term health and welfare of our children, an extremely disappointing message to give to them.</p> <p>In conclusion, allowing the construction of a fast food outlet and petrol station near to Hammond Park Primary School poses significant risks to the health, safety, and well-being of the children in the community.</p> <p>It undermines efforts to promote healthy lifestyles, jeopardises road safety, and sets an undesirable precedent for environmental stewardship.</p>	<p>performance, as this is measured by a variety of factors. Notwithstanding, fast food options may influence parental decisions due to location and convenience of food options.</p> <p>Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p>
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			It is imperative that we oppose such developments and advocate for the establishment of environments that support the development and future for our children.	
362.	Juliana 53 Gaebler Road HAMMOND PARK	Oppose	I'm fully against fast food chains around this area, there are already approved plans for fast food stores close by, in Whadjuk RD, why more? also Documents library says fuel tank trucks will use Gaebler RD as entrance to the petrol station, big trucks should be banned in residential areas, petrol stations and fast food stores in a residential area definitely goes against visual, air, contamination, it will bring pollution in all ways. these two should be also banned to be built in front of a school.	Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.  It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes including commercial vehicles entering a residential area.
363.	Anonymous	Oppose	There are multiple reasons why this development should not go ahead. First is the fact it is opposite a primary school. It is extremely ignorant to assume children will not be affected by having multiple fast food outlets and a petrol station opposite the school site. Society is trying so hard to help children make healthy food choices, having fast food outlets opposite is so contradicting. I also believe the traffic will severely increase which is hazardous in an area that many motorists speed in. There is no need for another petrol station or fast food outlet when there is already many within a 5km radius.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
364.	Damien Wragg 75 Murrumbidgee Dr HAMMOND PARK		Good evening,  I write to you to formally object to Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development within the City of Cockburn.  The subject site raises multiple significant concerns related to planning, health, safety and amenity including:	Noted, the City is in agreement with much of the content of this submission, as it raises valid planning considerations in context to the prevailing planning framework.  Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.

		<ul style="list-style-type: none"> <li>• Lack of a local structure plan to inform decisions of appropriate land use</li> <li>• Proximity of a planned Service Station to sensitive land use (school and residential)</li> <li>• Proximity of planned commercial developments to a Conservation Category Wetland</li> <li>• Increased levels of traffic congestion</li> <li>• Proximity to Bush Forever – Harry Waring Marsupial Reserve</li> <li>• Development of a Service Station within a bushfire prone area</li> <li>• Lack of compatibility with local setting and impact on amenity and character</li> <li>• Lack of odour management</li> <li>• Proximity of Fast-Food Outlets to sensitive land use and their negative health impacts</li> </ul> <p>The reasons for my objections include:</p> <p>Lack of a local structure plan to inform decisions of appropriate land use</p> <ul style="list-style-type: none"> <li>• Local structure plans are a key planning instrument for the coordination of development related to an area of land.</li> <li>• Typically, a property subject to a 'Development' zoning under the Local Planning Scheme, should have a Local Structure Plan (LSP) prepared to inform the decision of land use, development and subdivision.</li> <li>• The absence of a recent LSP, coupled with demographic changes in the suburb since 2017, underscores the need for a comprehensive re-evaluation.</li> <li>• A significant step in the planning framework has been missed.</li> <li>• The site's potential should be harnessed for compatible residential purposes.</li> </ul>	
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			<p>Proximity of planned Service Station to sensitive land use (school and residential)</p> <ul style="list-style-type: none"> <li>• The proposed development does not satisfy Clause 67(r) of the Planning and Development (Local Planning Schemes) Regulations 2015 as the proposed development constitutes a possible risk to human health or safety as it is directly adjacent to 'sensitive land uses' (residential development and school).</li> <li>• Separation distances specified for development of this kind within Guidance Statement No. 3 of the Environmental Protection Authority (Separation Distances between Industrial and Sensitive Land Uses 2005) have not been met.</li> <li>• The distance between the boundary of the Service Station (Lot 1) and Hammond Park Primary School is approximately 30m, far short of the recommended buffer distance for Service Station (24- hour operation) being 200m.</li> <li>• In addition, the distance between the boundary of the Service Station and the nearest residential dwelling (currently established) is only 170m, again, well short of the recommended 200m.</li> <li>• There is an accumulating body of evidence linking the proximity of those living, working, and studying near to a Service Station and the increased risk of cancer and childhood leukaemia.</li> <li>• The children at the school and nearby residents will likely be exposed to passive atmospheric contaminants, such as Benzene and other hydrocarbons through no conscious behavioural choice of their own, placing their health and safety at risk.</li> <li>• The applicant has not produced a satisfactory site-specific scientific study which demonstrates that the lesser</li> </ul>	
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			<p>separation distance that has been proposed will not result in unacceptable impacts and risk to human health or safety.</p> <p>Proximity of planned commercial developments to a Conservation Category Wetland</p> <ul style="list-style-type: none"> <li>• The proposed wetland buffer of 15m is insufficient to protect the wetland from the types of pollutants and contaminants from a commercial development.</li> <li>• The 15m buffer granted for Lot 9008 to the south of this proposed commercial development is a residential development.</li> <li>• The proposed development includes a car wash nearby to the wetland buffer which can increase the risk of weed spreading and contamination.</li> <li>• The wetland must be preserved and protected against any loss or degradation.</li> <li>• According to the District Structure Plan Southern Suburbs Stage 3 (2012) it states that a proposed local structure plan (LSP) must ensure that any issues regarding wetland impacts are investigated and managed in accordance with: <ul style="list-style-type: none"> <li>o Position Statement No.4 – Environmental Protection of wetlands (EPA 2004) and</li> <li>o Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999</li> </ul> </li> <li>• There is a lack of local structure plan.</li> <li>• It is noted within the Environmental Assessment that the development will potentially affect the endangered black cockatoo populations or their habitat. It is considered a high-risk development resulting in a significant impact based on clearing 1.27ha of foraging habitat and two potential breeding habitat trees.</li> </ul> <p>Increased levels of traffic congestion</p>	
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			<ul style="list-style-type: none"> <li>• The proposed development will create a significant increase in traffic including large fuel tankers using residential roads. The subject site will pose a threat to young students accessing school and their homes.</li> <li>• The subject site proposes drive through fast-food outlets which serve take-away coffee which will create traffic congestion during peak drop off and pick up times increasing congestion and risking public safety.</li> <li>• The access points are located within a school zone and are not appropriately located in a position as to prevent queuing and reduce overspill into the road network.</li> <li>• The proposed site does not have sufficient sight braking distance for Access C. It is possible that a car coming around the corner from Hammond Road will not have enough safe stopping distance when cars are stopped or spilled out onto the carriageway waiting to enter the site (Figure 3-4 Sightline Assessment - 300305045   Transport Impact Assessment Proposed Mixed Use Development, Lot 9501 Gaebler Road, Hammond Park)</li> <li>• The Planning Report neglects to highlight the reliance on Gaebler Road for verge parking and as a primary access point for the Kiss and Ride (north-bound) on Murrumbidgee Drive which would become even more congested and dangerous for families.</li> <li>• The planning report is completely at odds with the actual reliance and use of Gaebler Road for parking and the southern and eastern entries playing a primary role for accessing the school.</li> <li>• A development of this type is better suited to sites on Rowley and Wattleup Road with better access and proximity to freeway channels.</li> </ul> <p>Proximity to Bush Forever – Harry Waring Marsupial Reserve</p>	
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			<ul style="list-style-type: none"> <li>• According to the District Structure Plan Southern Suburbs Stage 3 (2012) it states that to protect Bush Forever careful consideration must be given as part of future structure plans to ensure an appropriate interface with Harry Waring Marsupial Reserve.</li> <li>• The lack of local structure plan is of significant concern.</li> <li>• The proposed development is not an appropriate interface for the Reserve.</li> <li>• The applicant has not addressed how light pollution will be managed to ensure it does not impact on the endangered marsupials that reside in the Reserve.</li> </ul> <p>Development of a Service Station within a bushfire prone area</p> <ul style="list-style-type: none"> <li>• The proposed development does not satisfy Clause 67(q) of the Planning and Development (Local Planning Schemes) Regulations 2015 as is not suitable given the possible risk of bush fire within the area.</li> <li>• The development is proposed to be built within a bush fire prone area.</li> <li>• The Service Station presents significant risk to human health and safety given its proposed location within a bushfire zone.</li> <li>• The firebreak proposed appears to be incorporated in the environmental wetland buffer and has not been considered in addition to the wetland buffer which should be required.</li> <li>• The applicant has not satisfactorily provided a bush fire management plan which would mitigate the risks associated with the location.</li> <li>• The Bushfire management plan cover sheet also suggests that the Declaration was completed by BPAD Accredited Practitioner whose accreditation has expired.</li> </ul>	
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			<p>Lack of compatibility with local setting and impact on amenity and character</p> <ul style="list-style-type: none"> <li>• The applicant’s proposed development is incompatible with the local setting.</li> <li>• The incompatibility is intensified given its location near a Primary School and Residential dwellings.</li> <li>• The developments height, size, layout and lack of good design does not satisfactorily enhance nor sustain the unique characteristics of the land nor contributes to the local identity of community and connection which the City of Cockburn and the family friendly suburb of Hammond Park embraces.</li> <li>• The proposed development is inconsistent with the distinct and unique characteristics of Hammond Park which is known as a safe, family friendly suburb which values and promotes community interaction and healthy living.</li> <li>• The City has a value of caring deeply for its people, community and environment</li> </ul> <p>Lack of odour management</p> <ul style="list-style-type: none"> <li>• The proposed development does not satisfy Clause 67(n) of the Planning and Development (Local Planning Schemes) Regulations 2015 as the application has not demonstrated how satisfactory odour management arrangements will be incorporated into the proposed development. Odour is one of the environmental impacts which must be considered.</li> </ul> <p>Proximity of Fast-Food Outlets to sensitive land use and their negative health impacts</p> <ul style="list-style-type: none"> <li>• The subject site directly contradicts evidence and good practice strategies stated within the Evidence brief: food, built environments and obesity published by the Department of</li> </ul>	
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			<p>Health (WA) in 2022. The publication specifically states that we should:</p> <ul style="list-style-type: none"> <li>o Change planning laws, zoning restrictions and land use policies and strategies to limit unhealthy food outlets and to support access to healthy food options, including near schools</li> <li>o Implement restrictions on opening hours of unhealthy food outlets near schools.</li> <li>o Ensure healthy food outlet positioning is competitive and well balanced with other food outlets</li> <li>o Locate healthy food outlets within 800 m of home, school, and work to increase healthy food intake</li> <li>o Co-locate healthy food outlets with other key destinations to facilitate multiple activities as part of one trip e.g. within activity centres and near schools.</li> <li>• There is clear evidence that accessibility of fast-food outlets impacts on dietary intake, obesity and purchasing habits. The proximity of the fast-food outlets directly opposite and within less than 100m of the southern entrance to Hammond Park Primary School will expose young students to unhealthy food options daily.</li> </ul> <p>I implore you to consider the long-term consequences of not rejecting this Planning Application.</p> <p>The well-being of our community and the safety of our children must be prioritised.</p> <p>I trust that you will consider these concerns thoughtfully and provide a recommendation to reject this Planning Application.</p>	
365.	Anonymous	Oppose	<p>After recent banning of ham in WA school canteens, the idea of fast food precincts across from the primary school is absurd.</p>	Noted.

			The increase in traffic in this area could potentially raise the risk of accidents.	
366.	Candice King 4 Snowy Rise HAMMOND PARK	Oppose	I have concerns about the close proximity of a service station to the local primary school, especially the health ramifications to young children. Also the additional cars/traffic in an already busy location.	Noted.
367.	Simon Watson 22 ironbark terrace HAMMOND PARK	Support	More facilities. More jobs.	Noted.
368.	Anonymous	Oppose	<p>I strongly oppose due to the following reasons</p> <ul style="list-style-type: none"> <li>• Lack of a local structure plan to inform decisions of appropriate land use</li> <li>• Proximity of a planned Service Station to sensitive land use (school and residential)</li> <li>• Proximity of planned commercial developments to a Conservation Category Wetland</li> <li>• Increased levels of traffic congestion</li> <li>• Proximity to Bush Forever – Harry Waring Marsupial Reserve</li> <li>• Development of a Service Station within a bushfire prone area</li> <li>• Lack of compatibility with local setting and impact on amenity and character</li> <li>• Lack of odour management</li> <li>• Proximity of Fast-Food Outlets to sensitive land use and their negative health impacts</li> </ul> <p>The proposal has far more negatives than positives and becomes a stain on Hammond Park as a community. The health risks are too huge to be ignored. The destruction of native bushland for unnecessary amenities. The danger to a growing</p>	Noted, please refer to the City's recommendation report detailing the comprehensive assessment undertaken which responds to much of the content of this submission.

			<p>family suburb by increasing traffic through this already busy area is absurd. The fact that people at Cockburn Council have proposed this for this area of Hammond Park, right next to a school for young children who are the future of this beautiful suburb of Cockburn, makes me extremely concerned if they're the right people to lead Cockburn residents in the future.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/a09533d1a414c0dd65375e96e9afb4327f5c5475/original/1708520767/e2e905a614a6c71dbfa8b92fafbc8a8e_Letter_A_Prof_Alex_Larcombe_TelethonKids.pdf?1708520767">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/a09533d1a414c0dd65375e96e9afb4327f5c5475/original/1708520767/e2e905a614a6c71dbfa8b92fafbc8a8e_Letter_A_Prof_Alex_Larcombe_TelethonKids.pdf?1708520767</a></p>	
369.	<p>Michael Senini 71 Bellingham Rd Hammond Park HAMMOND PARK</p>	Oppose	<p>24hr Businesses operating in the middle of the suburb, not located in a central position on a major road. Traffic congestion caused by proposed fast food outlets. Placing unhealthy food outlets across the road from a primary school, contrary to guidelines set out by the cancer council of WA. Impact of rubbish from fast food businesses on surrounding nature reserves. Clear public attitude against the development.</p>	Noted.
370.	<p>Mohammad Bashar 38 Bellingham Road HAMMOND PARK</p>	Oppose	<p>Will be lots of traffic . Also will bring lot of outsiders. Primary school kids will get involved with junk food.</p>	Noted.
371.	Anonymous	Oppose	<p>An established school of nearly 1000 primary aged students is situated directly across the street. Noise, traffic, and fumes from both petrol stations and fast food outlets will greatly impact our children in a negative way risking their health and well-being.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>

		<p>Australia's guide to healthy eating (<a href="https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating">https://www.eatforhealth.gov.au/guidelines/australian-guide-healthy-eating</a>) recommends that foods falling into the category of those items commonly sold in fast food chain stores, only be consumed occasionally. From a nutrition standpoint, placing 3 fast food outlets within less than 50m from the school boundary continues to normalise these food options when the school and the departments of education and health work so hard at educating our children to make better, healthier choices. With 1 in 4 West Australian children declared overweight or obese, to allow these companies to operate where they are being proposed will only perpetuate this cycle of unhealthy eating, poor physical health, long term chronic disease and an extraordinary burden on the healthcare system. According to the Cancer Council WA, proximity to food outlets influences food purchasing and consumption.</p> <p>The sheer number of extra people that this proposed development would attract would cause serious safety issues to our children who, at the moment, are continually at risk while crossing un-patrolled roads due to the already dire traffic issue that exists around the school at drop off and pick up times. I've witnessed first hand a collision between a car and a child and several near misses. This is already an ongoing issue that our school community has raised time and again to the city without a solution being put in place. To further put burden on children and the school is beyond belief and in my mind unethical.</p> <p>Bushfire risks, road congestion with heavy truck delivery of fuel and other goods, leakage of fuel and chemicals and damage to wetlands, noise and light pollution directly in the backyards of homes adjacent to the project - these are all major concerns.</p>	<p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p>
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			I do not lament change and growth in our suburb, however the proposed location is illogical and completely inappropriate.	
372.	Anonymous	Support	This purposal is good for Hammond park	Noted.
373.	Anonymous	Oppose	<p>I have a child who attended the primary school and have the following concerns:</p> <p>Safety risks due to increased traffic flow</p> <p>Air pollution due to emissions from vehicles and petrol pumps, exposing children to harmful pollutants</p> <p>Environmental hazards as a result of spills and leaks could contaminate area, posing environmental risks to school and surrounding area</p> <p>Health concern due to exposure to petrol fumes and other chemicals which may have adverse health effects on children</p> <p>Increased crime</p> <p>Negative impact on property values</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.
374.	Bethwyn Macukat 34 Jackadder Avenue HAMMOND PARK	Oppose	<p>The proposed development is directly opposite a primary school that takes in around 900 children from the area. 900 of some of the more vulnerable citizens in our community. As adults, is up to us to help protect and support them as they grow up, but with a development containing 3 fast food outlets and fuel station we will be failing them by supporting this development.</p> <p>Firstly, the western end of Gaebler Rd is busy during school drop off and pick up times. Cars, bikes, people walking and small children are all navigating their way to and from school. Adding a development that will increase traffic to that same area will result in further congestion and an increased risk of a serious accident (noting that there have already been people v car accidents on that road close to the school). RaisingChildren.net.au even suggests that children under the age of 10 do not have the necessary skills to negotiate driveways, roads and carparks by themselves. The addition of a</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact the expected traffic volumes of a residential area.</p> <p>Noted, light pollution is a valid consideration, as it impacts fauna and nearby residential.</p> <p>Noted, bushfire is a valid consideration in the planning framework and this should be</p>

			<p>large carpark and access points to the site on Gaebler Rd is greatly increasing the amount of information a child has to sort through before they can cross the road in that area.</p> <p>Secondly, while a medical centre would be a welcome boost close to a school, it is the other tenants on the property that are causing concern. Namely the fast food outlets and the increased marketing of their products to impressionable children. Even the World Health Organisation make strong recommendations around the protection of children from the promotion and “marketing of foods that are high in saturated fatty acids, trans-fatty acids, free sugars and/or salt”. I understand that there are no specific laws around fast food outlets being built near schools, but the fact that 900 children will now be exposed to fast food marketing an extra 600 times per year must be cause for concern. These are the same children that are still building up their capacity to think for themselves and make healthy choices.</p> <p>Thirdly, while I do not live directly adjacent to the land in question, I would raise concerns regarding the protection of the reserve to the west of the site. 24/7 bright lights and an increased fire risk due to highly flammable products being on site (fuel/gas) would be putting pressure on the animals of the reserve and their habitats. The City of Cockburn work so hard with the State Government to help protect these areas that it would be disappointing to see a development take precedent over the already existing features of that section of Hammond Park.</p> <p>Thank you for taking the time to consider the views of all community members.</p>	considered as part of the assessment of the proposal.
375.	Anonymous	Support	Convenient	Noted

376.	Anonymous	Support	It will be great for our community to have closer options for a quick coffee and be able to get fuel at all hours. This is a great idea!	Noted
377.	Anonymous	Oppose	<ol style="list-style-type: none"> <li>1. Lack of a local structure plan to inform decisions of appropriate land use</li> <li>2. Proximity of a planned Service Station to sensitive land use (school and residential)</li> <li>3. Proximity of planned commercial developments to a Conservation Category Wetland</li> <li>4. Increased levels of traffic congestion (to an already congested area)</li> <li>5. Proximity to Bush Forever - Harry Waring Marsupial reserve</li> <li>6. Development of a Service Station within a bushfire prone area</li> <li>7. Lack of compatibility with local setting and impact on amenity and character</li> <li>8. Lack of odour management</li> <li>9. Proximity of Fast-Food Outlets to sensitive land use and their negative health impacts</li> </ol> <p>Please see attached document outlining the health risks the Service Station alone poses on our children, not just those who attend the school, but also those in the surrounding residential areas.</p> <p>Please reconsider this proposal. This is not the right area for it.</p> <p>Kindest regards from a concerned parent of Primary School aged children.</p> <p><a href="https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/a09533d1a414c0dd65375e96e9afb4327f5c5475/original/1708560001/901cc32e77a7f9f7c0e1267223a0558b_Letter_A_Prof_Alex_Larcombe_TelethonKids.pdf?1708560001">https://s3-ap-southeast-2.amazonaws.com/ehq-production-australia/a09533d1a414c0dd65375e96e9afb4327f5c5475/original/1708560001/901cc32e77a7f9f7c0e1267223a0558b_Letter_A_Prof_Alex_Larcombe_TelethonKids.pdf?1708560001</a></p>	Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.

378.	Daniel Leslie 10, 35 Barfield Road HAMMOND PARK	Oppose	<p>I oppose the proposal for fast food restaurants and a service station at this location as there are 3 operating schools within close proximity who will have access to unhealthy food options. The location is directly across from a school and will increase the traffic flow resulting in a higher risk to safety of the members of the community. A 24 hour restaurant and service station will increase the crime rate and antisocial behaviour. The Harry Waring Reserve is directly opposite the site and it is a main concern having a service station there with bushfires becoming more active in the area. I believe the site could be better used with a place the community can come together with a mix of Cafe, health centre (gym), healthy food options and medical services.</p>	Noted.
379.	Anonymous	Oppose	<p>Dear Cockburn Council,</p> <p>I am a local Cockburn resident and grandmother of 2 children who attend Hammond Park Primary School. I am writing to you to formally object to the proposed development "Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development" (<a href="https://comment.cockburn.wa.gov.au/dap23004">https://comment.cockburn.wa.gov.au/dap23004</a>).</p> <p>My concerns are related to the health and safety of the children of Hammond Park Primary and surrounding residences. The development also raises planning concerns which I will list below.</p> <p>1. Lack of a local Structure Plan to inform decisions regarding the appropriate use of land at the site. Properties subject to 'development' zoning under the Local Planning Scheme, should have a Local Structure Plan. In this instance, an important step in the planning framework has been missed.</p>	<p>Noted, the City is in agreement with much of the content of this submission, as it raises valid planning considerations in context to the prevailing planning framework.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>

			<p>2. Proximity of a proposed Service Station to sensitive land use and associated health risks, particularly for school children. The proposed development does not satisfy Clause 67(r) of the Planning and Development (Local Planning Schemes) Regulations 2015 as it constitutes a possible risk to human health or safety due to being directly adjacent to 'sensitive land uses' (residential development and school). Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, and populations in close vicinity of petrol stations are at increased risk of developing cancer, particularly leukaemia in children (see attached letter from Head of Respiratory Environmental Health at Telethon Kids pertaining to this issue and outlining the risks. A/Prof Alex Larcombe provided this letter to my daughter, after hearing about the proposed development).</p> <p>Guidance Statement No. 3 of the Environmental Protection Authority (Separation Distances between Industrial and Sensitive Land Uses 2005) recommends a separation distance of at least 200m for 24 hour service stations, which has not been met. The distance between the boundary of the petrol station and the boundary of the school is the width of Gaebler Road. My 3 year old granddaughter's classroom is within less than 200 m of the proposed development.</p> <p>3. Traffic safety and congestion concerns</p> <p>Traffic safety and congestion is not adequately addressed by the developer. The developer makes a number of statements throughout the planning application and Transport Impact Statement which indicate that they not aware of the extent of use of Gaebler Rd as an access point to the school traffic and</p>	
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			<p>use of Gaebler Rd for parking. This suggests that their traffic modelling is inaccurate.</p> <p>The developer has not adequately addressed pedestrian safety in their application. There are no sufficient traffic slowing measures proposed, including for both Gaebler and Hammond Rd adjacent to the site. Children have been hit or almost hit by cars on Gaebler Rd. The proposed primary entry points to the site are on Gaebler Rd, bringing heavy vehicles and excessive traffic into a school zone and a local distributor road. There is a line of sight issue: "there is a chance that a car coming around the bend from Hammond Road will have insufficient safe stopping sight distance if there are cars stopped on the carriageway" (p. 19, Transport Impact Assessment); which is likely to be a significant cause of accidents if the development goes ahead and amplifies the already existing traffic issues.</p> <p>4. Proximity of proposed commercial developments to a Conservation Category wetland and to Bush Forever – Harry Waring Marsupial Reserve. The proposed wetland buffer of 15m is insufficient to protect the wetland from loss or degradation. The applicant did not address the risks of 24 hour light pollution to the nocturnal marsupials inhabiting the area, or the risks of habitat loss to the protected black cockatoos. A Local Structure Plan was not submitted so attention to these concerns have been skipped in the planning process.</p> <p>5. Lack of compatibility with local setting and impact on amenity and character of a family-orientated suburb. The proposed development is incompatible with the adjacent uses of land, and does not align with the family friendly and safe suburb that Hammond Park currently is. Some of the proposed amenities, including medical centre and approval for fast food</p>	
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			<p>restaurants are already available within a 500m - 1 km radius of the site. A petrol station would be better located on a major road/highway on the outskirts of a suburb.</p> <p>5. Proximity of Fast-Food Outlets to sensitive land use and the negative health consequences. According the Department of Health, Government of Western Australia. (2022). Evidence brief: food, built environments and obesity. <a href="https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf">https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf</a>: "Unhealthy food environments can adversely affect food consumption and be a driver of obesity and diet-related chronic diseases such as type 2 diabetes, cardiovascular disease, and some cancers." The presence of fast food advertising where visible to students in their learning environment is unethical and conflicts with the health eating guidelines of the Department of Education.</p> <p>6. Service Station placement within bushfire prone area The development is proposed to be built within a bush fire prone area and does not satisfy Clause 67(q) of the Planning and Development (Local Planning Schemes) Regulations 2015. No bushfire management plan was submitted by the applicant.</p> <p>7. Lack of odour management. The proposed development does not satisfy Clause 67(n) of the Planning and Development (Local Planning Schemes) Regulations 2015 as the application has not demonstrated how satisfactory odour management arrangements will be incorporated.</p> <p>I hope you with give thoughtful consideration to these concerns and reject the developer's proposal.</p>	
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380.	Oscar Reyes 14 Varese Place, Hammond Park	Oppose	<p>the 24/7 outlet will bring in increased anti social behavior. I use Mcdonald's Gateways as an example.</p> <p><a href="https://thewest.com.au/news/crime/cockburn-chaos-three-girls-charged-over-success-rampage-ng-b881160455z">https://thewest.com.au/news/crime/cockburn-chaos-three-girls-charged-over-success-rampage-ng-b881160455z</a></p> <p>this is only one news worthy example, with multiple examples that only get reported to the police and unseen to the general public. Outside of the Success area.</p> <p>I do not want this in Hammond Park. The reason i left Success to Hammond Park was because of all the car break in at the Aubin Grove Train Station which i was 3 homes away from. When places likes these are open past 10pm, it gives teens especially an option to hangout and damage surrounding properties. Give the Primary school is only has a low fence, this would be a major target for vandalism. The chains wont chip in the fix the issues. but the rate payer will! Why, would I be penalized for something we did not want in the first place</p>	Noted.
381.	Anonymous	Support	Closer than cockburn central and nothing this way.	Noted.
382.	Anonymous	Support	Service station would be great to have in the local area: it would also generate a lot of job opportunities for the local residents	Noted.
383.	Anonymous	Oppose	We don't need more junk food near young kids and the schools. While I'm not opposed to the service station and car wash, why not have some locally run cafes in lunch bars instead of money hungry multi million dollar business's that are going to bring in disruptive behaviour and loitering teens, as well has more obesity and health problems in children.	Noted.

384.	Anonymous	Oppose	<p>I oppose the proposed development at Lot 9501 Gaebler Road Hammond Park for the following reasons:</p> <p>Proximity to Hammond Park Primary School</p> <p>The inclusion of a petrol station on the property directly across the road from the primary school poses a health risk for the 900+ students that attend this school. Please see attached letter with documented evidence from Associate Professor Alexander Larcombe from the Telethon Kids Institute outlining the potential health risk for children within proximity to petrol stations. In Western Australia we have world class researchers who the community and government support through the Telethon. How can we ignore this research and the impact this development will have on our kids.</p> <p>The Cancer Council have also been vocal in their concerns of the health risk that the proposed McDonalds and KFC with their participation in the media coverage and rally held at the school. Please find attached article from their website. Our School is educating students regarding healthy eating, supporting the crunch and sip program and have strict criteria for the foods sold in the canteen, so how can a development consisting of McDonalds and KFC which children will be able to smell from the school daily be allowed to proceed.</p> <p>24-Hour fast food and petrol stations can also attract anti-social behavior that kids may be exposed to travelling to and from school. This could make some students feel unsafe in their community and unsafe riding and walking to and from school.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Please refer to the City's recommendation report which provides more information on buffer requirements to sensitive land uses.</p>
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		<p>Traffic in this location at school times is extremely busy and due to the school being significantly above capacity parking is extremely difficult. The report from the developer states that the parking lots of the school are on the North and Eastern sides of the school away from the proposed development south of the school. However, this bushland is currently informally used as a car park by parents as well as all the parallel parking bays south of the school at pick up and drop off times. Therefore, the additional traffic including fuel tankers and other trucks and vehicles attracted by this type of development will create significant risks to children's safety. There have already been multiple students hit by cars on Gaebler road in the past 2 years my son has attended the school.</p> <p>Proximity to Harry Waring Marsupial Reserve</p> <p>The Harry Waring Marsupial Reserve is a feral proof fenced reserve and protected area home to many endangered marsupials including nocturnal animals. This reserve is part of the bush forever project and a conservation site. The 24-hour nature of the businesses proposed will negatively impact wildlife. The lights and noise will be disruptive to wildlife living within the reserve. The risks of polluting the reserve increase with the toxins emitted by the petrol station. This area as mentioned by the developer had been subject to a local structure plan under review for residential housing. The applicant did not progress this plan further based on bushfire constraints at the time. This developer is outlining that a residential development at this site is not viable due to bushfire restraints however the risk associated with having a petrol station a source of fuel next to a large area of bushland and a large school to evacuate pose a significant risk.</p>	
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			<p>I understand that the land is zoned as development and that this development would provide significant financial success for the developer and landowner as well as it would be convenient for some members of the community to have proximity to these types of businesses. However, I strongly believe this monetary gain and convenience is significantly outweighed by the health risks the petrol station and 24-hour fast-food outlets pose to our children's health and the Harry Waring Reserve. These types of developments are better suited to other main roads in the area such as Wattleup, Rowley and Russel Roads. The Petrol station would be better accessed by these roads closer to the freeway that already have high level of car and heavy vehicle traffic. My preference for this area would be housing, however a more thought-out community commercial development would potentially suit this location. A Newsagency, bakery, gym, hairdressers, cafes and other food options subway, Mexican, Chinese restaurant and other small businesses. Businesses that don't operate 24 hours and pose significant health risks to our children. The other businesses proposed by the developer I do not oppose but it is not the right location for a petrol station, McDonalds and KFC. If this petrol station goes ahead, I will no longer feel comfortable sending my children to the school that they love due to the proximity of the petrol station with research strongly showing risks to their health. I really hope the City of Cockburn and the JDAP review and consider the health risks of this development and take the time to consult with professional bodies like the Telethon Kids Institute and the Cancer Council and work with the developer to determine a more suitable development for this location.</p>	
385.	Anonymous	Support	It might bring some life into Aubin Grove	Noted, however this proposal is located in Hammond Park

386.	Anonymous	Oppose	It is hugely inappropriate to build fast food outlets immediately opposite a primary school when we are trying to teach children about the importance of healthy diets. I have no issue with the other facilities though would hope consideration is given to traffic management and child safety. I am the parent of 2 children now at high school.	Noted.
387.	Anonymous	Oppose	Location is terrible. Too close to school and home. Dangerous for school children. Petrol station too close to bushland therefore potential fire hazard, plus the petrol smell/fumes.	Noted.
388.	Anonymous	Oppose	I am concerned about the safety and health of the young children that attend the school. Near the school sport field, this would bring bad smell, presence of extra activity around the school, noise and also being nearby an animal and plant reserve. Not to mention that fires have in the reserve would increase the danger with flammable fumes from the petrol station.	Noted.
389.	Dhileena Parambathe eri 57 Gaebler road Hammond Park	Oppose	The proximity is proposed development to the Hammond Park Primary School is very much worrying. It's only less than 300 m away from the school compound. The school already in lack of infrastructure especially parking. This proposed development definitely cause heavy traffic in the school surroundings which is dangerous to the kids and the residents nearby. Few months back we witnessed bushfire in Gaebler road in Hammond Park which was close to this proposed site.A Petrol-bunk near this unimaginable. Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that "petrol stations emit benzene and other contaminants that have been associated with an	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.

		<p>increased risk of childhood leukaemia” (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-health-performance...">https://www.aihw.gov.au/.../australias-health-performance...</a></p> <p>So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will bring more traffic to the area, reduce the available parking for</p>	
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			<p>the school and increase the likelihood of further accidents on Gaebler Rd.</p> <p>From my research it seems the risks of what is proposed here are greatest for children. Close to 1000 students attend Hammond Park Primary School every day. How many of them are you willing to risk? Is it worth it for your convenience? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds?</p> <p>Yes, there are risks in our everyday world, in everything we do. However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development in this particular location.</p> <p>Thank you</p>	
390.	Amanda Brumley 16 Flametree Bend HAMMOND PARK	Oppose	<p>'The proximity of this development to the adjacent Hammond Park Primary School, and to the Harry Waring Marsupial Reserve make it completely unsuitable for this location.</p> <p>- Children will be constantly subjected to petrol station fumes as the proposed 7-eleven is immediately across the road from the school, and up-wind of it. While the levels of these fumes may be negligible, when combined with the fumes from the extra cars attending the site (for example, idling in line for a bowser) the cumulative health effects over the 8 year period that a child in their earliest formative years may be attending the school would be significant. Levels of respiratory ailments and cancers will increase.</p> <p>- Children will be constantly exposed to marketing for fast food with low nutritional value while at school, and before and after</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>It is acknowledged that the commercial nature of this development would impact the expected traffic volumes of a residential area.</p> <p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p>

		<p>school, which has been shown many times to greatly contribute to childhood obesity and poor community health outcomes.</p> <ul style="list-style-type: none"><li>- The proximity to the marsupial reserve is guaranteed to negatively and greatly impact the health of this reserve, which is of significant ecological value. The unavoidable contamination from the fuel station and the car wash of the ground water and air quality, and hence surrounding vegetation can only adversely affect the resident wildlife population. The litter from the fast food outlets will unavoidably end up blowing into the reserve, again adversely affecting the wildlife that the reserve was created to protect.</li><li>- Traffic and parking management and pedestrian safety associated with HPPS children getting to and from school has been a significant cause of community frustration and concern for many years. The school has over 900 students in attendance in 2024. The traffic management report associated with this proposal includes only a brief reference to the interaction between the development and the school. I disagree. At school pick up time especially, traffic congestion and pedestrian safety along Gaebler Rd and Hammond Rd will be significantly impacted, creating dangerous situations for children on a daily basis.</li><li>- It is worth noting that the parking facilities within the development will undoubtedly be used by parents picking up their children from school, which is likely to cause problems for the vendors within the development, particularly the medical centre due it it's proposed location. It is also going to increase the level of exposure children (and parents) have to the fast food marketing and temptation as they walk back to their cars. It is impossible to argue that the overall health of the population of Hammond Park, and particularly the children, could be anything but significantly negatively impacted by this development.</li></ul>	
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			<p>- I am not opposed to a fuel station being built within Hammond Park, there is a great need for one. It is the location of this one that is of greatest concern. A location closer to the freeway and preferably on Russell Rd would be much more appropriate.</p> <p>- It is stated in the Bushfire Management Plan that this development is situated within a bushfire prone area, yet there is NO reference within that document to the highly flammable/explosive nature of the petroleum products that will be sold within very close proximity to ecologically significant bushland. The 7-Eleven store is classified in the same way as the KFC, Starbucks etc: as "shops, restaurants, cafes". From a bushfire risk perspective I do not accept that these establishments should be given the same level of consideration.</p> <p>In summary, I am dismayed that a development proposal of this nature, immediately adjacent to a large primary school, AND a large bushland reserve could even reach this point in the approval process. It defies logic that anyone should think this would be a good outcome for our community, our children, or our environment.</p>	
391.	Erin Swarbrick 23 Kanji Loop ATWELL	Oppose	As a parent of young children, I can say without hesitation that the presence of fast food outlets so close to a school will result in more unhealthy foods being consumed by the young children. After school rewards, older primary school aged children purchasing food after school etc.	Noted.
392.	Anonymous	Oppose	The location of this development is completely inappropriate and distasteful to the suburb. Locating these establishments directly opposite a beautiful peaceful primary school is a risk to the children that attend. Operational Policy 2.4 - Planning for school sites, section 3.6.2 states 'careful consideration needs to be given to ensure that schools are located amongst or adjacent to compatible land uses to support education, health and well-	Noted.

			<p>being outcomes". Having fast food stores and a petrol station emitting hazardous fumes is in fact opposite of supporting this policy.</p> <p>Frankland Avenue / Hammond Road cannot currently support the additional traffic in its current underdeveloped state, The increased traffic that will drive to these establishments will be a huge risk to children walking to school daily. More traffic/trucks in an already dangerous thoroughfare and has a huge problem of speeding and hooning at all hours. The 24/7 operations of the stores will only further exacerbate this issue.</p> <p>The highly protected nature reserve to the west houses nocturnal animals. The additional artificial light, noise and fumes from the proposed development will surely negatively affect their current habit.</p> <p>There is already an approved application for fast food stores on Whadjuk Drive. There is no need for more to commercialize and cheapen the beautiful suburb. Please consider the environmental, and health and wellbeing hazards that will present if this Development application is approved. It will negatively affect the suburb and the residents that live within it.;</p>	
393.	Anonymous	Oppose	<p>the development has poor community, social, environmental and planning outcomes</p> <p>Planning Framework</p> <p>a. The application is not consistent with the outcomes of the Southern Suburbs Districts Structure Plan (SSDSP), Stage 3 The Stage 3 SSDSP shows Lot 9501L as comprising medium density residential development adjacent to the mapped Conservation Category Wetland. Residents who have purchased in the suburb have been guided by the SSDSP which shows that the proposal area will comprise housing and conservation category wetlands.</p>	<p>Noted, the City is in agreement with much of the content of this submission, as it raises valid planning considerations in context to the prevailing planning framework.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>

			<p>The proposal submitted is inconsistent with the approved SSDSP Stage 3, and is not supported on the grounds that:</p> <ul style="list-style-type: none"> <li>- Families in the area require access to more housing, not to fast food restaurants and a car wash;</li> </ul> <p>b. The application is not supported because it does not provide for any unique built form or local uniqueness. Planning design principles should have regard to built form of a development, and how the built form fits into the local context. The proposal does not provide any built form uniqueness, nor have regard to the landscape in which it is sited, being between two high value conservation areas and within a tight knit community suburb.</p> <p>2) Social context</p> <p>a. The application is not consistent with the community outcomes designed in the Southern Suburbs District Structure Plan, Stage 3. The Stage 3 SSDSP shows Lot 9501L as comprising medium density residential development adjacent to the mapped Conservation Category Wetland. The intent of the SSDSP is to “provide a framework for local planning that meets the social and economic needs of the community”, “encourage local employment within centres, as well as through home based businesses” and “reflect and integrate the development area with surrounding land uses”. The proposed development does not meet any of these design outcomes. The submitted Planning Report states that “it is evident from (Table 1 of the Plan providing a summary of the surrounding Local and Neighbourhood Centres) that the designated Local Centres have failed to deliver meaningful commercial development with the intent of the SSDSP remaining unrealised”. Whilst the SSDSP Stage 3 area has not met the intended density of retail</p>	
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			<p>development, the correlation between the proposed businesses in this application (takeaway, service station, car wash and medical centre) and the outcomes sought in the SSDSP is far fetched! Figure 10 of the SSDSP Stage 3: Neighbourhood Structure and Retail Hierarchy provides an indication that Hammond Park should comprise a mixture of Neighbourhood centres and local centres/deli. So far, neighbourhood centres have been the key retail development in the area. Along with commercial daycare developments.</p> <p>Local centres and delis have not been provided for at all within the current planning and approvals framework. The current application does not address the mixture of retail areas being sought for Hammond Park, and include smaller, local business opportunities to own and operate local centres and delis.</p> <p>We do not agree that the application addresses the retail needs of the community, and argue that the application has disregard to the SSDSP which provides for smaller retail opportunities such as locally owned and operated delis, newsagency, bakery etc. b. The proposal does not have regard to Operational Policy 2.4: Planning for School Sites (WAPC, DPLH, 2022) and will have negative social and health impacts to students in the area. OP2.4: Planning for School sites provides guidelines for the location and development of public school sites, and considers the rights of students to appropriate education in the context of the siting of a school. Nearby landuses and developments are considered under this policy, with the policy to be considered during the assessment of structure plans, developments and subdivisions. Under the policy, Policy measure 3.6.2 provides for "Careful consideration to be given to (nearby land uses) to ensure that school sites are located amongst or adjacent to compatible land uses to support education, health and</p>	
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			<p>wellbeing outcomes". The proposed development of three fast food retail businesses and a service station with convenience store does not meet the requirements of OP2.4. The proposal is likely to lead to poor health, education and wellbeing outcomes as the development is sited directly adjacent to the local public primary school. The proposed development disregards the policy which aims to improve health and education outcomes for students.</p> <p>3) Environmental context</p> <p>a. The application is not consistent with the environmental outcomes of the Southern Suburbs District Structure Plan, Stage 3. The SSDSP was designed to provide 'an integrated open space, conservation and drainage network, balancing environmental, recreational and drainage objectives. b. The application does not provide for protection of the environmental values and integrity of the CCW wetland on the lot, nor the Harry Waring Masurpial Resrve wetland ecosysrtems. SSDSP The CCW was subject to a wetland classification review in 2010 and the DEC determined that the CCW is a fully functioning wetland and resolved to retain its CCW classification. Careful consideration needs to be given to the wetland at the LSP stage to ensure that subdivision and drainage impacts are minimised and appropriate ongoing management measures are implemented. A 50m wetland buffer has not been provided!</p> <p>4) Sustainability context</p> <p>a. The proposal does not provide for best practice sustainability, or sustainable land use design. The SSDSP was designed to 'Provide for sustainable land use and lot design that responds</p>	
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			<p>to solar orientation principles as well as Crime Prevention Through Environmental Design (“CPTED”). The proposed development on a corner bounded by conservation areas, a public primary school and road network does not provide for sustainable design, nor address CPTED.</p> <p>5) Aesthetics and Amenity impacts</p> <p>a. The proposed development is not supported due to the visual amenity and aesthetic impacts it will have to the local community. b. The proposal provides a poor visual interface between two high conservation natural areas – Harry Warring Marsupial Reserve and a Conservation Category Wetland.</p>	
394.	Anonymous	Oppose	<p>I disagree with this proposal because it is not safe to out a petrol station and fast food outlet just directly across the road from primary school. I am very worry about that exposure to petrol fumes will put our children's health at risk. Also fast foods can lead to negative health impacts. I am concerned that increased levels of traffic congestion around that area it is already busy on Gaebler Rd when we pick up kids from school.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p>
395.	Kelly Delvin 45 Paradoxa road, Hammond Park	Support	<p>I am writing in support of the proposed</p>	<p>Noted.</p>
396.	Vicki Marchesani No Address provided	Support	<p>Hammond Park has been in need of a service station and commercial complex such as this for many years. The suburb has grown rapidly and I don’t believe there will be many more cars brought to the area but it will be well patronised by the residents whose cars are already here. One suggestion put the</p>	<p>Noted. Hammond Park is an area under transition, and many of the planned local centres are yet to be delivered.</p>

			service station and most access on the west side and then the south to minimise impact on residents. Thankyou again, this has my wholehearted support.	
397.	Julie Finnigan 12 Blackstock Hammond Park	Objection	My submission is to oppose and against the development of this commercial development. I reside in Hammond Park and do not want this residential area becoming a commercial hub. It is not necessary to develop this hub in a residential area, with fast food outlets close to a school just to encourage children to eat fast food. There are enough fast food outlets around. It will increase traffic too close to homes, which again we don't want in a residential area. There are enough hoons in that area without creating more. There is already a medical centre in Hammond Park and others close by so we don't need another one.	Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School.
398.	Amanda & Andrew Dixon 2 Hunter Way Hammond Park	Objection	There is no doubt that these things in your proposal are needed here. But I feel your proposal couldn't be in a worse location. There is only one major way in and out of that location and it's via Frankland Ave (about to become Hammond Rd). That is the only thorough fare through to where you're proposing to put this precinct. Have you done any studies on what sort of traffic that is going to bring to a very short street with only one main access to the outside of the suburb? My second concern is putting this directly over the road from the primary school. You surely are aware of the accidents that have already occurred around this area which includes children being run over. This is only going to increase with the multitude of cars accessing these services.  There are surely other, better placed, areas in Hammond Park for this sort of development? The corner of Rowley and Barfield would be better? It has direct freeway access - much like the Thomas Rd petrol station does, and also the Anketel Rd one now too? Or somewhere along the Wattleup Road area? These are main roads already built to carry the volume of traffic that's	The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City advertised the application pursuant to the requirements of planning legislation.  Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.

			<p>going to come. These are also properties that aren't directly over the road from a 1000 student primary school which already has safety concerns with children crossing roads. Please take my thoughts and concerns under advisement. I am not anti change. I am not a NIMBY. I want to see my suburb thrive and this will ultimately help. I would love to see these amenities in my suburb. We waited a very long time for a local shop, and were delighted when the pub came. We also have children who have used both sporting complexes, parks, outdoor gyms and cafes. We welcome some fast food outlets that we can walk to ... maybe help with the calories so it doesn't seem so bad :). What we are asking you to do is please reconsider where you are planning this proposal.</p>	
399.	Cassandra No address provided	Objection	<p>As a resident of the peaceful and safe community of Hammond Park, Western Australia, I am deeply concerned about the proposed commercial development under consideration for approval.</p> <p>As a resident of the peaceful and safe community of Hammond Park, Western Australia, I am deeply concerned about the proposed commercial development under consideration for approval. This development could drastically change our lives, introducing a 24/7-operating petrol station and other 24/7 business just outside our door steps. The petrol station alone would have constant fumes and noise from refuelling trucks and other vehicles would disrupt our tranquillity. Moreover, the increased traffic flow raises serious safety concerns due to the potential for accidents or near misses. Remember the young boy who was hit by a car 2022.</p> <p><a href="https://www.perthnow.com.au/news/wa/hammond-park-crash-young-boy-hit-by-car-in-perths-south-c-7725660">https://www.perthnow.com.au/news/wa/hammond-park-crash-young-boy-hit-by-car-in-perths-south-c-7725660</a></p> <p>This is not just about my family's well-being; it's about all of us who call Hammond Park home. We love living here because it is</p>	

			<p>safe and quiet - qualities that are now under threat due to this proposed development.</p> <p>We believe that if approved as currently planned, this commercial development will have numerous negative effects on our community. It is crucial that this development doesn't go ahead.</p> <p>Therefore, we need to be heard and put a stop to this proposed development.</p> <p>It's time for us to act now! Protecting the safety and well-being of our children and preserving the quality of life in Hammond Park depends on it.</p>	
400.	Danielle Senini 71 Bellingham Rd Hammond Park	Objection	<p>My urgent concern is the proposal we received yesterday from the City of Cockburn regarding the absurd idea to develop commercially on Gaebler Rd. My neighbours and I are entirely opposed to this proposal and will continue to write to or call whomever it is necessary to express this position. Firstly, an established school of nearly 1000 primary aged students is situated directly across the street. Noise, traffic, and fumes from both petrol stations and fast food outlets will greatly impact our children in a negative way risking their health and well-being. Secondly, the sheer number of extra people that this proposed development would attract would cause serious safety issues to our children who, at the moment, are continually at risk while crossing un-patrolled roads due to the already dire traffic issue that exists around the school at drop off and pick up times. I've witnessed first hand a collision between a car and a child and several near misses. This is already an ongoing issue that our school community has raised</p>	

			<p>time and again to the city without a solution being put in place. To further put burden on children and the school is beyond belief and in my mind unethical. I am happy to circulate petitions, send letters, and make phone calls to ensure this proposal is reconsidered for another location. And what a great addition to our suburb that would be - we often lament the lack of facilities like a service station, however the proposed location is illogical and completely inappropriate.</p>	
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401.	Robbie & Cassandra 58 Johnsonia Bend Hammond Park	Objection	<p>Following the review of the proposed development we object to the proposal for the</p> <p><b>1. With respect to the planning report:</b></p> <ul style="list-style-type: none"> <li>The local structure plan applied in 2017 had set forth residential development site. There has been no discussion, information, or considerations as to why constraints applicable could be managed in alternative ways, or solutions proposed to achieve this outcome as part of this proposal. Scrutiny should be undertaken to assess these constraints and whether a residential development was or could be considered feasible as the priority for any application for the proposed development.</li> <li>A further consideration is the significant timeframe for the proposed upgrade of Hammond Road to enable and facilitate improved traffic management for the development site. Given a timeframe of 2030, it is unclear whether this timeframe will be achieved or road funded and may cause a risk or detriment to traffic flow and safety of the development site. A planning consideration must include a condition of approval to forward this upgrade to coincide with this development and we recommend a condition of planning approval dependency, with the road upgraded funded by the developer.</li> <li>The time of operation on a 24x7 basis by the fuel station, McDonalds and car wash what appears to be an unusual consideration to planning approvals given the residential neighbourhoods. There appears to be no evidence or comparison of equivalent planning approvals within the state or the City of Cockburn where businesses are permitted to operate within a 200m distance. We urgently request the planning authority and developers go back and provide sufficient evidence of comparison sites and review planning approvals where fuel stations, businesses operating on a 24x7 basis that produce sustained mechanical noise to planning body consider identifying any restrictions applied as part of previous approvals. This does not align with other local developments and creates significant detriment to land holders within a 1,000m radius. A better consideration would be to apply conditions of approval for operating hours for all business to cease operation prior to 10pm every day and before 7am</li> <li>A recommendation was sought for an ESD professional to collate Franchisers' ESD reports and develop an ESD narrative for the development. This does not appear with attachments as having been achieved and should be assessed and completed before considering approval of this application.</li> </ul>	<p>Noted. The proposal contradicts the previously advertised 2017 structure plan, which is a 'seriously entertained planning proposal', to be given regard during assessment. The proposal is inconsistent with this structure plan, as it proposes 'Commercial' rather than 'Residential' land uses.</p> <p>Please refer to the detailed planning assessment within the City's Responsible Authority Report, and the City's recommendation.</p> <p>In relation to matters of probity, Declarations of Due Consideration and Disclosures of Interest are declared prior to the panel determining development applications.</p>
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			<ul style="list-style-type: none"><li>• The CPTED review has limited to a timeframe of 2022 and fails to consider near misses including a car hitting a student during the 2023 year. A review should be reperformed with current information that may critically impact the consideration of implementation of safety design considerations and should not be approved until fully assessed and any additional implementations added.</li><li>• There is acknowledgement of condition of planning approval for wetland but no outcome which must be acknowledged and accepted.</li><li>• There is a statement regarding net benefits to the community which have no evidence nor has this considered the impact of competition to medical center.</li></ul>	
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			<p>which we detail in the retail needs assessments. These benefits should be checked further detail assessed before considering approval of this application.</p> <ul style="list-style-type: none"> <li> <p>■ With respect to 7.5 operational policy, the consideration does not address the matters:</p> <ul style="list-style-type: none"> <li>○ The timing of out of school care (OOSC) drop offs and pick ups which would conflict with AM and PM peaks for the proposed development location of the OOSC towards the development i.e. entry from Gaebler additional traffic modelling for these events have not been considered this traffic flow analysis must be performed prior to considering approval of application.</li> <li>○ The increase in car traffic in 2023 has not been considered due to timing the detailed report to 2022. As a result, there is heavy ramping and parking on Gabler road on the proposed site. We recommend visual inspection of school timeframes of the flow of traffic, parking and the likelihood of vehicles used by parents attending the school, prior to considering approval of application.</li> <li>○ This does not consider the proximity of the Hammond Park Secondary the likely use of scooter transport to and from the area. The impact analysis of this transport type and forecast growth resulting in collisions has not been assessed. The developer along with main roads should undertake further assessment, prior to considering approval of this application.</li> <li>○ The report fails to acknowledge the conflict of 'cheaper' Tuesdays which of vehicles across Perth increases during the proposed AM and PM peaks coincide with school pick up times and OOSC times for the fuel station. Modelling of increased traffic, accidents has not been modelled nor considered.</li> </ul> </li> <li> <p>■ With respect to 7.6 many considerations have not been undertaken by the developer including:</p> <ul style="list-style-type: none"> <li>○ Modelling of sites within 200m of a service station and how many of these sites on 24x7 basis or with other time of operation restrictions, including parking to reduce noise and pollutants.</li> <li>○ This also doesn't include reference to the operation of a car wash or fuel station elevated noise challenges within the area operating on a 24x7 basis.</li> <li>○ Additionally, the consideration of road safety measures whereby speed limits are physically limited to reduce hooning likely to increase due to the increase in traffic.</li> </ul> </li> </ul>	
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			<ul style="list-style-type: none"><li>○ These considerations must be reviewed in detail prior to considering application.</li><li>● With respect to traffic management, the traffic impact assessment has not made incorrect statements regarding:<ul style="list-style-type: none"><li>○ Parking not being problematic in the areas – this relies on outdated requires reassessment and visual inspection.</li><li>○ The lack of road safety design features has not been considered to of speeding vehicles attending the site due to hill locations and long without physical speed reduction measures such as speed bumps and lowering roundabouts.</li><li>○ There does not appear to be advice from main roads considered as application.</li></ul></li><li>● There appears to be no consideration to address the limited sight lines included implementation of changes to the road network to reduce the likelihood of a</li></ul>	
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			<ul style="list-style-type: none"> <li>• With respect to section 8.3 noise, a planning approval condition should be n acoustic analysis must be undertaken and must conform to or less than the parameters in the reports provided.</li> <li>• There is reference to referral to the Commonwealth EPBC Act for clearing th enjoined to the approval of this proposal and not separated from it, to ensu Cockburn meets its community expectations on responsibility for ecological environmental sustainability.</li> <li>• The conclusion references the development will deliver access to important amenities in the areas that have been demonstrated to be lacking. This doe detailed reference to: <ul style="list-style-type: none"> <li>○ The 4 medical centres within short proximity to the proposed site, v retail catchment zone.</li> <li>○ The 8 cafes within a short proximity to the proposed site, with more the retail catchment zone.</li> <li>○ The 9 fooderies (not including cafes) within a short proximity to the with more than 20 in the retail catchment zone which includes a Mc</li> </ul> </li> <li>• The conclusion also states no negative impacts on adjoining properties, but consider: <ul style="list-style-type: none"> <li>○ Pollutants and aromas from the development as part of this assessn must be commissioned to assess the impact prior to considering ap application.</li> <li>○ Whilst within permitted levels, mechanical noises on a 24x7 basis, c health issues for the community including those suffering from tinn reduction of property values, limiting the ability for residents to ope at night for passive cooling. Detailed consideration of these factors i considered prior to considering approval of this application.</li> </ul> </li> </ul>	
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			<p><b>2. With respect to the traffic impact assessment report, in addition to matters raised above:</b></p> <ul style="list-style-type: none"> <li>• The 2.10 crash assessment uses dated information (up to 2022) where other traffic incidents have not been revealed nor measures which would be required to limit the impact of these matters.</li> <li>• The sightline assessment identifies a material issue where no valid safety measures are provided.</li> <li>• The report does not consider scooters and bike as traffic flow which is an issue for the students likely to attend from Secondary School and local road users via bicycle to the freeway onramps.</li> <li>• 6.3 assumptions are limited to 2022 data which do not reflect accidents involving students.</li> </ul> <p><b>3. With respect to the acoustic report, in addition to matters raised above:</b></p> <ul style="list-style-type: none"> <li>• The mechanical services have not yet been selected. A conditional planning condition will be required of the sound power levels not to exceed the items described in part of a mechanical service design needs.</li> </ul> <p><b>4. With respect to the retail needs report, in addition to the matters raised above:</b></p> <ul style="list-style-type: none"> <li>• The report does not provide an assessment to the categories of developments proposed. A more detailed assessment regarding the existing businesses proposed is required.</li> </ul>	
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			<p>cafes, medical centres should be assessed, especially for impact to existing bus loss of trade and turnover impact for these businesses as per figure 18 of the r detailed assumptions for review. This may result in one or more businesses no viable, adversely impacting jobs and community harmony of the development completed prior to consideration of approval of this application.</p> <ul style="list-style-type: none"> <li>• There is reference to the proposed medical centre providing for 65 FTE jobs, ho not clear where these staff will be found noting the profound skills shortage in Australia for skilled professionals. The assumptions need to be based on facts a assessment for the viability of these numbers must be provided prior to consid approval.</li> <li>• 6.2 benefits have not been based on fact – there are no retail goods provided – services or food outlets. Additionally, competition is either none or overly satu the small business community, likely resulting in small businesses folding due t addressable market. Detail should be provided or benefits clearly validated pri consideration of this application.</li> </ul> <p><b>We request that should any consideration for a commercial development as propos is subject to the following:</b></p> <ol style="list-style-type: none"> <li>1. Any business does not operate 24x7 and limited to 10pm closure, 8am opening</li> <li>2. There is sufficient design to road safety measures to reduce speed to the surro with physical limitations.</li> <li>3. Any business has limited noise and environment adverse impact i.e. does not p mechanical instruments in their design.</li> <li>4. It is unlikely to generate community disbenefit i.e. a target of theft (ATM, chem store), etc.</li> </ol> <p><b>We further request for probity reasons, that any person who has either responsibility over the decision for the application clearly declare any potential, perceived or actual interest with respect to this development application.</b></p> <p>Should any conflict be declared, any such person should recuse themselves from the p identify a suitable substitute without conflict. These decision makers should be monito the conflict yearly over a 5-year period. This is reflective of the support of an applicatio community resistance, limited benefits and significant adverse impact to the communit residents.</p>	
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402.	Damien Wragg 75 Murrumbidgee Drive, Hammond Park	Objection	<p>I write to you to seek assistance with an objection to Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development within the City of Cockburn. The subject sites proximity to Hammond Park Primary School raises multiple significant concerns including:</p> <ul style="list-style-type: none"> <li>• Negative health impacts</li> <li>• Increased and dangerous traffic congestion</li> <li>• Lack of a local structure plan to inform decisions of land use.</li> </ul> <p>The reasons for my objections are outlined within the attached letter. The proximity of the fast-food outlets directly opposite and within less than 100m of the southern entrance to Hammond Park Primary School will expose young students to unhealthy food options daily and directly contradicts evidence and good practice strategies stated within the Evidence brief: food, built environments and obesity published by the Department of Health (WA) released in 2022. As a current Councillor for the East Ward, I implore you to consider the long-term consequences of not assisting in an objection to this Planning Application. The well-being of our community and the safety of our children must be prioritised.</p>	<p>Noted.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
403.	Felicity Francis Twig Street Hammond Park	Objection	<p>I would like to strongly convey that I oppose this commercial development. I am a long term resident of Hammond Park who built our family home 12 years ago just off Gaebler Road on Twig Street. We would never have chosen to build our home, and send our kids to the local Primary School, knowing such a massive commercial development was to be built across from our children's Primary School. Parking and traffic problems are already high at the Primary School. Not to mention the smell of three fast food outlets wafting over into local houses and the Primary School. We are already dealing with advertising of fast food outlets and our kids pleas to eat fast food daily. This is not the healthy 'close to the coast' lifestyle parents at Hammond</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>

			Park want for their children. There's also the concern of noise pollution and crime increasing in the area with 24 operation service stations and fast food outlets. It would make more sense to have such a large commercial development on Rowley Road, Wattleup Road or Russel Road and NOT in the middle of a suburban area, across from a Primary School!	
404.	Anonymous	Objection	I strongly refuse towards the Hammond park commercial development	Noted.
405.	Anonymous	Objection	As a resident of Hammond Park I do not understand the position proposed for this development on Gaebler Road which is a residential road opposite the local Hammond Park Primary School. I'm concerned with the smell from fast food outlets, increased traffic, increase in noise from these sites and litter issues, the proximity to primary school, proximity to nature reserve, lack of road infrastructure to support traffic... Gaebler Road is not a suitable site for this development. Concerns over large delivery vehicles delivering fuel, fast food supplies on residential roads Issues with impacting nearby gazetted protected wetlands Light pollution from 24 hour operations affecting local residents and nearby nature reserves Issues with traffic congestion around school. And also dangerous intersection increasing traffic risk. As a resident and tax payer I strongly oppose this development and urge the Cockburn Council to reconsider this development to another location.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
406.	David Fletcher 32 Weetman Rd Hammond Park	Objection	Due to listing of cars leaving and coming in the area. Will increase our quiet area. The heights in the area won't be appropriate for and suburban area right opposite a school and the terrible smells from the fast food outlets and a high flow of traffic and condensation (sic) causing more noise.	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.
407.	Belinda Patroni	Objection	The proposed commercial development is directly opposite Hammond Park Primary School which raises multiple significant concerns including:	Noted. Please refer to the City's recommendation report for further details on the comprehensive

	32 Eucalyptus Drive Hammond Park		<ul style="list-style-type: none"> <li>• Negative health impacts</li> <li>• Increased and dangerous traffic congestion</li> <li>• Lack of a local structure plan to inform decisions of land use.</li> </ul> <p>The reasons for my objections are outlined within the attached letter. I would like to highlight that the proximity of the fast-food outlets directly opposite and within 100m of the southern entrance to Hammond Park Primary School will expose young students to unhealthy food options daily and directly contradicts evidence and good practice strategies stated within the Evidence brief: food, built environments and obesity published by the Department of Health (WA) released in 2022. I urge you to consider the long-term consequences of not assisting in an objection to this Planning Application. The well-being of our community and the safety of our children must be prioritised. I trust that you will consider these concerns thoughtfully and actively assist with an objection.</p>	assessment undertaken which provides a response to much of the matters raised.
408.	Chris Holliday 14 Neilson Street Hammond Park	Objection	<p>Leukaemia is the most common cancer amongst children. There have been many international studies that have linked higher rates of leukaemia found in children that live or attend schools that are within 1000m of petrol stations. Petrol stations are considered a source of atmospheric pollutants during refueling activities. Pollutants such as butadiene and in particular benzene have been found in concentrations from 1-5ppm higher than the recommended limit of 0.1ppm. 2. The proposed location of the petrol station will lead to an increase in traffic, this will create a potential hazard to children's safety and could lead to potential road traffic trauma or worse case scenario death. 3. Fast food outlets can potentially attract anti social behaviour and also an increase in crime. I hope you will present my concerns to your planning committee, I look forward to any comments you or the committee may have on this matter</p>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.

409.	Karin Tan 19 Capello Lane, Hammond Park	Objection	<p>I am writing to express our strong opposition to the proposed development of a petrol station and fast food restaurants in close proximity to our primary school (Hammond Park Primary School) and residential area. As a member of the community and a parent, I am deeply concerned about the potential negative impact this development could have on the well-being and safety of our children, as well as the overall quality of life in our neighbourhood. First and foremost, the proximity of a petrol station poses significant safety risks to our children. The increased traffic, emissions, and potential for accidents associated with such a facility could jeopardize the safety of students walking to and from school or playing in the area. Furthermore, the presence of fast food restaurants nearby raises concerns about the health and dietary habits of our children. Research has consistently shown the detrimental effects of fast food consumption on children's health, including increased risk of obesity, diabetes, and other related health issues. Moreover, the noise, light pollution, and potential for litter associated with these establishments are not conducive to a peaceful and harmonious residential environment. Our neighbourhood should be a place where families feel safe and comfortable, not overwhelmed by the negative externalities of commercial development. I urge you to reconsider the approval of this development project and to prioritize the well-being and safety of our community, especially our children. There are plenty of alternative locations for such businesses that would not pose the same risks to our neighbourhood.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p>
410.	Mark Williams	Support	<p>is there somewhere where residents can sign a petition saying Yes they want this proposal to go ahead? Seems today we live in a world whereby the minority over rule the majority because the majority don't complain....</p>	<p>Noted, however the development is being proposed outside of the designated local centres for Hammond Park.</p> <p>Petitions are driven by community members.</p>

411.	Chloe Harvey 89 Gaebler road, Hammond Park	<p>Please see my below petition AGAINST the proposed development on Gaebler road, Hammond Park Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that “petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia” (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009). In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, Version: 1, Version Date: 19/02/2024 Document Set ID: 11807661 (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-health-performance...">https://www.aihw.gov.au/.../australias-health-performance...</a> So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p>
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			<p>close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd. From my research it seems the risks of what is proposed here are greatest for children. Close to 1000 students attend Hammond Park Primary School every day. How many of them are you willing to risk? Is it worth it for your convenience? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds? Yes, there are risks in our everyday world, in everything we do. However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development in this particular location.</p>	
412.	<p>Hannah Anderson 38 Canary Dr, Hammond Park</p>	Support	<p>It would be great if it was a gym, some locally owned restaurants and a hairdresser instead, but progress is progress. The medical centre is a fantastic thing to be adding and the fuel station will be very convenient and how cool to have the newest Starbucks. I love takeaway, I just wish it could be some lovely Italian or Indian, somewhere families can dine and we can foster the community spirit of Hammond park, instead of the quickness and clinical nature of interactions at fast food places. Not worried about anonymity.</p>	<p>Noted. Local Centres have been provided elsewhere within the planning framework for Hammond Park.</p>
413.	<p>Lisa &amp; Steve Johnson 21 Inverson Bvd Hammond Park</p>	Oppose	<p>We oppose the location of fast food &amp; 24/7 service station as proposed above. The 24/7 servo &amp; MacDonal'd's will create a "hang out place" for teens which could result in undesirable behaviour. This intersection is already very busy with local traffic and would become a main thoroughfare if this development proceeds, similar to the Emmanuel Catholic College round about area. Version: 1, Version Date: 19/02/2024</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>

			<p>Document Set ID: 11807673 It would also impact the primary school with upper school children dropping in to get a Slurpie on their walk to or from school, as many of the ECC students do. So more health &amp; obesity problems for our kids. And I've no idea why a service station would be proposed so close to the wetlands, creating emissions that could be harmful to wildlife. The residents do need a service station, but not plonked in the middle of our housing development. A service station near the Rowley Rd freeway entries or near the new sports complex on Wattleup Rd would be less impact on our residents. At the Hammond Rd site, I'd prefer to see a Subway where we can purchase a roll for kids lunch boxes on the days we've run out of bread. And perhaps a Bakers Delight, Skin Check Centre, Barber &amp; Thai Restaurant.</p>	
414.	<p>Andie Johnson 21 Inverson Bvd Hammond Park</p>	<p>Oppose</p>	<p>We oppose the location of fast food &amp; 24/7 service station as proposed above. The 24/7 servo &amp; MacDonald's will create a "hang out place" for teens which could result in undesirable behaviour. Version: 1, Version Date: 19/02/2024 Document Set ID: 11807680 This intersection is already very busy with local traffic and would become a main thoroughfare if this development proceeds, similar to the Emmanuel Catholic College round about area. It would also impact the primary school with upper school children dropping in to get a Slurpie on their walk to or from school, as many of the ECC students do. So more health &amp; obesity problems for our kids. And I've no idea why a service station would be proposed so close to the wetlands, creating emissions that could be harmful to wildlife. The residents do need a service station, but not plonked in the middle of our housing development. A service station near the Rowley Rd freeway entries or near the new sports complex on Wattleup Rd would be less impact on our residents. At the Hammond Rd site, I'd prefer to see a Subway where we can purchase a roll for kids lunch boxes on the days we've run out</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.</p>

			of bread. And perhaps a Bakers Delight, Skin Check Centre, Barber & Thai Restaurant.	
415.	Rob Vinci 79 Murrumbidgee Drive, Hammond Park	Oppose	I am opposed to the proposed construction project at the address of : 9501L Gaebler Road Hammond Park WA 6164 My reasons for being opposed to this project are as follows. - Promotion and ease of access to fast food for young children This project (once complete) will increase: - the road traffic around a school zone. - noise levels around the clock - light pollution during the night - local area crime rates and violent crime Additionally, the proposed hydrocarbon storage facility is being placed in a bush fire prone area which is adjacent to an area which historically has encountered bush fires. Putting a hydrocarbon storage facility so close to homes and a primary school in an area already identified as a bushfire prone zone is reckless, unsafe and will introduce unnecessary risk to the lives of residents and students of this area. <i>Document Set ID: 11807691</i> The most recent bushfire incident in Harry Waring Marsupial Reserve occurred on Wednesday, February 7, 2024. <i>Document Set ID: 11807691, Document Set ID: 11807691</i>	Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.
416.	Anonymous	Oppose	It is fair to say that it is an absolute farce that this planning application is even considered and allowed to proceed to this stage of consultation; for sure that it is an appallingly illogical proposal from the very start! The suggested scope of development with a 24-hour service station, vehicle wash and fast food outlets in a middle of a relatively small residential suburb and adjacent to a primary school befuddles development and planning logic. These suggested amenities are (more aptly) seen alongside arterial roads as we have seen along Beeliar Drive and Armadale Road for obvious reasons! Setting these up at Gaebler Road, attracting high traffic volume to an area that poses increased road risks to children and residents is simply irresponsible, and quite frankly, of utmost absurdity!	The City of Cockburn is not proposing this development. The proposal has been lodged by a private landowner and the City advertised the application pursuant to the requirements of planning legislation.  Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause amenity concerns for the community.

			<p>You may qualify that you cannot consider feedback relating to anti-social behaviour - grow up mate. Look no further than the fast-food outlets at Success and Cockburn and tell me factually that you are not inviting trouble to the doorsteps of law-abiding residents and young families of this suburb. You are opening yourselves to a class action, I assure you. The suburb is not of the density, scale and size where the community desires or cries out for these unnecessary amenities that have no bearing or improvements to the local community. This is not what we sign up for as residents of Hammond Park, and we implore the JDAP to act responsibly for the residents of the suburb, and not be driven by the monetary gains that these developments will add to the Local Government and Planning Commission's coffers.</p>	
417.	Leighton James	Support	<p>I have two children at Hammond park primary school and I don't think there is any negative impacts from the development and it will be a much needed asset to Hammond park</p>	Noted.
418.	Jason Cavallaro 17 Packer Rise Hammond Park	Oppose	<p>I would like to put forward my objection to the commercial development of <b>9501L Gaebler Road, Hammond Park WA, 6164.</b></p> <p>Firstly I am very disappointed that the City of Cockburn has listed this area for Development under the Town Planning Scheme but has not outlined what type of development would be approved. If this area was only zoned for residential housing then the development in question would not be able to proceed and would not impact surrounding residents.</p> <p><b>Impact on Children's Health</b> - The development site is situated directly across the road from my kids primary school. My biggest concern is the petrol station will omit toxic fumes across our school and school oval. These chemicals will include Benzene, Ethyl Benzene, Toluene and Xylenes. There is proven evidence from Cancer Council which shows that these toxic</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p> <p>Noted, the proposal is inconsistent with the Environmental Protection Authority's recommended buffer distances to sensitive land uses (such as residential and school sites). This</p>

		<p>fumes can lead to cancers including Leukaemia. I don't want my kids to get sick from this. The proposed service station is not even 30 metres from the school oval. The school is considered a "Sensitive Area" and this development is not appropriate for this area. Also, we already have to breathe in the poisonous air from Cockburn Cement and we do not need any other poisons affecting our suburb!</p> <p><b><u>Environmental Impact</u></b>- I understand that an environmental study has been done, however any petrol station is no good for the environment with the risk of the tank leakage which will contaminate the soil and surrounding wetlands. There is so many other places that this could go without impacting homes/wetlands/natural bushland/animals ie Wattleup Road. Why not put a petrol station near the Wattleup shops which is already contaminated from the previous petrol station? Also a 24 hr petrol station is absurd when not even the ones located on Beeliar drive (which is in a much busier area) aren't even open this long.</p> <p><b><u>Too Many Fast Food Outlets &amp; Unhealthy</u></b>- The City of Cockburn has already approved the shopping centre development on Whadjuk Drive which includes fast food restaurants. This is only approx 500m from the proposed development site. It is not necessary to have so much takeaway so close to each other within 1km. There is already a lot of takeaway restaurant options in the Cockburn area which is very close to the development site. How many more do we really need within a 5km radius?</p> <p>The school canteen can only sell healthy items and have enforced the traffic light system. They also are no longer selling ham sandwiches. We are trying to teach our kids healthy eating, we are teaching them according to government health</p>	<p>has been given consideration in the City's assessment.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>Noted and agreed that some land uses proposed have a direct amenity impact on the Hammond Park Primary School and are causing considerable angst amongst students attending the school.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
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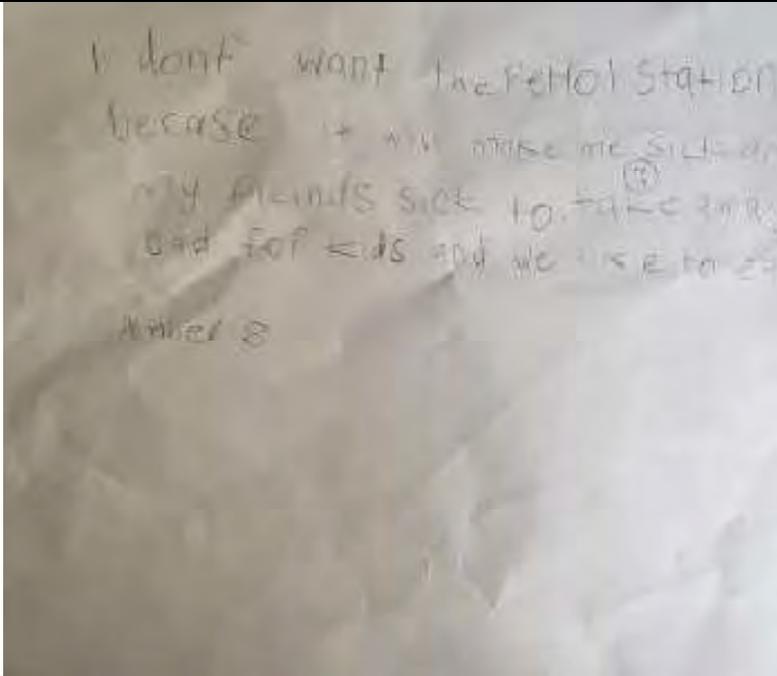
			<p>requirements and then a development with the most unhealthy takeaway could be on our kids doorsteps which is being approved by our government. What message are we sending our kids and how contradictory for the government? Research shows that 1 in 4 kids are obese or overweight in WA so why put greasy takeaway foods in-front of a primary school.?</p> <p><b>Pollution, Smell &amp; Noise-</b> The heavy takeaway's suggested in this development ie McDonalds and KFC will pollute the air with the smell of fried food impacting surrounding houses. My home is not even 300 metres from the development site and I do not want it to effect my enjoyment of my outdoor space. The noise from trucks delivering in the morning, trucks filling up the tanks, cars filling up constantly and the use of the car wash will all make considerable noise to surrounding homes.</p> <p><b>Increase in Traffic-</b> the traffic report refers to outdated research back in 2019-2020 which was well before the school reached over 900 students and also before many of the houses in the surrounding area had been built. There is so much traffic already before and after school and this development will impact the school greatly. Parents already have to park on the side of the road as the school does not have enough parking. See images attached. Where do you expect people to park? Although the research took into consideration the new school opening off Wattleup Road this has made no difference to the amount of students attending Hammond Park Primary. The area is growing rapidly and with growth comes traffic. The school at the moment has so many portable demountables and cannot fit any more- that's how full we are.</p> <p>Parents have also been pushing to have a traffic warden at the school for student safety and to this date they have not been able to get approval. This development will in no doubt increase</p>	
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		<p>traffic and will make it even more dangerous for kids to cross the road. Is the government happy to risk our children's lives? There has been incidents of kids being hit by cars and this is even before this area is developed.</p> <p><b><u>Negative Visual Impact-</u></b> It has been suggested in the proposal that all the shop pylon signs will be 10metres high. This will be visual from any surrounding residents which will be unattractive to these properties and will impact property value. I don't want to be able to see any fast food/advertising signage from my back or front yard. Under <b>City of Cockburn LPP 3.7</b> Pylon signs should only be 3m high maximum?</p> <p><b><u>Child's View on Proposal-</u></b> my daughter attends Hammond Park Primary School and is in Year 3. She wanted to submit her views on the proposal and drew a picture and wrote a few words. Please accept her views as this proposal directly affects her and her friends at the school. See details in the appendix below.</p> <p>APPENDIX <i>Parking Before School</i></p>	
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*Amber Cavallaro- Year 3 Hammond Park Primary School*



				
419.	Jeffrey Lee No address provided		<p>Hammond park primary school need your help...we have a developer trying to flatten the land and develop a petrol station and fast food chains across the school. It is less than 700 metres away. Our poor kiddos less than 12 years old would be suffering over the daily smell of petrol. This is unacceptable in terms of health and many other factors</p> <p>Sunrise news is on it this morning but we still need more help!</p> <p>If you as a dad or mum, can understand this scary notion, please vote against it.</p> <p>And also, as your capacity being a Minister, Mayor and Councillor, please help us in this. This is about our future for our kids. You can intervene on this, no?</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>

		<p>I know you are not in the hammond park area but you can still help us. Please vote against it.</p> <p>I am a local Hammond Park resident, father of 2 children at Hammond Park Primary School. My research was focused on environmental influences on child health and early life immune development.</p> <p>I have conducted some reading and research into the scientific literature (peer-reviewed journal articles) to better understand the risks associated with the proposed Gaebler Rd development, for my own benefit.</p> <p>I thought I'd share a short summary of my research findings so that you may be better informed too:</p> <p>Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that "petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia" (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or</p>	
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		<p>environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF), which you can find out more about here: <a href="https://www.aihw.gov.au/.../australias-health-performance...">https://www.aihw.gov.au/.../australias-health-performance...</a></p> <p>So far, we have touched on risks associated with environmental pollutants and fast-food restaurants placed in close proximity to residences. There are also risks associated with increased traffic through the suburb (which also contributes to environmental pollutants/poor air quality), and safety issues especially for children when crossing the road. The proposed application will bring more traffic to the area, reduce the available parking for the school and increase the likelihood of further accidents on Gaebler Rd.</p> <p>From my research it seems the risks of what is proposed here are greatest for children. Close to 1000 students attend Hammond Park Primary School every day. How many of them are you willing to risk? Is it worth it for your convenience? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds?</p> <p>Yes, there are risks in our everyday world, in everything we do. However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development in this particular location.</p>	
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420.	Cancer Council Western Australia Level 1, 420 Bagot Road, Subiaco	Oppose	<p>Dear Mayor,</p> <p>Cancer Council WA is writing to you and all elected members of City of Cockburn in support of the residents of Hammond Park who have expressed their immense concern regarding a development application currently open for consultation.</p> <p>Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development. Available from: <a href="https://comment.cockburn.wa.gov.au/dap23004">https://comment.cockburn.wa.gov.au/dap23004</a></p> <p>The development application includes a 24-hour operation service station (7-Eleven), three drive-through, up to 24-hour operation fast food outlets (McDonald's, KFC, Starbucks), medical centre, and motor vehicle wash. The proposed development is directly opposite Hammond Park Primary School and within close proximity to housing developments.</p> <p>Cancer Council WA and our partners are strongly opposed to this development proposal given the very likely detrimental impact to the children and families living and attending school in the area. Evidence demonstrates that unhealthy food outlets near homes and schools impacts families and children attending the school. We know that fast food outlets are in high numbers around Perth schools and their numbers are higher in suburbs living with economic stress. One in two Perth school children purchase unhealthy food and drinks from fast food outlets near their schools at least once a week with the frequency increasing with proximity to a major chain outlet such as McDonald's and KFC. We link a <a href="#">WA Department of Health evidence brief</a> on the matter which references the above evidence.</p> <p>Despite this evidence, new developments for fast food outlets are consistently approved even with strong community objection. Communities express disappointment and anxiety when their new housing developments are subsequently surrounded by fast food outlets and service stations. This is particularly relevant to the families of Hammond Park with a commercial development approved in December 2023 including two drive through fast food outlets only 1km away from this proposed site. If this particular application is approved, it would result in five new drive through fast food outlets in a small residential area that includes two primary schools and one high school.</p> <p>Our review of the planning report indicates that the land was previously the subject of a Local Structure Plan (LSP) seeking residential development which has not progressed further than the WA Planning Commission. An application for such a significant change of use is concerning, given that current Hammond Park residents would have purchased homes under the premise the land would be residential. Perth has an urgent need for homes to address housing shortages, not more drive through fast food outlets.</p> <p>We urge the City of Cockburn Council to support the residents of Hammond Park. As a community we all want to live in vibrant, family friendly suburbs that support our health and quality of life. We ask you and your City of Cockburn Councillors to use your discretionary powers to reject this development application.</p> <p>Yours sincerely,</p>  <p>Ashley Reid Chief Executive Officer</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
421.	Eden Goo 8 Hugel Lane	Support		Noted.

	HAMMOND PARK			
422.	Anonymous	Support	-	Noted.
423.	Anonymous	Oppose	<p>I have previously provided a submission stating I opposed the new development off Gaebler Rd in Hammond Park (24/7 servo and fast food joints etc), but wish to add the following to supplement my prior submission which was very limited.</p> <p>I oppose the proposed development for the following reasons:</p> <ul style="list-style-type: none"> <li>• Health <ul style="list-style-type: none"> <li>○ My ten year old daughter attends Hammond Park Primary and <b>may</b> attend HP Secondary (depending on how this evolves) and I am very worried about the short, mid and long term health implications for all children in the locality. Banning ham in toasties and then developing 3 fast food outlets metres from the school seems comical and upsetting to me. How can we promote healthy eating to our children when you place such venues so close to three separate schools. I do not doubt the private developer has proposed three fast food outlets for the very reason there is so much footfall from children in the</li> </ul> </li> </ul>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>Noted, the applicant is responsible for submitting a Traffic Impact Assessment which must address traffic related issues.</p> <p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p> <p>Noted, the City is in agreement with much of the content of this submission, as it raises valid planning considerations in context to the prevailing planning framework.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>

			<p>area. The developer has zero concern for the social aspects and health concerns of the estate, they only have profits in mind.</p> <ul style="list-style-type: none"><li>• Traffic<ul style="list-style-type: none"><li>○ This is a residential estate and as far as I am aware that land was originally planned for residential properties. For some reason unknown to me this has changed due to an expiry. This in itself appears dubious as residential properties within a triangle of schools is surely sound in terms of business. Allowing this development to go ahead will create a very significant increase in traffic through the estate and around all of these schools. Children have already been knocked down by cars in the estate and this was a concern even before the proposal of 24/7 fuel and food services. Even with traffic calming measures this simply won't work within this estate. I find it very hard to believe such plans would ever get past the initial planning phase in more affluent estates.</li></ul></li><li>• Bush fires<ul style="list-style-type: none"><li>○ The protected bushland adjacent to this area surely makes it unwise to propose a petrol station next to the primary school. There have been several bushfires here in recent years and the emergency services often complain of the water</li></ul></li></ul>	
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			<p>pressure being unable to cope with such events. If there were to be an emergency event at the petrol station or near, are we willing to risk so many children who will be metres away??</p> <p>This whole proposal stinks of a developer with dollars in mind who lives far away and has no concerns about social and safety implications for the local community. We are all very hopeful, that the local government or those who make the decisions, can please see sense with this, decline the proposed development and direct them to somewhere more sensible.</p>	
424.	Anonymo us	Oppose	<p>I have previously provided a submission stating I opposed the new development off Gaebler Rd in Hammond Park (24/7 servo and fast food joints etc), but wish to add the following to supplement my prior submission which was very limited.</p> <p>I oppose the proposed development for the following reasons:  <b>Health</b>  My ten-year-old daughter attends Hammond Park Primary School and may attend HP Secondary (depending on how this evolves) and I am very worried about the short, mid and long-term health implications for all children in the locality. Banning ham in toasties and then developing 3 fast food outlets metres from the school seems comical and upsetting to me. How can we</p>	<p>Noted, the City is in agreement with much of the content of this submission, as it raises valid planning considerations in context to the prevailing planning framework.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>

		<p>(parents and the Australian government who is responsible for the Health curriculum in schools) promote healthy eating to our children when you place such venues so close to three separate schools? The developer has zero concern for the social aspects and health concerns of the estate, they only have profits in mind.</p> <p>Here is a link to a scientific evidence brief regarding food, built environments and obesity. <a href="https://acrobat.adobe.com/id/urn:aaid:sc:AP:efe9aaec-2d6d-400a-bb4b-fc29d79aa999">https://acrobat.adobe.com/id/urn:aaid:sc:AP:efe9aaec-2d6d-400a-bb4b-fc29d79aa999</a></p> <p><b>Traffic</b></p> <p>This is a residential estate and as far as I am aware that land was originally planned for residential properties. For some reason unknown to me this has changed due to an expiry. This in itself appears dubious as residential properties within a triangle of schools are surely sound in terms of business. Allowing this development to go ahead will create a very significant increase in traffic through the estate and around all of these schools. Imagine all the deliveries for the fast food chains? The delivery of petrol?</p> <p>Children have already been knocked down by cars in the estate and this was a concern even before the proposal of 24/7 fuel and food services. Even with traffic calming measures this simply won't work within this estate. I find it very hard to believe such plans would ever get past the initial planning phase in more affluent estates.</p> <p><b>Bush fires</b></p>	
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		<p>The protected bushland adjacent to this area surely makes it unwise to propose a petrol station next to the primary school. There have been several bushfires here in recent years and the emergency services often complain of the water pressure being unable to cope with such events. If there were to be an emergency event at the petrol station or near, are we willing to risk so many children who will be metres away??</p> <p>This whole proposal stinks of a developer with dollars in mind who lives far away and has no concerns about social and safety implications for the local community. We are all very hopeful, that the local government or those who make the decisions, can please see sense with this, decline the proposed development and direct them to somewhere more sensible.</p> <p><b>Pollution</b></p> <p>There will certainly be an increase in <u>noise pollution, smell pollution, light pollution and the pollution of the actual landscape! What an incredible eyesore will it be!</u> What are the contingencies for an oil leak or petrol leak at the servo? What is the action plan if it contaminates the local water supply? This has recently occurred in a Perth suburb!</p> <p><b>Too many food chains in the local area</b></p> <p>There are already 5 fast-food chains in this area. We don't need any more!</p> <p><b>Wetlands</b></p> <p>The proposed plan is too close to the wetlands. Protected species and other wildlife are at risk if this development gets the green light.</p>	
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			With all this in mind, <b>houses</b> will also run the very big risk that they will be <b>devalued in price</b> .	
425.	Pamela & Nikola Baskovich 36 Gaebler Road HAMMO ND PARK	Oppose	<ol style="list-style-type: none"> <li>1. This is a Class A wetland with a 50m buffer zone</li> <li>2. The wetland environment will be significantly compromised as will Harry Waring Marsupial Research Station</li> <li>3. Proximity to Hammond Park Primary School – exhaust fumes, congested traffic, danger to children</li> <li>4. Road congestion for residents</li> </ol>	<p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p> <p>Noted, the proposal is inconsistent with the Environmental Protection Authority’s recommended buffer distances to sensitive land uses (such as residential and school sites). This has been given consideration in the City’s assessment.</p>

		<p>A meeting of concerned residents was held at 36 Gaebler Road, Hammond Park, on February 19<sup>th</sup> and as a group we expressed our concern at the proposed application to develop Lot 9501L Gaebler Road, Hammond Park for the following reasons.</p> <p><b><u>ENVIRONMENTAL REASONS:</u></b></p> <ul style="list-style-type: none"> <li>• This block is still largely an A CLASS WETLAND and has been since 1986.</li> <li>• Any disturbance of vegetation will impact on the conservation of the wetland.</li> <li>• Due to planned 24 hour activity on the site the nocturnal animals of the area will be severely compromised.</li> <li>• As HARRY WARING MARSUPIAL PARK is a research property any disturbance of ground water or pollution caused by fuel-leaching into the ground from underground tanks and excessive exhaust fumes will be detrimental to the health of the park.</li> <li>• There will be litter blown into the wetland from the commercial precinct.</li> </ul> <p><b><u>CHILDREN'S SAFETY AT THE HAMMOND PARK PRIMARY SCHOOL:</u></b></p> <ul style="list-style-type: none"> <li>• It is a well know medical fact that increased exhaust fumes causes damage to children's health and learning ability.</li> </ul> <p><i>MELBOURNE UNIVERSITY STUDY BY Dr. Elena Schneider-Futschik and Associate Professor Louis Irving found the following</i></p> <p><i>There is increasing evidence internationally and in Australia linking a higher risk of asthma and allergies with exposure to traffic-related air pollution.</i></p> <p><i>The 2015 study found that every two microorganisms per cubic metre incremental increase in chronic exposure to particulate matter from car exhausts in early childhood, increased the risk of developing asthma in later childhood by 14 per cent.</i></p>	
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- Continuous exposure to vehicle exhaust fumes not only can cause asthma it is also associated with lead levels rising in humans which interferes with brain function and learning.
- Already there is significant traffic around the school and no designated crosswalks for the children. With the increased traffic cueing to enter/exit the proposed commercial site, children attending the school will be impacted even more.
- Any fuel site needs to have 200m from its boundary to a school sites boundary. There is just 27m between the school boundary and the proposed fuel station site.
- At present, parents have use of the verge on the southern side of Gaebler Road but frequently end up parking almost up to number 34 Gaebler Road, most of that clear verge will disappear if the proposed commercial site goes ahead. Where are parents expected to park then???

**RESIDENTS:**

- We already have hoons doing burnouts and racing on our street late at night and early mornings.
- It is too dangerous to reverse out onto Gaebler Road due to the amount of traffic and children using the road at present. With the proposed commercial precinct on Lot 9501L, it will be very difficult to enter/exit our own properties.
- The Local Structure Plan for the area, number 467 does not have this development included on it why not?
- The proposed entry to the commercial site is not only opposite the school oval but within 20m of the junction of Hammond Road and Gaebler Road. This will impact on traffic using this corner particularly when cars cue for cheap petrol and when large tankers are delivering fuel to the proposed service station.

NAME	ADDRESS	PHONE NUMBER	SIGNATURE
Pamela Bakovic	36 GAEBLER RD. H.P.	0423 143 132	<i>Pamela Bakovic</i>
Dean + Gail Freeman	32 Willis Tce H.P.	0428915571	<i>Dean Freeman</i>
Wayne Kelly	44 Gaebler St H.P.	0417959138	<i>Wayne Kelly</i>
Catherine Mitchell	20 Willis Tce H.P.	048602707	<i>Catherine Mitchell</i>
Damien Whigg	75 Hurrenbeidge Dr H.P.	0439398478	<i>Damien Whigg</i>
Nikola Bakovic	36 GAEBLER RD. H-PARK	0409 571 598	<i>Nikola Bakovic</i>

426.	Kym Bloffwitch	Oppose	<p>I am a resident of Hammond Park and I am writing to express my concern and to formally object to the proposed development on Gaebler Road.</p> <p>I feel that this development will be placing my child and others attending Hammond Park Primary School at risk. The increased traffic on Gaebler Road will adversely affect the children travelling to school. Gaebler Road is already very busy during this time, with cars and foot traffic. We have had a child hit by a car in 2022 and given the number of children attending Hammond Park (over 900) this could be a real possibility in the future.</p> <p>The parking around the school is already insufficient and it is already very difficult to negotiating the pick-up and drop-off of children at the school. The junction on the corner of Hammond Road and Gaebler is very difficult to cross on foot or cycling and this will increase with the extra traffic that this development will bring.</p> <p>There have been numerous studies showing that having fast food outlets next to schools increase the risk of poor nutrition, type 2 diabetes and obesity in children. This exposure to fast food directly across from the school is placing our children at risk and normalising this type of nutritionally deficient food. The Cockburn Council, as our local government should be addressing primary health strategies in the planning of our communities, by limiting this type of unhealthy, nutrientally deficient food and by the promotion of healthy eating. The Health Department has already done significant work in this area, identifying that the urban environment and exposure to unhealth food have a significant effect on the health of individuals and the fact we can build two fast food</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including students attending the Hammond Park Primary School.</p> <p>Noted, the land uses proposed are commercial in nature and naturally require increased car parking bays compared to residential properties.</p> <p>Noted, bushfire is a valid consideration in the planning framework and this should be considered as part of the assessment of the proposal.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
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			<p>restaurants across the road from a primary school in mind-boggling!</p> <p>I feel that the petrol station should not be placed so close to the school and in a bush fire zone, directly across from a nature reserve. I feel this is an unexceptable risk and the school has already experienced an evacuation, due to fire last year. There are other more suitable locations, that are not directly across the road from our most vulnerable members of the community.</p> <p>The health risks associated with the petrol station is also a concern with benzene linked with childhood leukemia. As well as increased noise, light and rubbish a 24hr establishment will produce. I feel the noise pollution is not sufficiently address in the proposal. Both these roads are already experiencing anti-social behaviour, with hooning cars at night and I feel this will increase with a 24hr establishment.</p> <p>This development is not needed in Hammond Park. There will be fast food outlets in the Whadjuk development and there are already established businesses in the area, less than five minutes away by car. This development does not bring any real benefits to the community, but it does pose a multitude of potentially adverse outcomes. The Cockburn Council has a duty of care to the community and I feel that by approving this proposed development the council is being negligent. This is about our children's safety and not community convienece.</p>	
427.	Anonymo us	Oppose	<p>I am a local Hammond Park resident, mother of 2 children at Hammond Park Primary School, and university science lecturer. <b>I am writing to you to formally object to the proposed development “Planning Application - DAP23/004 -</b></p>	<p>Noted, the City is in agreement with much of the content of this submission, as it raises valid planning considerations in context to the prevailing planning framework.</p>

		<p><b>9501L Gaebler Road Hammond Park - Commercial Development”</b>  <a href="https://comment.cockburn.wa.gov.au/dap23004">https://comment.cockburn.wa.gov.au/dap23004</a>). This development is proposed for the middle of Hammond Park amongst residences and right next to the biggest school in the suburb.</p> <p>I have conducted some reading and research into the scientific literature (peer-reviewed journal articles) to better understand the risks associated with the proposed development on Gaebler Road, Hammond Park. Much of my focus is related to health and safety concerns, but there are also planning concerns too, which I outline below:</p> <p style="text-align: center;"><b><u>1. Lack of a local Structure Plan to inform decisions regarding the appropriate use of land at the site</u></b></p> <p>Properties subject to ‘development’ zoning under the Local Planning Scheme, should have a Local Structure Plan to inform the decision of land use. In this instance, an important step in the planning framework has been missed. There is a need for a Local Structure Plan.</p> <p style="text-align: center;"><b><u>1. Proximity of a proposed Service Station to sensitive land use and associated health risks, particularly for school children</u></b></p> <p>The proposed development does not satisfy Clause 67(r) of the Planning and Development (Local Planning Schemes) Regulations 2015 as it constitutes a possible risk to human</p>	<p>Please refer to the City’s recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
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		<p>health or safety due to being directly adjacent to 'sensitive land uses' (residential development and school).</p> <p>Petrol stations contribute significantly to ambient benzene concentrations in their vicinity, especially during intense refueling activity, and populations in close vicinity of petrol stations are at increased risk of developing cancer (Karakitsios, 2007). A recent study found that "petrol stations emit benzene and other contaminants that have been associated with an increased risk of childhood leukaemia" (Malavolti et al., 2023, p. 771). In this study, children living within in close proximity (50 m) to a petrol station had a more than double the risk of developing childhood leukaemia compared to children living a kilometre or more away. The relative risk of acute lymphoblastic leukaemia quadrupled for older children over the age of 5 years with exposure (Malavolti, 2023). Similarly, Steffen et al. (2004) found that the odds of childhood leukaemia were 4 times higher for dwellings neighbouring a petrol station compared to those that did not. These findings are consistent with a number of other studies which also concluded that there is an elevated risk of childhood leukaemia associated with living next to a petrol station and/or environmental exposure to benzene (Infante, 2017; Brosselin et al. 2009).</p> <p>Guidance Statement No. 3 of the Environmental Protection Authority (Separation Distances between Industrial and Sensitive Land Uses 2005) recommends a separation distance of at least 200m for 24 hour service stations, which has not been met. Residences are within 170m. The distance between the boundary of the school and the proposed petrol station is just metres. School classrooms, including those used by Kindy and Pre-primary students are within 200m; the school oval is</p>	
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			<p>within 50 m. <b>Please find attached a letter from the Head of Respiratory Environmental Health at the Telethon Kids Institute pertaining to this particular point.</b></p> <p style="text-align: center;"><b><u>2. Traffic safety and congestion concerns</u></b></p> <p>Traffic safety and congestion is not adequately addressed by the developer, with a particular lack of understanding of existing traffic issues related to this area and the school. The developer notes the car accidents that have occurred on Gaebler Rd in their crash assessment (2.10), but <b>fail to note recent incidents of pedestrians (school children) being hit/almost hit by cars on this road.</b> See here for a specific incident:  <a href="https://thewest.com.au/stories/little-boy-hit-by-car-south-of-perth/">https://thewest.com.au/stories/little-boy-hit-by-car-south-of-perth/</a></p> <p>See here for video footage of near miss at the junction of Gaebler Rd and Hammond Rd at school pick up time:  <a href="https://www.abc.net.au/news/2022-12-21/near-miss-in-hammond-park-perth/101734590">https://www.abc.net.au/news/2022-12-21/near-miss-in-hammond-park-perth/101734590</a></p> <p>The proposal does not adequately address pedestrian safety, including insufficient speed slowing measures. Sketches indicate that due to the turning circle of fuel trucks, there will be a “full movement crossover” onto the wrong side of the road on the Hammond Rd exit path, which poses a risk to overcoming traffic. There are no safe routes for pedestrians to cross Hammond Rd, including absence of crosswalks or other traffic slowing measures to ensure, for example, safety of access to the nearest bus stop on Hammond Rd.</p> <p>The developer states that “the primary service vehicle <b>entry point will be from Gaebler Road</b> with the southernmost entry</p>	
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		<p>from Hammond Road intended to be the secondary service access point”. This means that traffic will increase through the school zone on Gaebler Road. Access C services the petrol station, and any significant queuing into the petrol station will result in traffic backing onto Gaebler Rd, and potentially locking up of the junction at Gaebler Rd and Hammond Rd. Furthermore, a pre-existing sight line issue was noted by the developer: <b>“there is a chance that a car coming around the bend from Hammond Road will have insufficient safe stopping sight distance if there are cars stopped on the carriageway waiting to pull into the western most parking bays”</b> (p. 19, Transport Impact Assessment) or queuing to enter the site. As the extent of school traffic using these bays and this road during pick-up drop-off times has not been taken into account by the developer, along with site traffic, there is likely to be significant queuing on the carriageway and a significantly increased risk of accidents due this sight line issue (p. 19 Transport Impact Assessment). Additionally, Gaebler Rd is a “Local Distributor” road which is designed to “only carry traffic belonging to or serving an area” and “should accommodate buses but discourage trucks” (p. 6 Transport Impact Assessment). Hence the use of Gaebler Rd as an access point for all site traffic development, including large fuel tankers, is incompatible with its classification.</p> <p>The developer makes statements about the school traffic that indicate that they have not taken into account the extent of school traffic using Gaebler Rd in their Transport Impact Assessment, and including in their SIDRA modelling:</p> <ol style="list-style-type: none"> <li>1. First, they state that “there will (be) no traffic congestion that results at school pick up or drop off time”, but then conflict this statement by later</li> </ol>	
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			<p>mentioning that “the AM peak of school and the site may coincide” (p.54 Transport Impact Assessment).</p> <p>2. The developer states “<b>it is expected that interaction between the school and site traffic would be minimal, as most of the pick-up drop-off activity occurs on different roads</b>”. This statement is categorically incorrect. This is a school of 920 students. There is very little parking to the north of the school, and about half of this parking is allocated to staff. On Murrumbidgee Dr is another small carpark that holds very few cars. A significant volume of cars use Gaebler Rd in both directions to access Murrumbidgee Dr for either parking or to access the ‘Kiss and Drop’. Further due to the overall lack of parking to accommodate the volume of students and families attending the school, Gaebler Rd is significantly used for parking at pick up and drop off (both north bays and the south dirt verge).</p> <p>Therefore, it is likely that the SIDRA Analysis modelling included in the Transport Impact Assessment is inaccurate because it is modelled on no/minimal use of Gaebler Rd as a school access and parking point (section 6.8 Transport Impact report).</p> <p><b><u>3. Proximity of proposed commercial developments to a Conservation Category wetland and to Bush Forever – Harry Waring Marsupial Reserve</u></b></p> <p>The proposed wetland buffer of 15m is insufficient to protect the wetland from loss or degradation due to the development’s activities and the types of pollutants and contaminants from a commercial development. There is</p>	
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		<p>increased risk of weed spreading and contamination from an insufficient buffer between the wetland and car wash. According to the District Structure Plan Southern Suburbs Stage 3 (2012) it states that a proposed local structure plan must ensure that any issues regarding wetland impacts are investigated and managed in accordance with: Position Statement No.4 – Environmental Protection of wetlands (EPA 2004) and Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999. It is noted within the Environmental Assessment that the development will potentially affect the endangered black cockatoo populations due to clearing 1.27ha of foraging habitat and two potential breeding habitat trees.</p> <p>Further, according to the District Structure Plan Southern Suburbs Stage 3 (2012) it states that to protect Bush Forever careful consideration must be given as part of future structure plans to ensure an appropriate interface with Harry Waring Marsupial Reserve. The proposed development is not an appropriate interface for the Reserve. The applicant has not addressed the impact of the 24 hour light pollution on the endangered marsupials (nocturnal) that reside in the Reserve.</p> <p>Again, the lack of local structure plan is of significant concern to both of these issues.</p> <p style="text-align: center;"><b><u>4. Lack of compatibility with local setting and impact on amenity and character of a family-orientated suburb</u></b></p> <p>Given the proposed development is located directly adjacent to a large primary school, a conservation category wetland, a Reserve and residences, this development is incompatible</p>	
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		<p>with the character and amenity of the local setting. The development does not enhance the unique characteristics of the site, including the identity of the bush land, the community and family friendly, safe vibe of the suburb. A better use of this site would be for either residences or health promoting small businesses (e.g. gym or yoga studio).</p> <p>Further, there is already a medical centre within 500 m on Marquis St (which more conveniently incorporates a pharmacy too on the same site), and a development that is approved to incorporate two fast-food restaurants on Whadjuk Dr. Thus, there is no need to replicate amenities that already will exist within a less than 1 km radius.</p> <p style="text-align: center;"><b><u>5. Proximity of Fast-Food Outlets to sensitive land use and the negative health consequences</u></b></p> <p>In relation to the risks associated with fast-food restaurants, “students with fast-food restaurants near (within one half mile of) their schools (1) consumed fewer servings of fruits and vegetables, (2) consumed more servings of soda, and (3) were more likely to be overweight” (Davis &amp; Carpenter, 2009). These are recognised risk factors for poor health and wellbeing outcomes in the Australian Health Performance Framework (AHPF): <a href="https://www.aihw.gov.au/reports-data/australias-health-performance/australias-health-performance-framework">https://www.aihw.gov.au/reports-data/australias-health-performance/australias-health-performance-framework</a></p> <p>According to the WA Department of Health (2022) “Unhealthy food environments can adversely affect food consumption and be a driver of obesity and diet-related chronic diseases such as type 2 diabetes, cardiovascular disease, and some</p>	
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			<p>cancers.” Alviola et al. (2014) demonstrated that fast-food restaurants within a mile of schools (that specifically included Kindy – Year 6 students) significantly affected school level obesity rates. Placing fast food restaurants next to a place visited by more than a thousand children each day (920 students currently enrolled at the school plus a significant number of younger/older non-enrolled siblings), is an attempt to ‘hook’ young people on fast food through repeated exposure to visible brand placement within their otherwise safe and health promoting ‘learning/community space’. Placing fast food this close to the school is totally incompatible with the WA Department of Education’s (2023) healthy eating traffic light system used by the canteen.</p> <p><b><u>6. Service Station placement within bushfire prone area</u></b></p> <p>The development is proposed to be built within a bush fire prone area and does not satisfy Clause 67(q) of the Planning and Development (Local Planning Schemes) Regulations 2015 as is not suitable given the possible risk of bush fire within the area.</p> <p>The firebreak proposed appears to be incorporated in the environmental wetland buffer and has not been considered in addition to the wetland buffer. The applicant has not satisfactorily provided a bush fire management plan which would mitigate the risks associated with the location. The Bushfire management plan cover sheet also suggests that the Declaration was completed by a BPAD Accredited Practitioner whose accreditation has expired.</p> <p><b><u>7. Lack of odour management</u></b></p>	
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		<p>The proposed development does not satisfy Clause 67(n) of the Planning and Development (Local Planning Schemes) Regulations 2015 as the application has not demonstrated how satisfactory odour management arrangements will be incorporated.</p> <p><b>Summary and concluding remarks</b></p> <p>From my research it seems <b>the risks of what is proposed here are greatest for children</b>. Close to 1000 students attend Hammond Park Primary School every day with many more cohorts to be funnelled through the school in the future. How many of them are you willing to risk? I moved to this suburb because it was a family friendly suburb and a good place to raise children. Will it still be this way if this development proceeds?</p> <p>Yes, there are risks in our everyday world, in everything we do. <b>However, we have an opportunity to remove an unnecessary set of risks here by not proceeding with this development in this particular location.</b></p> <p>I trust that you will give due diligence to the concerns raised and recommend to <b>reject</b> this Planning Application and/or consider a Scheme Amendment to prohibit the use of this site for the purposes outlined in the applicant's Planning Application.</p> <p><b>Attachments:</b> Letter from A/Prof Alex Larcombe (Head of Respiratory Environmental Health, Telethon Kids Institute)</p> <p><b>References:</b></p>	
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			<p>Alviola IV, P. A., Nayga Jr, R. M., Thomsen, M. R., Danforth, D., &amp; Smartt, J. (2014). The effect of fast-food restaurants on childhood obesity: a school level analysis. <i>Economics &amp; Human Biology</i>, 12, 110-119.  <a href="https://doi.org/10.1016/j.ehb.2013.05.001">https://doi.org/10.1016/j.ehb.2013.05.001</a></p> <p>Brosselin P, Rudant J, Orsi L, <i>et al.</i> (2009). Childhood acute leukemia and residence next to gas stations and automotive repair garages: the ESCALE study (SFCE*). <i>Occupational and Environmental Medicine</i>,  <a href="https://doi.org/10.1136/oem.2008.042432">https://doi.org/10.1136/oem.2008.042432</a></p> <p>Davis, B. &amp; Carpenter, C. (2009). Proximity of Fast-Food Restaurants to Schools and Adolescent Obesity. <i>Am J Public Health</i>. 99,505–510.  <a href="https://doi.org/10.2105/AJPH.2008.137638">https://doi.org/10.2105/AJPH.2008.137638</a></p> <p>Department of Health, Government of Western Australia. (2022). Evidence brief: food, built environments and obesity.  <a href="https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf">https://www.health.wa.gov.au/~media/Corp/Documents/Health-for/Healthy-eating/Evidence-brief-food-built-environments-and-obesity.pdf</a></p> <p>Infante, P. F. (2017). Residential proximity to gasoline stations and risk of childhood leukemia. <i>American Journal of Epidemiology</i>, 185(1), 1-4.  <a href="https://doi.org/10.1093/aje/kww130">https://doi.org/10.1093/aje/kww130</a></p> <p>Karakitsios, S. P., Delis, V. K., Kassomenos, P. A., &amp; Pilidis, G. A. (2007). Contribution to ambient benzene concentrations in the vicinity of petrol stations: Estimation of the associated health risk. <i>Atmospheric Environment</i>, 41(9), 1889-1902.  <a href="https://doi.org/10.1016/j.atmosenv.2006.10.052">https://doi.org/10.1016/j.atmosenv.2006.10.052</a></p>	
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			<p>Malavolti, M., Malagoli, C., Filippini, T. <i>et al.</i> (2023). Residential proximity to petrol stations and risk of childhood leukemia. <i>Eur J Epidemiol</i> 38, 771–782.  <a href="https://doi.org/10.1007/s10654-023-01009-0">https://doi.org/10.1007/s10654-023-01009-0</a></p> <p>Steffen, C., Auclerc, M. F., Auvrignon, A., Baruchel, A., Kebaili, K., Lambilliotte, A., ... &amp; Clavel, J. (2004). Acute childhood leukaemia and environmental exposure to potential sources of benzene and other hydrocarbons; a case-control study. <i>Occupational and environmental medicine</i>, 61(9), 773.  <a href="https://doi.org/10.1136/oem.2003.010868">https://doi.org/10.1136/oem.2003.010868</a></p>	
428.	<p>Sarah R Enriquez</p> <p>3 Gaebler Road HAMMO ND PARK</p>	Oppose	<p>Noise and pollution impact on nature reserve, school and local residents.</p> <p>Increased traffic on Gaebler Rd, increased crime rate due to increased visitors to the area.</p> <p>Increase of fumes from cars and trucks.</p> <p>Initially there were different plans for the area, like a park, when our house was built.</p> <p>Bushland is part of the wetland, the proposed buffer zone is not sufficient. It is home to the local wildlife.</p> <p>Negative impact of fast food in close proximity to schools, and increased cancer and disease risk due to fumes and chemicals originating from the service station.</p>	<p>Noted, the proposal is inconsistent with the Environmental Protection Authority’s recommended buffer distances to sensitive land uses (such as residential and school sites). This has been given consideration in the City’s assessment.</p> <p>Noted, the applicant is responsible for submitting a Noise Management Plan which must address noise related issues.</p> <p>It is acknowledged that the commercial nature of the development proposed was not previously contemplated for this site and would impact expected noise levels of a residential area.</p> <p>Noted, it is acknowledged that the proposal will have an environmental impact that should be considered as part of the assessment of the proposal.</p>

429.	Damien Wragg	Oppose	<p>We write to you to share a petition formally objecting to <b>Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development</b> within the City of Cockburn.</p> <p>The subject site raises multiple significant concerns related to planning, health, safety and amenity shared by petitioners including:</p> <ul style="list-style-type: none"> <li>• Lack of a local structure plan to inform decisions of appropriate land use</li> <li>• Proximity of a planned Service Station to sensitive land use (school and residential)</li> <li>• Proximity of planned commercial developments to a Conservation Category Wetland</li> <li>• Increased levels of traffic congestion</li> <li>• Proximity to Bush Forever – Harry Waring Marsupial Reserve</li> <li>• Development of a Service Station within a bushfire prone area</li> <li>• Lack of compatibility with local setting and impact on amenity and character</li> <li>• Lack of odour management</li> <li>• Proximity of Fast-Food Outlets to sensitive land use and their negative health impacts</li> </ul> <p>We implore you to consider the long-term consequences of not rejecting this Planning Application.</p>	<p>Noted. It is acknowledged that the land uses proposed were not previously contemplated for this location and the impact of those uses may cause health concerns for the community, including influence on students attending the Hammond Park Primary School.</p> <p>Please refer to the City’s recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
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The well-being of our community and the safety of our children must be prioritised.

I trust that you will consider these concerns of the 82 petitioners thoughtfully and provide a recommendation to **reject** this Planning Application.

Objection to Planning Application - DAP23/004 - 95011 Gaebler Road Hammond Park - Commercial Development

Full name	Address	Signature	Date
Erin Tracy	32 Longpool Road Treble	[Signature]	15/2/24
Jennifer Patten	101 Frankland Ave, Hammond Park 6169	[Signature]	16/2/24
Felicity Miller	29 Cousins St, Hammond Park	[Signature]	16/2/24
Brad Graham	121 Ficks Parade, Hammond Park 6164	[Signature]	16/2/24
Renee Lewis	165 Frankland Ave Hammond Park 6164	[Signature]	16/2/24
Kelly Lull	7 Prato Vista, Mann and 6164	[Signature]	16/2/24
Leanne Kernohan	17 Cousins St Hammond Park	[Signature]	16/2/24
Kym Kloffwitsch	49 Lewis St Hammond Park	[Signature]	16/2/24
J. M. O'Neill	2 Oaks Way, HAMMOND PA	[Signature]	16/2/24
Kaye Hoel	28 Berson Crt Lake George	[Signature]	16/2/24
Lily Robinson	529 Russell Road, Beelair	[Signature]	16/2/24
Michelle Anderson	"	[Signature]	16/2/24
Michael Robinson	"	[Signature]	16/2/24

Full name	Address	Signature	Date
Clare Edwards	Scalora rd	[Signature]	16/2/24
Laura La Touche	31 Bayfield Rd Hammond Park	[Signature]	16/2/24
Cassandra Whitome	Johnson bend, Hammond park	[Signature]	16/2/24
Katrina Kent	32 Plumwood Avenue	[Signature]	16/2/24
Monica Thompson	4/42 Baker Court	[Signature]	16/2/24
RORY WINTER	1 Tim ST	[Signature]	16/2/24
Leone Marie	237 Pease rd Beelair	[Signature]	16/2/24
Rebecca Hamilton	14 McIntosh Street Hammond Park	[Signature]	16/2/24
Gustavo Bitencor	7 Costello	[Signature]	16/2/24
Felicity Francis	4 Twig St Hammond Park	[Signature]	16/2/24
VIOLETTA PAVLOVA	ALBEROD ST HAMMOND PARK	[Signature]	16/2/24
Aaron Bin	9 Napoli Dr Hammond Park	[Signature]	16/2/24
Jessa Coulter	17 Packer Rise Hammond Park	[Signature]	16/2/24

Full name	Address	Signature	Date
Atalia Park	14 Cooli Street, Hammond Park W.A		16/2/24
Sara Huley	71 Murrumbidgee Drive, Hammond Park		16/2/24
Christy Paul	67 Gaebler Rd, Hammond Park		16/2/24
Siobhan Paul	67 Gaebler Rd, Hammond Park		16/2/24
Eveline Huntley	71 Murrumbidgee DR, Hammond Park		16/2/24
Ashleigh Lawrence	70 Bellingham Rd Hammond Park		16/2/24
Charbel Stalley	7 Baumea Turn Hammond Park		16/2/24
Joanne Lisandro	25 Cousins St, Hammond Park		16/2/24
ERICA LISANDRO	12 BAUDIN RIVE COGEE		16/2/24
Alisha Jove	21, Neilson St, Hammond Park - 6164		16/2/24
Sophie Lane	26 Cousins Street Hammond Park		16/2/24
Stacey Manning	11 Station Street Hammond Park		16/2/24
Megan Raby	8 Lamondway Hammond Park		16/2/24

Full name	Address	Signature	Date
Prisha Sathish	48 Murrumbidgee Drive Hammond Park		16/2/24
Sreerama Vignaravi	49 WINDRIVE DRIVE, HP- 6164		16/2/24
Philoena Parambathoor	57 Gaebler Road Hammond Park		16/2/24
Amita Shinton	21 Gaebler Road Hammond Park		16/02/24
Jessica Labouchere	173 Frankland Avenue Hammond Park		16/2/24
Stephen Wragg	1 Fourth Ave Applecross (Compass)		16/2/24
Jonathan Scott	19 Prigraunt Street Hammond Park		16/2/24
Yeree Jang	36 Barrow Turn Hammond Park		16/2/24
Russell Weber	35 Barrow Turn Hammond Park		16/2/24
Mark Holst	47 Margaret Bvd Hammond Park		16/2/24
Daupa Masar	14 Baumea Turn Hammond Park		16/2/24
BARRY LAWRENCE	70 BELLINGHAM RD HAMMOND PARK		16/2/24
James Conti	72 Bellingham RD Hammond Park		16/2/24

Full name	Address	Signature	Date
ISHA KAMBOJ	38 Barfield Road Hammond Park		16/02/24
Ser Meng Lee	38 Barrow Turn Hammond Park		16/2/24
Ying Phylis Wang	38 Barrow Turn Hammond Park		16/02/24
Si zhen Pan	42 Maleny Bulwerd		16/02/24
Rebecca Hawkins	14 Prato Vista, Hammond Park		16/02/24
Jennifer Wragg	75 Murrumbidgee Drive		16/02/24
KATARINA BAILLIE	13 Jewell GDS HAMMOND PK.		16-2-24
Damen Wragg	75 Murrumbidgee Drive		16-2-24

Full name	Address	Signature	Date
Stacey Stamen	9 eucalyptus drive, Hammond Park		16/2
Lauren Traupson	77 Murrumbidgee dr, Hammond Park		16/2
Laura Blood	28 Eucalyptus Drive Hammond Park		16/2
LYNETTE JOHNSON	131 FRANKLAND AVE Hammond Park		16/2
JAYEJO JOHNSON	131 FRANKLAND AVE Hammond Park		16/2
Pavathy Sreekumar	6 Dianella Road Hammond Park		16/2
Aasish Sasidharan	6 Dianella Road Hammond Park		16/2
Elisha Middleton	4 Ironbark Tce, Hammond Park		16/2
Danielle Semra	71 Bellingham Rd Hammond Park		16/2
Full name	Address	Signature	Date
Michelle Cavallaro	17 Packer Rise Hammond Park		16/2/24
Christopher Schlipfhaus	Unit 4 42 Baler Ct Hammond Park		16/2/24
Andrew Catchley	175 Henswood Ave, Wood		16/2/24
Amarnath Hopton	2A Pavlovich Court, Wattleup WA 6116		16/2/24
Meryl Jones	3 Baler Court/Hammond Park		16/2/24
Rita Woods	12 Townshend Parkway		16/2/24
Telesa Basso	65 Coebler Rd Hammond Park		16/2/24
Vijayala Phulke	28 Jewel Gardens Hammond Park		16/2/24
Romy A	11 Devere St Hammond Park		16/2/24
Kariny Tan	19 Capello Lane Hammond Park		16/02/24
Jocelyn Wilson	38 Voyageurs Way, Hammond Park		16/2/24
Jessica Sweeney	6 Desivee Street Hammond Park		16/2/24
Claira Mann	32 Minigwal Lp Hammond Park		16/2/24

430.	Jennifer Wragg  75 Murrumbidgee Drive HAMMOND PARK	Oppose	<p>Good evening,</p> <p>I write to you to formally object to <b>Planning Application - DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development</b> within the City of Cockburn.</p> <p>The subject site raises multiple significant concerns related to planning, health, safety and amenity including:</p> <ul style="list-style-type: none"> <li>• Lack of a local structure plan to inform decisions of appropriate land use</li> <li>• Proximity of a planned Service Station to sensitive land use (school and residential)</li> <li>• Proximity of planned commercial developments to a Conservation Category Wetland</li> <li>• Increased levels of traffic congestion</li> <li>• Proximity to Bush Forever – Harry Waring Marsupial Reserve</li> <li>• Development of a Service Station within a bushfire prone area</li> <li>• Lack of compatibility with local setting and impact on amenity and character</li> <li>• Lack of odour management</li> <li>• Proximity of Fast-Food Outlets to sensitive land use and their negative health impacts</li> </ul> <p>The reasons for my objections include:</p> <p><u>Lack of a local structure plan to inform decisions of appropriate land use</u></p> <ul style="list-style-type: none"> <li>• Local structure plans are a key planning instrument for the coordination of development related to an area of land.</li> <li>• Typically, a property subject to a ‘Development’ zoning under the Local Planning Scheme, should have a Local Structure Plan (LSP) prepared to inform the decision of land use, development and subdivision.</li> <li>• The absence of a recent LSP, coupled with demographic changes in the suburb since 2017, underscores the need for a comprehensive re-evaluation.</li> <li>• A significant step in the planning framework has been missed.</li> <li>• The site's potential should be harnessed for compatible residential purposes.</li> </ul> <p><u>Proximity of planned Service Station to sensitive land use (school and residential)</u></p> <ul style="list-style-type: none"> <li>• The proposed development does not satisfy Clause 67(r) of the Planning and Development (Local Planning Schemes) Regulations 2015 as the proposed development constitutes a possible risk to human health or safety as it is directly adjacent to ‘sensitive land uses’ (residential development and school).</li> <li>• Separation distances specified for development of this kind within Guidance Statement No. 3 of the Environmental Protection Authority (Separation Distances between Industrial and Sensitive Land Uses 2005) have not been met.</li> <li>• The distance between the boundary of the Service Station (Lot 1) and Hammond Park Primary School is approximately 30m, far short of the recommended buffer distance for Service Station (24- hour operation) being 200m.</li> <li>• In addition, the distance between the boundary of the Service Station and the nearest residential dwelling (currently established) is only 170m, again, well short of the recommended 200m.</li> <li>• There is an accumulating body of evidence linking the proximity of those living, working, and studying near to a Service Station and the increased risk of cancer and childhood leukaemia.</li> <li>• The children at the school and nearby residents will likely be exposed to passive atmospheric contaminants, such as Benzene and other hydrocarbons through no conscious behavioural choice of their own, placing their health and safety at risk.</li> </ul>	<p>Noted, the City is in agreement with much of the content of this submission, as it raises valid planning considerations in context to the prevailing planning framework.</p> <p>Please refer to the City’s recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
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			<ul style="list-style-type: none"> <li>• The applicant has not produced a satisfactory site-specific scientific study which demonstrates that the lesser separation distance that has been proposed will not result in unacceptable impacts and risk to human health or safety.</li> </ul> <p><u>Proximity of planned commercial developments to a Conservation Category Wetland</u></p> <ul style="list-style-type: none"> <li>• The proposed wetland buffer of 15m is insufficient to protect the wetland from the types of pollutants and contaminants from a commercial development.</li> <li>• The 15m buffer granted for Lot 9008 to the south of this proposed commercial development is a residential development.</li> <li>• The proposed development includes a car wash nearby to the wetland buffer which can increase the risk of weed spreading and contamination.</li> <li>• The wetland must be preserved and protected against any loss or degradation.</li> <li>• According to the District Structure Plan Southern Suburbs Stage 3 (2012) it states that a proposed local structure plan (LSP) must ensure that any issues regarding wetland impacts are investigated and managed in accordance with: <ul style="list-style-type: none"> <li>◦ Position Statement No.4 – Environmental Protection of wetlands (EPA 2004) and</li> <li>◦ Environmental Protection (Kwinana) (Atmospheric Wastes) Policy 1999</li> </ul> </li> <li>• There is a lack of local structure plan.</li> <li>• It is noted within the Environmental Assessment that the development will potentially affect the endangered black cockatoo populations or their habitat. It is considered a high-risk development resulting in a significant impact based on clearing 1.27ha of foraging habitat and two potential breeding habitat trees.</li> </ul> <p><u>Increased levels of traffic congestion</u></p> <ul style="list-style-type: none"> <li>• The proposed development will create a significant increase in traffic including large fuel tankers using residential roads. The subject site will pose a threat to young students accessing school and their homes.</li> <li>• The subject site proposes drive through fast-food outlets which serve take-away coffee which will create traffic congestion during peak drop off and pick up times increasing congestion and risking public safety.</li> <li>• The access points are located within a school zone and are not appropriately located in a position as to prevent queuing and reduce overspill into the road network.</li> <li>• The proposed site does not have sufficient sight braking distance for Access C. It is possible that a car coming around the corner from Hammond Road will not have enough safe stopping distance when cars are stopped or spilled out onto the carriageway waiting to enter the site (Figure 3-4 Sightline Assessment - 300305045   Transport Impact Assessment Proposed Mixed Use Development, Lot 9501 Gaebler Road, Hammond Park)</li> <li>• The Planning Report neglects to highlight the reliance on Gaebler Road for verge parking and as a primary access point for the Kiss and Ride (north-bound) on Murrumbidgee Drive which would become even more congested and dangerous for families.</li> <li>• The planning report is completely at odds with the actual reliance and use of Gaebler Road for parking and the southern and eastern entries playing a primary role for accessing the school.</li> <li>• A development of this type is better suited to sites on Rowley and Wattleup Road with better access and proximity to freeway channels.</li> </ul>	
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			<p><u>Proximity to Bush Forever – Harry Waring Marsupial Reserve</u></p> <ul style="list-style-type: none"> <li>• According to the District Structure Plan Southern Suburbs Stage 3 (2012) it states that to protect Bush Forever careful consideration must be given as part of future structure plans to ensure an appropriate interface with Harry Waring Marsupial Reserve.</li> <li>• The lack of local structure plan is of significant concern.</li> <li>• The proposed development is not an appropriate interface for the Reserve.</li> <li>• The applicant has not addressed how light pollution will be managed to ensure it does not impact on the endangered marsupials that reside in the Reserve.</li> </ul> <p><u>Development of a Service Station within a bushfire prone area</u></p> <ul style="list-style-type: none"> <li>• The proposed development does not satisfy Clause 67(q) of the Planning and Development (Local Planning Schemes) Regulations 2015 as is not suitable given the possible risk of bush fire within the area.</li> <li>• The development is proposed to be built within a bush fire prone area.</li> <li>• The Service Station presents significant risk to human health and safety given its proposed location within a bushfire zone.</li> <li>• The firebreak proposed appears to be incorporated in the environmental wetland buffer and has not been considered in addition to the wetland buffer which should be required.</li> <li>• The applicant has not satisfactorily provided a bush fire management plan which would mitigate the risks associated with the location.</li> <li>• The Bushfire management plan cover sheet also suggests that the Declaration was completed by BPAD Accredited Practitioner whose accreditation has expired.</li> </ul> <p><u>Lack of compatibility with local setting and impact on amenity and character</u></p> <ul style="list-style-type: none"> <li>• The applicant's proposed development is incompatible with the local setting.</li> <li>• The incompatibility is intensified given its location near a Primary School and Residential dwellings.</li> <li>• The developments height, size, layout and lack of good design does not satisfactorily enhance nor sustain the unique characteristics of the land nor contributes to the local identity of community and connection which the City of Cockburn and the family friendly suburb of Hammond Park embraces.</li> <li>• The proposed development is inconsistent with the distinct and unique characteristics of Hammond Park which is known as a safe, family friendly suburb which values and promotes community interaction and healthy living.</li> <li>• The City has a value of caring deeply for its people, community and environment</li> </ul> <p><u>Lack of odour management</u></p> <ul style="list-style-type: none"> <li>• The proposed development does not satisfy Clause 67(n) of the Planning and Development (Local Planning Schemes) Regulations 2015 as the application has not demonstrated how satisfactory odour management arrangements will be incorporated into the proposed development. Odour is one of the environmental impacts which must be considered.</li> </ul> <p><u>Proximity of Fast-Food Outlets to sensitive land use and their negative health impacts</u></p> <ul style="list-style-type: none"> <li>• The subject site directly contradicts evidence and good practice strategies stated within the Evidence brief: food, built environments and obesity published by the Department of Health (WA) in 2022. The publication specifically states that we should:</li> </ul>	
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			<ul style="list-style-type: none"> <li>○ Change planning laws, zoning restrictions and land use policies and strategies to limit unhealthy food outlets and to support access to healthy food options, including near schools</li> <li>○ Implement restrictions on opening hours of unhealthy food outlets near schools.</li> <li>○ Ensure healthy food outlet positioning is competitive and well balanced with other food outlets</li> <li>○ Locate healthy food outlets within 800 m of home, school, and work to increase healthy food intake</li> <li>○ Co-locate healthy food outlets with other key destinations to facilitate multiple activities as part of one trip e.g. within activity centres and near schools.</li> </ul> <ul style="list-style-type: none"> <li>• There is clear evidence that accessibility of fast-food outlets impacts on dietary intake, obesity and purchasing habits. The proximity of the fast-food outlets directly opposite and within less than 100m of the southern entrance to Hammond Park Primary School will expose young students to unhealthy food options daily.</li> </ul> <p>I implore you to consider the long-term consequences of not rejecting this Planning Application.</p> <p>The well-being of our community and the safety of our children must be prioritised.</p> <p>I trust that you will consider these concerns thoughtfully and provide a recommendation to <u>reject</u> this Planning Application.</p>	
431.	Bradley O'Sullivan  8 Mohan Loop  HAMMOND PARK	Oppose	There is no need for fast food outlets in the community and no less across the road from a primary school does not set a good and healthy standard in the community.	Noted.

432.	<p>Aigle Royal Developments</p> <p>Level 8, 225 St Georges Terrace Perth</p>	Oppose	<p>Aigle Royal Group writes in response to the proposed commercial development at Lot 9501 Gaebler Road, Hammond Park. Our Group owns the soon to be developed Hammond Park shopping centre located nearby on Whadjuk Road, Hammond Park.</p> <p>We have reviewed the available documentation and wish to object for the following reasons:</p> <p><u>Contrary to strategic planning – out of centre development</u></p> <p>The proposal is not supported by the following key strategic documents which inform planning for commercial and retail development:</p> <ul style="list-style-type: none"> <li>a) City of Cockburn Draft Local Planning Strategy (LPS)</li> <li>b) City of Cockburn Local Commercial and Activity Centres Strategy (LCACS)</li> <li>c) Southern Suburbs District Structure Plan (SSDSP)</li> </ul> <p>All of the above documents endorse the establishment of a planned retail hierarchy within the City of Cockburn comprising of local, neighbourhood and district centres equitably spaced to provide sustainable access to services and facilities, including employment and recreation. The subject location is not supported for a local centre or neighbourhood centre. Accordingly, the proposal is defined as "out of centre development".</p> <p><i>State Planning Policy 4.2 - Activity centres (SPP 4.2)</i></p> <p>Like the documents referred to above, SPP4.2 seeks to only support centres which are defined within a planned retail hierarchy. Indeed, this concept is central to all the objectives contained in Part 5 of SPP 4.2. As explained above, the subject land is defined as "out of centre development". SPP 4.2 states:</p> <p><i>7.9 Out-of-centre development</i></p> <p><i>a) There is a general presumption against the approval of activity centre uses outside of activity centres as they are likely to impact nearby activity centres and the overall activity centre hierarchy.</i></p>	<p>Noted. Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>
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			<p>d) Turnover impacts additionally applied to centres that are unlikely to be developed and operational as of 2026. Applying the turnover impacts to centres expected to be operational (which is a smaller number) will lead to higher impacts than estimated.</p> <p>e) No analysis of demand for proposed uses (such as per capita or spending derived demand for take-away food and service station uses) nor supply (with no recognition of similar uses approved 750 metres from the proposed centre).</p> <p>f) There is a significant lack of transparency of assumptions which influences the ability to verify analysis (e.g. turnover of centres pre and post proposed centre are not detailed).</p> <p><i>No demonstrated need for proposed centre</i></p> <p>a) The report presents a limited case on the need for the proposed centre (with a lack of any supporting analysis being detailed in the report, in turn making validation difficult).</p> <p>b) Demand for proposed uses (such as per capita or spending derived demand for take-away food and service station uses) should be assessed along with supply (including recognition of similar uses approved 750 metres from the proposed centre, i.e. at Hammond Park neighbourhood centre).</p> <p>c) The only analysis which has been inferred as need for the site was a high level assessment of assumed leakage from the expansive trade area defined.</p> <ul style="list-style-type: none"> <li>▪ Pracsys appears to have applied a turnover per sqm assumption to shop retail floorspace against an estimated retail spending for the trade area to derive leakage however the lack of detail limits verification of this approach (e.g. headings on figure 14 appear to be incorrect).</li> <li>▪ The analysis demonstrates that leakage is expected to decline significantly as other centres develop (from circa \$102.6m to \$33.5m)</li> <li>▪ Nonetheless, the high level approach which considered all shop retail and an arbitrary leakage number does not imply need for the proposed centre. Analysis should have instead explored in detail what is existing and proposed across all centres, need for the proposed drive-thru retail, the ability to meet this need within existing and proposed centres and any estimated market gap</li> </ul> <p>d) SPP 4.2 requires consideration of all activity centre uses. As such, the analysis should explore all uses proposed rather than only shop retail.</p> <p><i>Centre impacts have been under-estimated</i></p> <p>a) The centre impacts, particularly on those within the immediate locality, have been under-estimated due to:</p> <ul style="list-style-type: none"> <li>▪ The expansive and arbitrary trade area of 5km radius for the local centre has not been justified;</li> <li>▪ Many centres are assumed to have expanded or be developed within two years despite no indication this is achievable (e.g. Cockburn Gateway, Mandogalup,</li> </ul>	
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			<p>Hammond Road, Wandii district centre and Wandii local centre);</p> <ul style="list-style-type: none"> <li>• Impacts have been spread across a large number of existing and future centres, including centres which have no direct competitive relationship with the site (e.g. Stargate local centre) and thus under-estimated for more directly competitive centres; and</li> <li>• Assumed turnover of the development was \$10.2m as of 2026 (1,041 sqm x \$9,843) which is well below comparable benchmark and sustainable turnover levels for proposed drive-thru uses (approx. \$15,000 per sqm as of 2023).</li> </ul> <p>b) The estimated impacts are likely to be higher than anticipated and therefore the conclusion surrounding the net benefits is likely overstated.</p> <p>As stated above, the report does not correctly account for potential retail expansion at the nearby Hammond Park neighbourhood centre. Within this centre there are a number of vacant sites appropriately zoned for retail development (expansion). These sites are strategically located relative to the existing and proposed transport networks and their location is fully endorsed within an approved retail hierarchy. Given the availability of these holdings, additional retail floor space, like that proposed, cannot be supported.</p> <p><u>Environmental issues</u></p> <p>The proposal has been reviewed by environmental consultants, Western Environmental. There are many environmental issues which are currently unresolved:</p> <ol style="list-style-type: none"> <li>a) The proposal results in the clearing of remnant vegetation, including Banksia Woodland threatened ecological community which in turn may be habitat for endangered cockatoo species;</li> <li>b) The land adjoins a conservation category wetland CCW. The proposal is reliant upon a vastly reduced buffer to the CCW. There is no certainty that this will be supported by the DWER / EPA and therefore the required development footprint can be achieved;</li> <li>c) Probability that the development will constitute a controlled action pursuant to the Commonwealth EPBC Act. The likelihood of approval and meeting offset requirements is unknown;</li> <li>d) Related to c), the proposal may also constitute a significant action via the State Environmental Protection Authority Act.</li> </ol> <p>Given the above, there is no certainty that the land can be cleared to facilitate the development as proposed. The correct course of events would be for these issues to be resolved via a preceding structure plan process. In the absence of an approved structure plan, the development application should not be approved.</p> <p><u>Incompatible with adjoining primary school</u></p> <p>The proposal is opposite Hammond Park Primary School. The school is well established and provides a safe learning environment for primary school children who reside in the adjoining community. We are concerned that the proposal will introduce a number of factors fundamentally incompatible with the school, including:</p>	
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		<p>a) Significant increases in traffic volumes, including at the intersection of Gaebler Road and Hammond Road putting students at risk;</p> <p>b) The proposed takeaway outlets, which include McDonalds and KFC, are a distraction to primary school children.</p> <p>We are also concerned that the proposed fast-food outlets will expose a large number of primary school children to the advertising (marketing) of fast-food products proposed to be available at the subject site. Both outlets include extensive signage advertising the food and beverages available. The link between the marketing of fast food and obesity is now well established via national and international research: the Cancer Council of Australia states:</p> <p><i>Exposure to the marketing of unhealthy foods and beverages is a widely acknowledged risk factor for the development of childhood obesity and noncommunicable diseases.</i></p> <p>Source: <a href="https://www.cancer.org.au/wp-content/uploads/2021/06/Link-between-junk-food-advertising-and-childhood-obesity.pdf">https://www.cancer.org.au/wp-content/uploads/2021/06/Link-between-junk-food-advertising-and-childhood-obesity.pdf</a></p> <p>The proposal is incompatible with the adjoining primary school and should not be approved.</p> <p><u>Traffic considerations</u></p> <p>We are concerned that the intersection of Gaebler Rd and Hammond Rd will fail to perform satisfactorily upon full development of the area, especially when Hammond Rd is extended to Rowley Rd to the south. The City is requested to fully assess the capacity of this intersection and advise the JDAP accordingly.</p> <p><u>Built form and urban design</u></p> <p>The proposal will result in a number of poor outcomes:</p> <p>a) A service station at the corner of Hammond Road and Gaebler Road resulting in poor street activation and the primacy of a car dominated land use inconsistent with a local centre;</p> <p>b) Related to a), preponderance of car dominated land-uses (fast-food) along Hammond Road that are also inconsistent with a local centre;</p> <p>c) Poor interface with the CCW located to the east of the site.</p> <p>Overall, the proposal seems to represent overdevelopment of the site. Access and maneuverability will be complicated and illegible in areas creating poor amenity for shoppers and visitors alike.</p> <p><u>Absence of a structure plan and local development plan</u></p> <p>The established principles of orderly and proper planning dictate that a structure plan should have been prepared as a prelude to lodgment of the subject development application. In these circumstances a structure plan and accompanying local development plan would resolve the issues identified above:</p> <p>a) Retail need, including impact on other centres within the hierarchy;</p> <p>b) Land use compatibility, including interface treatments to adjoining land;</p> <p>c) Preferred layout / built form outcomes; and</p>	
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			<p>d) Environmental considerations.</p> <p>For Aigle Royal Group it seems fundamentally unjust that the subject development application can be considered. Between 2021 and 2023 our Group worked with the City of Cockburn and other stakeholders to develop a suitable structure plan to support our recent development approval at Hammond Park.</p> <p>Given the absence of an approved structure plan and LDP, the proposal cannot be supported.</p> <p><u>Summary</u></p> <p>The proposal cannot be supported for the following reasons:</p> <p>a) The location is not a designated centre and on this basis is not supported by any strategic planning document;</p> <p>b) Related to a), the proposal is defined as an "out of centre" proposal which is specifically not supported by the WAPC's peak planning for centres policy SPP 4.2;</p> <p>c) The argument that the proposal is a replacement local centre for the redundant centre at the corner of Irvine is flawed. The redundant centre is only 1,531 sqm, whereas the proposed site area is 14,488 sqm (1.45ha).</p> <p>d) The site is only about 750 metres from the approved Hammond Park neighbourhood centre. The proposed uses are already approved and or supported at that centre. Both the planning report and retail assessment do not account for the growth potential of this centre.</p> <p>e) Related to d), given the availability of land at the Hammond Park centre, additional retail floor space, like that proposed in an out of centre location, cannot be supported;</p> <p>f) The accompanying retail assessment fails to:</p> <ul style="list-style-type: none"> <li>• Demonstrate transparency in both its analysis and methodology;</li> <li>• Demonstrate demand for the centre;</li> <li>• Satisfactorily account for impacts on nearby centres;</li> </ul> <p>g) There are significant environmental issues that remain unresolved. It is unknown if the required clearing would be permitted to enable the proposed development;</p> <p>h) The ultimate capacity of the Gaebler Rd/ Hammond Rd intersection is questioned. We ask that the City thoroughly assess the capacity of this intersection;</p> <p>i) There are fundamental land-use compatibility issues with the adjoining Hammond Park primary school. The proposal will expose a large population of school children to advertising for fast food which has been linked to obesity;</p> <p>j) The application is not supported by an approved structure plan and accompanying local development plan; and</p> <p>k) For all the reasons outlined above, the proposal represents ad hoc planning and development</p> <p><u>contrary to the principles of orderly and proper planning</u></p>	
433.	Cassandra Whittome	Oppose	On behalf of the Hammond Park community,	Noted.

			<p>Please find the tally of signature for the petition raised. I ask again that you hear the collective voices of the community Hammond Park. This is an overall consensus is No</p> <p><a href="#">Supporter comments · Act now to save Hammond Park as we know it · Change.org</a></p>	
434.	Cancer Council Western Australia Level 1, 420 Bagot Road, Subiaco	Oppose	<p>Fast-food outlets sell oversized, overly processed food, packed full of cheap ingredients including salt, added sugar and saturated fat which can lead to a variety of health problems. They regularly advertise directly to children, such as cheap \$1 slushies in lolly flavours on the sides of bus-stops and school buses and partner with brands which appeal to children, such as UNO* and Starburst*.</p> <p>The proposed fast-food outlets includes a drive-through Starbucks, a drive-through McDonald's operating 24/7 and a drive-through KFC operating 24/7. The site is directly opposite Hammond Park Primary School, 1km from Hammond Park Catholic Primary School and 1.3 km from Hammond Park Secondary College. There are childcare centres within a 700m radius including Great Beginnings Hammond Park and Childcare and Early Learning Centre.</p> <p>The location of the site will lead to repeated exposure and accessibility to unhealthy food by families and children, particularly school children who use public transport as their main method of transport to and from school.</p> <p><b>Our interest in the application</b></p> <p>Cancer Council WA objects to the land use for drive-through fast-food outlets in circumstances where they pose significant risk to community and public health. This is in areas where there would be significant impact to the quality of the existing food environment such as further proliferation of high density fast-food outlets in neighbourhoods, and where proposed developments are in close proximity to homes, schools and children's community infrastructure.</p> <p>The proposal for three drive-through fast-food outlets in Hammond Park poses significant risk to public health and community, particularly children due to its proximity to homes, schools and childcare facilities.</p> <p>Cancer Council Western Australia (Cancer Council WA) welcomes the opportunity to comment on the above proposal and urges the City of Cockburn to refuse the fast-food outlet land-use component of this development application.</p> <p>As the peak non-government cancer control organisation in Western Australia, Cancer Council WA advises government and other bodies on practices and policies to help prevent, detect and treat cancer. We develop, promote and contribute to policy and initiatives to reduce the incidence and impact of cancer on the Australian community.</p> <p><b>Evidence to support our submission</b></p> <p>Poor diets and living with overweight and obesity are priority public health issues in Western Australia, requiring collective efforts across community organisations and Government at all levels. Western</p>	<p>Noted, additional response from submitter.</p> <p>Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>

		<p>Australian Local Governments are increasingly taking actions to assist their community to live in the best possible health by implementing strategies to assist community to eat well and be physically active. This is part of creating healthy, connected communities and responding to the principles and objectives of the Public Health Act 2016 under the administration of WA Local Governments.</p> <p>Currently, living with overweight and obesity and poor diets are second and third respectively to tobacco use in contributing the most burden of preventable death and disease in Australia<sup>1</sup> and there is a clear link to poor diets and having higher body weight with increased risk of heart disease, stroke, type 2 diabetes and 13 types of cancer<sup>2</sup>. Recent research commissioned by Cancer Council Australia and published in the International Journal of Cancer modelled that over the 25 years (2017-2037), 190,500 cancer cases could be avoided if all Australian adults achieved and maintained a healthy weight<sup>3</sup>.</p> <p>The location and density of fast-food outlets is contributing to poor diets and having overweight and obesity as a result of their pervasive availability, accessibility and marketing<sup>4</sup>. The Western Australian Department of Health has reviewed the evidence regarding food, built environments and obesity and consequently recommended that planning laws and frameworks are utilised and amended to limit unhealthy food outlets and support access to healthy food outlets, including near schools<sup>5</sup>.</p> <p>Perth neighbourhoods are experiencing 'food swamps'; a term describing an area where the density and number of unhealthy food outlets outnumber access to outlets providing healthier options. Dr Gina Trapp and colleagues are at the forefront of research regarding communities' geographical access to food and its influence on diet. Her research verified that geographical access to food within a community influences individuals' diet.</p> <p>Dr Trapp and her team have mapped all fast-food outlets within the Perth metropolitan area in relation to area level disadvantage and proximity to schools. They found that there are twice as many fast-food outlets in the most disadvantaged suburbs of Perth compared to the more advantaged<sup>6</sup>.</p> <p>They also found Perth schools were surrounded by fast-food outlets. Perth primary schools on average have two fast-food outlets within 400m and seven within 1km<sup>7</sup>. Secondary schools are higher, with three fast-food outlets within 400m and 13 fast-food outlets within 1km.</p> <p>WA research has found that almost 50 per cent of secondary school students' frequent fast-food outlets near their schools to purchase unhealthy food on a weekly basis, and it's more likely when the fast-food outlets are the most common chain outlets (i.e. McDonald's, KFC, Hungry Jacks, Subway).</p> <p>Fast-food outlets are the most common food outlet frequented by Australians for food prepared outside the home with over half (55 per cent) of WA adults consuming fast-food once a week or more<sup>8</sup>. We know that lower socio-economic households are more likely to frequently purchase fast-foods<sup>9</sup> and consume takeaway more frequently, compared to their higher socio-economic counterparts<sup>10</sup>. Moreover, the combination of low socio-economic status, and high fast-food outlet exposure has been shown to increase the odds of developing obesity<sup>11</sup>. Thus, the increased proliferation of fast-food outlets in areas of disadvantage could further aggravate health inequalities.</p> <p>Cancer Council WA commends the City of Cockburn for their Strategic Community Plan 2020-2030 which outlined a 'vibrant, healthy, safe, inclusive and connected community' as one of your strategic objectives. The development of three new fast-food outlets will undermine this objective as it is crucial that families and children can live, work, play and learn in neighbourhoods that encourage and facilitate healthy behaviours.</p>	
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			<p>The WA Food Atlas team led by Dr Gina Trapp at Edith Cowan University is mapping food retail and food service outlets in all Perth metropolitan Local Governments<sup>iii</sup>. The results for the City of Cockburn demonstrate that over 50 per cent of food services are fast-food which is above average when compared with the rest of Perth. This is particularly concerning given the South Metropolitan Health Services (WA) City of Cockburn Health and Wellbeing Profile Report which demonstrated that 32.9 per cent of adult residents eat fast food weekly, and 71.7 per cent of residents are living with overweight and obesity<sup>iv</sup>.</p> <p>In December 2023, the City of Cockburn approved an application for the Hammond Park Neighbourhood Centre which included two drive through fast-food outlets. If this application for three new fast-food outlets is approved, there will be a total of five fast-food outlet developments within a 1km radius. The proliferation of unhealthy food outlets is a serious concern that will influence the nutrition and diets of residents including families and children for many years to come.</p> <p><b>Grounds to object</b></p> <p>Cancer Council WA is aware of the inherent failure of Western Australia’s planning laws to address community health concerns. While there is no legal obligation to consider community health and local interests, Cancer Council WA is determined to ensure decision makers within the City of Cockburn adopt a people centred approach to the design of communities. The process of decision-making naturally involves balancing a combination of interests, to arrive at a decision that gives appropriate weight to these interests. Cancer Council WA is concerned parties with a vested commercial interest may outweigh community interests due to the pressure and influence they may exert.</p> <p>Cancer Council WA has surveyed representative samples of the Western Australian population and 79 per cent are in favour of a policy requiring local governments to consider the health of their communities when deciding whether a new unhealthy food outlet should be approved, for example if the proposed outlet is close to a school. As such, the planning process should consider the aspirations of the community to promote spaces and environments that support healthy living.</p> <p><b>Conclusion and recommendation</b></p> <p>Cancer Council WA supports measures that promote vibrant, liveable neighbourhoods. The health and wellbeing of community must be supported by health promoting environments to prevent behaviours associated with chronic diseases, including cancer.</p> <p>We commend the work Western Australian local governments are already doing to support the health of their residents. Cancer Council WA continues to work with local governments to achieve our vision of a cancer free future for our community. Our guide <i>Local Governments, public health, and cancer prevention. Taking action to improve the health and wellbeing of our local communities</i> provides an introduction to our capacity to work with WA local governments.</p> <p>Cancer Council WA urges the City of Cockburn to use its discretionary power and reject development application for three drive-through fast-food outlets. Approving the application for drive-through fast-food outlets will undermine the efforts of parents and public health agencies who are trying to support communities to live a healthier life.</p> <p>In the spirit of deepening relationships, Cancer Council WA acknowledge all the traditional custodians and owners of country throughout Western Australia and recognise their continuing connection to land, waters and community. We also pay our respect to their Elders and extend that respect to all Aboriginal peoples living and working in the City of Cockburn.</p>	
435.	Brian & Jacqueline	Oppose	<p>Too close to school Cancer concerns Fire risk area (high) Increase in traffic</p>	Noted.

	Redwort h-Maley 15 Neilson St HAMMO ND PARK		Noise 24/7 deliveries Pollution animal reserve Fumes for primary school	
436.	Telethon Kids Institute	Oppose	<p>I would like to relay my concerns regarding the proposal to build a service station at Lot 9502 Gaebler Road Hammond Park.</p> <p>I have been contacted by a concerned parent of children attending Hammond Park Primary School due to my role as a career researcher of environmental health, and my previous involvement in a similar application at my own children's primary school in Eden Hill. From this perspective, I oppose allowing a petrol station being built at the proposed location.</p> <p>My main concern is with regards to the likelihood of exposing children at Hammond Park Primary School and nearby residents to toxins universally associated with petrol stations. These include known carcinogens such as benzene, toluene and other volatile organic compounds (Koustantzi 2014).</p> <p>Based on the planning documents, the proposed service station would directly border Gaebler road, and hence would only be a short distance to sporting facilities and classrooms at the school. This means that during regular exercise periods and class break times, students could be only a few dozen metres from the bowisers. The closest classrooms to the proposed petrol station would be approximately 150m away (still well within the zone of exposure - see below).</p> <p>The Environmental Protection Agency (2005) recommends that for service stations open during normal hours (Monday to Saturday 7am to 7pm), 50 metres of separation distance be left between the boundary on the service station and the boundary of the school (which is classified as a sensitive land use). The proposed service station is planned to be open 24 hours per day, 7 days a week, thus will be operating at a much higher capacity than 7am to 7pm 6 days a week. The separation distance increases to 200 metres (boundary to boundary) for service stations operating 24 hours a day. In the proposal, the separation distance is the width of Gaebler Road.</p> <p>Scientific research has identified significant risks to health due to living or working near petrol stations. For example, Fontes et al (2013) found that the incidence rate of malignant neoplasms that affect the hematopoietic system and the lymphoid tissues (leukemias and the lymphomas, some of the most common cancers in children) increases with proximity to the emission source. Researchers found that in the first 50 m of the vicinity of petrol station rates of these cancers were "very concerning" (up to 37 cases per 100,000 people) in comparing these findings with incidence rates for the general population, the authors recommended that for "human health protection the buffer distance to live or work in the vicinity of a petrol station <b>must be at least 150m</b>". Similarly, a range of other studies have identified links between childhood cancer/leukemia and proximity to petrol stations (eg Mazarin et al 2021 and Malavolti et al 2023). Some of the classrooms, and effectively all of the outdoor play areas of Hammond Park Primary School are less than 150m from the proposed service station.</p>	Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.

			<p>Importantly, a key chemical associated with petrol stations, benzene, is a "non-threshold" carcinogen, meaning that there is no safe level of exposure based on current knowledge. Karakitsios et al (2007) found that petrol stations contributed significantly to benzene concentrations in urban environments. They also state that people living in the vicinity of a typical petrol station are exposed to an additive concentration of benzene ranging from 3 to 6 mg/m<sup>3</sup>. Of particular concern is that this would increase the leukemia risk caused by benzene alone from 3% to 21%.</p> <p>Available research and EPA guidelines clearly identify serious health risks associated with living, working or attending school in the vicinity of a petrol station. With their still developing immune systems, the children at Hammond Park Primary School are even more susceptible to the effects of exposure to these dangerous toxins. It is obvious that the potential risks to health far outweigh the benefits of locating a petrol station on that site and I urge you to recommend the proposal be denied, or modified to move the service station further away, to avoid a public health issue and ensure the safety of children and nearby residents.</p>	
437.	Anonymo us	Oppose	I would like to vote against the application for a Commercial Development at Lot 9501 Gaebler Road Hammond Park.	Noted.
438.	Anonymo us	Oppose	I would like to vote against the application regarding the commercial development at lot 9501 Gaebler Rd, Hammond Park.	Noted.
439.	Anonymo us	Oppose	<p>I think this development, which includes a service station, is way too close to the primary school for any number of reasons, safety and well being of the children bring the major concern.</p> <p>It a residential area with many young children walking to and from school everyday.</p> <p>In an ideal world, children under 10 years old should be accompanied by an adult when crossing the road.</p> <p>This is not always the case, as I have witnessed.</p> <p>The safety of our children is paramount.</p> <p>It hardly seems appropriate to encourage parents to do a quick stop after school for unhealthy snacks when schools are trying to educate kids about healthy eating.</p> <p>Traffic in that area is already diabolical at drop and afternoon pick up and these problems will only get worse as it will potentially cause traffic to increase across the board and exacerbate parking problems.</p>	Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.

			It is a very poorly considered location and should not be allowed to proceed.	
440.	Hammond Park Community Association	Oppose	<p>In response to community interest in the above Planning Application, the Hammond Park Community Association decided to conduct a simple on line survey to gauge community sentiment.</p> <p>The results of this survey would then be used to determine the basis of any submission to the City of Cockburn, consistent with the Objects of the Association which include:</p> <ol style="list-style-type: none"> <li>1. To improve and maintain the quality of community life and residential amenity in Hammond Park and neighbouring areas,</li> <li>2. To provide a forum for discussing issues and identifying community needs,</li> <li>3. To provide a vehicle for communication and information in the community.</li> <li>4. Where appropriate, to act as a resource for the Community providing a unified voice, and</li> <li>5. To represent the Community to government agencies.</li> </ol> <p>People responding to the survey were asked to identify their address, whether they supported the application and to provide reasons for their position.</p>	Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.

As a result of this survey, 134 submissions were received. Of these submissions, 12 were from non Hammond Park residents and as such their responses do not form part of the results.

In summary, of the 122 submissions from Hammond Park residents, 54 (44.3%) were in favour while 68 (55.7%) were opposed.

The reasons given in support of the application are summarised as follows:

Reason	Number
Add value to the area through the provision of more shops, amenity and convenience	19
Facilities of this nature (particularly fuel) are currently lacking in Hammond Park.	39
Will make the neighbourhood better.	1
Improve/increase access to services	2
Increase local employment	8
Support the concept but consider the location could be improved due to traffic concerns regarding Gaebler/Hammond Rd intersection.	3

The reasons given opposing the application are summarised as follows:

<b>Reason</b>	<b>Number</b>
Negative health impacts of fast food on the community	7
Increased traffic being attracted to this area	33
Major sites of fast food and petrol outlet considered too close to the Hammond Park Primary School	35
Too close to the current traffic problem at Gaebler/Hammond Road and the delayed timeframe for rectifying this intersection.	9
Decrease the amount of space available for school parking purposes causing further danger for school pupils particularly at pick up time.	29
The scale of the development is not compatible to the suburban nature of the area.	4
Concern about increased levels of noise and smell pollution.	6
Unsafe development (storage of fuels etc) in a bush fire risk zone.	2
Negative impact on wildlife in this locality.	7
Inappropriate location for these facilities.	13

			Alternative facilities already exist nearby.	7		
			Impact on local amenity as a result of 24/7 activities in a primarily residential area.	3		
			Specific health concerns due to petrol fumes in residential area.	5		
			Likely increase in crime rates as a consequence of people being attracted to fast food and fuel outlet 24/7.	4		
		<p>Based on the results of the survey above, it appears there is some justification for the provision of some of the services that will be provided by this application.</p> <p>However, it is considered any benefits are outweighed by legitimate community concerns about the proximity to the Hammond Park Primary School and likely negative impacts on student (pedestrian) safety and exposure to unhealthy food choices.</p> <p>These concerns are coupled with concerns relating to the current poorly aligned Gaebler Road/Hammond Road intersection and how this intersection will cope with the increased traffic levels which will occur if this development goes ahead.</p> <p>As such, and for the reasons stated above, the Hammond Park Community Association is opposed to Planning</p>				

			Application DAP 23/004 - 9501L Gaebler Rd Hammond Park.	
441.	Hammond Park Primary School Board 10 Eucalyptus Drive HAMMOND PARK	Oppose	<p>On assessing the complete proposal document there is a clear picture formed that the developer has no knowledge of the school structure, size or current parking and traffic management issues. The proposal states “parents will arrive before the classes end and be parked in available on-street parking or within the school car park”- with a school of over 900 students, school parking bays are full with additional community member parking both sides of Hammond Rd and along the verge in front of the proposed development site. Many parents will typically perform loops around the school to find parking which includes Hammond Road and Gaebler Road. It suggests that the opening of the new local government primary school would impact enrollment numbers which has not occurred so far, long term planning data for Hammond Park Primary School can be obtained from the WA Education Department. With our understanding that the long term projections will show Hammond Park Primary School slowly easing to 2020 enrolment levels – levels that were already considered to be problematic for the school community, and at a time when there was only limited development (and traffic) south of the school. The developer states PM peak time of 3pm-4pm without taking into account parents needing to arrive by 2.30pm to get a car park. The current proposal acknowledges that the Hammond Rd upgrade may not be complete for 5 years, however all traffic management that is suggested and diagrammed are post upgrade. Their summary of existing road network states that Hammond Road north of Gaebler Road is a 70km/h zone suggesting that it is an arterial road. This however is not the</p>	Please refer to the City’s recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.

		<p>case with current signage asserting a 50km/h road speed indicating a built up area.</p> <p>Traffic management and road safety around our primary school is a matter for everyone in the community. Speed, lack of parking, the volume of cars on the road and the presence of large vehicles all reduce safety for children. The interaction between traffic and pedestrians creates a significant risk of incident and injury. School environments are frequently characterised by higher levels of congestion, and with many pedestrians, cyclists, public transport and other road users. Communities can help to reduce congestion and improve safety in the vicinity of the school by encouraging children to walk or ride to school- an action that the school board, school administration team and Cockburn council combined have worked very hard on over the past 4 years. A great deal of effort has been invested in safe routes for children to go to and from school, however the increase in traffic and heavy vehicle volume as suggested in the proposal (“expected to generate approximately 410 trips during the AM Peak hour and 658 trips during the PM Peak hour”) will move more children back into cars due to fear of injury, which causes further congestion, increases carbon dioxide emissions and removes the opportunity for children to exercise- impacting long term health and mental wellbeing, to build self-confidence and independence, and decreases cognitive performance (Collins &amp; Kearns, 2005; Timperio et al. 2004).</p> <p>Heavy vehicles typically account for only a small percentage of traffic composition; however, they can have a significant impact on pedestrian safety. The proposed development will inevitably bring in additional heavy vehicle traffic for deliveries of food supplies, medical supplies and petrol along with trucks using the petrol station to refuel. Waste</p>	
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		<p>management heavy vehicles (10.1m rubbish trucks) are proposed to utilise only Gaebler Rd for entry and exit. This must be considered when assessing pedestrian safety around a school site. Heavy vehicles often have 'blind spots' to the front and sides due to their size, resulting in drivers potentially not being able to observe a pedestrian particularly a small child. This site should be assessed with respect to the likelihood of conflicts between pedestrians and heavy vehicles.</p> <p>The diagrams provided on pp19/20 depict a footpath completing the networks along Hammond Road and Gaebler Road. These footpaths introduce key crossing points expected to be used regularly by school children. The volume of traffic expected to be using these crossings is very high and poses a significant safety risk. Recent guidelines published by Main Roads Western Australia in August 2023 makes strong reference to the vulnerability of children when in the situation of being a pedestrian. Pedestrians are classed as vulnerable road users, even when the individual is a full grown adult, largely due to their lack of protection and limited biomechanical tolerance to violent forces if hit by a vehicle (CMARC. n.d). Motor vehicle fronts have not been designed to provide protection for pedestrians against injury at collision speeds of 30km/h or more. Pedestrians are exposed to many potentially dangerous situations when in close contact to moving traffic. Pedestrian groups fall into three categories of increased risk one of these being children under 17 years according to the road safety commission. Children are at times unpredictable, are unable to judge the speed and distance of an oncoming traffic and may not be able to see around cars parked on the side of the road. Research shows that most child pedestrian crashes occur close to home, on</p>	
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			<p>the way to or from school or in streets local to home. This has been evident in our local community with 2 children hit by cars on Gaebler Rd in the last 12 months. Due to their smaller stature children in a collision with a vehicle are most likely to make head or neck contact first causing life threatening injury or death. Worldwide research conducted by the university of central Florida suggests that areas and roads associated with commercial use have a significant increase of vehicle verse pedestrian collisions with a recommendation that commercial developments which produce greater traffic volumes are located away from schools to avoid mixed traffic environments.</p>	
442.	Justin Edmonds	Support	<p>To those that are opposing the commercial development on Gaebler Road in Hammond Park (7-Eleven service station, KFC, McDonalds, Starbucks &amp; medical centre),</p> <p>If you are worried about your kids going and eating fast food all the time, then your job, as someone who chose to have children, is to educate your kids as to the unhealthy attributes of fast food and what happens to your body when you eat it regularly.</p> <p>I believe the addition of 3 of these 4 stores (except for Starbucks), will be a fantastic addition to the suburb of Hammond Park. At present there is no service station in the suburb, forcing us to fill up in Cockburn. But more importantly, there is a distinct lack of decent places to get takeaway food, should one feel like not cooking at home. And this is one of the main positives to living in a city, although there are many negatives, compared to living in the country. As an example, my housemate and I decided to go fishing the other night. We were chasing a quick feed before our fun</p>	Noted.

			<p>night of fishing, and knowing the only option in Hammond Park was Dominos, we went to Spearwood to get our KFC. Now, we are both guys who eat extremely healthy food 95% of the time. But we both know that, on occasion, it is fine to have fast food, so long as it is not a regular occurrence.</p>	
443.	<p><i>Hammond Park Primary School P&amp;C</i> 10 Eucalyptus Drive HAMMOND PARK</p>	Oppose	<p>At a meeting on 20/2/2024, the Hammond Park Primary School Parents and Citizens Association (P&amp;C) members present agreed that the Association would send through a submission <b>OPPOSING</b> the Gaebler Rd Development. Please see the following for our reasoning behind the submission.</p> <p>There were a number of factors highlighted by the P&amp;C in their opposition to this development. These included the increased traffic, the nocturnal effects of excess lighting for the nearby reserve, the promotion of fast food by having 3 dedicated outlets and the increased pollution of fuel and gas from a fuel station - which would be directly opposite the school oval. The members present at the meeting chose to focus on the promotion and marketing of fast food in direct sight of impressionable young children.</p> <p>The P&amp;C acknowledge the work of the World Health Organisation (WHO) in their continued promotion of healthy eating practices for children (those under 18 years of age). The recent policy published by the WHO in July 2023 makes strong recommendations for the protection of children from the promotion and “marketing of foods that are high in saturated fatty acids, trans-fatty acids, free sugars and/or salt”. With the proposed development including 3 “fast food” outlets, there will be constant advertising every morning coming to school and every afternoon while heading home for the day. This is the beginning of the promotion of fast food</p>	<p>Please refer to the City’s recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.</p>

		<p>and the normalisation of it as part of a daily diet. The P&amp;C understands that there are no laws regarding prohibiting fast food outlets from being built near a school, but are requesting that the side-effects of this early advertising are considered as they will be felt many years down the track.</p> <p>For a quick calculation on a child who can read and comprehend the advertising, if they attend school every day, are dropped off and picked up along or near Gaebler Rd and play on the school oval at least once per day then they are being exposed to the advertising an average of 600 times each year (3 times per day, 5 days per week, 10 weeks per term, 4 terms each year). These are the same children who are then taught in class about healthy eating habits, the importance of physical activity and have a traffic light system to guide the creation of the canteen menu at the school. The School Curriculum and Standards Authority states that children from Pre-Primary to Year 10 (under Health and Physical Education) will “develop skills to live a healthy life” with one part of this focusing on “personal, social and community health”. Opposing a development of this scale will be sending the right message to students that the community and local government also care about personal, social and community health. Showing that we are all caring about the future of our children in the suburb.</p> <p>Thank you for considering this submission by members of the P&amp;C. A total of 10 members voted to endorse this submission. This was 100% of the member attendance on the night (unable to count the Principal as he is unable to vote in these circumstances).</p>	
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444.	Mark Holst 47 Macquarie Boulevard Hammond Park	Oppose	<p><a href="#">Summary</a></p> <p>I am writing in response to the application with the view towards recommending the JDAP reject the proposal based on:</p> <ul style="list-style-type: none"> <li>• Failing to demonstrate an adequate understanding of the adjoining school environment,</li> <li>• Failing to properly demonstrate an understanding of local traffic conditions for the school community,</li> <li>• Not demonstrating an understanding of existing issues that exist within the local school community,</li> <li>• Seemingly dismissing or providing misleading statements regarding important detail that should affect the determination of the proposal.</li> </ul> <p>To provide background, I am a Hammond Park resident (since 2017) and was the School Board Chair for the periods 2021 through 2023. I have been involved with the School Board since 2020 to address serious road safety concerns around the school. Much of the relevant agenda through this period was related to (1) road safety, (2) improving pedestrian movements, (3) resolving ongoing parking concerns, and (4) helping the school manage high levels of growth. For these initiatives I have been actively involved with:</p> <ul style="list-style-type: none"> <li>• <a href="#">City of Cockburn</a> – for Traffic Warden applications, reviewing traffic count data, addressing parking compliance, and addressing road safety concerns. This involved working with operational staff (planning, road networks and compliance) and councillors (including Tarun Dewan and Lara Kirkwood).</li> <li>• <a href="#">Roger Cook</a> – as our local member for Kwinana, in seeking advice to address various issues and concerns.</li> </ul>	Please refer to the City’s recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.
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			<ul style="list-style-type: none"> <li>• <u>Department of Transport</u> – for implementation of the Your Move program, and performing research regarding Road Traffic Code (2000),</li> <li>• <u>Main Roads Western Australia</u> – for Traffic Warden applications, research regarding the Road Traffic Code (2000), speed re-zoning for Gaebler Road (implementation pending) and Hammond Road north of Gaebler (implemented),</li> <li>• <u>West Cycle</u> – for the Your Move program to help establish safe routes,</li> <li>• <u>WA Police</u> – for Traffic Warden applications, addressing driver behaviour at critical intersections, research regarding the Road Traffic Code (2000), and performing research with Constable Care to understand road safety best practices when planning crossings for children.</li> <li>• <u>Local Community</u> – through School Board meetings, P&amp;C meetings and engaging with community groups through social media.</li> </ul> <p>The key concerns addressed through this response include:</p> <ol style="list-style-type: none"> <li>1. Road safety issues,</li> <li>2. The Petrol station,</li> <li>3. Fast food establishments.</li> </ol> <p>I will predominantly focus on point (1) as this is my key area of involvement and expertise. I will briefly touch on the other points as I noted inconsistencies or concerns with the proposal.</p> <p>Please note I have not been granted adequate time to address the proposal in detail and have only been able to cover the contents provided under the Traffic Impact Assessment (102 pages) and Planning Report (49 pages).</p>	
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			<p>I'd like to open by addressing a statement made in the Planning Report:</p> <p><i>“Residential development is largely unviable due to the various constraints i.e. bushfire impacting the subject site as well as the poor amenity associated with large amount of traffic proposed on Hammond and Gaebler Road.</i></p> <p><b>Planning Report pp 27</b></p> <p>The proposal itself identifies residential development is unviable with the existing volumes of traffic throughout the area, however, there already exists a successful residential corridor along the full length of Hammond Road throughout Success.</p> <p>It is the belief of many within the school community and nearby residents that residential development is most compatible with the nearby school and other residential surrounds. The statement regarding bushfire impact is confusing given this has been successfully addressed in other parts of the suburb.</p> <p>Road Safety</p> <p>I have been working closely with the school since 2020, as part of the School Board, to address road safety concerns. This has seen a very significant investment of volunteer time and a high level of collaboration to ensure we fully understand and effectively resolve the issues.</p> <p>Throughout this time, we have:</p> <ul style="list-style-type: none"> <li>• Changed driver behaviour at the Eucalyptus Rd / Murrumbidgee Rd roundabout to encourage safe crossings. This required a clear understanding of the Road Traffic Code (2000) and a concerted effort to educate the school community,</li> </ul>	
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			<ul style="list-style-type: none"> <li>• Successfully introduced a Traffic Warden on Macquarie Boulevard,</li> <li>• Recently gained approval for a Traffic Warden on Gaebler Road near Twig Street,</li> <li>• Helped introduce a Kiss &amp; Drive to the school to improve parking efficiency,</li> <li>• Captured pedestrian and vehicle surveys at various sites surrounding the school to better inform decision making.</li> </ul> <p>Through these initiatives we have observed a significant increase in walking, riding, and scooting to school – and a vastly improved community sentiment towards road safety. One key misconception is that children are accompanied in their daily commute to school. Whilst this may be mostly true in the younger years, we see a significant number of unaccompanied children in the middle to later primary school years. This is reflective of (1) the cultures of parents who originate from communities outside of Australia, and (2) a significant number of children whose parents both work full time.</p> <p>It is important to remind readers that children face significant challenges when crossing roads:</p> <p><i>“Research from the University of Iowa shows children under certain ages lack the perceptual judgment and motor skills to cross a busy road consistently without putting themselves in danger. The researchers placed children from 6 to 14 years old in a realistic simulated environment and asked them to cross one lane of a busy road multiple times.</i></p> <p><i>The results: Children up to their early teenage years had difficulty consistently crossing the street safely, with accident rates as high as 8 percent with 6-year-olds.</i></p>	
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			<p><i>Only by age 14 did children navigate street crossing without incident, while 12-year-olds mostly compensated for inferior road-crossing motor skills by choosing bigger gaps in traffic.”</i></p> <p><a href="https://www.sciencedaily.com/releases/2017/04/170420090208.htm">https://www.sciencedaily.com/releases/2017/04/170420090208.htm</a></p> <p>Ultimately the proposal provided represents a threat to the gains we have seen through the initiatives we have implemented and will ultimately see a reduction in pedestrian participation rates. This is due to:</p> <ol style="list-style-type: none"> <li>1. Increased vehicle movements reducing apparent road safety,</li> <li>2. Increased vehicle movements at crossing locations increasing actual road safety, and</li> <li>3. increased presence of unknown adults in the area reducing the personal safety of children.</li> </ol> <p>Please see below for comments addressing specific statements made by the proposal.</p> <hr/> <p><i>“As the proposed development will generate a large number of additional traffic movements as well as including larger service vehicles (fuel tankers), the access points to Hammond Road rationalise access arrangements and make movement into and out of the subject site efficient. The primary service vehicle entry point will be from Gaebler Road with the southernmost entry from Hammond Road intended to be the secondary service vehicle access point.</i></p> <p><i>The proposed development is considered to be a significant trip generator with a total of 388 trips in the daily AM peak period and 638 trips in the daily PM peak period. This is considered to support the proposed access arrangement from Hammond Road”</i></p>	
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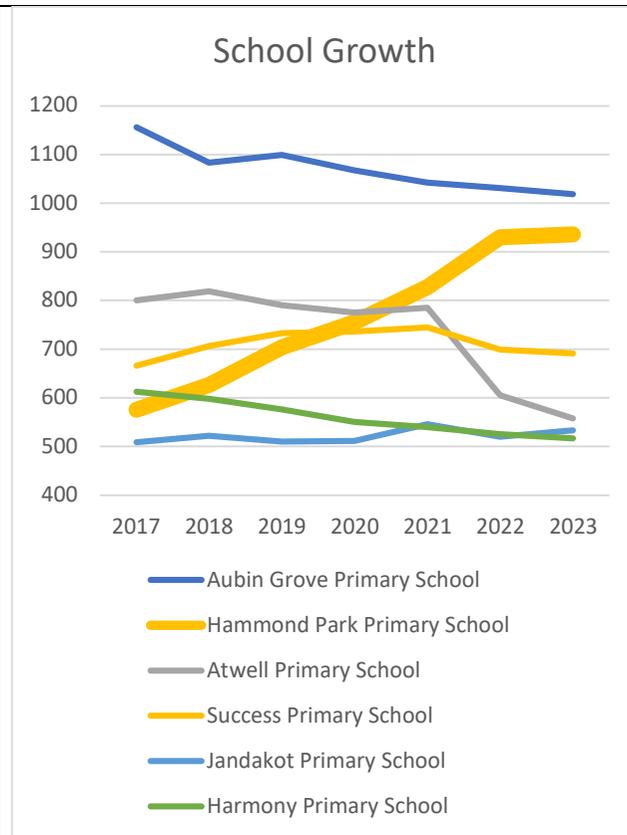
			<p style="text-align: center;"><b>Planning Report pp 31</b></p> <p style="text-align: center;"><i>"Pick up and drop off activity mainly occur in the school northern car park on Eucalyptus Drive and the car park on Murrumbidgee Drive. There are some activities on Gaebler Road, however it is not nearly as busy as the other two car parks."</i></p> <p style="text-align: center;"><b>Traffic Impact Assessment pp 54</b></p> <p style="text-align: center;"><i>"Based on the above, while the AM peak of the school and the site may coincide, it is expected that interaction between school and site traffic would be minimal, as most of the pick-up drop-off activity occurs on different roads."</i></p> <p style="text-align: center;"><b>Traffic Impact Assessment pp 54</b></p> <p style="text-align: center;"><i>"Land uses within the site will have their own car parking, and therefore are not expected to utilise any of the existing on street parking along the school frontages"</i></p> <p style="text-align: center;"><b>Traffic Impact Assessment pp54</b></p> <p>The above statements fail to demonstrate an understanding of how the school community currently interacts with the roads immediately surrounding the school:</p> <ul style="list-style-type: none"> <li>• There is already a recognised significant shortfall of parking at the school and the view held by the community is the current parking solution is ineffective. Unfortunately, there are no nearby community facilities available that can be used; other schools in the area are typically located adjacent to public open spaces with additional parking facilities and a larger pedestrian catchment.</li> </ul>	
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			<ul style="list-style-type: none"> <li>• The site immediately south of the school is a very busy area during the AM and PM peaks as parents typically use this for pick up and set down.</li> <li>• The vacant lot in question is currently used for parking with an estimated 30 vehicles parked on any given school day.</li> <li>• Many parents will typically perform loops around the school to find parking which includes Hammond Road and Gaebler Road.</li> </ul> <p><i>"The proposed development will have differing peak periods of operation and as such there will [be] no traffic congestion that results at school pick up or drop off time. Further, the primary access points for the school are from Eucalyptus Drive which has considerable separation from the development access points."</i></p> <p style="text-align: center;"><b>Planning Report pp 32</b></p> <p><i>"The development results in a net trip generation of 410 vehicles in the AM peak and 658 vehicles in the PM peak."</i></p> <p style="text-align: center;"><b>Planning Report pp 45</b></p> <p><i>"The weekday peak times (based on the existing traffic volumes) was identified to occur between 8:00AM to 9:00AM and 3:00PM to 4:00PM respectively during the weekday morning and afternoon peak hour periods. "</i></p> <p style="text-align: center;"><b>Traffic Impact Assessment pp 30</b></p> <p><i>"The proposed development is expected to generate approximately 410 trips during the AM Peak hour and 658 trips during the PM Peak hour"</i></p>	
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			<p style="text-align: center;"><b><i>Traffic Impact Assessment pp 32</i></b></p> <p>The proposal clearly indicates a significant increase in traffic flows affecting Gaebler Road.</p> <p>Recent surveys completed for Traffic Warden applications on Gaebler Road (near Twig Street) identified:</p> <ul style="list-style-type: none"> <li>• For the period 7:50AM to 8:50AM: 89 primary school student crossings, 17 secondary school student crossings, 59 other pedestrian crossings, 3 heavy vehicle crossings and 327 vehicle movements.</li> <li>• For the period 3:00PM to 4:00PM: 55 primary school student crossings, 23 secondary school student crossings, 38 other pedestrian crossings, 6 heavy vehicle crossings and 334 vehicle movements.</li> <li>• Additional primary student crossings (22 AM and 33 PM) were identified at an alternate location to the east, which are expected to cross at the approved Gaebler Road crossing when completed.</li> <li>• It must be noted these figures are well above the established thresholds of 20 primary school students and 200 vehicles for a Type-A crossing (being the highest category).</li> </ul> <p>It must be understood that the community holds a strong perception that vehicle traffic is already too high on Gaebler Road. To support this argument:</p> <ul style="list-style-type: none"> <li>• A petition was recently lodged to the City of Cockburn supporting the reduction of traffic volumes and speeds along this road, and</li> <li>• The Traffic Warden committee (which includes Main Roads WA) supported the introduction of the 40kph school speed zone along the full length of Gaebler</li> </ul>	
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			<p>Road from the Botany Rd/Irvine Pde Roundabout through to Gaebler Road to address existing safety concerns.</p> <p>With regards to the Traffic Impact Assessment:</p> <ul style="list-style-type: none"><li>• The table on pp8 of the Traffic Impact Assessment: this incorrectly states Hammond Road is 70kph north of Gaebler. This was recently adjusted to 50kph and also falls within a 40kph school speed restriction zone.</li><li>• The statement on pp 16/17 of the Traffic Impact Assessment: this identifies left-in, left-out only for Hammond Road. The clear impact here is an increase in traffic using the Gaebler Road entries placing further pressure on this road.</li><li>• The data provided on pp13 of the Traffic Impact Assessment, regarding crash statistics, fails to consider near misses and unreported incidents. Over the years I have been involved with the school, we have received numerous reports from the school community regarding incidents that have occurred, including cases where hospitalisation was required. There is a clear reluctance demonstrated by the community to submit Crash Reports due to the onerous nature of the process and the concern that it will get people into trouble. This has been raised previously with City of Cockburn and WA Police as this is unfortunately a known gap in the data sets used for decision making purposes.</li></ul>	
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			<ul style="list-style-type: none"> <li>• The diagrams provided on pp19/20 depict a footpath completing the networks along Hammond Road and Gaebler Road. These footpaths introduce key crossing points expected to be used regularly by school children. The volume of traffic expected to be using these crossings is very high and poses a significant safety risk.</li> </ul> <p><i>"It is also important to note that another primary school is planned to be constructed in the near future within the southern area of Hammond Park (near Wattleup Road). This would reduce the catchment area of Hammond Park Primary school and may result in a reduction in overall school traffic in the vicinity of Hammond Park Primary School and the site, therefore reducing interactivity between the site and school traffic."</i></p> <p><b>Traffic Impact Assessment pp55</b></p> <p>This statement is dated as the Jilbup Primary School is now in operational and is seeing students in 2024. Through our own research we identified some interesting facts whilst considering the growth of schools:</p> <ul style="list-style-type: none"> <li>• REPLAN data indicates Hammond Park will continue to see significant growth in new students coming into the suburb until at least until 2040,</li> <li>• The introduction of a new school and rezoning will not see a significant change in the number of students attending the school.</li> </ul>	
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Data has been drawn from the [myschool.edu.au](https://myschool.edu.au) site.

This demonstrates:

1. The significant growth seen by Hammond Park Primary School in recent years, and
2. How the opening of new schools did not see a significant short-term change in enrolment numbers for surrounding schools.

Long term planning data for Hammond Park Primary School can be obtained from the WA Education Department. My

		<p>understanding is long term projections will show Hammond Park Primary School slowly easing to 2020 enrolment levels – levels that were already considered to be problematic for the school community, and at a time when there was only limited development (and traffic) south of the school.</p> <p>The Planning Report pp1 shows an illustration demonstrating a crosswalk is to be provided as part of the proposal. I have been unable to find any detail within the proposal on this and appears to be misleading.</p> <p><a href="#">Petrol Station</a></p> <p>I will only briefly cover this topic, as I understand this is addressed comprehensively through other community submissions.</p> <p>The Planning Report (pp33) identifies an argument under the heading “7.66 Separation Distances between Industrial and Sensitive Land Uses”.</p> <p>This fails to take into consideration:</p> <ul style="list-style-type: none"><li>• Hammond Park Primary School exists within the prevailing wind area of the site, and</li><li>• The impact area includes up to 1,000 students.</li></ul> <p><a href="#">Fast Food</a></p> <p>I will only briefly cover this topic, as I understand this is addressed comprehensively through other community submissions.</p> <p><i>“The proposed land uses will not impact upon the amenity or operation of the proposed school. Being a primary school, the students are unlikely to frequent the proposed development without a consenting adult and as such it will not be an</i></p>	
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			<p><i>attractor for local students. Further school buildings and primary access points are located to the north of the school which has considerable separation from our proposed development.”</i></p> <p><b>Planning Report pp 32</b></p> <p>The language carefully speaks to the proposed school (Jilbup Primary School) which is a significant distance from the development site.</p> <p>When considering the impact to Hammond Park Primary School, we fully expect unaccompanied students to loiter at the proposal site before and after school, particularly for students those in middle to later years who enjoy greater independence.</p> <p>This presents two specific concerns:</p> <ol style="list-style-type: none"><li>1. The health and wellbeing of students will be affected by an increased junk food intake in their diets, and</li><li>2. Personal safety concerns with Primary School aged children mixing with unknown adults.</li></ol> <p>I believe the proposal fails to address these concerns. It is my belief the profitability of the proposal is counting on the additional patronage provided by these students.</p>	
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Appendix – Crossing Applications

**Pedestrian and vehicle survey count form – AM**

Applicant	Hammond Park Primary School
Speed	50
Zone	
Suburb	Hammond Park
Location	Gaebler Rd near Twig St
Near	

ONLY ONE HOUR NEEDS TO BE SURVEYED – THE HOUR IMMEDIATELY BEFORE SCHOOL STARTS

TIME	PRIMARY STUDENTS	SECONDARY STUDENTS	OTHER PEDESTRIANS	HEAVY VEHICLES	VEHICLE TRAFFIC
<del>0730 - 0744</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
<del>TOTAL</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
0745 - 0759	6		4		27
TOTAL	6		4	1	27
0800 - 0814	6	0	0		
TOTAL	6	2	3		41
0815 - 0829					
TOTAL	20	6	14		93
0830 - 0844					
TOTAL	51	9	18	1	119
0845 - 0900					
TOTAL	6	0	20	1	55
	89	17	59	3	327

7:50 start

8:50 end

The above survey data is true and correct

Survey conducted by (print name) Ivo Capa

Signed: \_\_\_\_\_ Date 14/02/2023

**Pedestrian and vehicle survey count form – PM**

Applicant Hammond Park Primary School  
 Speed Zone 50  
 Suburb Hammond Park  
 Location Sarblee Road near Twig St  
 Near \_\_\_\_\_

ONLY ONE HOUR NEEDS TO BE SURVEYED – THE HOUR IMMEDIATELY AFTER SCHOOL FINISHES

TIME	PRIMARY STUDENTS	SECONDARY STUDENTS	OTHER PEDESTRIANS	HEAVY VEHICLES	VEHICLE TRAIL
<del>1430 - 1444</del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>
<del>TOTAL</del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>
<del>1445 - 1459</del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>
<del>TOTAL</del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>	<del> </del>
1500 - 1514					
TOTAL	47	11	34	3	168
1515 - 1529	<del>     </del>	<del>     </del>	<del>     </del>	<del> </del>	<del> </del>
TOTAL	7	12	4	—	69
1530 - 1544					
TOTAL	1	—	—	3	53
1545 - 1600					
TOTAL	—	—	—	—	44
	55	23	38	6	334

3:00 start

Run count

The above survey data is true and correct  
 Survey conducted by (print name) Evo Cupa  
 Signed [Signature] Date 14/02/2



**Pedestrian and vehicle survey count form - PM**

Applicant Hammond Park Primary School  
 Speed 50  
 Zone Hammond Park  
 Suburb Hammond Park  
 Location Geetler Road  
 Near at Geetler/Botany Irvine Roundabout (west side)

ONLY ONE HOUR NEEDS TO BE SURVEYED - THE HOUR IMMEDIATELY AFTER SCHOOL FINISHES

TIME	PRIMARY STUDENTS	SECONDARY STUDENTS	OTHER PEDESTRIANS	HEAVY VEHICLES	VEHICLE TRAFFIC
<del>1430 1444</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
<del>TOTAL</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>
1445 - 1459					
TOTAL	0	0	3	2	78
1500 - 1514					
TOTAL	8	15	0	3	96
1515 - 1529					
TOTAL	19	47	11	11	292
1530 - 1544					
TOTAL	5	4	1	4	99
1545 - 1600					
TOTAL	1	1	1	0	10
	33	67	16	20	575

2:50 PM start  
3:50 PM end

The above survey data is true and correct

Survey conducted by (print name) Rebecca Hawkins Date 16/2/23  
 Signed [Signature]

1530 - Vehicle traffic  
 1544  
 1545 - 1550

445.	Anonymo us	Support	The area needs more shops and local jobs near by. I fully support this. We deff need a petrol station close by. My only concern is parking is already congested for the primary school and parents use that land to park on. Maybe instead of all grass on the gabler road side you could add additional parking bays.	Noted.
	Priyanka	Support	Yes i support the proposal. There are no nearby fuel stations and food shops that we can go to without a long drive to the Cockburn area. All the talk about opposing is just made up objections. In fact the proposed development will be very good for the area and people will benefit from it in terms of time saving and convenience - shops and fuel nearby and saving on fuel cost - not driving to different areas to get things that they can get nearby.  I hope proposed development passes but will see how things go.	Noted.
	Apex Planning	Oppose		Please refer to the City's recommendation report for further details on the comprehensive assessment undertaken which provides a response to much of the matters raised.

			<p>Apex Planning has produced this submission on behalf of Susanki Pty Ltd, who has an interest in Lot 97 (466) Wattleup Road, Hammond Park (the <b>affected property</b>):</p> <p>On behalf of Susanki Pty Ltd, we strongly <b>object</b> to the commercial development proposed at Lot 9501 Gaebler Road. This objection is presented on the following grounds:</p> <ol style="list-style-type: none"> <li>1. Lot 9501 is zoned Development under the City of Cockburn LPS3. Under Clause 3.2(j), the objective of the Development zone is to “provide for <b>future residential, industrial or commercial development to be guided by a comprehensive Structure Plan prepared under the Scheme</b>”. An application for planning approval has been submitted for Lot 9501 on an <i>ad hoc</i> basis, without any structure plan in place.</li> <li>2. The planning report which underpins the subject development purports that “<i>designated Local Centres have failed to deliver meaningful commercial development ... in this regard there is considerable demand for commercial / non – retail type uses</i>”. This assertion is unsubstantiated and unjustified, noting: <ol style="list-style-type: none"> <li>a. 466 Wattleup Road is subject to the <i>Lots 114, 123-125 Wattleup Road, Hammond Park Structure Plan</i> (an existing and <u>fully endorsed</u> structure plan) and contains 7,491sqm of undeveloped land allocated as ‘Local Centre’.</li> <li>b. The development of the ‘Local Centre’ allocated land on 466 Wattleup Road is planned for under the applicable planning framework and entirely achievable in the short-term. In this regard, Susanki Pty Ltd is currently in the process of formulating development plans and has attended two project meetings with the City of Cockburn on 1<sup>st</sup> March 2024 and 12<sup>th</sup> March 2024 to discuss proposed commercial development on this land.</li> <li>c. The Retail Needs Assessment which formed part of the application materials is deficient. Whilst it considered the 6,670sqm of retail NLA associated with the Hammond Park neighbourhood centre (which was granted development approval by the former MOJDAP in December 2023), it has ignored the ‘Local Centre’ land on 466 Wattleup Road. The RNA does not consider the implications of this unplanned commercial development on planned commercial land at 466 Wattleup Road. The subject application fails to adequately justify why commercial development should be considered on this site, given the wider planning context of the area.</li> <li>d. The proposed development is inconsistent with the <i>Southern Suburbs District Structure Plan</i>, which allocates the western portion of Lot 9501 as medium density residential. The strategic planning framework sets no basis for commercial development of the nature proposed on Lot 9501 whatsoever.</li> </ol> </li> </ol>	
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			<p>3. The proposed development undermines the statutory planning process and disregards the significant risk and potential for planning outcomes to be compromised on other land in the locality which has appropriately undergone proper process and has a structure plan in place. This is entirely contrary to orderly and proper planning.</p> <p>4. In addition to the above matters, we also note the following fundamental issues with this application:</p> <ul style="list-style-type: none"> <li>a. Two access points are proposed to Hammond Road. Given Hammond Road is planned for a future upgrade and extension (still some years away), the application materials offer minimal commentary regarding how the access points will relate to future road network planning. For example, it has not properly considered whether this multi-use consolidated commercial development on a single site requires a slip lane or turning pocket, and how this could impact on Hammond Road. This is an issue which should be addressed through a local structure planning process.</li> <li>b. Lot 9501 is densely vegetated and contains various environmental constraints. The application materials do not clarify whether the necessary and appropriate consultation/engagement with the relevant State environmental agencies has occurred. This is an issue which should be addressed through a local structure planning process.</li> <li>c. The engineering services report notes layout of the development is likely to impact the existing sewer reticulation in the vicinity of the site. The report notes only 50% of the site is capable of being serviced by gravity sewer and the remaining 50% should be negotiated / determined through liaison with Water Corp (hence the method of servicing is essentially unresolved). This is an issue which should be addressed through a local structure planning process.</li> </ul> <p>Based on the issues outlined above, the subject application is clearly inappropriate and presented on an <i>ad hoc</i> basis with the raft of key issues unresolved due to the absence of a local structure plan and a lack of meaningful input from a range of State authorities and agencies.</p> <p>The application creates a significant risk of compromising/prejudicing future planning outcomes on other nearby land which is already structure planned.</p> <p>It follows that the application should be <b>refused</b>.</p>	
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Our Ref: 1164

22 April 2024

Chief Executive Officer  
City of Cockburn  
PO Box 1215  
Bibra Lake DC, 6965

Sent via email: Chantala Hill [chill@cockburn.wa.gov.au](mailto:chill@cockburn.wa.gov.au)

Dear Madam,

**DAP23/004 – COMMERCIAL DEVELOPMENT – LOT 9501 GAEBLER ROAD, HAMMOND PARK**  
**RESPONSE TO SUBMISSIONS**

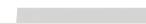
The following letter is intended to provide a response to submissions received during the recent public advertising and referral period for DAP23/004 which pertains to the proposed commercial development at Lot 9501 Gaebler Road, Hammond Park (herein referred to as the subject site).

Throughout the advertising and referral period, a number of submissions were received from Government authorities in addition to members of the public. In addressing these submissions we have provided a response to each of the Government agency referral responses and addressed a summary of issues raised within the public submissions.

The below table provides the Applicant Responses to the issues raised.

Referral Response	Applicant Response
<p><b>Department of Biodiversity and Conservation</b> Issues raised within their submission include:</p> <ul style="list-style-type: none"> <li>• Appropriateness of the wetland buffer.</li> <li>• Car wash proximity to wetland</li> <li>• General impact of development on the wetland.</li> <li>• Clearing of Banksia Woodland.</li> <li>• Landscaping species.</li> </ul>	<ul style="list-style-type: none"> <li>• PGV Environmental has prepared a detailed response to the DBCA submission and this is provided as Attachment 1 of this submission. This submission addresses the appropriateness of the wetland buffer.</li> <li>• Any risk of stormwater runoff will be dealt with in a stormwater management plan as a condition of approval that requires all wastewater to be captured, treated and disposed of in a manner that will not impact the wetland.</li> <li>• A wetland management plan will be required as a condition of planning approval which will ensure rubbish and other measures are managed appropriately to protect the wetland. This will be an improved outcome than the currently uncontrolled access that occurs within the wetland currently.</li> <li>• A referral under the EPBC Act is underway for the clearing of the Banksia Woodland vegetation and PGV environmental are confident this will be granted. As protection of this vegetation and clearing is governed by separate legislation, approval of the planning application can occur prior to the approval of a clearing permit.</li> <li>• If alternate landscaping species are required, these can be requested through an updated landscaping plan being requested as a condition of approval.</li> </ul>
<p><b>Department of Education</b> Issues raised within their submission include:</p> <ul style="list-style-type: none"> <li>• Inconsistency with the District Structure Plan</li> <li>• Land use incompatibility with the existing school site due to emissions – fast food outlets and service station.</li> <li>• Traffic congestion/parking.</li> <li>• Health issues associated with proximity to fast food.</li> </ul>	<ul style="list-style-type: none"> <li>• Whilst the proposed development is not ‘residential’ as noted in the DSP, this document is a strategic planning document and alternate development outcomes can be contemplated and approved at the site.</li> <li>• Emissions from the service station and fast-food outlets have been examined in detail and determined to be well within allowed limits as illustrated in the Emissions Impact Assessment in Attachment 2.</li> <li>• Traffic congestion and parking has been dealt with in details within Transport Impact Assessment which illustrates parking is compliant with scheme requirements and the road network has capacity to handle the forecast traffic movements.</li> <li>• With respect to the references to health issues associated with the proximity to fast food we note that the referenced Operational Policy 2.4 has little relevance to the subject development other than Clause 3.6 which deals with the relation to nearby uses. This clause does not prohibit the location of the proposed uses in</li> </ul>

	<p>proximity to a proposed school. Further, site specific studies have been undertaken that there will be no detrimental impacts to students of staff attending the school. In addition we note the reference to the evidence brief, however this is not a relevant planning consideration as planners do not seek to control human behaviour and nutritional decisions. This has been confirmed through other JDAP decision making with approvals at:</p> <ul style="list-style-type: none"> <li>○ McDonalds Ellenbrook – 92 Maffina Parade, Ellenbrook.</li> <li>○ McDonalds Alkimos – 4 Carlsbad Promenade, Alkimos.</li> <li>○ McDonalds Byford – Kardan Boulevard, Byford.</li> <li>○ McDonalds Greenfields – Minilya Parkway, Mandurah.</li> </ul>
<p><b>Department of Health</b> Issues raised within their submission include:</p> <ul style="list-style-type: none"> <li>● Separation distance between the service station and the school.</li> </ul>	<ul style="list-style-type: none"> <li>● Emissions from the service station have been examined in detail and determined to be well within allowed limits as illustrated in the Emissions Impact Assessment in Attachment 2. As a result of this site specific study, the reduced separation distance is considered to be appropriate.</li> </ul>
<p><b>Department of Planning Lands and Heritage</b> Issues raised within their submission include:</p> <ul style="list-style-type: none"> <li>● Number of access points to Hammond Road should be reduced to one.</li> </ul>	<ul style="list-style-type: none"> <li>● The Transport Impact Assessment demonstrates that the number of access points are entirely appropriate and warrant a departure from Development Control Policy 5.1. We understand the City’s traffic engineers are also supportive of the proposal with two access points.</li> <li>● We also note by virtue of supporting one access point there is a willingness to vary the requirements of DCP5.1.</li> </ul>
<p><b>Department of Water and Environmental Regulation</b> Issues raised within their submission include:</p> <ul style="list-style-type: none"> <li>● Separation distance between the service station and the school.</li> <li>● Issues with the submitted Local Water Management Strategy.</li> </ul>	<ul style="list-style-type: none"> <li>● With respect to separation distances, this has been addressed above and with the site specific study, determined to be appropriate.</li> <li>● A response to the comments on the LWMS has been provided in a letter from Oversby Consulting in Attachment 3. Through a condition of approval, the LWMS can be updated to accommodate the comments received from DWER.</li> </ul>
<p><b>Department of Fire and Emergency Services</b> Issues raised within their submission include:</p> <ul style="list-style-type: none"> <li>● Concerns with the submitted BMP.</li> </ul>	<ul style="list-style-type: none"> <li>● Despite the comments provided by DFES, we are confident in that the provisions of the BMP have appropriately addressed relevant bushfire concerns and the threat to the development will be appropriately mitigated through compliance with the BMP.</li> </ul>



Public Submission Issues	Applicant Response
<p><b>No demonstrated need for the proposed uses</b></p> <ul style="list-style-type: none"> <li>• No need for more fast food</li> <li>• Housing crisis demonstrates need for residential, not fast food</li> <li>• Better suited to more significant access routes</li> <li>• Site better to be used for residential or park</li> <li>• Better to have urgent care clinic instead of medical centre</li> <li>• Better to have uses that will benefit the local community, not just big corporations</li> <li>• Not necessary following recent approval of Commercial Development (Whadjuk Dr) nearby and other similar amenities close by</li> <li>• Inconsistent with SPP 4.2 - constitutes 'out of centre development' due to not being located within an existing Centre Zone</li> <li>• RNA does not sufficiently demonstrate the need for the development, nor the impact on surrounding Centre Zones</li> </ul>	<ul style="list-style-type: none"> <li>• The submitted RNA demonstrates a need and desire for the proposed uses to located within the area and site specifically. Further, all operators included in the proposed development approached the landowners with a desire to be on the site which is anecdotal evidence that supports the findings of the RNA.</li> <li>• The reasons this site has been chosen is a result of the Hammond Road upgrade that will occur making it a significant access route.</li> <li>• A response to assertions that the RNA is incorrect and the proposal is not compliance with SPP4.2 has been included in Attachment 4 of this submission.</li> </ul>
<p><b>Decreased property values</b></p>	<ul style="list-style-type: none"> <li>• Not a relevant planning consideration</li> </ul>
<p><b>Bushfire risk</b></p>	<ul style="list-style-type: none"> <li>• This has been appropriately mitigated through measures outlined in the provided Bushfire Management Plan.</li> </ul>
<p><b>No regard for WAPC Operational Policy 2.4</b></p>	<ul style="list-style-type: none"> <li>• Operational Policy 2.4, has little relevance to the subject development other than Clause 3.6 which deals with the relation to nearby uses. This clause does not prohibit the location of the proposed uses in proximity to a school. Further, site specific emissions studies have been undertaken that there will be no detrimental impacts to students or staff attending the school.</li> </ul>
<p><b>Negative impact on the character of the area</b></p> <ul style="list-style-type: none"> <li>• Erode residential/family friendly character of the area</li> </ul>	<ul style="list-style-type: none"> <li>• The site abuts Hammond Road, which when upgraded will become a significant transport route that will impact the existing character of the area and support development of the nature proposed by the application.</li> </ul>

<ul style="list-style-type: none"> <li>• Visually unappealing fast food development and signage</li> <li>• Signage inconsistent with LPP 3.7</li> <li>• No allowance for any unique built form or local uniqueness, no context within the landscape</li> <li>• No interface with Harry Waring Marsupial Reserve or wetland</li> <li>• Advertising, colours, lights from fast food outlets will increase distraction for students and hinder learning</li> <li>• Scale of development and pylon signs is not consistent with character of the area (pylon signs reduced in height as condition of Whadjuk Dr approval)</li> </ul>	<ul style="list-style-type: none"> <li>• The development and its design has been considered in detailed by the City's Design Review Panel. Through this process, the design was broadly supported.</li> </ul>
<p><b>Odour – fuel and fast food.</b></p>	<ul style="list-style-type: none"> <li>• A specific emissions study that examines the impact of odour has been provided which demonstrates no impact to adjoining development beyond acceptable levels.</li> </ul>
<p><b>Health impacts of emissions</b></p>	<ul style="list-style-type: none"> <li>• A site specific emissions study has been completed which confirms there will be no negative health impacts resulting from the emissions generated by the service station.</li> </ul>
<p><b>Health impacts of fast food proximity to schools and residential properties</b></p> <ul style="list-style-type: none"> <li>• Studies linking school proximity to decreased nutrition standards, weight gain, unhealthy eating habits, increased junk food consumption</li> <li>• Unhealthy eating contributes to cancer, diabetes, stroke, heart disease</li> <li>• Temptation for older children to sneak over at lunchtime</li> <li>• Risk of poor health contributing to academic underachievement</li> </ul>	<ul style="list-style-type: none"> <li>• There are no statutory requirements or standards that are applicable with respect to the proximity of fast food to schools and residential properties.</li> <li>• The development is not responsible for the control/management of human behaviour. Children attending the school will not be permitted to leave the grounds during school and before and after school, parents and/or guardians are in control / responsible for their children and as such there is no ability for the children to attend the development without permission or supervision.</li> <li>• Prior decision making by JDAP suggests health impacts of fast food in proximity to sensitive land uses is not a relevant planning consideration. Evidence to this effect is provided through the recent McDonalds approvals in proximity to residential development:</li> </ul>

- At odds with school’s objectives for healthy lifestyles
- Normalising fast food
- Inconsistent with the City of Cockburn’s objectives for healthier lifestyles
- McDonalds Ellenbrook – 92 Maffina Parade, Ellenbrook.
- McDonalds Alkimos – 4 Carlsbad Promenade, Alkimos.
- McDonalds Byford – Kardan Boulevard, Byford.
- McDonalds Greenfields – Minilya Parkway, Mandurah.

**Traffic Impacts**

- Congestion around school
- Increased risk of speeding
- Unsafe for children, many of whom walk unaccompanied
- Insufficient traffic slowing measures proposed
- Children likely to cut through development to walk to school when coming from the south – dangerous walking through busy carpark
- Dangerous intersection (Gaebler & Hammond)
- Bus stop in close proximity will add to congestion
- Hammond Rd will not be able to cater to the development – road upgrade should occur first
- Current single lane roads not appropriate
- Commercial vehicles using residential streets to access development
- No consideration for impact on out of school care drop offs/pickups which will coincide with peak hrs at development
- No mention of impact of ‘cheap Tuesday’ fuel days which will bring greater concentration of traffic than usual
- Lack of footpaths on Gaebler Rd to connect to site
- The Transport Impact Assessment has comprehensively addressed all traffic related concerns and determined the development is appropriate with respect to access, parking and capacity of the surrounding road network.

- Proximity of high school considering use of e-scooters – safety concerns
- Insufficient sightlines from vehicular access points
- Increased traffic cutting through local roads to access the development
- Data in reporting was during COVID – not correct for current times
- Roads will become too busy for children to safely cycle to school
- Access points not located appropriately to reduce queuing
- Justification that nearby new primary school will reduce traffic at the school opposite the development is not valid, based on recent reporting

**Insufficient Parking**

- School drop-offs/pickups already have limited parking
- Parents would start parking at the Commercial Development
- Further shortage for school event days
- Heavy reliance on verge parking along Gaebler, which would be no longer possible
- Site layout means parking being spread out between the tenancies – not walkable internally

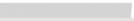
- The parking provision at the proposed development is compliant with the statutory parking provisions.

**Increased crime/antisocial behavior**

- Increased unknown/non-locals in area
- Increased loitering/begging

- There is no link between a development of this nature and increased antisocial behaviour/crime. Increased activity in evening hours will improve surveillance of the area to reduce crime.

<ul style="list-style-type: none"> <li>• Location for predators to watch and interact with children</li> <li>• Decreased feelings of safety and security</li> <li>• Link between commercial uses and increased burglaries</li> </ul>	
<p><b>Light pollution</b></p>	<ul style="list-style-type: none"> <li>• Light emissions are controlled by Australian Standards which the development will be designed to comply with.</li> </ul>
<p><b>Noise pollution</b></p> <ul style="list-style-type: none"> <li>• 24 hour operation – proximity to school and residents (including car wash and drive thru speakers)</li> <li>• Vehicles (including commercial/delivery vehicles)</li> <li>• Construction noise</li> </ul>	<ul style="list-style-type: none"> <li>• An acoustic report has been provided demonstrating the development is able to comply with the Environmental Protection (Noise) Regulations.</li> </ul>
<p><b>Detrimental Impact to the environment</b></p> <ul style="list-style-type: none"> <li>• Proximity to Harry Waring Marsupial Reserve</li> <li>• Proximity to Conservation Category Wetland</li> <li>• Fuel and oil contamination into groundwater – high water table level on site</li> <li>• Impact of construction (e.g. excavation for underground fuel storage) on groundwater</li> <li>• Light impacts (particularly 24/7 operation) on fauna</li> <li>• Reduced proposed buffer to wetland justified based on buffer to residential to the south</li> <li>• Runoff will increase spread of weeds</li> <li>• Firebreak within wetland buffer, further reducing its width</li> <li>• No detail on how EPA Position Statement No. 4 is met</li> </ul>	<ul style="list-style-type: none"> <li>• As part of the development a comprehensive environmental analysis was completed to examine existing flora and fauna as well as the wetland. These reports demonstrate the development will have a negligible impact on the environment and is appropriate for approval.</li> </ul>



<p><b>Sustainability concerns</b></p> <ul style="list-style-type: none"> <li>• ESD not sufficiently achieved</li> <li>• Land uses themselves promote poor example of sustainability</li> </ul>	<ul style="list-style-type: none"> <li>• An ESD report has been provided to demonstrate measures that will be implements to ensure sustainability objectives are met.</li> </ul>
<p><b>Lack of a structure plan</b></p> <ul style="list-style-type: none"> <li>• 2017 LSP for residential did not contemplate commercial</li> <li>• No approved LSP despite being a requirement for the Development Zone</li> <li>• 2017 LSP was unviable due to bushfire and traffic concerns – which are still relevant for this proposal</li> <li>• No indication that the departure from the 2017 LSP is in best interests of the community</li> <li>• Lack of LSP means no prior appropriate consideration of land uses</li> <li>• Not consistent with the SSDSP</li> <li>• SSDSP provides for small/local businesses, retail – not chains</li> <li>• Homes purchased in the area with the expectation that the land would be developed as residential</li> <li>• No certainty that the proposed vegetation clearing will be approved, which would have been contemplated at LSP stage</li> <li>• No preparation of a LSP is an ad hoc approach and inconsistent with orderly and proper planning</li> </ul>	<ul style="list-style-type: none"> <li>• The absence of a structure plan should not be a reason for not supporting the development as:             <ul style="list-style-type: none"> <li>○ The subject site exists in isolation as the last remaining property not included within a structure plan area. In this regard, no integration with adjoining properties is required to be coordinated through a local structure plan.</li> <li>○ The detail provided as part of submitted development application through the various supporting reports examines the appropriateness of the land uses and built form in much greater detail than what a structure plan would contemplate. As a result, the structure planning process would be superfluous as it would provide less detail and not pertain to a specific development.</li> <li>○ Statutorily, the absence of a structure plan does not prevent the DAP’s approving the proposed development as these are typically a due regard document.</li> </ul> </li> <li>• The 2017 LSP was never finalised/approved, furthermore it is no longer relevant/active and isn’t a mechanism that the proposed development is to be assessed against.</li> <li>• Inconsistency with the SSDSP has been addressed above. As this is a strategic planning document, strict compliance with the DSP is not required.</li> </ul>

## Conclusion

It is considered that through the technical documentation provided as part of the development application, as well as the supplementary information provided as part of this submission, the issues raised through the referral and public advertising periods have been comprehensively addressed.

Should you have any queries or require any clarification in regard to the matters raised, please do not hesitate to contact the undersigned on 9275 4433.

Yours Faithfully,



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**Neil Teo**  
**DIRECTOR**

**Attachment 1**

PGV Response to DBCA Submission

19 March 2024

Chantala Hill

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City of Cockburn  
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Osborne Park WA 6017

ABN 44 981 725 498

Knightside Nominees Pty Ltd

Dear Ms Hill,

**RE: Lot 41 Gaebler Road, Hammond Park – Response to Submissions on the DA**

Following is our response to the submissions on the Gaebler Road Hammond Park Commercial Development that have raised environmental issues.

**1 DBCA Submission 26 February 2024 (DBCA Ref: 2020/002699 (PRS 51723))**

**1.1 Wetland Buffer**

DBCA makes several comments about the 15m wetland buffer proposed in the Development Application.

Their first comment is that the 15m wetland buffer approved for Lot 9008 Frankland Avenue immediately to the south should not be viewed as a precedent. As a general comment we would normally agree with that statement. However, in this instance the wetland that has the approved 15m buffer on the southern Lot 9008 is the same wetland (UFI 14104) that occurs on Lot 9501. The wetland straddles the two lots. The wetland is a Dampland type of wetland on both lots. The wetland vegetation is the same dense vegetation type on both lots. The vegetation to be cleared around the wetland on both lots is upland woodland on sandy soils. The stormwater run-off from the residential development around the wetland on Lot 9008 and the commercial development on Lot 9501 will both be treated in a manner to avoid impacting the wetland hydrology and water quality.

Therefore, the scientific rationale that was accepted for the approved 15m buffer to wetland UFI 14104 on Lot 9008 should be equally applied to the acceptability of a 15m buffer to wetland UFI 14104 on Lot 9501.

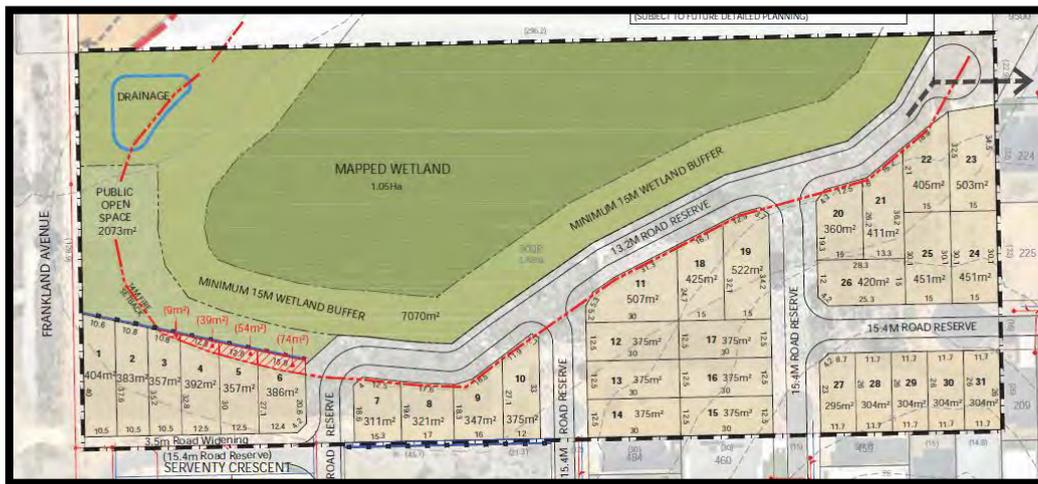
DBCA comment at the end of the second paragraph on page 2 of their submission that “based on current environmental and planning policy and guidance, wetlands that are to be protected require a minimum 50m buffer distance”. In the following paragraph DBCA refer to the Wetland Buffer Assessment prepared by PGV Environmental for Lot 9501 Gaebler Road. DBCA comment that they are not a decision-making authority for the land in question and considers it more appropriate for the

City to review the wetland buffer assessment and provide advice regarding the acceptability of the proposed setback.

The Wetland Buffer Assessment identifies the current wetland policies and guidance and in Section 4.1 refers to the EPA Guidance Statement 33 which states that as an alternative to applying the minimum 50m setback, a site-specific buffer assessment could be undertaken to determine the appropriate separation/buffer distance. The site-specific buffer assessment undertaken on the site in the Wetland Buffer Assessment concluded that *“the proposed 15m buffer will suitably protect the wetland’s ecological functions”*. The conclusion is not a surprise given the scientific analysis for the separation distance around the same wetland on Lot 9008 resulted in the same outcome.

DBCA refer to the wetland buffer on Lot 9008 as being 15-60m. It should be noted that the length of wetland on Lot 9008 is 310m. The 15m buffer applies to 260m of the 310m of wetland buffer on Lot 9008, or 84%. The portion that is 60m will be cleared to construct a stormwater drainage basin and an area of Public Open Space (POS) (Plate 1). The POS area has already been cleared (Plate 2). Therefore, the effective buffer width for most, if not all, of the wetland on Lot 9008 is 15m.

**Plate 1: Approved Structure Plan for Lot 9008**



**Plate 2: Current Status of Lot 9008 Wetland Buffer**



DBCA recommend that should the development ultimately be approved, a wetland management plan should be recommended as a condition of subdivision. Section 4.2.4 of the Wetland Buffer Assessment outlines some management practices to manage the potential physical disturbance threats to the wetland, such as fencing, however these are general comments that could be further detailed in a Wetland Management Plan (WMP). Therefore, on that basis we agree that the preparation and implementation of a WMP could be a condition of development approval.

## **1.2 Vegetation**

DBCA advises that the proponent may have notification responsibilities under the EPBC Act due to the Banksia Woodland TEC and Black Cockatoo habitat proposed to be cleared for the development. The proponent is aware of its obligations under the EPBC Act and has recently made a Referral under the Act.

PGV Environmental believes that an assessment and decision on the Development Application is not bound by the proposal being referred under the Commonwealth EPBC Act.

## **1.3 Native Fauna**

DBCA state that consideration should be given to the potential disturbance of native fauna resulting from habitat loss, particularly the Southern Brown Bandicoot. About two-thirds of the vegetation on the lot will be retained, including the densest vegetation in the wetland which provides habitat for the Southern Brown Bandicoot. However, it is best practice in recent years to manage the impact on fauna in areas of native vegetation to be cleared. Therefore, PGV Environmental considers it not unreasonable for a Fauna Management Plan (FMP) to be prepared as a condition of approval. The FMP would address the trapping and translocation of fauna from the development area just prior to clearing.

## **2 DWER Submission 28 February 2024 (DWER Ref: DWERT 1208, PA61310)**

### **2.1 Clearing Permit**

DWER advise that a clearing permit is required to clear native vegetation unless an exemption applies.

The proponent is aware of their clearing permit obligations. Clearing for structures less than 5ha outside an Environmentally Sensitive Area (ESA) may not require a clearing permit. However, any clearing within the ESA that is part of the 50m CCW buffer is likely to require a permit.

Please contact me if you require any clarification of this response.

Yours sincerely



Paul van der Moezel  
Managing Director

**Attachment 2**

Emissions Impact Assessment



# EMISSIONS IMPACT ASSESSMENT OF PROPOSED 7- ELEVEN FUEL SERVICE STATION & FAST FOOD RESTAURANTS

**MIXED USE DEVELOPMENT (HAMMOND PARK)**



# Emissions Impact Assessment of Proposed 7-Eleven Fuel Service Station & Fast Food Restaurants

Mixed Use Development (Hammond Park)

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Prepared for: Broad Vision Projects Pty Ltd

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Project Ref: EAQ-24012

April 2024

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Environment | Air Quality



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**Approved for Release**

Name	Position	File Reference
John Hurley	Principal Consultant	EAQ24012-Build+(Hammond Park)7-Eleven+EmissionsImpactAssessment-Final

**Signature**

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*This document presents the outcomes of a Desktop Emissions Modelling Assessment. All emissions inputs into the model were sourced from industry specific emissions’ factor publications, previous site-specific measurements, and/or from peer reviewed public domain data except where detailed otherwise herein. EAQ has not attempted to verify externally sourced data beyond its use herein. The modelling assessment has been prepared using the best available information provided by the Client and in conjunction with regulatory guidance from the appropriate regulatory jurisdiction(s). EAQ has exercised its diligence and due-care in delivering the outcomes of the assessment according to accepted assessment practices and techniques. EAQ disclaims any and all liability and responsibilities for damages of any nature, to any party, which may be caused from misapplication or misinterpretation by third parties of this assessment*



## Contents

Executive Summary .....	6
1 Background & Scope .....	7
1.1 Station Assessment Scope .....	7
<b>1.1.1 Station Legislative Context.....</b>	<b>8</b>
<b>1.1.2 Station Assessment Substances.....</b>	<b>8</b>
<b>1.1.3 Guidance for Assessing Station Impacts.....</b>	<b>9</b>
1.2 Restaurant’s Assessment Scope .....	10
1.3 The Site .....	10
2 Service Station Emissions Assessment .....	15
2.1 Station Emissions Estimation.....	15
2.2 Vapour Recovery .....	15
2.3 Bulk Deliveries and Emissions .....	15
2.4 VOC Emissions .....	16
2.5 Station Operational Data .....	17
2.6 Derived Emission Factors.....	17
<b>2.6.1 Fuel Throughput Trends.....</b>	<b>18</b>
2.7 Aermid Dispersion Modelling Methods .....	20
<b>2.7.1 Meteorology .....</b>	<b>20</b>
<b>2.7.2 Sensitive Receptors .....</b>	<b>20</b>
<b>2.7.3 Building Profile Input Program (BPIP) .....</b>	<b>20</b>
<b>2.7.4 Dispersion Modelling Limitations .....</b>	<b>20</b>
2.8 Station Assessment Results & Discussion .....	21
3 Restaurants Odour Emissions Assessment .....	23
Appendix A: Vapour Emissions Calculations .....	27
Appendix B: Meteorological Development & Representative Year .....	28
Appendix C: AERMOD Input File.....	29



**Figures**

Figure 1-1: Proposed Mixed Use Development Locality ..... 12  
Figure 1-2: Working Design of Proposed Mixed Use Development..... 13  
Figure 1-3: Modelling Depiction of Emission Sources (Proposed) ..... 14

**Tables**

Table 1-1: WA EPA Guidance for Separation Distances – Service Station ..... 8  
Table 1-2: Assessment Substances (pollutants) ..... 8  
Table 1-3: Assessment Criteria for Toxic Substances ..... 9  
Table 2-1: Example of Bulk Fuel Delivery Schedule (L/hr)..... 16  
Table 2-2: Composition of Petrol (NPI, 1999)..... 16  
Table 2-3: Composition of Petrol (Fuel Standards, 2019) ..... 16  
Table 2-4: Proposed Site Operating Detail ..... 17  
Table 2-5: Emissions Factors for Service Stations ..... 17  
Table 2-6: Representative Fuel Throughputs (BCC, 2017) ..... 18  
Table 2-7: Factored Total VOC Emission Rates per Hour (VR2) ..... 19  
Table 2-8: Proposed Site’s Bulk Storage Emissions during Bulk Refuelling (VR1)..... 19  
Table 2-9: Proposed 7-Eleven Station - Assessment Results for GLC’s of Pollutants (VR1 & VR2) @ Nearest Sensitive Receptors ..... 22  
Table 3-1: Restaurants’ Odour Risk Assessment Metrics..... 24  
Table 3-2: Restaurants’ Odour Risk Assessment Rating..... 24



## Executive Summary

Environmental and Air Quality Consulting Pty Ltd undertook an Air Emissions Impact Assessment of a proposed Mixed Use Development comprising of three (3) sites of potential emissions, namely a 7-Eleven Fuel Service Station, a McDonalds and KFC Restaurants (the Restaurants), of which both Restaurants will have drive-through food services.

The site scientific study addressed the short-term exposure and long-term health risks associated with vapour emissions from the Fuel Service Station. The Fuel Service Station is within an urban developed area and is part of an overall commercial development site.

The Assessment utilised industry accepted standards for estimating pollutant emission rates of primary airborne pollutants from fuel storage and refuelling activities at the Fuel Service Station and assessed these pollutant emission rates utilising conventional dispersion modelling methods to predict the concentration of primary pollutants at the nearest sensitive receiver within the locality.

The outcomes of the Assessment found that the primary pollutants of Benzene, Toluene, Ethyl benzene, Xylenes, Cyclohexane, *n*-Hexane and Styrene were predicted to have ground level concentrations lower than acceptable exposure limits set by the WA Department of Water and Environmental Regulation, National Environment Protection (Air Toxics) Measure and other relevant jurisdictional recommendations when utilising both Vapour Recovery Phase 1 (mandatory) and Vapour Recovery Phase 2 (proposed).

Based on the predicted ground level concentrations using VR1 and VR2, vapours from the Station will not negatively impact the health of the nearest existing sensitive urban receptors, the Hammond Park Primary School, or future sensitive land uses within the locality.

Additionally, a risk assessment was undertaken for the Restaurants, to include seasonal considerations for wind speed and direction with respect to the nearest sensitive receptors, and found that the modern equipment and practices adopted within the Restaurants, the impact risk rating significance score for the Restaurants, which can easily be reduced to a low-to-medium impact risk rating, and the readily available odour mitigation technologies in the event that residual stack odours are observable, the risk of malodour impacts from these Restaurants is low based on an unlikely occurrence of malodours impacting at the nearest sensitive receptor.

# 1 Background & Scope

Environmental & Air Quality Consulting Pty Ltd (EAQ) was engaged by Broad Vision Projects Pty Ltd (Broad), the proponent, to undertake an Air Emissions' Impact Assessment (the Assessment) of a proposed Mixed Use Development (the Site) comprising of three (3) sites of potential emissions, namely a 7-Eleven Fuel Service Station (the Station), a McDonalds and KFC Restaurants (the Restaurants), of which both Restaurants will have drive-through food services.

The Station and Restaurants are proposed to be located at the corner of Gaebler Road and Hammond Road in Hammond Park, Western Australia 6164.

This Assessment addresses the potential emissions in two-parts as follows:

- 1) Assessment of the Stations' toxic principal chemical compounds in petrols by undertaking a desktop scientific Assessment into the short and long-term health risks associated with vapour emissions from the Station, and
- 2) A review of the Restaurants likely emission sources and the modern controls used to mitigate odours from the preparation of foods within each Restaurant's commercial kitchen.

## 1.1 Station Assessment Scope

The Assessment of the Station was undertaken to determine the extent of offsite pollutant impacts beyond the boundary of the Site and subsequently determining the risk of health and amenity impacts for existing and future sensitive receivers and/or sensitive land uses (receptors).

The Assessment predicted ground level concentrations (GLCs) of various pollutants from vapour losses using regulatory standard dispersion modelling techniques.

The predicted GLCs were compared to the regulatory criteria for each pollutant assessed to determine if those GLCs would cause a health or amenity impact at the nearest receptor.

The model of choice was Aermid and its supporting pre- and post- processors.

Chemical vapour emission rates from the Station were developed from:

- NPI Emission Estimation Technique Manual ([NPI, 1999](#)) for Aggregated Emissions from Service Stations (Environment Australia);
- Air Toxics "Hot Spots" Program: Gasoline Service Stations Industry wide Assessment Guidelines – Toxics Committee of the California Air Pollution Control Officers Association ([CAPCOA, 1997](#)); and
- Brisbane City Council methodology for service stations (BCC, 2017).

The BCC, 2017 methodology was utilised to represent hourly throughput rates for service stations based on normal and peak traffic flows.



### 1.1.1 Station Legislative Context

The proposed Station will not be a Prescribed Premise with regard to the WA Department of Water and Environmental Regulation (DWER).

The Western Australia (WA) Environmental Protection Authority (EPA) 2005 Guidance for the Assessment of Environmental Factors document, *Separation Distances between Industrial and Sensitive Land Uses* recommends a buffer separation distance for Service Stations / Convenience Store Fuel Facilities and the nearest sensitive receptor as follows:

**Table 1-1: WA EPA Guidance for Separation Distances – Service Station**

50 m	Operating during normal business hours of Monday – Saturday from 0700 – 1900 hours
100 m	Freeway service stations
200 m	Service stations in operations for 24 hours daily

The EPA recommended buffers imply that where the separation distance is not met, a further scientific assessment of applicable emissions should be undertaken to support the application and thus inform the risk of health and amenity impacts at the nearest receptor.

*“Sensitive land uses include residential development, hospitals, hotels, motels, hostels, caravan parks, schools, nursing homes, childcare facilities, shopping centres, playgrounds and some public buildings. Some commercial, institutional and industrial land uses which require high levels of amenity or are sensitive to particular emissions may also be considered “sensitive land uses”. Examples include some retail outlets, offices and training centres, and some types of storage and manufacturing.”*

Importantly, there have been sweeping changes to the operational hours of service stations and retail businesses in Western Australia i.e., deregulation of hours.

### 1.1.2 Station Assessment Substances

The emission sources at the Station comprise the ventilation of the sub-terrain fuel storage tanks, and the refuelling bowsers (4 bowsers, i.e., 8 dispensers). Incidental spills can also be a source of vapour release, albeit minor. Emission sources are primarily passive vapour losses from refilling (storage tanks) and bower refuelling processes.

Principal chemical compounds (pollutants) typically emitted from service station activities are listed in **Table 1-2**. These compounds are part of the Total Volatile Organic Compounds (VOCs) emitted, which are assessed in the first instance, and those individual pollutant contributions are then derived based on the percentage contribution of those pollutants within the Total VOC emissions.

**Table 1-2: Assessment Substances (pollutants)**

Pollutants			
Benzene	Cyclohexane	Ethyl benzene	Styrene
Toluene	n-Hexane	Xylenes	



The proposed Station will comprise the following main features:

- 4 bowser ranks comprising a maximum of 8 refuelling outlets at any one time;
- The types of fuels proposed are;
  - Diesel (50 kL),
  - ULP 91 (30 kL),
  - ULP 95 (30 kL),
  - ULP 98 (70 kL),
- Bulk refuelling events will take place up to three times weekly, or every 3 days annually averaged to replenish a maximum volume of 180,000 Litres (180kL);
  - Tanker delivery of typically 1,000 Litres per minute (60,000 Litres per hour).
- The peak flow of vehicles per hour is anticipated at 96 based on a 4-Bowser configuration (i.e., 12 per refilling nozzle, per hour); and
- Average refuelling volume daily 62,439 Litres (based on peak flow of 96 cars per hour).

The above refuelling details represent a peak-hour approach which is applied across every daily peak period and assumes that vehicles volumes exhibit the same trends daily, whereas it's well understood that peak refuelling periods generally follow weekly fuel price cycles, and that peak flows typically do not occur across weekends.

### 1.1.3 Guidance for Assessing Station Impacts

The DWER prescribes maximum ambient concentrations of an array of pollutants and toxic substances. In prescribing these maximum concentrations, the DWER has referred to (among others); The National Environment Protection (Air Toxics) Measure (NEPM). These DWER, NEPM, and other jurisdictional recommendations have been adopted for this Assessment.

Importantly, the benzene exposure guidelines have been more rigorously reviewed by the Victorian (VIC) EPA and are considered more applicable to Australia-wide service station emissions.

The VIC EPA guidelines for benzene are based on an acute minimal risk level to toxic substances and have provided exposure limit recommendations for health effects from short-term exposure based on the Texas Commission on Environmental Quality ([TCEQ](#)) Air Monitoring Comparison Values, where; *“If predicted or measured airborne levels of a constituent do not exceed the comparison level, adverse health or welfare effects would not be expected to result. If ambient levels of constituents in air exceed the comparison levels, it does not necessarily indicate a problem, but rather, triggers a more in-depth review.”*

These maximum ambient concentration exposure limits are listed in **Table 1-3**.

**Table 1-3: Assessment Criteria for Toxic Substances**

Substance	Averaging Period	Criteria Source	Maximum (ambient) concentration	
			ppm	µg/m <sup>3</sup> at 25°C
Benzene	1 hour	<a href="#">EPA VIC, 2022</a>	0.18	580
	24 hours		0.009	29
	Annual	<a href="#">NEPM 2011</a>	0.003	9.6
Toluene	24 hours	<a href="#">NEPM 2011</a>	1	3,770
	Annual		0.1	377



<b>Ethyl benzene</b>	1 hour	<a href="#">EPA NSW 2016</a>	1.8	8,000
	Annual	Toxicos 2011		270
<b>Xylenes</b>	24 hours	<a href="#">NEPM 2011</a>	0.25	1,080
	Annual		0.2	870
<b>Cyclohexane n-Hexane</b>	1 hour	<a href="#">EPA NSW 2016</a>	5	190
			0.9	3,200
<b>Styrene</b>	1 hour	Dept. of Health WA	70	64

## 1.2 Restaurant’s Assessment Scope

The Restaurant’s will both operate a commercial kitchen that involves the use of non-solid fuels i.e., electrical and oil based cooking.

Kitchen exhaust fans extract airborne grease, combustion products, fumes, smoke, odours, heat and steam. Two emission components are of primary concern, airborne grease and odours.

This Assessment will address odours as the primary emissions source that has the potential to negatively impact the amenity of nearby receptors.

The review of the Site’s location, the Restaurant’s emission sources and local dispersion effects, to include prevailing meteorology will be undertaken to determine a risk of malodour impacts at the nearest sensitive receptors.

## 1.3 The Site

The Site is a proposed mixed-use application that will encompass the Station, Restaurants, a Starbucks Coffee House, Medical Centre, and Car Wash.

The Site is proposed to be located at the corner of Gaebler Road and Hammond Road and is within a designated ‘Development Zone’ as part of the City of Cockburn’s Town Planning Scheme 3 (TPS3), the Site’s surrounds include:

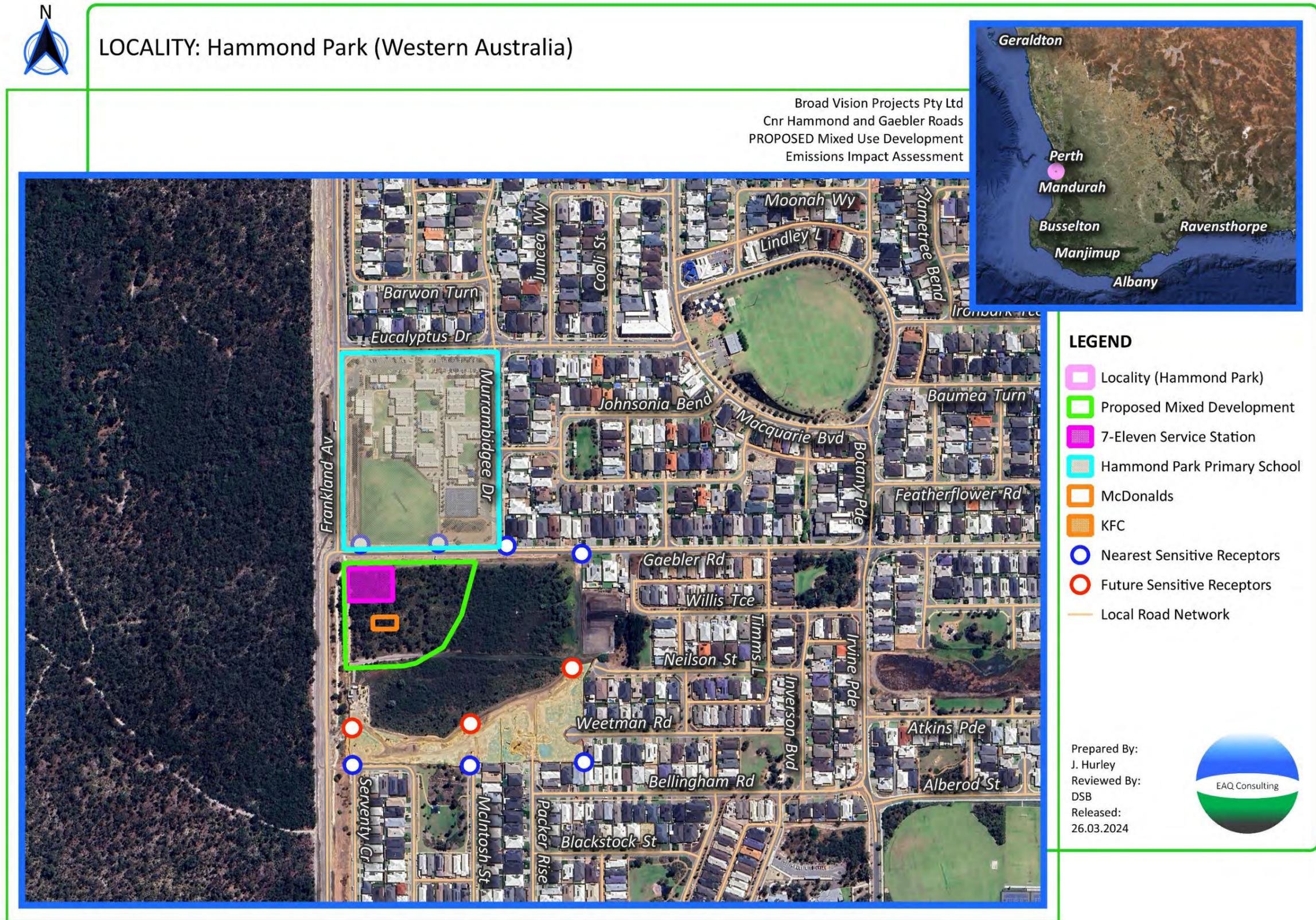
- Directly north of the Site is the adjacent Hammond Park Primary School (suburb of Hammond Park);
- Directly north-east, east and south of the Site are residential (urban) dwellings (suburb of Hammond Park);
- Various Parks and Recreation Reserves are interspersed within these residential areas (suburb of Hammond Park); and
- To the west is the Harry Waring Marsupial Reserve within the suburb of Wattleup.

The nearest sensitive receptor to the Stations closest vapour emission source is approximately 70 metres (m) to the north of the Site. This receptor is the School Oval. The nearest residential home to this vapour emission source is > 200 m to the north-east.



The Site is separated from residential homes to the east and south by a Wetland Boundary/Buffer where the nearest existing or future residential home to the closest Restaurant is 120 m to the south 170 m to the south-east and 260 m to the east.

The Locality of the Site and assessed sensitive receptors, the Site design and Model depiction are illustrated in the following **Figures**.



**Figure 1-1: Proposed Mixed Use Development Locality**



Figure 1-2: Working Design of Proposed Mixed Use Development



Figure 1-3: Modelling Depiction of Emission Sources (Proposed)



## 2 Service Station Emissions Assessment

### 2.1 Station Emissions Estimation

Activities at the Station that will produce emissions are related to losses of fuels through vapourisation or spillage and subsequent vapourisation of the spill(s). These specific activities comprise:

- Submerged filling of underground storage tanks;
- Underground tank breathing losses;
- Vehicle refuelling;
- ‘Whoosh’ emissions from removal of vehicle fuel cap; and
- Fuel spills, typically at the bowser.

The Station throughputs are estimated based on like-for-like 4-bowser 7-Eleven service stations’ average throughput. 7-Eleven routinely designs its Metropolitan service stations on an interchangeable basis, that is; same fuels, same bowsers, same locality, and traffic flows etc.

There is a dearth of information within other Australian jurisdictions for estimating hourly throughputs based on typical traffic flows at metropolitan service stations, as a result the widely referenced 2017 Brisbane City Council (BCC) methodology for service stations has been used to estimate hourly emissions at the Site.

Emission estimates based on specific emission compounds (**refer Table 1-2**) were derived using the NPI, 1999 and CAPCOA, 1997 guidelines for emission estimation factors.

### 2.2 Vapour Recovery

Vapour recovery (VR) at the Site will be in place for submerged underground storage tank(s) referred to as VR1 (mandatory).

VR2 will also be installed at the refuelling bowsers. VR2 can provide at least 85% vapour recovery when refuelling vehicles.

### 2.3 Bulk Deliveries and Emissions

The estimated total daily sale of fuels, based on the peak traffic flow of 96 cars at peak hour, is 62,439 Litres. As a result, the Site will receive, on average, approximately 2-3 bulk deliveries of fuels per 7 days, between the daily hours of 0700 hrs – 2200hrs.

Importantly, the total fuel volume per week is based on a peak hourly value of cars refuelling. The volumes of fuel dispensed for all other hours outside of the peak hour are therefore derived based on the peak hourly volume.

The actual peak hour volume is likely to be much lower than the 96 cars at peak and therefore the emissions derived for this Assessment will be an overestimate of actual emissions from the Station.



The maximum volume of the bulk fuel delivery that is dispensed into the storage tanks at the Station is approximately 60,000 L. Although there are up to 3 deliveries per week of 60,000 L or less, the schedule will shift based on fuel volumes dispensed. To account for variability in daily hours where deliveries are made; the delivery of bulk fuels is modelled 1-hourly, for each day and successive hour during those delivery times. **Table 2-1** lists an example of the delivery schedule and subsequent hourly emissions trend for bulk fuel deliveries.

**Table 2-1: Example of Bulk Fuel Delivery Schedule (L/hr)**

Time (24 hrs)	Monday	Tuesday	Wednesday	Thursday	Friday
0700	60,000				
0800		60,000			
0900			60,000		
1000				60,000	
1100					60,000
1200	60,000				
1300		60,000			
1400			60,000		
1500				60,000	
1600					60,000
1700	60,000				
1800		60,000			
1900			60,000		
2000				60,000	
2100					60,000

## 2.4 VOC Emissions

Of the fuel types proposed ULP contains the higher volatile fraction compared to diesel, as such all emissions in this Assessment have been assumed as ULP. This approach is conservative. There are no Ethanol blend fuels e.g., E5, E10. The vapour composition of VOCs in petroleum fuel ([NPI, 1999](#)), are listed in **Table 2-2**. The vapour composition of Benzene has been revised in accordance with the Australian Government’s Federal Register of Legislation, specifically the current [Fuel Quality Standards \(Petrol\) Determination 2019](#), which limits the volume of Benzene in petrol to 1% v/v maximum. Assuming a Benzene density value of 0.8765, the Benzene vapour composition (% weight) is listed in **Table 2-3**.

**Table 2-2: Composition of Petrol (NPI, 1999)**

Species	Petrol Liquid (% weight)	Petrol Vapour (% weight)
Cyclohexane	0.2	0.06370
Ethylbenzene	2.0	0.07910
<i>n</i> -Hexane	3.5	1.730
Styrene	0.1	0.00282
Toluene	10.4	1.080
Xylenes	12.2	0.433

**Table 2-3: Composition of Petrol (Fuel Standards, 2019)**

Species	Petrol Liquid (% weight)	Petrol Vapour (% weight)
Benzene	1.0	0.374



The composition percentages of the compounds listed in **Table 2-2** and **Table 2-3** were applied to the modelling outcomes of the final time-averaged emission rate GLC estimates (vapour and spill vapour losses) to derive individual pollutant contributions to airborne vapour impacts at the nearest receptor.

## 2.5 Station Operational Data

**Table 2-4: Proposed Site Operating Detail**

Parameter	Operational Data
Operating hours	24 hours / 7 days per week
Tanker delivery	Maximum 60,000 L/hour
<b>Peak Daily Refuelling Volume</b>	<b>62,439 L (VR1)</b>
Storage Tanks' Vent stacks	6 x 4.5 m high
Filling Stations/Bowsers	4 x Bowsers / 8 x Grade filling points (located below full canopy) <b>(VR2)</b>
Fuel Storage	Diesel 50 kL, ULP 91 30 kL, ULP 95 30 kL, ULP 70 kL.

## 2.6 Derived Emission Factors

Emissions generated from activities at the Site have been derived based on those vapour losses published by the NPI and CAPCOA guidance. **Table 2-5** lists those emission factors that apply to those processes where vapour losses occur.

**Table 2-5: Emissions Factors for Service Stations**

Emission Source	NPI, 1999 mg / L throughput	CAPCOA, 1997 Lbs / 1000 Gallons throughput
<b><i>Underground Tank Filling</i></b>	-	-
Submerged Filling	880	8.4
Splash Filling	1380	-
Submerged filling with vapour balance (VR1)	40	<b>0.42</b> (50 mg/L)
Underground tank breathing losses	<b>120</b>	0.84
<b><i>Vehicle Refuelling</i></b>	-	-
Displacement Losses (uncontrolled)	1320	8.4
Displacement Losses (controlled i.e., VR 2)	132	<b>0.74</b>
<b><i>Spillages</i></b>	-	-
Uncontrolled	80	<b>0.61</b>
Controlled	-	0.41
<b><i>"Whoosh" Emissions (fuel cap removal)</i></b>	-	0.26 - <b>0.66</b>

The refuelling activities are characterised as volume emission sources. These have been assessed utilising the CAPCOA, 1997 emission factors. Vent emissions from storage tank filling has been assessed using the NPI, 1999 emission factors.



### 2.6.1 Fuel Throughput Trends

To determine the hourly throughputs of fuel dispensing for service stations in accordance with the BCC, 2017 recommendations, the hourly profile of fuel sales daily is derived using the BCC, 2017 published profiles as listed in **Table 2-6**.

**Table 2-6: Representative Fuel Throughputs (BCC, 2017)**

Hour	Hourly Profile (%)
1	1.2
2	0.8
3	0.6
4	0.8
5	1.9
6	4.6
7	5.5
8	5.7
9	5.5
10	5.7
11	6.0
12	6.0
13	5.7
14	5.6
15	5.9
16	<b>6.2</b>
17	<b>6.2</b>
18	5.8
19	5.1
20	4.0
21	3.5
22	3.4
23	2.6
24	1.8

In **Table 2-6** the peak throughput hour begins at 4-5pm (1600 - 1700 hrs).

Applying the Average Daily Refuelling Volume of 62,439 L, the emission factors in **Table 2-5**, and deriving hourly volumes based on **Table 2-6**, the hourly Total VOC mass emission rates in grams per second (g/s) are developed.

These mass emission rates represent the combined (ALL) number of filling points (8) at any one time, and single bowser (SINGLE) operations (VR2) and are listed in **Table 2-7**.



**Table 2-7: Factored Total VOC Emission Rates per Hour (VR2)**

Hour	Throughput % daily volume/hr	Petrol Throughput (L/hr)	% to Peak Daily Hour	ALL Bowers Mass Emission Rate (g/s)	SINGLE Bowser Mass Emission Rate (g/s)
1	1.2	749	19.5%	0.401	0.100
2	0.8	500	13.0%	0.267	0.067
3	0.6	375	9.8%	0.201	0.050
4	0.8	500	13.0%	0.267	0.067
5	1.9	1,186	30.9%	0.635	0.159
6	4.6	2,872	74.8%	1.537	0.384
7	5.5	3,434	89.4%	1.838	0.460
8	5.7	3,559	92.7%	1.905	0.476
9	5.5	3,434	89.4%	1.838	0.460
10	5.7	3,559	92.7%	1.905	0.476
11	6.0	3,746	97.6%	2.005	0.501
12	6.0	3,746	97.6%	2.005	0.501
13	5.7	3,559	92.7%	1.905	0.476
14	5.6	3,497	91.1%	1.871	0.468
15	5.9	3,684	95.9%	1.972	0.493
<b>16</b>	<b>6.2</b>	<b>3,840</b>	<b>100.0%</b>	<b>2.055</b>	<b>0.514</b>
<b>17</b>	<b>6.2</b>	<b>3,840</b>	<b>100.0%</b>	<b>2.055</b>	<b>0.514</b>
18	5.8	3,621	94.3%	1.938	0.485
19	5.1	3,184	82.9%	1.704	0.426
20	4.0	2,498	65.0%	1.337	0.334
21	3.5	2,185	56.9%	1.170	0.292
22	3.4	2,123	55.3%	1.136	0.284
23	2.6	1,623	42.3%	0.869	0.217
24	1.8	1,124	29.3%	0.602	0.150

Table 2-8 lists the emission rate for the proposed Station during bulk refuelling activities (VR1).

**Table 2-8: Proposed Site’s Bulk Storage Emissions during Bulk Refuelling (VR1)**

Emission Source	Emission Type	Peak VOC Mass Emission Rate (g/s)	Stack Diameter (m)	Emission Velocity (m/s)
Vent Stack	Bulk Filling (Vapour Balance and Breathing Losses)	0.852	0.1	0.1

Appendix A presents the summary calculations for the derived mass emission rates.



## 2.7 Aermod Dispersion Modelling Methods

### 2.7.1 Meteorology

A 2023 annual dataset of meteorology was developed for the locality using surface observations from the Jandakot AERO Bureau of Meteorology (BoM) Automatic Weather Station (AWS) and CSIRO's TAPM prognostic model for upper air characteristics. The Jandakot BoM AWS is < 9 kms north-east of the Site and representative of the assessment domain.

[Appendix B](#) presents the development of the 2023 annual meteorological dataset and the selection of the 2023 year as representative of the locality.

### 2.7.2 Sensitive Receptors

Discrete sensitive receptors representing residential, and the local school were placed at locations closest and surrounding the Site (refer **Figure 1-1**). These receptors were assessed against the vapour emissions and compared against regulatory guidelines.

### 2.7.3 Building Profile Input Program (BPIP)

Building wake effects occur for those vertical stack emissions, in this case passive ventilation of the storage tank vent. An example of the Aermod Input File is presented in [Appendix C](#).

### 2.7.4 Dispersion Modelling Limitations

By definition, air quality models can only approximate atmospheric processes. Many assumptions and simplifications are required to describe real phenomena in mathematical equations. Model uncertainties can result from:

- Simplifications and accuracy limitations related to source data;
- Extrapolation of meteorological data from selected locations to a larger region; and
- Simplifications to model physics to replicate the random nature of atmospheric dispersion processes.

Models are reasonable and reliable in estimating the maximum concentrations occurring on an average basis. That is, the maximum concentration that may occur at a given time somewhere within the model domain, as opposed to the exact concentration at a point at a given time will usually be within the  $\pm 10\%$  to  $\pm 40\%$  range (US EPA, 2003).

Typically, a model is viewed as replicating dispersion processes if it can predict within a factor of two, and if it can replicate the temporal and meteorological variations associated with monitoring data. Model predictions at a specific site and for a specific hour, however, may correlate poorly with the associated observations due to the above-indicated uncertainties. For example, an uncertainty of  $5^\circ$  to  $10^\circ$  in the measured wind direction can result in concentration errors of 20% to 70% for an individual event (US EPA, 2003).



## 2.8 Station Assessment Results & Discussion

The Assessment of the Proposed 7-Eleven Fuel Service Station has projected ground level concentrations (GLCs) at the nearest sensitive receptors (refer **Figure 1-1**) for assessed pollutants of BTEX (Benzene, Toluene, Ethyl benzene, Xylenes), Cyclohexane, *n*-Hexane and Styrene that are below the guideline exposure standards when employing both VR1 and VR2.

These pollutants were assessed by firstly modelling Total VOCs as a function of emission factors for fuel storage and vehicle dispensing volumes according to those methods in [Section 2](#).

Those Total VOC GLCs projected were then revised to determine the percentage mass emission rate contributions for these pollutants (**refer Table 2-2**).

**Table 2-9** lists each predicted pollutant concentration for each averaging period at those assessed sensitive receptors. These pollutant concentrations are revised based on each compound's vapour contribution to petrol VOC emissions. Additionally, these predicted pollutant concentrations reflect both VR1 and VR2 vapour recovery.

Within **Table 2-9** is each pollutant's respective assessment criteria, the projected GLCs from the modelling Assessment and the revised projected GLCs at the nearest sensitive receptor (refer **Figure 1-1**) with a Percentage of Exposure Limit Value (%). This value represents the percentage ratio of projected GLCs compared to the assessment criteria for each pollutant.

A % < 100 % shows that the projected concentration at the sensitive receptor location achieves less than the assessment criteria i.e., PASS, whereas % ≥ 100 % shows non-compliance against the assessment criteria i.e., FAIL.

The magnitude of the compliance PASS/FAIL can be readily gauged by the size of the Percentage of Exposure Limit Value (%).

- All GLC values reported for each sensitive receptor are the maximum, Rank 1 values for all averaging periods; and
- All units of concentration are in  $\mu\text{g}/\text{m}^3$  unless stated otherwise.

In reviewing the predicted GLCs for vapours from toxic chemical pollutants in **Tables 2-9**, the pollutant emissions at the nearest sensitive receptors are less than the exposure limits in ambient air when employing VR1 and VR2 vapour recovery.

Based on the predicted ground level concentrations using VR1 and VR2, vapours from the Station will not negatively impact the health of the nearest existing, or future sensitive urban receptors, the Hammond Park Primary School, or future sensitive land uses within the locality.

Given the modelling outputs have very low percentages (%) for compliance factors (CFs), any uncertainty in the modelling is balanced by the low impacts, where; emissions could be more than double the modelling inputs and still not negatively impact on the existing and future sensitive receptors and/or sensitive land uses.



**Table 2-9: Proposed 7-Eleven Station - Assessment Results for GLC's of Pollutants (VR1 & VR2) @ Nearest Sensitive Receptors**

Receptor Location	Pollutant	Averaging Period	Exposure Limit (µg/m³)	Predicted GLC (µg/m³)	% of CF	Pass/Fail	Pollutant	Averaging Period	Exposure Limit (µg/m³)	Predicted GLC (µg/m³)	% of CF	Pass/Fail
School Oval cnr	Benzene	1-hour	580	8.24	1.42%	Pass	Benzene	24-hour	29	0.95	3.29%	Pass
School Oval cnr				10.07	1.74%	Pass				0.66	2.27%	Pass
NE Residential				1.12	0.19%	Pass				0.15	0.52%	Pass
SE Residential				0.62	0.11%	Pass				0.08	0.27%	Pass
SW Residential				1.51	0.26%	Pass				0.21	0.72%	Pass
School Building				1.82	0.31%	Pass				0.19	0.67%	Pass
South Cul-de-Sac				2.48	0.43%	Pass				0.13	0.45%	Pass
School Oval cnr				Benzene	Annual	9.6				0.28	2.96%	Pass
School Oval cnr	0.15	1.56%	Pass				1.90	0.05%	Pass			
NE Residential	0.02	0.25%	Pass				0.43	0.01%	Pass			
SE Residential	0.01	0.12%	Pass				0.23	0.01%	Pass			
SW Residential	0.03	0.34%	Pass				0.60	0.02%	Pass			
School Building	0.04	0.46%	Pass				0.56	0.01%	Pass			
South Cul-de-Sac	0.02	0.22%	Pass				0.38	0.01%	Pass			
School Oval cnr	Toluene	Annual	377				0.82	0.22%	Pass	Ethyl benzene	1-hour	8,000
School Oval cnr				0.43	0.11%	Pass	2.13	0.03%	Pass			
NE Residential				0.07	0.02%	Pass	0.24	0.00%	Pass			
SE Residential				0.03	0.01%	Pass	0.13	0.00%	Pass			
SW Residential				0.10	0.03%	Pass	0.32	0.00%	Pass			
School Building				0.13	0.03%	Pass	0.39	0.00%	Pass			
South Cul-de-Sac				0.06	0.02%	Pass	0.53	0.01%	Pass			
School Oval cnr				Ethyl benzene	Annual	270	0.06	0.02%	Pass			
School Oval cnr	0.03	0.01%	Pass				0.76	0.07%	Pass			
NE Residential	0.01	0.00%	Pass				0.17	0.02%	Pass			
SE Residential	0.00	0.00%	Pass				0.09	0.01%	Pass			
SW Residential	0.01	0.00%	Pass				0.24	0.02%	Pass			
School Building	0.01	0.00%	Pass				0.23	0.02%	Pass			
South Cul-de-Sac	0.00	0.00%	Pass				0.15	0.01%	Pass			
School Oval cnr	Xylenes	Annual	870				0.33	0.04%	Pass	Cyclohexane	1-hour	190
School Oval cnr				0.17	0.02%	Pass	1.72	0.90%	Pass			
NE Residential				0.03	0.00%	Pass	0.19	0.10%	Pass			
SE Residential				0.01	0.00%	Pass	0.11	0.06%	Pass			
SW Residential				0.04	0.00%	Pass	0.26	0.14%	Pass			
School Building				0.05	0.01%	Pass	0.31	0.16%	Pass			
South Cul-de-Sac				0.02	0.00%	Pass	0.42	0.22%	Pass			
School Oval cnr				<i>n</i> -Hexane	1-hour	3,200	38.15	1.19%	Pass			
School Oval cnr	46.61	1.46%	Pass				0.08	0.12%	Pass			
NE Residential	5.17	0.16%	Pass				0.01	0.01%	Pass			
SE Residential	2.89	0.09%	Pass				0.00	0.01%	Pass			
SW Residential	7.01	0.22%	Pass				0.01	0.02%	Pass			
School Building	8.44	0.26%	Pass				0.01	0.02%	Pass			
South Cul-de-Sac	11.49	0.36%	Pass				0.02	0.03%	Pass			



### 3 Restaurants Odour Emissions Assessment

In Western Australia there is no regulatory control for restaurant and fast-food odour emissions given that these activities are not prescribed premises under the Environmental Protection Act 1986. Notwithstanding, there are still obligations for restaurants and fast-food outlets to mitigate emissions related to noise, odour, dust, light pollution, and general waste controls. These obligations are typically administered at the local government level (i.e., cities, shires, towns).

Australian and International Standards provide the necessary engineering specifications for the design, installation and operations of a variety of kitchen exhaust technologies, e.g., [AS 1668.2-2012](#), [AS 1668.1:2015](#). These specifications are typically referred to by local government areas (LGAs), such as the City of Cockburn (CoC) of which the Site is proposed to be located within.

As per the CoC's [Guidelines for the Capture of Emissions by Kitchen Exhaust Hoods](#), the installation of such emissions' capture and control technologies require approval through the CoC's Health Services.

*"In accordance with AS1668.2-2012, a kitchen exhaust canopy is only required if the cooking appliances to be exhausted have a total maximum power input exceeding **8kW for electrical**, or a **total gas input of 29MJ/h** for a gas appliance. The local authority can however require the installation of a kitchen exhaust canopy if for particular circumstances it deems to be appropriate".*

Additional kitchen cooking vapour controls may be required based on the types of cooking activities undertaken and the proximity to nearby sensitive receptors.

Within Australia there is limited guidance on the requirements for odour capture and mitigation of emissions for restaurants and fast-food outlets. There is however some regulatory guidance from the United Kingdom (UK), where the UK often references Western Australian guidelines and vice-versa.

The UK's Department for Environment, Food and Rural Affairs (DEFRA) withdrew its 2005 guidance *Control of Odour and Noise from Commercial Exhaust System* in 2017. The guidance has been superseded by Ricardo-AEA Technology/NETCEN (EMAQ+), of which the EMAQ+ report is widely accepted by planning authorities within the UK in place of the previous DEFRA 2005 guidance.

The risk of odour nuisance from restaurant and fast-food outlets typically encompasses key metrics of plume dispersion type and characteristics, location and proximity of sensitive receptors, kitchen size/throughput, and cooking type (solid, gas fuels etc) and grease 'loading'.

The risk of an odour nuisance can then be deduced based on a rating (i.e., a score) where the derived score (risk rating) determines the level to which odour abatement should be implemented at the odour source.

These risk rating scores are listed in **Table 3-1** with the quantitative score for each risk rating category shown in parenthesis, and a further explanation of the risk rating described below each score.



**Table 3-1: Restaurants’ Odour Risk Assessment Metrics**

Dispersion	Receptor	Kitchen Size	Type / Grease Loading
Very Poor (20) Low level discharge, discharge into courtyard, or restriction on stack (i.e., capped vertical discharge).			Very High (10) Pubs (those serving a high level of fried food), fried chicken, burgers or fish and chips.
Poor (15) Discharge not low level, but below eaves, or discharge rate below 10m/s.	Close (10) Closest sensitive receptor is less than 20m from kitchen discharge	Large (5) More than 100 covers or a large-sized take-away	High (7) Kebab, Vietnamese, Thai or Indian
Moderate (10) Discharging 1m above eaves at a rate of 10-15m/s	Medium (5) Closest sensitive receptor is between 20 and 100m from kitchen discharge	Medium (3) Between 30 and 100 covers or a medium-sized take-away	Medium (4) Cantonese, Japanese or Chinese
Good (5) Discharging 1m above ridge at a rate of 15m/s or more	Far (1) Closest sensitive receptor is more than 100m from kitchen discharge	Small (1) Less than 30 covers or a small take-away	Low (1) Most pubs, Italian, French, Pizza or Steakhouse

The final score is then assigned ‘significance’ and a subsequent impact risk rating as per **Table 3-2**.

**Table 3-2: Restaurants’ Odour Risk Assessment Rating**

Impact Risk Rating	Odour Control Requirement	Significance Score
Low to Medium	Low level odour control	Less than 20
High	High level odour control	20 to 35
Very High	Very high level odour control	More than 35

The risk assessment Metrics and overall Risk Rating (**Tables 3-1 and 3-2**) can be used to identify a ‘trigger’ for odour treatment for either of the McDonalds or KFC Restaurants, where:

- It is typical for McDonalds and KFC Restaurants to exhaust their cooking vapours direct to atmosphere via stacks with an exit velocity of at least 10 m/s above the roofline;
- Receptors are > 100 metres from the nearest stack emission;
- Kitchen size is assumed to be medium takeaway given the location; and
- Cooking Type and Grease Loading is very high.

Based on this, the Significance Score for each Restaurant is 24, which is at the lower end of the High Impact Risk Rating.

Given that these Restaurant types are commonplace within the Perth Metropolitan Area and again within urban density suburbs, the design and build of these Restaurants will as a minimum account for the risk rating protocols as discussed above, and where applicable will implement higher odour controls as required.

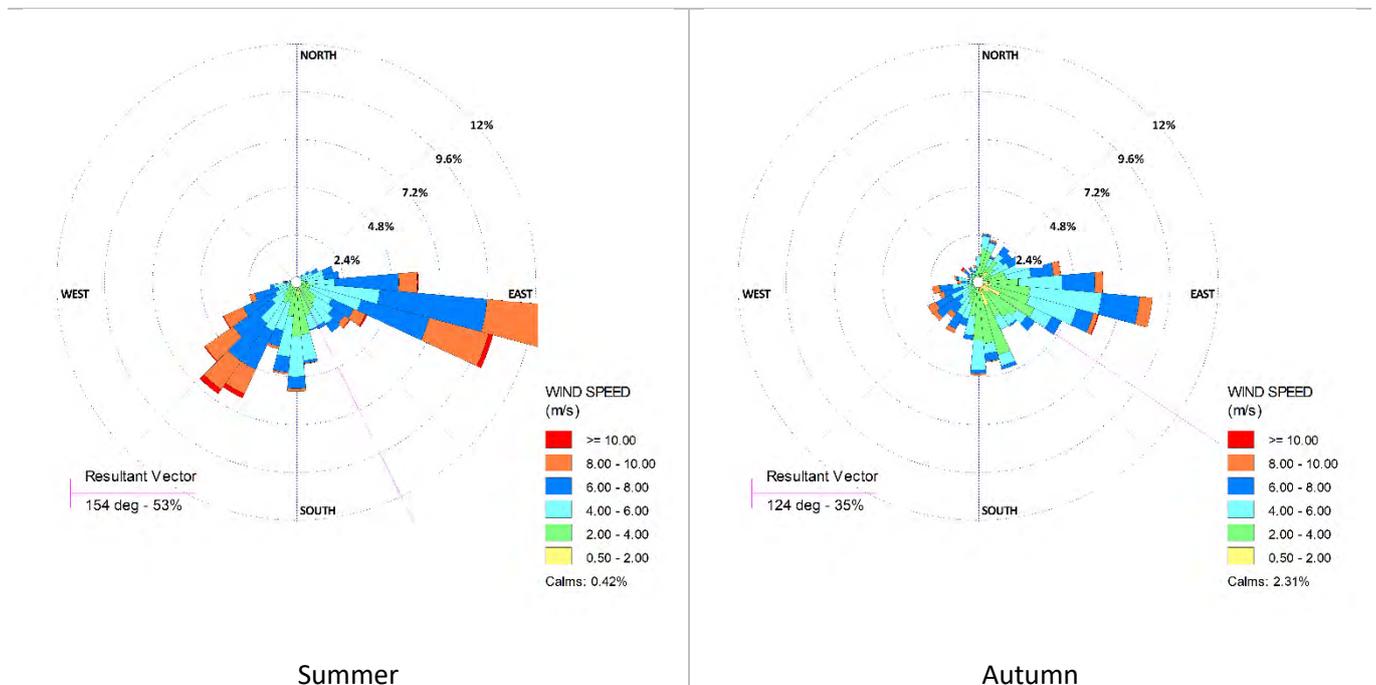


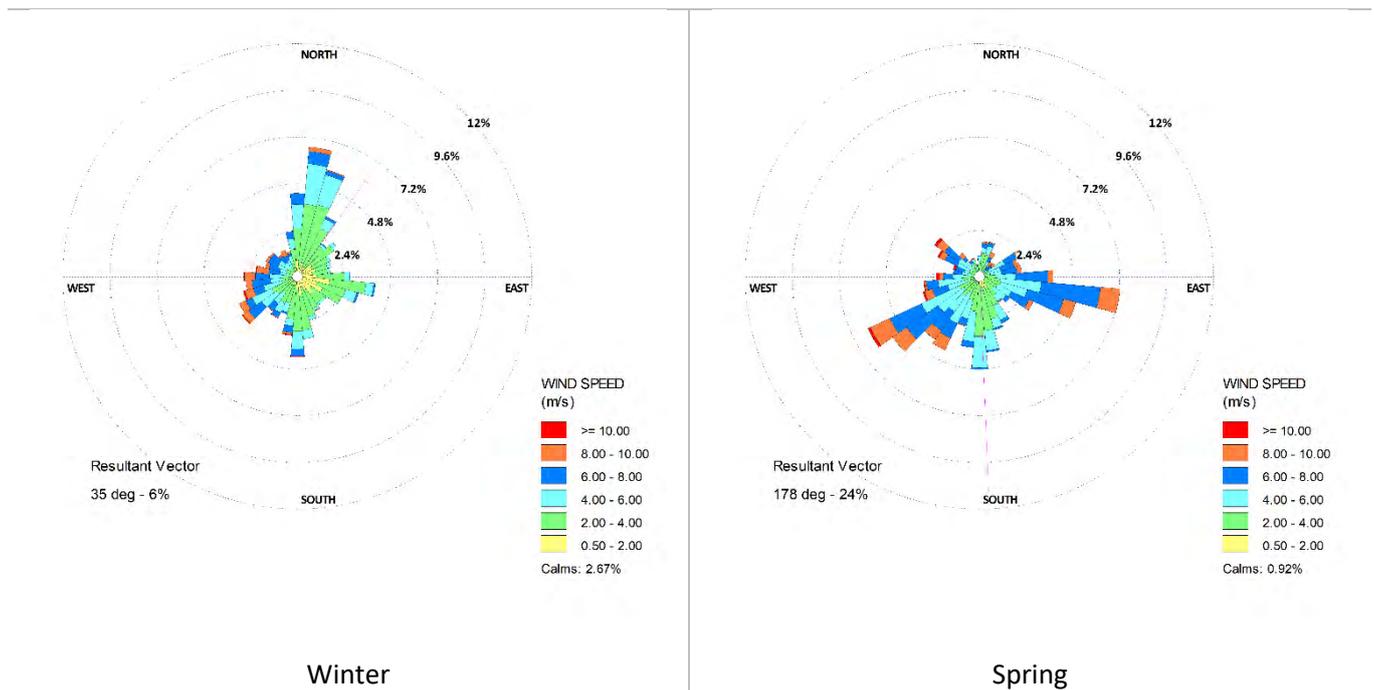
The EMAQ+ guidance defines numerous recognised odour abatement measures of which are used either in isolation or a combination thereof. The abatement measures range from dilution, HEPA and Carbon Filters, electrostatic precipitators (ESP) to remove particles (typically used for solid fuel cooking applications), odour counteractants and ozone treatment technologies.

Given the Restaurants are a ‘greasy’ aerosol emission source, the use of ozone is likely to be the most applicable technology if the need arose. Additionally, an increase in stack emission height(s) together with an increase in exit velocity would also reduce the Significance Score to less than 20 where odour abatement may only be required at a low level, which would remove any need for carbon, ESP or ozone etc.

Moreover, cooking equipment (fryers and grilles) generally have fume extraction canopies, made of stainless steel, with removable and cleanable grease filters. These grease filters ‘trap’ the large grease aerosols/particles to a level where grease accumulation inside the extraction ductwork and stack discharge is minimised leaving only fine aerosol to carry throughout the system and discharge. This is a form of odour mitigation when coupled with regular cleaning and changeout of fryer oils where modern fryer oils have high smoke points and are typically a cleaner oil grade with low residual odours.

The Hammond Park locality annual meteorological trend has a south-east wind vector (i.e., average direction and speed vector), with typical prevailing easterly winds in the AM and south to south-westerly winds in the PM. These winds are of course reliant on annual seasonal trends of which are illustrated below.





In summer the winds have a prevailing vector from the south, south-west; in autumn the vector prevails from the south-east; in winter the vector prevails from the north-east and spring the vector prevails from the south.

Based on these prevailing vectors the stronger wind speeds occur in summer and spring from the east and south-west, have prominent wind speeds from the east in autumn, and typically lower wind speeds in winter (ignoring storm events).

Given the location of sensitive receptors are to the north, east and south within a 250 metre radius from the central activities within the Site, the occurrence of seasonal winds impacting these receptors would be only during winter and spring, with the stronger summer winds readily dispersing odours, and within autumn the early periods of autumn would also have a strong influence on dispersion of odours with lower wind speeds toward the end of autumn and into the winter period.

Given the seasonal wind conditions which bode well for the surrounding sensitive receptors, the modern equipment and practices adopted within the Restaurants, the Significance Score for the Restaurants, which can easily be reduced to a low-to-medium impact risk rating, and the readily available odour mitigation technologies in the event that residual stack odours are observable, the risk of malodour impacts from these Restaurants is low based on an unlikely occurrence of malodours impacting at the nearest sensitive receptor.



## **Appendix A: Vapour Emissions Calculations**

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Bowser		Number of Dispensing Nozzles	8	hour	% daily sales	% to peak hr	# cars/peak hour	Petrol Throughput (L/hr)	L/s	g/s	Final g/s	FINAL Per Bowser	Emission Source	NPI 1999	CAPCOA	CAPCOA
+VR2		Peak Hourly Volume at Bowsers (transactions x Litres per car)	3,840	1	1.2%	19.5%	19	749	0.208	0.401	0.401	0.100		mg/L throughput	Lbs/1000 Gallons throughput	mg/L throughput
		CAPCOA (Lbs/1000gallons to mg/L)	1,927 mg/L	2	0.8%	13.0%	13	500	0.139	0.267	0.267	0.067	<b>Underground Tank Filling</b>			
		CAPCOA (Lbs/1000gallons to g/L)	1.927 g/L	3	0.6%	9.8%	10	375	0.104	0.201	0.201	0.050	Submerged Filling	880	8.4	1007
		Losses (g/L)	1.927 g/L/hr	4	0.8%	13.0%	13	500	0.139	0.267	0.267	0.067	Splash Filling	1380		
		VR2 (10-15% Losses) (g/L)	1.927 g/L/hr	5	1.9%	30.9%	30	1,186	0.330	0.635	0.635	0.159	Submerged filling with vapour balance	40	0.42	50
		<b>ESTIMATED TOTAL DAILY (24hr) VOLUME (L)</b>	<b>62,439</b>	6	4.6%	74.8%	72	2,872	0.798	1.537	1.537	0.384	Underground tank breathing losses	120	0.84	101
		E10 Volatilisation	1.5	7	5.5%	89.4%	86	3,434	0.954	1.838	1.838	0.460	<b>Vehicle Refuelling</b>			
		E10 % of T-Volumes	0%	8	5.7%	92.7%	89	3,559	0.989	1.905	1.905	0.476	Displacement Losses (uncontrolled)	1320	8.4	1007
		E10 Fuel Ratio Factor	0	9	5.5%	89.4%	86	3,434	0.954	1.838	1.838	0.460	Displacement Losses (90% controlled e.g VRU 2)	132	0.74	89
		% of Other Fuels	100%	10	5.7%	92.7%	89	3,559	0.989	1.905	1.905	0.476	<b>Spillages</b>			
		<b>Fuel Ratio Factor</b>	<b>1.000</b>	11	6.0%	97.6%	94	3,746	1.041	2.005	2.005	0.501	Uncontrolled	80	0.61	73
		Total Storage Tank Volumes	180,000 L	12	6.0%	97.6%	94	3,746	1.041	2.005	2.005	0.501	Controlled		0.41	49
<b>Storage Tanks</b>	<b>+VR 1</b>	NPI 1999	170 mg/L	13	5.7%	92.7%	89	3,559	0.989	1.905	1.905	0.476	<b>"Whoosh" Emissions</b>		0.26 - 0.66	79
			30658845.6 mg/hr	14	5.6%	91.1%	88	3,497	0.971	1.871	1.871	0.468	<b>"Whoosh" Emissions (averaged)</b>		0.46	79
			30658.846 g/hr	15	5.9%	95.9%	93	3,684	1.023	1.972	1.972	0.493				
			8.516 g/s	16	6.2%	100.0%	96	3,840	1.067	2.055	2.055	0.514				
		<b>4.5m High Vent Rate</b>	<b>0.00393 m3/s</b>	17	6.2%	100.0%	96	3,840	1.067	2.055	2.055	0.514				
		VR1 10% losses	0.852 g/s	18	5.8%	94.3%	91	3,621	1.006	1.938	1.938	0.485				
		<b>Final VR1 Value (per Vent)</b>	<b>0.852 g/s</b>	19	5.1%	82.9%	80	3,184	0.885	1.704	1.704	0.426				
		Annually	26860555.28 grams	20	4.0%	65.0%	63	2,498	0.694	1.337	1.337	0.334				
			26860.55528 kgs	21	3.5%	56.9%	55	2,185	0.607	1.170	1.170	0.292				
			73.59056242 kgs/day	22	3.4%	55.3%	54	2,123	0.590	1.136	1.136	0.284				
		Deliveries weekly	7.445 kgs	23	2.6%	42.3%	41	1,623	0.451	0.869	0.869	0.217				
		Per delivery	3.066 kg/hr	24	1.8%	29.3%	29	1,124	0.312	0.602	0.602	0.150				
					100.0%		1,570	<b>62,439</b>	<b>Max</b>	2.055	0.514					
		<b>Cars per Peak Hour</b>	<b>96</b>													
		<b>L per car on average</b>	<b>40</b>													
		Peak Volumes Dispensed	3840													
		<b>Average # Cars/hour Daily (7 days)</b>	<b>66</b>													
		Cars Daily	1570													
		Maximum Tanker Delivery Volume (kL)	180													
		Types of Fuel														
		Fuel Storage (kL)	Diesel	50												
			ULP 91	30												
			ULP 95	30												
			ULP 98	70												
		<b>Bulk Deliveries per Week</b>	<b>2.43</b>	<b>3</b>												
		Annual Sales	22,790,244													



## **Appendix B: Meteorological Development & Representative Year**

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# 1 Meteorology

The nearest BoM AWS(s) to the Hammond Park Locality is Jandakot ([Station 009172](#)).

Meteorological (met) trends at both of these stations would represent sea-breeze (Garden Island) and in general land-breeze effects (Jandakot).

The BoM AWS(s) do not adequately provide all the necessary met parameters to enable a 3-dimensional analysis of the locality’s met trends.

Additionally, the BoM AWS(s) may not wholly represent weather patterns within the modelling domain location of the Site.

To derive additional parameters required to develop a 3-dimensional met dataset, and also to account for any variability in met parameters between the Site and nearest BoM AWS(s), CSIRO’s The Air Pollution Model (TAPM) was utilised to develop a prognostic met file for the locality that was then further used to supplement the development of the final met dataset.

To determine which annual met period/s were the most representative of the locality, the Jandakot station was investigated for its most recent 5-year met trends (2019-2023).

## 1.1 Representative Meteorological Period

When undertaking dispersion modelling of air pollutants, the wind vector (speed and direction) is critical in determining the magnitude of the ground level impacts downwind of an emission source(s).

Temperature is also important within dispersion modelling for understanding vertical mixing layers and inversion layers within the domain assessed by the dispersion model, whilst rainfall has importance with regard to dust deposition rates, and empirically when determining odour impacts at ground level.

Five years of the latest annual data is sourced from the nearest, or multiple, BoM AWS(s). Any erroneous data and blank data cells are filtered and removed to ascertain the percentage of useful data recovery for each annual period. The data is arranged into annual observations and the primary *vector* of wind is sorted into “bins” of wind speed and direction, for example:

2023		CHECK #	8760			
WD↓ WS→	0	2	4	6	>6	TOTAL
0	0	0	0	0	0	0
90	0	308	649	468	355	1780
180	0	578	1136	818	847	3379
270	0	197	696	816	995	2704
360	0	110	267	237	283	897
TOTAL	0	1193	2748	2339	2480	8760

Each of the individual five years was compared to the corresponding five year trends for wind direction and speed, and a statistical analysis using the *chi-squared* relationship (goodness-of-fit) was undertaken.

The *chi-squared* value is a single number that shows how much difference exists between observed counts and the counts expected if there were no relationship at all in the population.

For determining the representative met year, each of the annual periods of grouped wind speed and direction are compared to the averaged dataset of all five years of grouped wind speed and direction. A **low value** for *chi-squared* means there is a high correlation between two sets of data. In theory, if the observed and expected values were equal (“no difference”) then chi-square would be zero — an event that is unlikely to happen in real life.

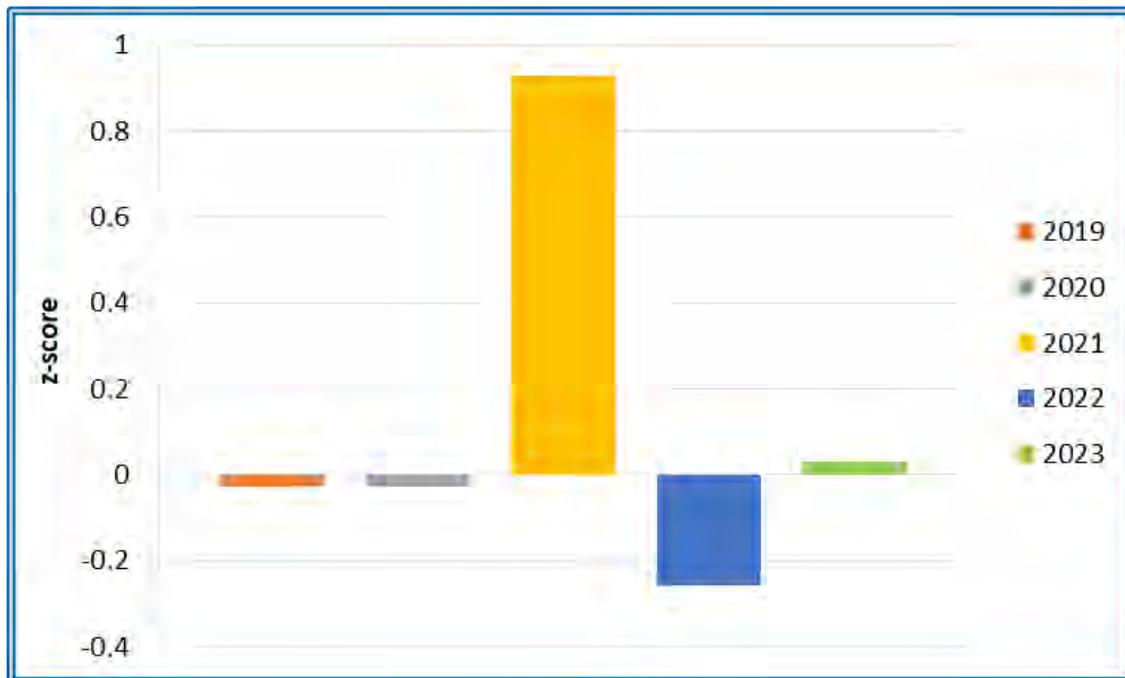
Comparing the annual periods of 2019 – 2023 inclusive for the Jandakot BoM AWS and deriving the representative year based on the **vector of wind**, the representative year derived using the *chi-squared* relationship was as follows:

**BoM AWS *chi-squared* Outcomes**

Annual Period	Jandakot AERO <i>chi-squared</i>
2019	98.5
2020	39.7
2021	43.4
2022	62.2
<b>2023</b>	<b>36.0</b>

The 2023 annual period was found to be the best-fit for long term meteorological trends.

To further clarify the use of the 2023 annual period as the representative year the Mann-Whitney U-Test was used to compare the **scalar values** of temperature where monthly temperatures (hourly averaged) were again sorted into “bins” and the monthly trends compared using the U-Test. The U-Test results are illustrated in **Figure 1**.



**Figure 1: Mann Whitney U-Test for Monthly Average Temperature Jandakot (009172) BoM AWS: 2023, 2020, 2019, 2022 and 2021.**

Considering the *chi-squared* results were in agreement with the Mann-Whitney U-Test, the use of the 2023 annual period was chosen accordingly.

The TAPM model was then ran for the 2023 annual periods and all missing data from the surface observations were interpolated for small gaps, and gap filled using TAPM for larger data gaps.

## 2 Meteorological Configuration

The TAPM (v4.0.4) model produces a 3D data tile representative of surface and upper air met characteristics with the following setup:

- 41 grid points (nx, ny);
- Five nests with the outer grid spacing (dx1, dy1) of 30 kms and subsequent nests approximately 1/3<sup>rd</sup> of the preceding nest (30, 10, 3, and 1.0 km); and
- 25 vertical grid levels.

The innermost nest (1.0 km spacing) was extracted as a 3D tile for each annual met period.

## 3 Meteorological Characteristics

### 3.1 Temperature

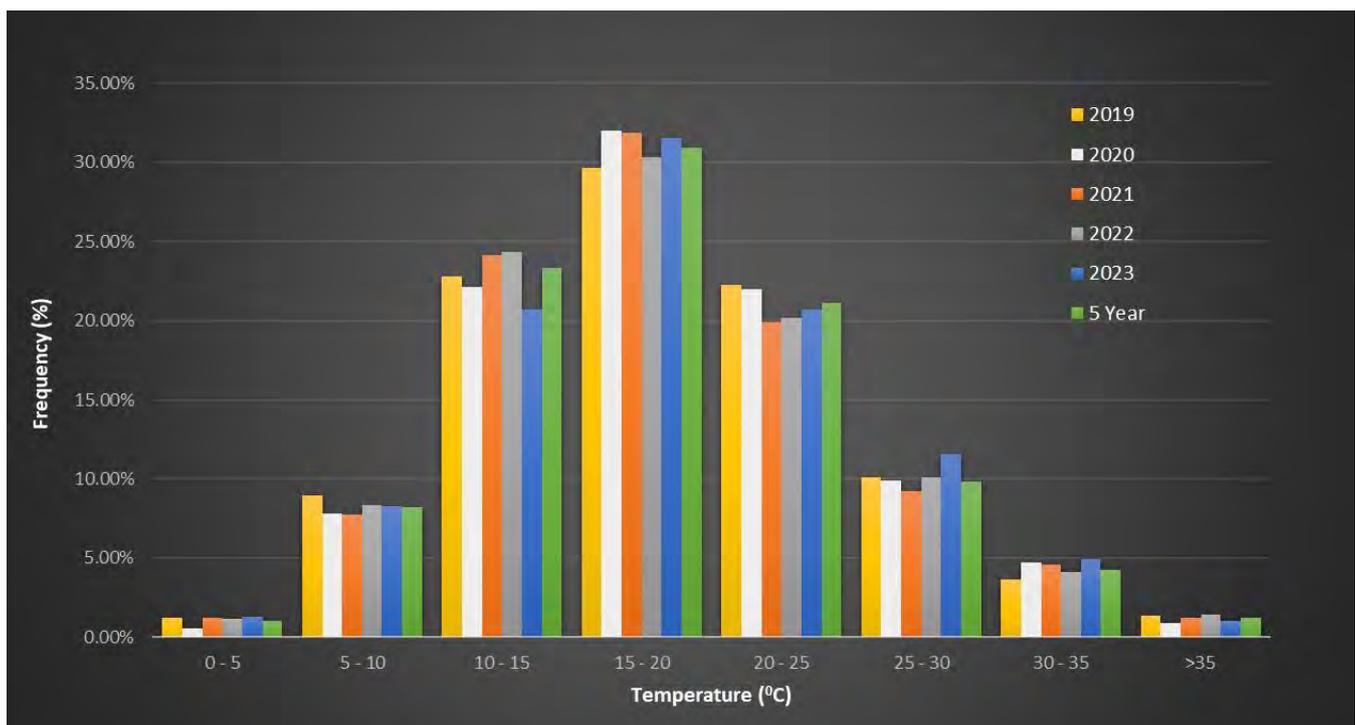
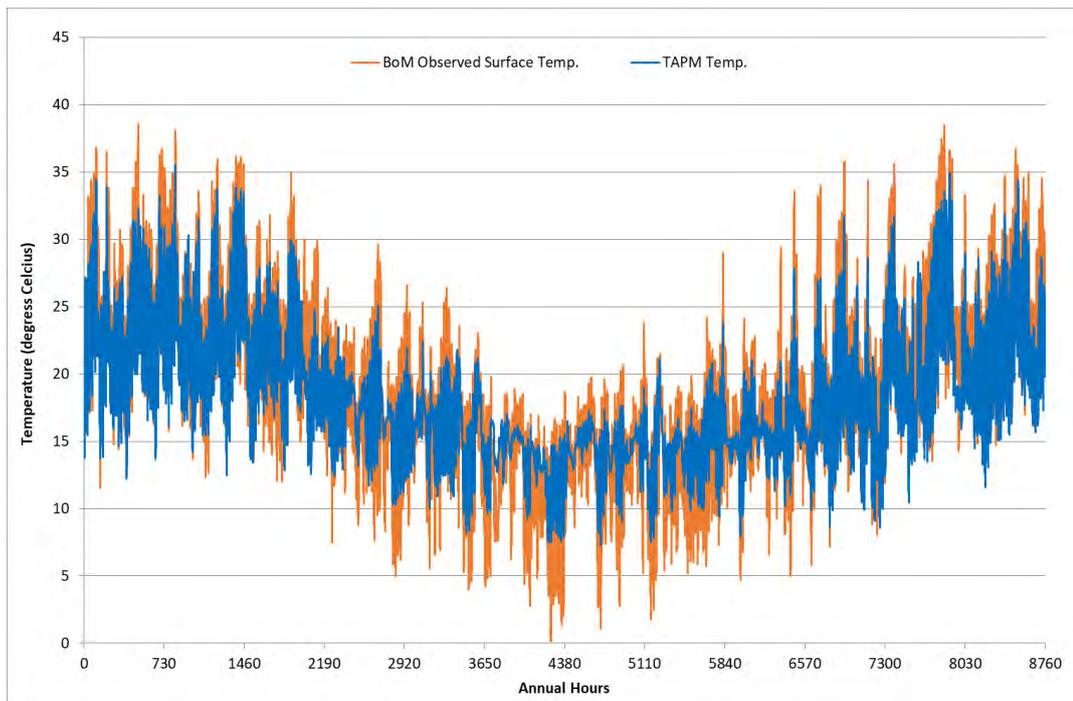


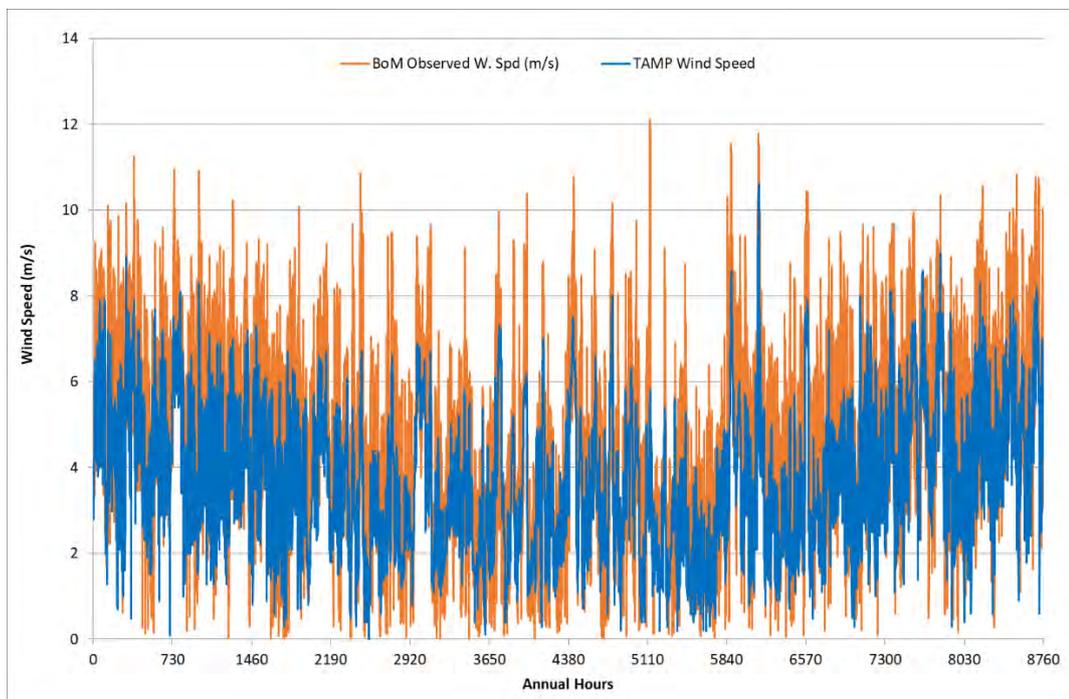
Figure 2: Annual Temperature Frequency Trends against the 5-Year Trend



**Figure 3: 2023 Observed Temperatures (Jandakot BoM AWS) versus TAPM Prognostic 2023**

Figure 3 shows that TAPM temperatures representative of Layer-1 (i.e., at 10 metres) tend to under-predict the higher temperatures and to a lesser extent over-predict the lower temperatures (in particular in the cooler seasons) when compared to surface observations at 10 metres from the Jandakot BoM AWS. As a result, the observed temperatures from Jandakot were used in the modelling.

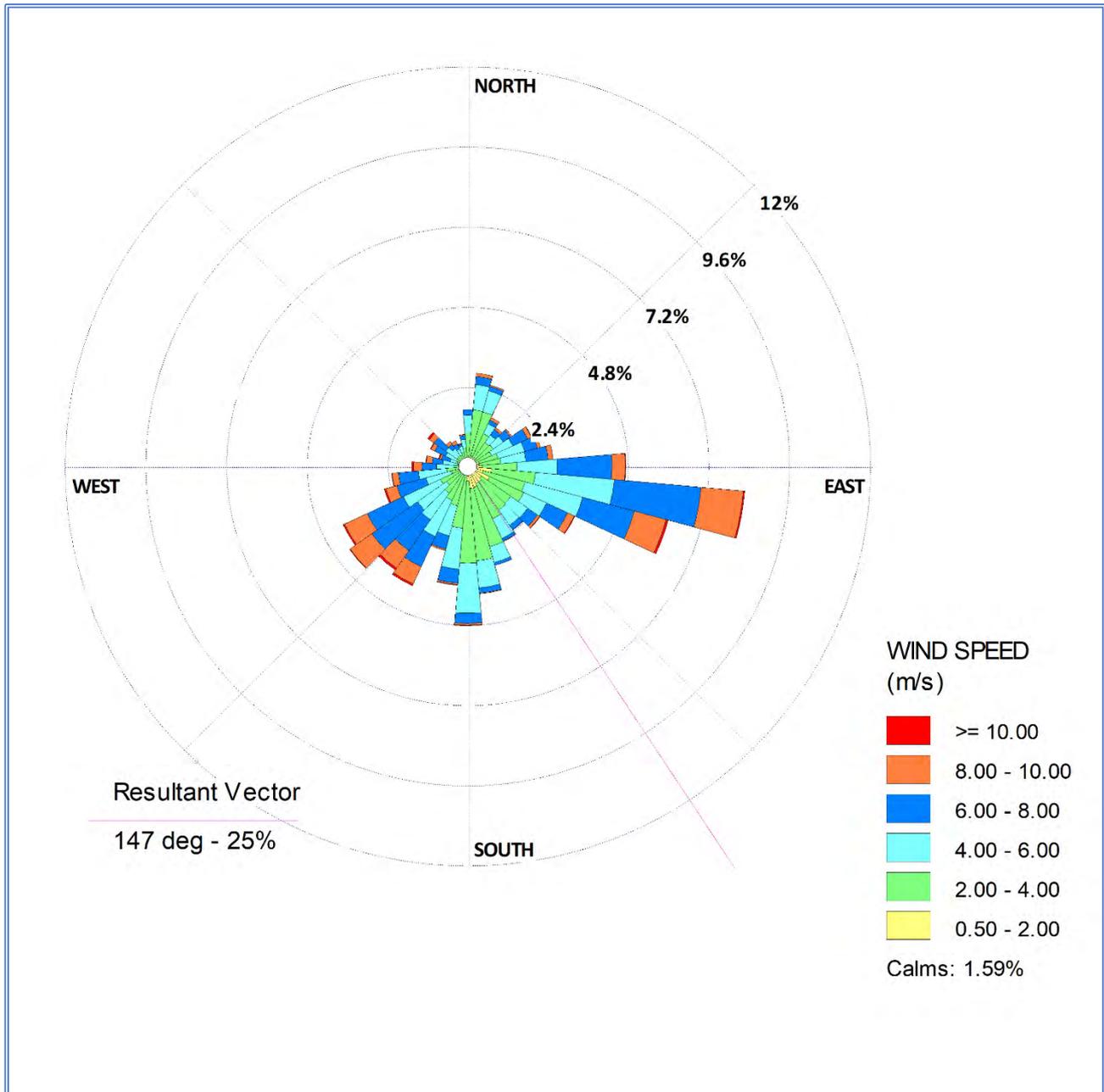
### 3.2 Wind Speed



**Figure 4: 2023 Observed Wind Speed (Jandakot BoM AWS) versus TAPM Prognostic 2023**

Figure 4 also illustrates that TAPM tends to under-estimate higher wind speeds, with good correlation to lower wind speeds. Again, the observed winds from Jandakot were used in the modelling.

The resultant wind rose of wind speed versus direction for the locality, taken from the Jandakot 2023 BoM AWS observations is illustrated in **Figure 5**, with a resultant wind vector from the south, south-east.



**Figure 5: 2023 Observed Wind Speed & Direction Characteristics (Jandakot BoM AWS)**



## Appendix C: AERMOD Input File

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1  **
2  *****
3  **
4  ** AERMOD Input Produced by:
5  ** AERMOD View Ver. 12.0.0
6  ** Lakes Environmental Software Inc.
7  ** Date: 26/03/2024
8  ** File: D:\MyAERMOD\24012\24012.inp
9  **
10 *****
11 **
12 **
13 *****
14 ** AERMOD Control Pathway
15 *****
16 **
17 **
18 CO STARTING
19   TITLEONE D:\MyAERMOD\22025\22025\22025.isc
20   MODELOPT CONC
21   AVERTIME 1 24 ANNUAL
22   POLLUTID VOC
23   RUNORNOT RUN
24   ERRORFIL 23016.ERR
25 CO FINISHED
26 **
27 *****
28 ** AERMOD Source Pathway
29 *****
30 **
31 **
32 SO STARTING
33 ** Source Location **
34 ** Source ID - Type - X Coord. - Y Coord. **
35   LOCATION BOWS1          VOLUME      390886.028   6440238.321       26.080
36 ** DESCRSRC Bowser 1
37   LOCATION BOWS2          VOLUME      390894.361   6440238.260       25.800
38 ** DESCRSRC Bowser 2
39   LOCATION BOWS3          VOLUME      390902.692   6440238.323       25.430
40 ** DESCRSRC Bowser 3
41   LOCATION BOWS4          VOLUME      390910.960   6440238.419       24.880
42 ** DESCRSRC Bowser 4
43   LOCATION STCK0          POINTCAP    390874.005   6440231.656       26.260
44 ** DESCRSRC Tank Breather
45   LOCATION STCK1          POINTCAP    390874.005   6440231.752       26.260
46 ** DESCRSRC Tank Breather
47   LOCATION STCK2          POINTCAP    390874.001   6440231.852       26.260
48 ** DESCRSRC Tank Breather
49   LOCATION STCK3          POINTCAP    390874.005   6440231.952       26.260
50 ** DESCRSRC Tank Breather
51   LOCATION STCK4          POINTCAP    390874.005   6440232.052       26.270
52 ** DESCRSRC Tank Breather
53   LOCATION STCK5          POINTCAP    390874.005   6440232.152       26.270
54 ** DESCRSRC Tank Breather
55 ** Source Parameters **
56   SRCPARAM BOWS1          1.0         1.000         1.395         2.233
57   SRCPARAM BOWS2          1.0         1.000         1.395         2.233
58   SRCPARAM BOWS3          1.0         1.000         1.395         2.233
59   SRCPARAM BOWS4          1.0         1.000         1.395         2.233
60   SRCPARAM STCK0          1.0         4.500         0.000         0.5           0.1
61   SRCPARAM STCK1          0.0         4.500         0.000         0.5           0.1
62   SRCPARAM STCK2          0.0         4.500         0.000         0.5           0.1
63   SRCPARAM STCK3          0.0         4.500         0.000         0.5           0.1
64   SRCPARAM STCK4          0.0         4.500         0.000         0.5           0.1
65   SRCPARAM STCK5          0.0         4.500         0.000         0.5           0.1
66
67 ** Building Downwash **
68   BUILDHGT STCK0          0.00        0.00         0.00         0.00         0.00         0.00
69   BUILDHGT STCK0          0.00        0.00         0.00         0.00         0.00         0.00
70   BUILDHGT STCK0          0.00        0.00         0.00         0.00         0.00         0.00
71   BUILDHGT STCK0          0.00        0.00         0.00         0.00         0.00         0.00
72   BUILDHGT STCK0          0.00        0.00         0.00         0.00         0.00         0.00
73   BUILDHGT STCK0          0.00        0.00         0.00         0.00         0.00         0.00

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74								
75	BUILDHGT	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
76	BUILDHGT	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
77	BUILDHGT	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
78	BUILDHGT	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
79	BUILDHGT	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
80	BUILDHGT	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
81								
82	BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
83	BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
84	BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
85	BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
86	BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
87	BUILDHGT	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
88								
89	BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
90	BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
91	BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
92	BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
93	BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
94	BUILDHGT	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
95								
96	BUILDHGT	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
97	BUILDHGT	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
98	BUILDHGT	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
99	BUILDHGT	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
100	BUILDHGT	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
101	BUILDHGT	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
102								
103	BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
104	BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
105	BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
106	BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
107	BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
108	BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
109								
110	BUILDWID	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
111	BUILDWID	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
112	BUILDWID	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
113	BUILDWID	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
114	BUILDWID	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
115	BUILDWID	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
116								
117	BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
118	BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
119	BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
120	BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
121	BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
122	BUILDWID	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
123								
124	BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
125	BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
126	BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
127	BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
128	BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
129	BUILDWID	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
130								
131	BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
132	BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
133	BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
134	BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
135	BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
136	BUILDWID	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
137								
138	BUILDWID	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
139	BUILDWID	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
140	BUILDWID	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
141	BUILDWID	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
142	BUILDWID	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
143	BUILDWID	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
144								
145	BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
146	BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00

147	BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
148	BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
149	BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
150	BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
151								
152	BUILDLLEN	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
153	BUILDLLEN	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
154	BUILDLLEN	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
155	BUILDLLEN	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
156	BUILDLLEN	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
157	BUILDLLEN	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
158								
159	BUILDLLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
160	BUILDLLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
161	BUILDLLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
162	BUILDLLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
163	BUILDLLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
164	BUILDLLEN	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
165								
166	BUILDLLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
167	BUILDLLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
168	BUILDLLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
169	BUILDLLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
170	BUILDLLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
171	BUILDLLEN	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
172								
173	BUILDLLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
174	BUILDLLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
175	BUILDLLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
176	BUILDLLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
177	BUILDLLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
178	BUILDLLEN	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
179								
180	BUILDLLEN	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
181	BUILDLLEN	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
182	BUILDLLEN	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
183	BUILDLLEN	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
184	BUILDLLEN	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
185	BUILDLLEN	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
186								
187	BUILDLLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
188	BUILDLLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
189	BUILDLLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
190	BUILDLLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
191	BUILDLLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
192	BUILDLLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
193								
194	XBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
195	XBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
196	XBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
197	XBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
198	XBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
199	XBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
200								
201	XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
202	XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
203	XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
204	XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
205	XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
206	XBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
207								
208	XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
209	XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
210	XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
211	XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
212	XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
213	XBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
214								
215	XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
216	XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
217	XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
218	XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
219	XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00

220	XBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
221								
222	XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
223	XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
224	XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
225	XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
226	XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
227	XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
228								
229	XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
230	XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
231	XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
232	XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
233	XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
234	XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
235								
236	YBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
237	YBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
238	YBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
239	YBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
240	YBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
241	YBADJ	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
242								
243	YBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
244	YBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
245	YBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
246	YBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
247	YBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
248	YBADJ	STCK1	0.00	0.00	0.00	0.00	0.00	0.00
249								
250	YBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
251	YBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
252	YBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
253	YBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
254	YBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
255	YBADJ	STCK2	0.00	0.00	0.00	0.00	0.00	0.00
256								
257	YBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
258	YBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
259	YBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
260	YBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
261	YBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
262	YBADJ	STCK3	0.00	0.00	0.00	0.00	0.00	0.00
263								
264	YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
265	YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
266	YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
267	YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
268	YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
269	YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
270								
271	YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
272	YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
273	YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
274	YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
275	YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
276	YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
277								

\*\* Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"

\*\* Variable Emission Scenario: "Vent (1)"

281	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.852	0.0	0.0
282	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.852	0.0	0.0	0.0	0.0	0.852
283	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
284	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.852	0.0	
285	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.0	0.852	0.0	0.0	0.0	0.0
286	EMISFACT	STCK0	HRDOW7	0.852	0.0	0.0	0.0	0.0	0.0	0.0	0.0
287	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.852
288	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.0	0.0	0.852	0.0	0.0	0.0
289	EMISFACT	STCK0	HRDOW7	0.0	0.852	0.0	0.0	0.0	0.0	0.0	0.0
290	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
291	EMISFACT	STCK0	HRDOW7	0.852	0.0	0.0	0.0	0.0	0.852	0.0	0.0
292	EMISFACT	STCK0	HRDOW7	0.0	0.0	0.852	0.0	0.0	0.0	0.0	0.0



366	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.852	0.0	0.0	0.0	0.0	0.852
367	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
368	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.852	0.0
369	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.852	0.0	0.0	0.0	0.0
370	EMISFACT	STCK4	HRDOW7	0.852	0.0	0.0	0.0	0.0	0.0	0.0	0.0
371	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.852
372	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.852	0.0	0.0	0.0
373	EMISFACT	STCK4	HRDOW7	0.0	0.852	0.0	0.0	0.0	0.0	0.0	0.0
374	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
375	EMISFACT	STCK4	HRDOW7	0.852	0.0	0.0	0.0	0.0	0.852	0.0	0.0
376	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.852	0.0	0.0	0.0	0.0	0.0
377	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
378	EMISFACT	STCK4	HRDOW7	0.0	0.852	0.0	0.0	0.0	0.0	0.852	0.0
379	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.852	0.0	0.0	0.0	0.0
380	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
381	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
382	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
383	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
384	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
385	EMISFACT	STCK4	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
386	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.852	0.0	0.0
387	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.852	0.0	0.0	0.0	0.0	0.852
388	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
389	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.852	0.0
390	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.852	0.0	0.0	0.0	0.0
391	EMISFACT	STCK5	HRDOW7	0.852	0.0	0.0	0.0	0.0	0.0	0.0	0.0
392	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.852
393	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.852	0.0	0.0	0.0
394	EMISFACT	STCK5	HRDOW7	0.0	0.852	0.0	0.0	0.0	0.0	0.0	0.0
395	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
396	EMISFACT	STCK5	HRDOW7	0.852	0.0	0.0	0.0	0.0	0.852	0.0	0.0
397	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.852	0.0	0.0	0.0	0.0	0.0
398	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
399	EMISFACT	STCK5	HRDOW7	0.0	0.852	0.0	0.0	0.0	0.0	0.852	0.0
400	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.852	0.0	0.0	0.0	0.0
401	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
402	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
403	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
404	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
405	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
406	EMISFACT	STCK5	HRDOW7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

```

407
408 ** Variable Emissions Type: "By Hour-of-Day (HROFDY)"
409 ** Variable Emission Scenario: "Scenario 1 (4)"
410 EMISFACT BOWS1 HROFDY 0.1 0.067 0.05 0.067 0.159 0.384
411 EMISFACT BOWS1 HROFDY 0.46 0.476 0.46 0.476 0.501 0.501
412 EMISFACT BOWS1 HROFDY 0.476 0.468 0.493 0.514 0.514 0.485
413 EMISFACT BOWS1 HROFDY 0.426 0.334 0.292 0.284 0.217 0.15
414 EMISFACT BOWS2 HROFDY 0.1 0.067 0.05 0.067 0.159 0.384
415 EMISFACT BOWS2 HROFDY 0.46 0.476 0.46 0.476 0.501 0.501
416 EMISFACT BOWS2 HROFDY 0.476 0.468 0.493 0.514 0.514 0.485
417 EMISFACT BOWS2 HROFDY 0.426 0.334 0.292 0.284 0.217 0.15
418 EMISFACT BOWS3 HROFDY 0.1 0.067 0.05 0.067 0.159 0.384
419 EMISFACT BOWS3 HROFDY 0.46 0.476 0.46 0.476 0.501 0.501
420 EMISFACT BOWS3 HROFDY 0.476 0.468 0.493 0.514 0.514 0.485
421 EMISFACT BOWS3 HROFDY 0.426 0.334 0.292 0.284 0.217 0.15
422 EMISFACT BOWS4 HROFDY 0.1 0.067 0.05 0.067 0.159 0.384
423 EMISFACT BOWS4 HROFDY 0.46 0.476 0.46 0.476 0.501 0.501
424 EMISFACT BOWS4 HROFDY 0.476 0.468 0.493 0.514 0.514 0.485
425 EMISFACT BOWS4 HROFDY 0.426 0.334 0.292 0.284 0.217 0.15
426 SRCGROUP bowzers BOWS1 BOWS2 BOWS3 BOWS4
427 SRCGROUP vents STCK0 STCK1 STCK2 STCK3 STCK4 STCK5
428 SRCGROUP ALL
429 SO FINISHED
430 **
431 *****
432 ** AERMOD Receptor Pathway
433 *****
434 **
435 **
436 RE STARTING
437 INCLUDED 24012.rou
438 RE FINISHED

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439  **
440  ****
441  ** AERMOD Meteorology Pathway
442  ****
443  **
444  **
445  ME STARTING
446  ** Surface File Path: D:\MyAERMOD\24012\
447  SURFFILE 24012.SFC
448  ** Profile File Path: D:\MyAERMOD\24012\
449  PROFFILE 24012.PFL
450  SURFDATA 0 2023
451  UAIRDATA 0 2023
452  SITEDATA 9172 2023
453  PROFBASE 26.0 METERS
454  ME FINISHED
455  **
456  ****
457  ** AERMOD Output Pathway
458  ****
459  **
460  **
461  OU STARTING
462  RECTABLE ALLAVE 1ST
463  RECTABLE 1 1ST
464  RECTABLE 24 1ST
465  MAXTABLE 1 100
466  ** Auto-Generated Plotfiles
467  PLOTFILE 1 ALL 1ST D:\MyAERMOD\24012\24012.AD\01H1GALL.PLT 31
468  PLOTFILE 24 ALL 1ST D:\MyAERMOD\24012\24012.AD\24H1GALL.PLT 32
469  PLOTFILE 1 browsers 1ST D:\MyAERMOD\24012\24012.AD\01H1G001.PLT 33
470  PLOTFILE 24 browsers 1ST D:\MyAERMOD\24012\24012.AD\24H1G001.PLT 34
471  PLOTFILE 1 vents 1ST D:\MyAERMOD\24012\24012.AD\01H1G002.PLT 35
472  PLOTFILE 24 vents 1ST D:\MyAERMOD\24012\24012.AD\24H1G002.PLT 36
473  PLOTFILE ANNUAL ALL D:\MyAERMOD\24012\24012.AD\AN00GALL.PLT 37
474  PLOTFILE ANNUAL browsers D:\MyAERMOD\24012\24012.AD\AN00G001.PLT 38
475  PLOTFILE ANNUAL vents D:\MyAERMOD\24012\24012.AD\AN00G002.PLT 39
476  SUMMFILE D:\MyAERMOD\24012\23016.SUM
477  OU FINISHED
478  **
479  ****
480  ** Project Parameters
481  ****
482  ** PROJCTN CoordinateSystemUTM
483  ** DESCPTN UTM: Universal Transverse Mercator
484  ** DATUM World Geodetic System 1984
485  ** DTMRGN Global Definition
486  ** UNITS m
487  ** ZONE -50
488  ** ZONEINX 0
489  **
490

```

D:\MyAERMOD\22025\22025\22025.isc

BPIP (Dated: 04274)

DATE : 3/26/2024

TIME : 17: 7:36

D:\MyAERMOD\22025\22025\22025.isc

=====  
BPIP PROCESSING INFORMATION:  
=====

The P flag has been set for preparing downwash related data for a model run utilizing the PRIME algorithm.

Inputs entered in METERS will be converted to meters using a conversion factor of 1.0000. Output will be in meters.

The UTM variable is set to UTM. The input is assumed to be in UTM coordinates. BPIP will move the UTM origin to the first pair of UTM coordinates read. The UTM coordinates of the new origin will be subtracted from all the other UTM coordinates entered to form this new local coordinate system.

Plant north is set to 0.00 degrees with respect to True North.

D:\MyAERMOD\22025\22025\22025.isc

PRELIMINARY\* GEP STACK HEIGHT RESULTS TABLE  
(Output Units: meters)

Stack Name	Stack Height	Stack-Building Base Elevation Differences	GEP** EQN1	Preliminary* GEP Stack Height Value
STCK0	4.50	N/A	0.00	65.00
STCK1	4.50	N/A	0.00	65.00
STCK2	4.50	N/A	0.00	65.00
STCK3	4.50	N/A	0.00	65.00
STCK4	4.50	N/A	0.00	65.00
STCK5	4.50	N/A	0.00	65.00

\* Results are based on Determinants 1 & 2 on pages 1 & 2 of the GEP Technical Support Document. Determinant 3 may be investigated for additional stack height credit. Final values result after Determinant 3 has been taken into consideration.

\*\* Results were derived from Equation 1 on page 6 of GEP Technical Support Document. Values have been adjusted for any stack-building base elevation differences.

Note: Criteria for determining stack heights for modeling emission limitations for a source can be found in Table 3.1 of the GEP Technical Support Document.

BPIP (Dated: 04274)

DATE : 3/26/2024

TIME : 17: 7:36

D:\MyAERMOD\22025\22025\22025.isc

BPIP output is in meters

SO_BUILDHGT	STCK0	0.00	0.00	0.00	0.00	0.00	0.00
SO_BUILDHGT	STCK0	0.00	0.00	0.00	0.00	0.00	0.00





220	SO XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
221	SO XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
222	SO XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
223	SO XBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
224	SO YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
225	SO YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
226	SO YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
227	SO YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
228	SO YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
229	SO YBADJ	STCK4	0.00	0.00	0.00	0.00	0.00	0.00
230								
231								
232	SO BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
233	SO BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
234	SO BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
235	SO BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
236	SO BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
237	SO BUILDHGT	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
238	SO BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
239	SO BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
240	SO BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
241	SO BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
242	SO BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
243	SO BUILDWID	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
244	SO BUILDLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
245	SO BUILDLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
246	SO BUILDLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
247	SO BUILDLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
248	SO BUILDLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
249	SO BUILDLEN	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
250	SO XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
251	SO XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
252	SO XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
253	SO XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
254	SO XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
255	SO XBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
256	SO YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
257	SO YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
258	SO YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
259	SO YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
260	SO YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
261	SO YBADJ	STCK5	0.00	0.00	0.00	0.00	0.00	0.00
262								

**Attachment 3**

Letter from Oversby Consulting on LWMS



Our Ref: B21022  
Contact: Brendan Oversby

19<sup>th</sup> March 2024

Acting Coordinator Development Services City of Cockburn  
PO Box 1215  
Bibra Lake DC WA 6965

**Attention Chantala Hill**

Dear Chantala

**Lot 41 Gaebler Road, Hammond Park – Response to relevant water management submissions on the DAP23/004**

Oversby Consulting provides the following summary on the items raised by the Department of Water and Environmental Regulation (DWER) to the Local Water Management Strategy (LWMS) that accompanied DAP23/004. The comments were contained in the letter from DWER to the City of Cockburn on the 28/02/2024, with their reference being DWERT1208, PA61310.

The comments relate specifically to the third item raised:

**Issue**

Better Urban Water Management

The table of comments provided by DWER that relates to this item is attached below, with our responses to each item seen in the far right column.

Should you have any queries with the provided responses, please contact me to discuss.

Yours sincerely

**Oversby Consulting Pty Ltd**

A handwritten signature in black ink, appearing to read 'Brendan Oversby', with a long horizontal flourish underneath.

**Brendan Oversby**  
**Director**

ATTACHMENTS

TABLE OF COMMENTS AND RESPONSES ON LOT 9501 GAEBLER ROAD HAMMOND PARK LWMS

Attachment 1 - Department of Water and Environmental Regulation - comments on the *Lot 9501 Gaebler Road, Hammond Park - Local Water Management Strategy*

Contact for further information: Mark Hingston – 9550 4209

	Date received	Comments Sent
Rev 1	17/1/2024	28/2/2024

No.	Page	Section	Rev 1 - DWER Comments	Rev 1 – Author’s Proposed Actions – 19/3/2024	Rev 2 - DWER Comments	Rev 2 - Author’s Actions
1			The local water management strategy (LWMS) is proposing a reduction to the recommended 50 metre buffer setback for conservation category wetlands (CCW). The LWMS should provide written evidence that the Department of Biodiversity, Conservation and Attractions supports the reduced buffer setback	Written evidence from DBCA can be added as an appendices to the LWMS on the final agreed setbacks. The letter response from PGV (19/3/2024) should be reviewed for the current situation with appropriate setbacks for the wetland.		
2	6	Section 4.4 - Groundwater	Table 7 – also provide the groundwater level as m AHD.	The levels in mAHD will be added		
3	13	Section 7.1 – Shallow Superficial Aquifer	Please confirm which ‘DWER groundwater mapping’ is being referred to. Text indicates maximum groundwater levels (MGL) range from 20 – 21 m AHD while Figure 8 indicates MGL of 18 – 19 m AHD across the site.	The mapping was taken from City’s GIS. Will add text on difference between observed levels from aerials and DWER broad mapping of levels. Will also add latest contours within DWER’S GW online mapping (Perth Groundwater Map) .		
4	17	Section 8.2 – 1 EY Management	Section should confirm that amended soil will be used at the biofiltration swales and that it will have a PRI of at least 10 and a minimum depth of 300 mm.	The text will be modified to confirm the biofiltration systems will use amended soils in line with FAWB guidelines plus have a PRI of at least 10 and minimum depth of 300mm.		

5	17	8.3 - Drainage Management Plan – 10%AEP	On a figure please provide the location of all proposed underground stormwater storage cells within the commercial development area.	Indicative locations will be added for each lot.		
6	17	Section 8.4 – Drainage Management Plan – 1% AEP	<p>Pre and Post development flows into the wetland area differ significantly. No information has been provided regarding the ecological significance of the current pre-development flows into the conservation category wetland or what impact reducing this flow may have on the wetland. In the absence of this environmental information, pre and post development flows into the wetland area should be comparable.</p> <p>It is unclear from information provided if stormwater infrastructure related to the 1% AEP overflow is proposed within the wetland buffer area. All stormwater management infrastructure is to be located outside of the CCW buffer and large events may overtop and overland flow into the wetland buffer.</p>	<p>The difference in flows is for the 1% AEP only, which is generally not significant for ecological processes. The main water source for the wetland is groundwater flow. As all events up to and including the 10% AEP are being completely infiltrated, which matches the current situation. Therefore there should be no significant impact from the change in flow in the 1% AEP. As part of detailed design, an increase in flow in the 1% AEP can be designed for, should this be deemed necessary.</p> <p>The only proposed stormwater infrastructure within the wetland buffer area would be a layer of erosion resistant material along the firebreak to help spread the discharge out into sheet flow prior to it contacting the retained vegetation. Additional clarification text to help clarify this will be provided in the updated LWMS.</p>		

7	19	Section 9.1 – Groundwater Level Management	<p>The LWMS should provide correspondence from the City of Cockburn indicating it supports directing subsoil discharge from the development into the existing street drainage.</p> <p>Should subsoil drainage be installed groundwater quality testing will be required. Treatment of subsoil discharge prior to directing to existing street drainage may be required.</p>	<p>The use of the existing drainage network for a subsoil discharge is deemed an effective way of managing groundwater rise. It is noted that there is already a trend to rising groundwater trends throughout the surrounding developed areas. As such, having a subsoil network will assist with managing groundwater levels both within the subject land and the surrounding existing street network. City input into this item is welcome</p> <p>Groundwater testing regimes can be included. The LWMS will be updated to include the need for pre and post water quality test so that any issues can be effectively managed.</p> <p>Options on possible treatment solutions will be included in the LWMS to provide direction for future detailed design.</p>		
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8	19	Section 9.4 - Monitoring	<p>Given the location of the CCW, that the MGL is relatively high and that a commercial development (including car wash and fuel station) is proposed, a groundwater quality monitoring program with contingency actions is recommended.</p> <p>Please provide details of a proposed monitoring program which should include preliminary trigger values for parameters, a contingency plan, location(s) of monitoring bores and a future monitoring regime.</p>	<p>A groundwater quality testing regime and contingency plan will be added to the LWMS.</p> <p>The monitoring regime will be outlined as well as trigger values and how items are to be rectified in case trigger values are exceeded.</p>		
9	24	Section 12.1 – Pre-development Groundwater	<p>Section indicates that groundwater level monitoring has been undertaken. Please provide the monitoring results within an appendix to the LWMS.</p> <p>Usually two onsite winter peaks are required to determine a reliable MGL for a site and to inform a LWMS. However, the applicant may correlate onsite monitoring with any nearby Departmental long-term monitoring bores to derive an onsite MGL</p>	<p>The LWMS will be updated to include text that refers back to Section 4.4 where the results are already included. The Geotech report, which included the groundwater monitoring will also be added as an appendix for more detailed referencing.</p> <p>As new bores are likely to be installed, these will be monitored to collect more level information. The LWMS will be updated to reflect this.</p>		
10		Appendix	<p>Provide typical cross-sections detailing the interface between the proposed development and the wetland buffer. One cross-section should illustrate the area proposed for stormwater runoff via overland flow and illustrate how erosion will be avoided. Also please provide conceptual cross-section designs for the proposed drainage infrastructure.</p> <p>Designs should include critical invert levels in m AHD, top water levels, use and depth of amended soil and maximum groundwater level.</p>	<p>Cross section designs will be included in the LWMS that detail the interface between the development and wetland buffer.</p> <p>Additional details will also be provided on internal stormwater infrastructure to show how the system works with the levels of the site while also managing discharge to the groundwater and wetland.</p>		

**Attachment 4**

Response to RNA Comments



# Build Plus Group

## NBT Objection Response

APRIL 2024

# 1 SUMMARY

The objections to the Retail Needs Assessment and Net Benefit Test by Aigle Royal have been reviewed and responded to below. Key points to note:

- A clear need for the proposed uses was identified
- Pracsys modelled turnover impact in line with State Planning Policy 4.2 (SPP4.2) guidelines and included all relevant activity centres and floorspace
- The impacts are based on appropriate assumptions and clearly show the proposed uses will not affect the viability of any activity centre in the catchment
- The Hammond Park Neighbourhood Centre Retail Impact Assessment excluded fast food floorspace stating it is not Shop Retail floorspace, so the objector has no objective means of determining the demand or stating the viability for these uses
- The Retail Needs Assessment and Net Benefit Test findings are corroborated by the Hammond Park Neighbourhood Centre Retail Impact Assessment, which identified a current gap of 22,900m<sup>2</sup> Shop Retail floorspace within a catchment smaller than that which Pracsys modelled. The HPNC analysis also identified the gap would increase to 32,000m<sup>2</sup> by 2030
- The Retail Needs Assessment and Net Benefit Test provide a robust evidence-base to demonstrate a net benefit for the shop retail uses at lot 9501 Gaebler Rd



Ref#	Comment	Response
1	<p><u>Contrary to strategy planning – out of centre development</u></p> <ul style="list-style-type: none"> <li>• Does not align with local planning</li> <li>• SPP4.2 only supports centres defined within a planned retail hierarchy</li> <li>• Do not recognise full growth potential of Hammond Park Neighbourhood Centre</li> <li>• Approval will duplicate the role of the Hammond Park centre and cannot be supported</li> </ul>	<p><u>Point 1:</u> New centres are not contrary to planning frameworks. New centres are required where there can be a demonstrated need. As stated in the report, The City of Cockburn Local Planning Scheme No.3 (LPS 3) defines these uses with more detailed categories; Service Station and Fast Food are identified as Transport and Entertainment uses respectively. These uses better reflect the intention of the proposed development and demonstrate that they are less likely to impact the Shop Retail network. They have been included to provide a conservatively high retail impact to inform the NB Test.</p> <p>The proposed development at Lot 9501 Gaebler Road, Hammond Park aligns with the South Sub-Regional Planning Framework ESS targets and SPP4.2 policy outcomes by providing local employment opportunities in the listed industries. The subject site’s proposed service station, fast food and medical centre uses are generally considered population-driven industries that attract local workers. The proposed medical centre and retail uses will support approximately 65 Full Time Equivalent (FTE) jobs, directly contributing to growth in ESS. The development fills a spatial and land use market gap thereby increasing the efficient and equitable access to goods and services.</p> <p><u>Point 2:</u> SPP4.2 has a presumption against activity centre uses outside of activity centres, requiring a Net Benefit Test (NB Test) to be undertaken for out-of-centre developments before they can be approved. The SPP4.2 identifies criteria where an out-of-centre development may be appropriate, including:</p> <ul style="list-style-type: none"> <li>• Sufficiently separated from nearby activity centres to minimise negative impacts to those activity centres (as demonstrated through the NB Test)</li> <li>• In proximity to existing housing at an average dwelling density of at least 25 dwellings per gross Urban Zone (Region Schemes) hectare within a 400m walkable catchment of the development</li> </ul>



Ref#	Comment	Response
		<ul style="list-style-type: none"> <li>• Accessible to its catchment community by walking and cycling, minimising the need for additional private vehicle trips</li> </ul> <p>The proposed development has been shown to be sufficiently far from surrounding centres to have only insignificant impacts. It is in proximity to existing and future housing, and it reduces vehicle trips by being close to a Primary School and along a future high vehicle route.</p> <p><u>Point 3:</u> As reported, Pracsys has included Hammond Park Neighbourhood Centre (HPNC) at 5,485m<sup>2</sup> NLA in 2026 and 6,670m<sup>2</sup> NLA in 2031, which is based on the staging proposed for HPNC and is conservatively high as the GLA numbers were included as NLA. We have accounted for the full development potential of the Centre. The Impact Test conducted to support the HPNC specifically excludes fast food from its analysis and states that it is not Shop Retail floorspace (See Figure 1 below table).</p> <p><u>Point 4:</u> The HPNC only recently sought approval to expand from a planned local centre with a maximum 1,451m<sup>2</sup> by 2026, to a neighbourhood centre of approximately 6,000m<sup>2</sup>, stating there is a significant current gap in the catchment. The location was not where the original local centre was identified making it similarly an out-of-centre development that would duplicate current uses in other activity centres. The Impact Test for the HPNC identified significant impacts on surrounding centres but stated that these would be offset by market growth (see Figure 3 below table). It indicates that all impacts would be mitigated within 2 – 3 years, this is consistent with the findings of the Pracsys analysis that there is significant forecast growth in expenditure.</p> <p>The proposed at Lot 9501 Gaebler Rd can be supported based on the needs assessment and will have an insignificant effect on the HPNC.</p>



Ref#	Comment	Response
2	<p><u>Retail impact – justification</u></p> <p>Key Issues: a) Trade area arbitrary and too large</p>	<p>The NB Test uses gravity modelling which provides an objective means of measuring the need for and impact of proposed Shop Retail uses. WAPC has accepted this as a suitable method for measuring the impact of a development and it has been used extensively by Pracsys and other consultants to support Local Government planning frameworks across the metropolitan area. In the Southern Metropolitan area alone, Pracsys developed the Local Commercial and Activity Centres Strategy for the City of Cockburn, City of Kwinana and a Needs Assessment using Gravity Modelling to inform the City of Rockingham Local Commercial Strategy.</p> <p>The gravity model provides probabilistic distribution of expenditure that considers the size of floorspace and the distance from where people live to a given centre. This means that the centres most proximate to Lot 9501 Gaebler Road will see the greatest impact. The model is based on extensive research into consumer behaviour (academic research that Pracsys applies) and is used for spatial planning purposes across multiple sectors including transport, education, social services, etc.</p> <p>The catchment was selected to account for competing centres as required by SPP4.2. It ensures that all relevant centres are included, this is particularly important given the projected levels of traffic along Hammond Rd that will see the proposed development have access to passing traffic that may otherwise visit activity centres such as the planned Hammond Road centre which is approximately 4km to the north. Most importantly, the gravity model ensures that the turnover captured from other centres reflects consumer behaviour, with the closest centres having the greatest impacts.</p>
3	<p><u>Retail impact – justification</u></p> <p>Key Issues: b) Turnover productivity is too low</p>	<p>As referenced in our report, the turnover productivity level is based on Colliers benchmarks for dine-out food. The benchmark estimates were escalated to current dollars to ensure they reflected turnover productivities at the time of analysis.</p>



Ref#	Comment	Response
4	<p><u>Retail impact – justification</u></p> <p>Key Issues: c) Impacts are too spread out</p>	<p>As per response 2, gravity modelling provides an objective measure of impact that applies the greatest impacts on the nearest centres. SPP4.2 guidelines require impacts be assessed at an activity centre level using Shop Retail floorspace. The catchment has been made sufficiently large to consider, within reason, all centres that may be affected.</p>
5	<p><u>Retail impact – justification</u></p> <p>Key Issues: d) Impacts applied to future centres</p>	<p>SPP4.2 requires consideration of impact on current and planned centres. We included all planned centres and expansions as required to ensure the proposed uses would not impact on their viability. These centres need to be considered whether they are built before the proposed development or afterward.</p> <p>Reducing the number of future centres would further justify the proposed uses as there would be more unmet demand in the catchment.</p>
6	<p><u>Retail impact – justification</u></p> <p>Key Issues: e)</p> <ul style="list-style-type: none"> <li>• No analysis of demand for proposed uses or supply</li> <li>• No recognition of similar uses 750m from the proposed centre</li> </ul>	<p>SPP4.2 states that a net benefit test should be developed using Shop Retail floorspace (PLUC code 5), which includes takeaway and convenience (i.e. service station) uses.</p> <p>SPP4.2 also states that impact should be measured at an activity centre level, not based on specific operators.</p> <p>The proposed fast food uses at lot 5901 Gaebler Rd would be primarily accessed by passing traffic along Hammond Road. Similar uses at HPNC would have access to visitors of the supermarket whose weekly shopping behaviour would not be affected by the proposed uses, minimising any impact on the activity centre.</p> <p>The Impact Test conducted to support the HPNC specifically excludes fast food from its analysis and states that it is not Shop Retail floorspace (See Figure 1 below table). The objector has no basis to state there is insufficient demand for these uses.</p> <p>There is a significant and growing demand for Shop Retail uses in the Catchment that would include all types of retail including those being proposed.</p>



Ref#	Comment	Response
7	<p><u>Retail impact – justification</u></p> <p>Key Issues: f) Lack of Transparency</p>	<p>The Net Benefit Test includes assumptions for:</p> <ul style="list-style-type: none"> <li>• Demand</li> <li>• Supply (current / future)</li> <li>• Turnover calibration</li> <li>• Impact assessment steps</li> <li>• Gravity modelling method</li> </ul> <p>We included the turnover impact reduction % at 2026 and future time points and details of modelling inputs and assumptions are clearly stated.</p>
8	<p><u>Retail impact – justification</u></p> <p>No demonstrated need for proposed centre: a) limited case on need</p>	<p>The Needs Assessment (Section 5 of the report) first demonstrates there is significantly more expenditure in the catchment than there is supply by measuring leakage. The method for measuring leakage is stated and includes comparing retail expenditure in the catchment (summarised in Section 3.4) to estimated total turnover captured by centres in the catchment (estimate of total in Figure 14, supply is provided in Section 4.2 and turnover productivity benchmarks in the needs assessment section).</p> <p>The needs assessment then demonstrates there is a high level of retail demand that will grow significantly based on population growth in Figure 15 through the results of the gravity model. Proposed floorspace at Lot 9501 Gaebler Rd could achieve viable productivity levels by 2026, growing significantly into the future, even with significant expansions in surrounding centres.</p> <p>The analysis corroborates the Impact Assessment undertaken for HPNC, that identifies a current gap of 22,900m<sup>2</sup> within a catchment smaller than that which Pracsys modelled. The HPNC analysis also identified the gap would increase to 32,000m<sup>2</sup> by 2030. See Figure 2 below table.</p>



Ref#	Comment	Response
9	<p><u>Retail impact – justification</u></p> <p>No demonstrated need for proposed centre: b) Demand for proposed uses</p>	<p>See response #6</p>
10	<p><u>Retail impact – justification</u></p> <p>No demonstrated need for proposed centre: c) high level assessment of assumed leakage</p> <ul style="list-style-type: none"> <li>• Figure 14 error</li> <li>• Leakage expected to decline</li> <li>• The leakage approach does not imply need</li> </ul>	<p>There is a typo, Figure 14 headers should be turnover (\$) instead of productivity (\$/m<sup>2</sup>)</p> <p>The leakage assessment was used to demonstrate the broader need for retail in the catchment. Leakage was not assumed; it was estimated based on catchment turnover and the available supply. The leakage analysis was undertaken to demonstrate the current gap and that even with major expansions, there will be \$33 million of leakage. This conservatively assumes that future floorspace only captures leakage. The proposed uses at Gaebler Rd would only partially reduce the remaining leakage with a total turnover of just over \$10 million based on modelling. The analysis demonstrates there is sufficient turnover available in 2026 to support all additional floorspace and the proposed uses.</p> <p>The objection does not acknowledge that the site was tested through gravity modelling at its proposed size to measure its turnover productivity in 2026 (Figure 15 of the report). Need for the proposed floorspace was demonstrated, not implied, with a productivity level of \$9,843m<sup>2</sup> in 2026, which is above the benchmark viability for the relevant uses. This is shown to increase significantly over time as population grows. There is a high level of evidence demonstrating need for retail uses that the proposed development can address.</p>
11	<p><u>Retail impact – justification</u></p> <p>No demonstrated need for proposed centre: d) SPP4.2 requires all activity centre uses</p>	<p>SPP4.2 requires assessment of Shop Retail PLUC 5 for Net Benefit Tests, specifically for assessing turnover impact. Other activity centre uses are considered in the Community Benefits section as per the guidelines.</p>



Ref#	Comment	Response
12	<p><u>Retail impact – justification</u></p> <p>Centre impacts have been underestimated: a) Underestimated impacts due to</p> <ul style="list-style-type: none"> <li>• Trade Area</li> <li>• Future centres</li> <li>• Spread of impact</li> <li>• Turnover Productivity too low</li> </ul>	<p>For trade area, future centres and spread of impact see responses 2, 3, 4 and 5</p> <p>The objector states a productivity level of \$15,000m<sup>2</sup> in 2023 for drive-thru purposes. The proposed fast-food uses will have drive through and dine in space, it is unclear where the objectors estimate was sourced and to what floorspace it is relevant. Pracsys used benchmarks sourced from Colliers and escalated to current dollars when the analysis was undertaken. A high-level comparison has been undertaken to provide a worked example of fast food productivity. McDonalds had approximately 1,000 stores in Australia in 2022 (source identifies 1,059 in 2024).<sup>1</sup> Total turnover in 2022 was \$1.29 billion US, approximately \$1,94 billion AUD at current exchange rates.<sup>2</sup> Estimated average floorspace (building) of a McDonalds is 600m<sup>2</sup> GLA,<sup>3</sup> which means that the average McDonalds turnover productivity in Australia is \$3,600m<sup>2</sup> NLA (assumes NLA is 90% of GLA). This demonstrates the applied \$9,843m<sup>2</sup> is sufficiently high to model the proposed uses and it has been applied to all NLA fast food floorspace including seating areas, etc.</p>
13	<p><u>Retail impact – justification</u></p> <p>Centre impacts have been underestimated: b) net benefits overstated</p>	<p>Given the gravity model applies the highest impact to the nearest centres and our turnover productivity estimate is conservatively high, the estimated impacts are likely overstated. It should be noted that the highest impacts could increase by over 30% and it would still be insignificant according to SPP4.2 guidelines. The purpose of the turnover impact test is to ensure that the viability of other activity centres is not affected, the proposed uses will not affect the viability of any activity centre in the catchment.</p>
14	<p><u>Retail impact – justification</u></p>	<p>See responses 1, 6, 12 and 13</p>

<sup>1</sup> <https://www.statista.com/statistics/1371050/australia-number-of-mcdonalds-restaurants-by-state/>

<sup>2</sup> <https://www.statista.com/statistics/1411715/mcdonalds-australia-annual-revenue/>

<sup>3</sup> <https://www.apimagazine.com.au/news/article/emulate-mcdonalds-to-upsize-your-property-portfolio>



Ref#	Comment	Response
	Centre impacts have been underestimated: (Summary) The report does not correctly account for potential retail expansion at Hammond Park	
15	<p><u>Absence of a structure plan and local development plan</u></p> <p>a) Retail need, including impact on other centres within the hierarchy</p>	A needs assessment and net benefit test has been undertaken as per SPP4.2 to support orderly planning and decision making for the site.
16	<p><u>Summary</u></p> <p>a) Not a designated centre</p> <p>b) Out of centre development</p> <p>c) Replacement of Irvine</p> <p>d) Distance from Hammond Park</p> <p>e) Availability of land at Hammond Park</p> <p>f) Fails to demonstrate transparency and demand and satisfactorily account for impacts</p>	<p>Comments a) and b): The planning framework provides criteria for out-of-centre developments and requires a net benefit test. These have been addressed.</p> <p>Comment c): a local centre is generally defined as having less than 1,500m<sup>2</sup> NLA, which aligns with the proposed development. Local centres can provide and are often encouraged to provide non-shop retail uses to support local community needs.</p> <p>Comments d) and e): see responses 1, 6, 12 and 13</p> <p>Comment f): see responses # 7 and 8</p>



Figure 1

## IMPACT TEST | CENTRE TURNOVER

### Key Findings

The proposed development adds a total of 6,170 sq.m of GLA over two phases (excluding PAD sites).

- **Stage one** consisting of the supermarket (3,600 sq.m), liquor (200 sq.m) and specialties/retail (1,185 sq.m) with the first full year of operation being FY2025.
- **Stage two** consisting of the remaining specialties/retail (1,185 sq.m) with the first full year of operation being FY2030.

Not all of this floorspace will be retail with an estimated 550 sq.m of non-retail floorspace (total for Phase 1 and Phase 2). **This analysis has not considered the external, pad-site fast food which is not categorised as Shop Retail.**

To determine an appropriate forecast turnover for the development, this study made the following assumptions.

- FY2025 is the first full year of centre operations, in line with the per capita floorspace provisioning need detailed on page 24.
- Trade area population and spending growth as outlined in this report.
- The F&G (Food and Groceries) market for the trade area is forecast to be at \$117 million in 2025 (Constant 2022 dollars) with ~77% of F&G spending directed to supermarkets.
- Significant leakage of supermarket spending from the current trade area (approximately 90%) prior to the opening of the development. This leakage is directed towards Harvest Lakes, Cockburn Gateway and the under construction Costco in addition to various other centres beyond the trade area and online. This is expected to increase to 41% retention following the opening of Phase 1 of the development.
- The supermarket to capture approximately 25% of trade area supermarket spending (34% from the primary and 18% from the combined secondary trade area) in FY2025.
- The supermarket to attract 15% of its turnover from beyond and an additional 6% of non F&G spending.

Based on these assumptions, a 3,600 sq.m supermarket at the subject site could achieve turnover of \$32.9 million (\$9,151 per sq.m) in year 1 rising to \$45.1 million (12,522 per sq.m) in 2030.

Hammond Park Retail Impact Assessment

### Supermarket Turnover Potential, Hammond Park Activity Centre, 2022-2030 (\$M, 2022, incl. GST)

	Subject Site Supermarket		
	2022	2025	2030
<b>Trade Area Population:</b>			
Primary Trade Area	5,325	8,208	12,201
Secondary Trade Area	8,206	8,269	8,333
<b>Total Trade Area</b>	<b>13,531</b>	<b>16,476</b>	<b>20,534</b>
<b>Trade Area Food &amp; Grocery (F&amp;G) Spending:</b>			
Primary Trade Area	33	63	84
Secondary Trade Area	53	55	61
<b>Total Trade Area</b>	<b>87</b>	<b>117</b>	<b>145</b>
<b>Proposed Supermarket Market Share of F&amp;G:</b>			
Primary Trade Area	0.0%	33.8%	32.6%
Secondary Trade Area	0.0%	17.7%	18.4%
<b>Total Trade Area</b>	<b>0.0%</b>	<b>25.4%</b>	<b>26.7%</b>
<b>Proposed Supermarket Turnover (\$M):</b>			
<b>F&amp;G Turnover from Trade Area</b>	<b>26.3</b>	<b>36.0</b>	
F&G Turnover from Beyond Trade Area	4.6	6.4	
<b>Total F&amp;G Turnover</b>	<b>31.0</b>	<b>42.4</b>	
General Merchandise Turnover	2.0	2.7	
<b>Total Supermarket Turnover (\$2022)</b>	<b>32.9</b>	<b>45.1</b>	
Proposed Supermarket GLA	3,600	3,600	
<b>Average Trading Level (\$ psm)</b>	<b>9,151</b>	<b>12,522</b>	

Source: Urbis

Page 28



Figure 2

## EXECUTIVE SUMMARY

The analysis and findings outlined in this report demonstrate that there is a current and forecast need for convenience retail floorspace in the Hammond Park / Mandogalup area and the subject site is best placed to help meet this need whilst supporting the sustainability of the broader activity centre hierarchy.

The key retail need findings are summarised below.

- **A Rapidly Growing Population:** Housing stimulus measures and land supply availability are supporting high near-term population growth that is not being supported by a commensurate increase in retail / commercial amenities. Looking further forward, the trade area's population is expected to increase 67% over the next decade.
- **Increasing Retail Spend:** Annual retail expenditure generated by residents in the trade area is forecast to increase \$354 million (incl GST and inflation) in the main trade area from 2022 to 2037 due to high population growth and per capita retail expenditure increases.
- **Limited Retail Supply:** There has been limited expansion of retail floorspace in the trade area over recent years despite increasing population. In particular, the Hammond Park Activity Centre (the subject activity centre) has delivered significantly less retail than envisaged within the district structure plan (70 sq.m versus 5,000 sq.m NLA). Only 11% of supermarket retail expenditure generated by residents in the trade area is estimated to be captured by retailers in the trade area and this presents challenges regarding the liveability of the area, the level of local employment opportunities, limited competition and high need for additional travel for convenience shopping needs.

- **High and Increasing Retail Need:** There is a current undersupply of retail floorspace in the trade area (equivalent to shortfall of retail floorspace of ~22,900 sq.m GLA as of 2022) and this undersupply is expected to increase as the area continues to develop (equivalent to ~32,400 sq.m GLA as of 2030).

A retail impact assessment in line with State Planning Policy 4.2 (existing and draft policies) and the City of Cockburn's Local Commercial and Activity Centres Strategy demonstrates that there is strong merit in rezoning the subject site to commercial for the purposes of a supermarket-anchored development of approximately 6,670 sq.m (~5,000 to 5,500 sq.m NLA) – in line with floorspace envisaged within the Southern Suburbs District Structure Plan.

In particular, the proposed rezoning will ensure the subject centre can provide a neighbourhood level role and function as intended. The subject site is the only opportunity to ensure this centre can deliver this planned convenience retail function given other zoned sites have been developed for non-retail purposes or have limited scale to attract key tenants.

Whilst there will almost always inevitably be trading impacts from the provision of additional retail floorspace, there is a need to understand the extent to which these impacts influence the longer term sustainability of the retail network. There is also importantly a need to balance these turnover impacts with competition, consumer choice and short term employment benefits.

No impacts are expected to be detrimental to the sustainability of any individual centre however the undersupply of convenience retail is expected to lead to one-off centre turnover impacts of between -1.9% and -12.9%.

Importantly, the positive effect of market growth is expected to offset the one-off trading impacts over the short-term, with competitive centres expected to be trading back above pre-centre levels within 2-3 years.

It is important to note that these impacts are concentrated on a few centres given the lack of competition in the area and the proposal only represents a moderate increase in retail floorspace on the 5,000 sq.m NLA identified in the district structure plan for the area. As such, the net impact (i.e. above what is planned for the site) is considered negligible.

Furthermore, the proposed rezoning is expected to deliver a number of benefits to the community. Key positive impacts include:

- Increased consumer choice and liveability associated with the provision of additional retail and commercial amenities close to residents; and
- Increased employment opportunities in the short term through the construction phase and significant ongoing employment (293 direct and indirect ongoing jobs, which includes full-time, part-time and casual roles).

Overall, the proposed development is expected to deliver a significant range of direct and demonstrable benefits for the community whilst maintaining a sustainable existing and planned activity centre hierarchy.



Figure 3

## IMPACT TEST | RETAIL TURNOVER IMPACT FINDINGS

### Key Findings

Whilst there will almost always inevitably be trading impacts from the provision of additional retail floorspace, there is a need to understand the extent to which these impacts influence the longer term sustainability of the retail network. There is also importantly a need to balance these turnover impacts with competition, consumer choice and short term employment benefits.

Overall, no impacts are expected to be detrimental to the sustainability of any individual centre however the undersupply of convenience retail is expected to lead to one-off centre turnover impacts of between -1.9% and -12.9%.

Importantly, the positive effect of market growth is expected to mostly offset the one-off trading impacts over the short-term with key centres expected to be trading back above pre-centre levels within 2-3 years.

### Estimated Impacts on Competing Centres

	GLA (sq.m)	Retail Turnover (\$2022M)			Impact (2025)		Retail Turnover (\$2022M)	
		2022	'Before Impact' (2025)	'Post Impact' (2025)	(\$M)	(%)	2028 (\$M)	Var'n to 2022
<b>Existing Centres:</b>								
Harvest Lakes Village Centre	5,160	66.8	67.7	59.0	-8.7	-12.9%	68.6	+2.7%
The Park Hive IGA	2,130	24.4	25.6	22.4	-3.2	-12.6%	26.9	+10.3%
IGA Xpress Aubin Grove	775	9.1	9.4	9.0	-0.4	-4.0%	10.1	+11.6%
Cockburn Activity Centre	58,369	475.7	495.9	484.5	-11.3	-2.3%	555.4	+16.8%
<b>Proposed Centres:</b>								
Costco Casaurina			186.5	182.9	-3.6	-1.9%	210.5	
<b>Other Centres</b>								
					-13.6			
<b>Total Impact</b>					<b>-40.8</b>			

n.b. GLA rounded to nearest 5 sq.m

Note: Costco turnover includes wholesale trade.

Hammond Park Retail Impact Assessment



Department of Planning,  
Lands and Heritage

City of Cockburn  
PO Box 1215  
Bibra Lake DC WA 6965

Your ref: DAP23/004

Our ref: DP/10/00666

Enquiries: Simon Luscombe (Ph: 6551 9307)

17 April 2024

Attention: Chantala Hill

Dear Chantala,

**Re: Lot 9501 Gaebler Road, Hammond Park**

I refer to your email correspondence dated 17 April 2024 regarding the above application. In accordance with the Western Australian Planning Commission's (WAPC) Notice of Delegation dated 18 January 2022, the following comments are provided with respect to this proposal which seeks approval for a commercial development.

**Land Requirements**

The site abuts Hammond Road which is reserved as an Other Regional Road (ORR) in the Metropolitan Region Scheme (MRS) and Category 1 in the subject location per Plan Number SP 694/6. The site is not affected by the ORR reservation.

**Transport Impact Assessment (TIA)**

The above report by Stantec (November 2023) states that the proposal will generate 410 AM peak hour trips and 658 PM peak hour trips. SIDRA intersection analysis shows generally acceptable performance for all movements, with some delays shown for right turning movements to 2025 and 2035.

**Recommendation**

Figure 3-2 of the TIA shows two new access points to Hammond Road which will service the development. This is not in accordance with the Commission's Regional Roads (Vehicular Access) Policy D.C. 5.1, which seeks to minimise the number of new crossovers onto regional roads. As Hammond Road is a Category 1 control of access road (and taking into account the nature of the development), the Department would be prepared to support a single access point only to the ORR (serviced by an appropriate turning treatment).

Thank you for your correspondence. Should you have any further queries, please contact me on 6551 9307 or via email [simon.luscombe@dplh.wa.gov.au](mailto:simon.luscombe@dplh.wa.gov.au).

Yours sincerely

Simon Luscombe  
Principal Planning Officer  
Strategy and Engagement





Your ref: DAP23/004  
Our ref: 2020/002699 (PRS 51723)  
Enquiries: Catherine Prideaux  
Phone: 08 9442 0300  
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Ms Chantala Hill  
Acting Coordinator Development Services  
City of Cockburn  
PO Box 1215  
Bibra Lake DC WA 6965

Dear Ms Hill

**DAP23/004 – 9501L GAEBLER ROAD HAMMOND PARK – COMMERCIAL DEVELOPMENT**

Thank you for your email of 17 January 2024 referring the above proposed Development Assessment Panel (DAP) application to the Parks and Wildlife Service of the Department of Biodiversity, Conservation and Attractions (DBCA) for comments. The City of Cockburn (the City) has requested DBCA's comment on the potential environmental impact of the proposal, in particular the reduced buffer to the adjacent Conservation Category wetland (CCW).

The Department has reviewed the proposal and provides the following advice pursuant to its responsibilities under the *Biodiversity Conservation Act 2016* and the *Conservation and Land Management Act 1984*.

**Background**

DBCA has previously provided advice to the City in relation to the Southern Suburbs District Structure Plan and for (separate) local structure plans for Lots 41 and 42 at the corner of Gaebler Road and Hammond Road. The proposed structure plan for the subject site (formerly Lot 41) was prepared in 2017 DBCA understands that the structure plan has not progressed through to final approval. It is noted that the current development proposal is not consistent with the Lot 41 structure plan submitted in 2017. Consideration of the current development application in the absence of an approved structure plan and subdivision application for this site may be deemed premature.

It is noted that a structure plan has been approved for the adjacent Lot 42, now known as Lot 9008, with subdivision of this site approved in 2021.

**Wetland and Wetland Buffer**

A portion of Lot 9501 Gaebler Road is classified as a Conservation category dampland (UFI 14101) in DBCA's *Geomorphic Wetlands Swan Coastal Plain* dataset. A 15 m buffer has been allocated to the wetland boundary in the DAP application, reflective of the allocated 15

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m – 60 m buffer distance that is to be retained in the portion of UFI 14101 on Lot 9008 immediately to the south of Lot 9501.

The Structure Plan for Lot 9008 Frankland Avenue SPN/2191 was referred to the EPA Services (EPAS) Branch of Department of Water and Environmental Regulation (DWER) for advice regarding the adequacy of the buffer to the CCW. In September 2020 the EPAS advised that “in this specific instance, the site study and plan modification to provide a 15-60 metre (m) wetland buffer will help to maintain the values associated with the wetland but should not be viewed as a precedent.” DBCA concurs with EPA advice that the decision on Lot 9008 should not be viewed as a precedent and therefore planning decisions made for this area should not be reflected in future associated planning applications. Based on current environmental and planning policy and guidance, wetlands that are to be protected require a minimum 50 metre buffer distance.

In October 2022 DBCA was asked to comment on the *Lot 9501 Gaebler Road, Hammond Park Wetland Buffer Assessment* prepared by PGV Environmental. The advice given by DBCA at the time remains relevant to the subject application, namely that DBCA is not in a position to comment on the acceptability of the proposed setback. The department is not a decision-making authority for the land in question and has no current or future management responsibilities for the wetland. DBCA considers it more appropriate for the City to review PGV’s wetland buffer assessment and provide advice regarding the acceptability of the proposed setback.

Should the development proceed, DBCA’s expectation is for the area allocated as wetland buffer and shown on the development plans, to be retained in a natural state surrounding the CCW extent. The development footprint and any associated infrastructure is to remain outside the buffer area, i.e. drainage infrastructure, recreational infrastructure including pathways, firebreaks and low fuel zone planting is to remain outside the wetland and its buffer. This should be achievable with a requirement for the wetland buffer to be physically fenced off to restrict public access to give protection to the environmental asset. Future management of the wetland and its buffer should be outlined in a wetland and buffer management plan, prepared and implemented by the proponent, to the satisfaction of the City of Cockburn, as a condition of approval.

It is noted from the Planning Report (Dynamic Planning and Developments, December 2023) that the proposed development was considered by the City of Cockburn Design Review Panel (DPP) on two occasions in 2023. In relation to Principle 7 – Legibility - the DPP recommends “Enhance legibility of wetland with pedestrian path within buffer zone supported, but the impact of the retaining wall needs more clarification.” Refer to page 23. In DBCA’s view, as noted in the above paragraph, provision of a pedestrian path within the buffer zone is not considered appropriate.

In relation to final design and management of the proposed development, consideration should also be given to the potential alteration of the hydrological regime and geomorphology of the wetland (potential to change from Dampland to Sumpland) resulting from the importation of up fill to maintain 1.5 m separation to groundwater, and from the hard road surface that surrounds the wetland. In the absence of an adequate setback from the mapped wetland and the proposed importation of fill associated with the development, the wetland is likely to be hydrologically impacted. The proponent should clearly demonstrate that adequate studies and required measures to mitigate hydrological impacts have been identified and will be implemented.

### **Car Wash and Fast-Food Outlets**

In relation to the proposed car wash facility, DBCA questions the suitability of this land-use within a sensitive area that would ordinarily be protected as a wetland buffer, in accordance with current policy and guidance. Positioning a car wash facility in such close proximity to a Conservation category wetland is not considered appropriate, particularly where the buffer has incurred a significant reduction, as there is a greater risk of nutrients and pollutants

entering the surface water and ground water systems. There will also be a greater risk of rubbish entering into the natural area from the proposed 7-Eleven and three fast food outlets. The proponent should clearly demonstrate how these threatening processes and potential development attributable impacts will be managed and mitigated during construction and the ongoing operation of the facility.

### **Wetland Management Plan**

Should development ultimately be approved, a wetland management plan should be recommended by the City of Cockburn as a condition of subdivision. The *Guidelines checklist for preparing a wetland management plan* (DEC 2008) should be used to prepare the plan. It should include strategies to enhance existing native vegetation, to address management of edge effects such as weeds, rubbish, disease, feral/pet animals and the increased risk of fire. It should also show the position of fences, gates, pathways and fire access. The provision of conservation fencing between the development and the wetland buffer will assist with access control and limit some of the aforementioned edge effects.

### **Local Water Management Strategy**

DBCA defers to Department of Water and Environmental Regulation to provide specific comment on hydrological issues.

The applicant should ensure the proposed stormwater management measures are in accordance with Better Urban Water Design principles to maintain existing hydrological processes and regimes within wetland UFI 14101, and avoiding adverse impacts to the wetland values of downstream wetland systems that are groundwater fed, including Banganup Lake within the adjacent Harry Waring Nature Reserve.

### **Vegetation Protection, Matters of National Environmental Significance and Clearing Permit Requirements**

A Banksia Woodland Threatened Ecological Community Assessment was undertaken by PGV in June 2023. The TEC assessment found that the size (1.67 ha) and condition [Very Good to Excellent] of the Banksia woodland patch meets the criteria for identification as the Banksia Woodlands of the Swan Coastal Plain Threatened Ecological Community (page 15 of the Environmental Assessment Report, PGV Environmental, September 2023).

Lot 9501 therefore contains Matters of National Environmental Significance (MNES) protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These include habitat for the threatened black cockatoo species and the Banksia Woodlands of the Swan Coastal Plain TEC, as described in the Approved Conservation Advice (incorporating listing advice) for the Banksia Woodlands of the Swan Coastal Plain Ecological Community (Department of the Environment and Energy, 2016).

The proponent may therefore have notification responsibilities under the EPBC Act and should contact the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEWW) for further information on these responsibilities prior to any clearing works.

The proponent should be advised that clearing of native vegetation in Western Australia is prohibited, unless the clearing is authorised by a clearing permit obtained from DWER or is of a kind that is exempt in accordance with Schedule 6 of the *Environmental Protection Act 1986* or *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. Given that much of the site is located in the 50 m buffer of a CCW, the area is environmentally sensitive and therefore clearing exemptions may not apply.

## Native Fauna

Consideration should also be given to potential disturbance of native fauna and a loss of fauna habitat, resulting from removal of surrounding vegetation and replacement with road surface, particularly for the southern brown bandicoot *Isoodon obesulus* subsp. *fuscicenter* (Priority 4 species).

## Landscaping Plan

The landscaping plan is included as Appendix 10 of the Planning Report (Dynamic Planning and Developments, December 2023). Species selection within the landscaping plan should wherever possible, reflect the endemic native species that occur within the adjacent Harry Waring Nature Reserve, Bush Forever site 392.

There is a risk that the following flora species, if used in landscaping, may become an invasive weed within the adjacent bushland areas and their use should therefore be avoided or managed:

- *Corymbia ficifolia* is a WA native of the South Coast.
- *Eucalyptus victrix* is local to the Gascoyne and Pilbara regions.
- *Melaleuca quinquenervia* is not native to Western Australia.
- *Corymbia calophylla* does not occur in the adjacent Harry Waring Nature Reserve, Bush Forever site 392, but if they are suitable as street trees according to the City then they are acceptable on the plan.
- DBCA is unaware of any evidence that *Cupaniopsis anacardioides* (Tuckeroo) may become an invasive weed but, should they be planted, DBCA recommends the City monitors the trees over time, to see whether there is any self-seeding.

Should you wish to discuss any of the comments provided please contact Planning Officer Catherine Prideaux of this office on telephone 9442 0300, or by email at [catherine.prideaux@dbca.wa.gov.au](mailto:catherine.prideaux@dbca.wa.gov.au) in the first instance.

Yours sincerely



Benson Todd  
REGIONAL MANAGER

26 February 2024

cc. Mark Hingston, Planning Advice, DWER Kwinana Peel Region



Your ref: DAP23/004  
Our ref: DWERT1208, PA61310  
Enquiries: Mark Hingston Ph. 95504209

City of Cockburn  
PO Box 1215  
Bibra Lake DC, WA 6965

Attention: Chantala Hill

Dear Chantala

**Re: Proposed Commercial Development – Lot 9501 Gaebler Road, Hammond Park**

Thank you for providing the Proposed Commercial Development – Lot 9501 Gaebler Road, Hammond Park received on 17 January 2024 for the Department of Water and Environmental Regulation (Department) to consider.

The Department has identified that the proposed commercial development has the potential to impact on environment and water resource values and management. The Department therefore objects to the proposal in its current form. Key issues and recommendations are provided below, and these matters must be addressed to the satisfaction of the Department.

**Issue**

Conservation Category Wetland Management

**Advice**

The Geomorphic Wetlands – Swan Coastal Plain (Management Category) Dataset, which is managed by the Department of Biodiversity, Conservation and Attractions (DBCA), has identified that a Conservation Category Wetland (CCW) is located adjacent to the proposed commercial development. The commercial development proposes a wetland buffer of only 15 metres. In addition, it appears this limited buffer will also include a proposed firebreak. The Department considers this buffer distance inadequate to protect the CCW's ecological and environmental values. To adequately protect the CCW from threatening processes, a buffer or separation requirement consistent with the *Guideline for the Determination of Wetland Buffer Requirements* (DPLH, December 2005) of 50 m is recommended.

The Department recommends that the DBCA is consulted on the issue of buffers between the proposed development and the CCW. Wetland buffers and separation distances should be addressed to the satisfaction of the DBCA.

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107 Breakwater Parade Mandurah Ocean Marina Mandurah Western Australia 6210  
PO Box 332 Mandurah Western Australia 6210  
Telephone: 08 9550 4222 Facsimile: 08 9581 4560  
[www.dwer.wa.gov.au](http://www.dwer.wa.gov.au)

The applicant should also be made aware that the 50 metre CCW buffer area is classed an Environmentally Sensitive Area (ESA) under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004.

Under section 51C of the *Environmental Protection Act 1986* (EP Act), clearing of native vegetation is an offence unless:

- it is undertaken under the authority of a clearing permit
- it is done after the person has received notice under Section 51DA(5) that a clearing permit is not required
- the clearing is subject to an exemption

Exemptions for clearing that are a requirement of written law, or authorised under certain statutory processes, are contained in Schedule 6 of the EP Act. Exemptions for low impact routine land management practices outside of environmentally sensitive areas (ESAs) are contained in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (the Clearing Regulations).

Based on the information provided, the proposed clearing is not exempt and a clearing permit is required due to part of the proposed development footprint being within a mapped ESA.

The Department has not received a clearing permit application for this proposal. Application forms are available from <https://www.wa.gov.au/service/environment/environment-information-services/clearing-permit-forms>

Additional information on how to apply for a clearing permit is available from Clearing permit forms | Western Australian Government ([www.wa.gov.au](http://www.wa.gov.au)).

Information regarding clearing permit fees can be found here: [Clearing fees – frequently asked questions | Western Australian Government \(www.wa.gov.au\)](#)

If further clarification is required, please contact the Department's Native Vegetation Regulation section by email ([admin.nvp@dwer.wa.gov.au](mailto:admin.nvp@dwer.wa.gov.au)) or by telephone (6364 7098).

## Issue

Industry Buffers (Service Station)

### Advice

The Environmental Protection Authority's (EPA) *Guidance for the Assessment of Environmental Factors, Separation Distances between Industrial and Sensitive Land Uses* (EPA, June 2005) (GS3) provides advice on the use of generic separation distances (buffers) between industrial and sensitive land uses. The intent is to avoid conflicts between incompatible land uses and assist in the determination of suitable distances between industry and sensitive land uses where industry may have the potential to affect the amenity of a sensitive land use. Schools and residential developments are considered a sensitive land use within the document.

The GS3 notes three different descriptions for the service station industry with varying operating hours for premises (being Monday-Saturday from 7am to 7pm, 24-hour operations and Freeway 24-hour operations) with varying recommended buffer distances. The GS 3 recommends a default buffer distance of 200m for 24-hour service

station operations. The City of Cockburn should ensure that a suitable buffer distance is achieved in the planning decision for this proposed development..

If the above issues are resolved, the Department provides the following advice,

**Issue**

Better Urban Water Management

**Recommendation**

Consistent with *Better Urban Water Management (BUWM)* (WAPC, 2008) and policy measures outlined in the *Draft State Planning Policy 2.9: Water Resources*, the proposed commercial development should be supported by an approved Local Water Management Strategy (LWMS) prior to finalising the structure plan.

The Department has reviewed the *Lot 9501 Gaebler Road, Hammond Park - Local Water Management Strategy* (Oversby Consulting, October 2023) provided. Please find the Department's comments on the LWMS within Attachment 1 below for your consideration. Accordingly, the proposed development should not be finalised prior to the endorsement of a satisfactory LWMS by the Department and the City of Cockburn.

Should you require any further information on the comments please contact Mark Hingston on 9550 4209.

Yours sincerely



Jane Sturgess  
Acting Program Manager – Planning Advice  
Kwinana Peel Region

28 / 02 / 2024

Cc Sabbir Hussein  
City of Cockburn

Catherine Prideaux  
Department of Biodiversity, Conservation and Attractions

Attachment 1 - Department of Water and Environmental Regulation - comments on the *Lot 9501 Gaebler Road, Hammond Park - Local Water Management Strategy*

Contact for further information: Mark Hingston – 9550 4209

	Date received	Comments Sent
Rev 1	17/1/2024	28/2/2024

No.	Page	Section	Rev 1 - DWER Comments	Rev 1 – Author’s Actions	Rev 2 - DWER Comments	Rev 2 - Author’s Actions
1			The local water management strategy (LWMS) is proposing a reduction to the recommended 50 metre buffer setback for conservation category wetlands (CCW). The LWMS should provide written evidence that the Department of Biodiversity, Conservation and Attractions supports the reduced buffer setback			
2	6	Section 4.4 - Groundwater	Table 7 – also provide the groundwater level as m AHD.			
3	13	Section 7.1 – Shallow Superficial Aquifer	Please confirm which ‘DWER groundwater mapping’ is being referred to. Text indicates maximum groundwater levels (MGL) range from 20 – 21 m AHD while Figure 8 indicates MGL of 18 – 19 m AHD across the site.			
4	17	Section 8.2 – 1 EY Management	Section should confirm that amended soil will be used at the biofiltration swales and that it will have a PRI of at least 10 and a minimum depth of 300 mm.			

5	17	8.3 - Drainage Management Plan – 10%AEP	On a figure please provide the location of all proposed underground stormwater storage cells within the commercial development area.			
6	17	Section 8.4 – Drainage Management Plan – 1% AEP	<p>Pre and Post development flows into the wetland area differ significantly. No information has been provided regarding the ecological significance of the current pre-development flows into the conservation category wetland or what impact reducing this flow may have on the wetland. In the absence of this environmental information, pre and post development flows into the wetland area should be comparable.</p> <p>It is unclear from information provided if stormwater infrastructure related to the 1% AEP overflow is proposed within the wetland buffer area. All stormwater management infrastructure is to be located outside of the CCW buffer and large events may overtop and overland flow into the wetland buffer.</p>			
7	19	Section 9.1 – Groundwater Level Management	<p>The LWMS should provide correspondence from the City of Cockburn indicating it supports directing subsoil discharge from the development into the existing street drainage.</p> <p>Should subsoil drainage be installed groundwater quality testing will be required. Treatment of subsoil discharge prior to directing to existing street drainage may be required.</p>			

8	19	Section 9.4 - Monitoring	<p>Given the location of the CCW, that the MGL is relatively high and that a commercial development (including car wash and fuel station) is proposed, a groundwater quality monitoring program with contingency actions is recommended.</p> <p>Please provide details of a proposed monitoring program which should include preliminary trigger values for parameters, a contingency plan, location(s) of monitoring bores and a future monitoring regime.</p>			
9	24	Section 12.1 – Pre-development Groundwater	<p>Section indicates that groundwater level monitoring has been undertaken. Please provide the monitoring results within an appendix to the LWMS.</p> <p>Usually two onsite winter peaks are required to determine a reliable MGL for a site and to inform a LWMS. However, the applicant may correlate onsite monitoring with any nearby Departmental long-term monitoring bores to derive an onsite MGL</p>			
10		Appendix	<p>Provide typical cross-sections detailing the interface between the proposed development and the wetland buffer. One cross-section should illustrate the area proposed for stormwater runoff via overland flow and illustrate how erosion will be avoided. Also please provide conceptual cross-section designs for the proposed drainage infrastructure. Designs should include critical invert levels in m AHD, top water levels, use</p>			

			and depth of amended soil and maximum groundwater level.			
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Enquiries: Peter Franklin, 9222 2000

Alysha Kempf  
Environmental Health Coordinator  
Public Health and Building Services | Development and Compliance  
City of Cockburn  
PO Box 1215, Bibra Lake DC, WA 6965

Via email: [akempf@cockburn.wa.gov.au](mailto:akempf@cockburn.wa.gov.au)

Dear Alysha,

### **PROPOSED 24 HOUR SERVICE STATION - LOT 9501 GAEBLER ROAD, HAMMOND PARK**

Thank you for your correspondence of 16 February 2024 requesting the Department of Health (DoH) to provide public health advice in relation to the separation distance between a proposed service station development and an existing primary school. Our advice, and reasoning, is provided below.

The proponent has stated that there is a distance of 170m between the service station and the Hammond Park primary school. This is not correct. As per the EPA Separation Distance Guidance (GS3: Separation Distances between Industrial and Sensitive Land Uses) a buffer (separation distance) is the land between the boundary of the industrial site (service station) and the boundary of the sensitive land-use (the school) (p.11). This allows for activities by both industry and the sensitive receptor to be undertaken up to the boundary of the respective sites. By this definition, the separation distance is <30m. Even from the main emission sources (petrol bowsers and fuel vents) it is only about 60m to the school boundary.

The proponent argues for a reduced separation distance because 'The proximity of other service stations within the metropolitan area are much closer than 170m and in some cases actually abut or are across the road from residential development.' and that 'This has been permitted in recent years with the vapour recovery process and technology improving greatly to ensure no impact on adjoining sensitive land uses.' The Department of Health (DOH) is not aware that the smaller separation distances have been permitted due to demonstrated reduced impact and recommend that specific evidence is provided to demonstrate that this is the case. It is true that there are service stations in close proximity to sensitive land-uses, but this does not mean that this is safe or acceptable. Past practices, if incorrect, should not inform current or future development.

Separation distances are generic but if the distance is less than the generic distance a site-specific study is expected. For gaseous pollutants, this may take the form of an air dispersion modelling study. Unfortunately, however, the DOH has received advice from the Department of Water and Environmental regulation (DWER) that '...air quality

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dispersion modelling has a number of areas of uncertainty and that the Department is generally not able to verify the assumptions made in these modelling studies. Therefore, the use of dispersion modelling to make precise judgements on separation distances is impossible.'

The National Environment Protection (Air Toxics) Measure, which is referred to in the application, is neither an air quality standard nor an accepted exposure limit; it is a monitoring investigation level, ie the concentration of an air toxic which if exceeded requires an appropriate form of further investigation and evaluation. Benzene, the main chemical of concern, is a non-threshold carcinogen and the NEPM for benzene does not differentiate between 'safe' and 'unsafe'.

Therefore, from a public health point of view, the DOH recommends the application of the separation distances as they appear in the Guidance. I hope this advice is useful. Please do not hesitate to contact Peter Franklin on 9222 2000 if you need further information.

Yours sincerely



Peter Franklin  
**A/MANAGING SCIENTIST - CHEMICAL HAZARDS  
ENVIRONMENTAL HEALTH DIRECTORATE**

Date: 29/02/2024



Department of  
Education

Your ref: DAP23/004  
Our ref: D24/0076246  
Enquiries: Matt Turnbull

Chief Executive Officer  
City of Cockburn

Email: [customer@cockburn.wa.gov.au](mailto:customer@cockburn.wa.gov.au)

Attention: City of Cockburn – Planning Department

To whom it may concern,

### **Proposed commercial development application – Lot 9501L Gaebler Road, Hammond Park**

Thank you for your email dated 17 January 2023 providing the Department of Education (the Department) with the opportunity to comment on the proposed Joint Development Assessment Panel (JDAP) development application for a commercial development as advertised online by the City of Cockburn (the City) at Lot 9501L Gaebler Road, Hammond Park (the site).

The site is located directly opposite Hammond Park Primary School (Primary School) and therefore, the Department shall have due regard to the provisions of the Western Australian Planning Commission's Operation Policy 2.4 – Planning for school sites (OP 2.4) when assessing the proposal. Having assessed the proposal, the Department **strongly objects** to the commercial development in accordance with the following considerations:

#### Inconsistencies with local planning framework

The site is zoned 'Development' under the City's Local Planning Scheme No. 3 and is located within the Southern Suburbs District Structure Plan – Stage 3 (DSP). It is noted the site is not subject to an approved Local Structure Plan and is partially located within a Conservation Category Wetland reserve under the DSP. The DSP identifies the non-wetland designated portions of the site for medium density residential use and the Department considers residential development on this site to be an appropriate interface with the Primary School.

In comparison, commercial uses are generally confined within the southern portion of DSP, specifically in the approved Lots 114, 123-125 Wattleup Road, Hammond Park Structure Plan (Hammond Park Structure Plan) which is appropriately located 600m south of the Primary School. Accordingly, the proposed commercial development does not align with the intended land use of the subject site as prescribed under the DSP.

#### Incompatible land uses

As stated in clause 3.6.2 of OP 2.4, schools are deemed sensitive land uses and it is imperative to ensure that school sites are located amongst or adjacent to compatible land uses to support education, health, and wellbeing outcomes of students. The proposed service station and fast food outlets are not considered compatible close to the school site. Such establishments will pose safety and health risks to the school community and compromise the amenity of the school and neighbouring residential development by way of increased traffic and noise.

- *Fast-food Outlets*

The Department identifies that there are three fast food outlets proposed on the northern and western sides of the site which are 36 metres (Starbucks), 85 metres (McDonalds), and 120 metres (KFC) from the Primary School site. The Department does not support fast food outlets operating adjacent to public school sites as these food outlets may cause unhealthy diets and obesity which are the leading risk factors for death, disease and disability in Western Australia. Refer to Attachment 1 – an ‘Evidence brief: food, built environments and obesity, page 1 of 8’ published by the Department of Health. The WA Government’s Sustainable Health Review, April 2019 has recognised these issues and has recommended prioritising ‘changes to planning laws to limit unhealthy food outlets and to support access to healthy food options, including near schools’.

- *Service Station*

The proposed service station is located approximately 23 metres from the Primary School site. As per the provisions of the Environmental Protection Authority’s (EPA) ‘Separation Distances between Industrial and Sensitive Land Uses’, June 2005 (EPA Guidelines), a 200 metre separation distance is required between a 24 hour service station and sensitive land uses such as schools.

Service stations by their operational nature may generate a range of emissions of pollutants and safety risks, which if not carefully managed, may adversely impact the health, amenity and wellbeing of occupants of schools. Given that the proposed service station is located less than the minimum required distance from the Primary School site, the proposed service station is not supported.

#### Traffic Congestion/Car Parking Concerns

The Traffic Impact Assessment (TIA) has indicated if parking overflow occurs from the operation of the commercial development (which would most likely occur during peak times), surrounding car parking options including the Primary School’s on-street parking bays on Gaebler Road are available.

Given that the operating hours of the proposed businesses would conflict with those of the Primary School, the Department is concerned that there may not be adequate car bays to facilitate the drop-off and pick-up of students and the potential for vehicular conflicts and safety hazards, particularly on Gaebler Road. In addition, the potential overflow will compound the already strained traffic and parking congestion around the Primary School during the school peak periods. This is coupled with access to the proposed service station for both prospective customers and refuelling tankers occurring from Gaebler Road (Access Point C), which is a primary distributor road and has only been designed to cater for local traffic including for the Primary School.

Furthermore, it has been documented that there have been several traffic incidents and accidents on Gaebler Road involving school children from the Primary School over the last year. These safety concerns will likely be compounded from increased traffic resulting from the proposed development on local roads surrounding the school, posing a threat to the safety of the school’s students.

#### Conclusion

The Department’s position on the proposal is to reinforce that student health and safety is a priority and it does not support incompatible land uses in close proximity to school sites, particularly fast food and service stations in this instance. The Department has significant concerns that ongoing harm may be caused to the school students from the exposure of such businesses including the potential increase in traffic congestion and parking and reliance, in part, on the existing on-street parking adjacent to the school site. The operations of these businesses are best suited within the Local Centres identified within the Hammond Park Structure Plan which provides a logical buffer between the Primary School and commercial uses.

In view of the above, the Department strongly requests the City recommends that the proposed development is refused by the JDAP. The Department looks forward to the City's consideration of the above matters.

Should you have any queries on the above, please contact Mr Matt Turnbull, Manager Land and Planning by email at [matt.turnbull@education.wa.edu.au](mailto:matt.turnbull@education.wa.edu.au).

Yours sincerely,



Anna Brown  
**Director Infrastructure Strategy and Planning**

22 February 2024



# Evidence brief: food, built environments and obesity

Unhealthy diets, overweight, and obesity are the leading risk factors for death, disease and disability in Western Australia (WA), after tobacco use.<sup>1</sup> Most WA adults (71 per cent) are overweight or obese and one in four WA children are overweight or obese.<sup>2,3</sup> If current trends continue, hospitalisation costs linked to overweight and obesity in WA are set to rise by 80 per cent, to \$610 million by 2026.<sup>4</sup>

Overweight and obesity are closely linked to the environments in which people are born, live, work, learn, play, and age.<sup>5</sup> Today's environment has been referred to as obesity-promoting or 'obesogenic' as it encourages people to consume more energy than their bodies need and to be less physically active,<sup>6</sup> which are drivers of obesity and diet-related disease.<sup>7,8,9</sup>

Our food environments are shaped by food production and supply, food composition, food prices and affordability, nutrition labelling, marketing and promotions, and access to healthy and unhealthy food retail outlets.<sup>10</sup>

Our current food environments promote excess energy intake from cheap, widely available and heavily promoted energy-dense, nutrient-poor and/or highly processed products that should be limited or avoided in a healthy diet.<sup>11</sup> There is also evidence of inequitable access to healthy food outlets both within and outside metropolitan areas.<sup>12,13</sup>

This brief summarises evidence regarding the location, proximity and density of healthy and unhealthy food retail outlets, the impact this has on dietary intake, overweight and obesity, and policy options to address these issues.

## WA policy context

The Sustainable Health Review (SHR) is a 10 year blueprint for the WA health system that emphasises the importance of prevention. Recognising that rising rates of overweight and obesity are placing undue burden on the health system, recommendation 2a of the SHR is to halt the rise in obesity and increase the number of adults who have a healthy weight.<sup>14</sup> A priority for implementation under recommendation 2a is "Changes to planning laws to limit unhealthy food outlets and to support access to healthy food options including near schools".<sup>14</sup> Supporting this, the Western Australian Health Promotion Strategic Framework 2022-2026 includes a strategic direction to "Work across government and key sectors to influence urban planning to ensure urban design and infrastructure promotes and supports healthy eating patterns in line with the Australian Dietary Guidelines, increases local access to healthy food and drink, and reduces children's exposure to unhealthy food outlets."



## What does the evidence say?

The study of the impact of unhealthy and healthy food outlets on dietary intake and health is an evolving field and in recent years, there has been a significant body of evidence collected on the Perth metropolitan area (Perth). A summary of the evidence is provided on the following pages.

### Perth neighbourhoods are dominated by unhealthy food outlets

- Food outlets considered by health professionals to be 'unhealthy' (such as convenience stores, café restaurants and takeaway/fast food outlets) were present in greater numbers than healthy food outlets (such as supermarkets/greengrocers) in both established and newly developed neighbourhoods from 2004 - 2011.<sup>12</sup>
- Between 2005 and 2010, cross-sectional data showed that within 3 km of the average Perth home, there were 28 fast food outlets and only 10 healthy food outlets.<sup>15</sup>
- Between 2005 and 2010, for every 1,000 people in Perth there were 1.4 fast food outlets compared to 0.5 healthy food outlets.<sup>15</sup>
- Between 2004 and 2011, the number of unhealthy food outlets increased more than the number of healthy food outlets in both established and newly developed Perth neighbourhoods.<sup>12</sup>

### Areas of lower relative socioeconomic advantage have more unhealthy food outlets

- There were significantly fewer supermarket/greengrocers and a lower proportion of healthy food outlets in areas of low socioeconomic advantage compared to areas of high socioeconomic advantage, in newly developed neighbourhoods between 2004-11.<sup>12</sup>
- Between 2004 and 2011, established neighbourhoods had more unhealthy food outlets in closer proximity to the home in areas of lower socioeconomic advantage compared with higher socioeconomic areas.<sup>12</sup>
- The density of fast food outlets and the 'top 4' fast food chains was greater in areas with more relative socioeconomic disadvantage in 2018-19.<sup>16</sup>
- In 2018-2019, with each increasing level of relative socioeconomic advantage the number of fast food outlets decreased by 6 per cent and the number of 'top 4' fast food chains decreased by 10 per cent.<sup>18</sup>



### More unhealthy food outlets are located closer to the home than healthy food outlets

- More unhealthy food outlets were located closer to home than healthy food outlets in both established and newly developed Perth neighbourhoods studied between 2004 and 2011.<sup>12</sup>
- Between 2005 and 2010, 41 per cent of children had at least one unhealthy food outlet within 800 m of their home.<sup>15</sup>

- Between 2005 and 2010, the average distance from a person's home to a fast food outlet was around 1.3 km, compared to 1.5 km to a healthy food outlet.<sup>15</sup>

It should be noted that people purchase and/or consume food and drink in a variety of outlets located around places they work, learn and recreate. Limited research has been undertaken to assess the impact of food outlets away from the place of residence.

## Unhealthy food outlets are located close to schools

### Studies during 2017-2019 show that:

- Perth schools had an average of 1.8 fast food outlets located within 400 m; 5.7 fast food outlets within 800 m; and 8.1 fast food outlets within 1 km.<sup>16</sup>
- 86 per cent of Perth schools had at least one fast food outlet located within 1 km.<sup>16</sup>
- 11 per cent of Perth schools had at least one of the 'top 4' fast food chains within 400 m; 32 per cent had one within 800 m; 41 per cent had one within 1 km.<sup>16</sup>
- Perth secondary schools were significantly more likely than primary schools and K-12 schools to have at least one fast food outlet within 1 km.<sup>16</sup>
- An increase in the number of 'top 4' fast food chain outlets within 400 m, 800 m and 1 km of a school was significantly associated with an increase in the frequency of secondary school students purchasing unhealthy (discretionary) foods from food outlets near their school.<sup>16,17</sup>
- 45 per cent of secondary school students surveyed (n=2389) purchased discretionary foods from food outlets near their school once a week or more.<sup>17</sup>
- Schools located in lower socioeconomic areas had a significantly higher number of fast food outlets within 400 m and 'top 4' fast food chain outlets within 400 m and 1 km, than schools located in higher socioeconomic areas.<sup>16</sup>

## Accessibility to food outlets has an impact on dietary intake and obesity

- Australian evidence is mixed in relation to the neighbourhood density and proximity of supermarkets and obesity however, several international and local studies suggest a lower likelihood of obesity is linked with the presence of supermarkets.<sup>19,20,21</sup>
- The number of healthy food outlets within 800 m of home is consistently associated with a decreased risk of children being overweight or obese.<sup>15</sup>
- Locating healthy food outlets within 800 m of home<sup>22</sup>, school, and work increases healthy food intake.<sup>23</sup>
- Living in an area with a greater proportion of healthy food outlets is associated with healthy food intake,<sup>6</sup> healthier purchases, and the consumption of healthier items, particularly vegetables.<sup>19</sup>
- Relocating to an area with a greater percentage of healthy food outlets near the home is significantly associated with an increased intake of fruit and vegetables.<sup>24</sup>
- Moving to a new residential development with a higher number of unhealthy food outlets (convenience stores and café restaurants) near the home is significantly associated with an increased intake of unhealthy food.<sup>24</sup>
- Over time, diets become healthier as the percentage of healthy food outlets near the home increases.<sup>25</sup>

- A 2018-19 study of fast food outlets in Perth found some evidence of relationships between fast food outlets and 'top 4' chain fast food outlet availability near homes, vegetable intake, and body mass index.<sup>16</sup>

## Accessing healthy food is more difficult in rural and remote areas

- In rural and remote areas, transport challenges, inadequate supply, poor variety and low quality of fresh food, and high prices, means that fresh and healthy food is not always available in more remote food outlets, making it difficult for people to access a healthy diet.<sup>26, 27</sup>

## Improved public transport access and walkability to healthy food outlets promotes healthy eating

- Not having access to a car can be a barrier to accessing healthy food.<sup>25</sup>
- Locating healthy food outlets close to where people live, and along public transport routes can reduce barriers to accessing healthy food.<sup>20</sup>
- Improving public transport access and providing safe connected walking and cycling paths and networks allow people to more easily access healthy food outlets.<sup>20</sup>



## Good practice

The literature identifies a range of strategies for use across government that can increase access to healthy food and reduce access to unhealthy food. These strategies have been drawn from evidence and expert opinions. Some of the key strategies are listed below.

- Embed healthy food environments as a key objective and planning mechanism in planning policies and legislation.<sup>28 - 31</sup>
- Change planning laws, zoning restrictions and land use policies and strategies to limit unhealthy food outlets and to support access to healthy food options, including near schools.<sup>14, 32, 33</sup>
- Implement restrictions on opening hours of unhealthy food outlets near schools.<sup>35</sup>
- Provide economic or other incentives for food outlets selling predominantly healthy foods, including near schools.<sup>37</sup>
- Implement policies to ensure menus provide healthier options and/or that healthier options are the default option.<sup>32</sup>
- Provide a variety of fresh and nutritious food outlets such as supermarkets and grocery stores within walking distance of where people live and near public transport, walking and cycling routes.<sup>38 - 41</sup>
- Ensure healthy food outlet positioning is competitive and well balanced with other food outlets.<sup>31</sup>
- Co-locate healthy food outlets with other key destinations to facilitate multiple activities as part of one trip e.g. within activity centres and near schools.<sup>30, 31</sup>

- Take policy action in remote communities and their community stores to improve availability of healthy foods and limit availability and sales of unhealthy foods<sup>32</sup> e.g. transport subsidies, incentives for store owners.
- Provide economic or other incentives to support the development of supermarkets in food deserts.<sup>34, 35</sup>
- Use zoning and/or land use policies to establish and encourage farmers markets and community-based gardens to improve local access to fresh produce.<sup>34, 42, 43</sup>
- Facilitate healthy mobile food vendors and other innovative nutritious food retail and distribution initiatives, particularly in areas underserved with fresh food stores e.g. mobile vendors or farmers markets selling fresh fruit, vegetables or other produce.<sup>23, 44</sup>

## Conclusion

Evidence for a link between exposure to unhealthy food environments and poor diet is accumulating.<sup>9, 39, 45</sup> Unhealthy food environments can adversely affect food consumption and be a driver of obesity and diet-related chronic diseases such as type 2 diabetes, cardiovascular disease, and some cancers. Improving community food environments is an equitable approach to support consumers to make healthier food and beverage choices and reduce their risk of obesity and chronic diseases.

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Our Ref: D34013  
Your Ref: DAP23/004

Chantala Hill  
City of Cockburn  
[chill@cockburn.wa.gov.au](mailto:chill@cockburn.wa.gov.au)

Dear Ms Hill

**RE: HIGH RISK LAND USE – LOT NUMBER 9501, CORNER GAEBLER ROAD AND HAMMOND ROAD, HAMMOND PARK – PROPOSED COMMERCIAL DEVELOPMENT INCLUDING PETROL STATION AND CARWASH – DEVELOPMENT APPLICATION**

I refer to your email dated 14 March 2024 regarding the submission of a Bushfire Management Plan (BMP) (Version 1.1), prepared by Bushfire Prone Planning and dated 31 October 2023, for the above development application.

This advice relates only to *State Planning Policy 3.7: Planning in Bushfire Prone Areas* (SPP 3.7) and the *Guidelines for Planning in Bushfire Prone Areas* (Guidelines). It is the responsibility of the proponent to ensure the proposal complies with relevant planning policies and building regulations where necessary. This advice does not exempt the applicant/proponent from obtaining approvals that apply to the proposal including planning, building, health or any other approvals required by a relevant authority under written laws.

**Assessment**

- Further clarification is required within the BMP of the requirements of SPP 3.7, and the supporting Guidelines as outlined in our assessment below.
- DFES notes that the DA plans provided with the referral do not match the plans provided/assessed within the BMP. DFES notes that the redesign of the car wash has resulted in a reduction in separation between the proposed car wash and hazardous vegetation.
- The City has asked for specific comment on the petrol station, as well as the location of the carwash in an area of BAL-40. Comments are provided for both questions below, however DFES notes that the Car Wash is located in an area of BAL-FZ. Comments are also provided below regarding the definition of habitable building as defined by the Guidelines.

**1. Policy Measure 6.5 a) (ii) Preparation of a BAL contour map**

Issue	Assessment	Action
<b>Vegetation Exclusion</b>	Evidence to support the exclusion of surrounding sites, road reserves and proposed firebreaks as managed to low threat in accordance with AS3959 is required.  Specifically: <ul style="list-style-type: none"><li>• Road Reserves - evidence has not been provided to validate management of the reserve</li></ul>	Modification to the BMP is required.

	<p>by the responsible authority. DFES notes that as the areas are outside of the subject site, it is unclear if management can be ensured in perpetuity. It is noted that some of the submitted information references “future road widening”, however until this is implemented there would be a need to maintain the vegetation to a low threat standard to ensure that BAL ratings are accurate.</p> <ul style="list-style-type: none"> <li>• School area – limited photographic evidence has been provided to validate the overall area excluded. The school site includes multiple drainage areas that are typically difficult to manage to low threat.</li> <li>• For clarity, the BMP should be updated to clearly detail each excluded area, and the reason for each exclusion (e.g. exclusions ‘e’ and ‘f’ should be separated).</li> </ul> <p>Alternatively, the vegetation should be updated and classified as per AS3959, or the resultant BAL ratings may be inaccurate.</p>	
<p><b>Vegetation classification</b></p>	<p>Vegetation area 2 cannot be substantiated as Class D Scrub with the limited information and photographic evidence available. The submitted photos do not include height sticks or references to validate height, and there is no detail provided to validate how some areas have been separated from the adjoining Class A Forest. A review of Google Streetview indicates that taller trees are present within the plot that are not shown in the submitted photos, and the species in these areas appear consistent with the adjoining Class A Forest</p> <p>The BMP should detail specifically how the Class D Scrub classification was derived as opposed to Class A Forest.</p> <p>If unsubstantiated, the vegetation classification should be revised to consider the vegetation as per AS3959, or the resultant BAL ratings may be inaccurate.</p>	<p>Modification to the BMP is required.</p>
<p><b>Vegetation classification</b></p>	<p>Vegetation area 3 cannot be substantiated as Class C Shrubland with the limited information and photographic evidence available (noting photo ID 8 has been included in this part of the table). Height sticks have not been provided to validate the vegetation height.</p> <p>The BMP should detail specifically how the Class C Shrubland classification was derived as opposed to D Scrub/Class A Forest.</p>	<p>Modification to the BMP is required.</p>

	If unsubstantiated, the vegetation classification should be revised to consider the vegetation as per AS3959, or the resultant BAL ratings may be inaccurate.	
<b>Vegetation Management</b>	It is noted that a “firebreak” is referenced on a number of plans in the BMP and shown along the boundary of proposed lots 3 and 5 with lot 6. DFES does not accept fire break notices as part of the vegetation management required to achieve an APZ or low-threat classification. Fire break notices may only apply for part of the year and may be varied from year to year by the responsible local government. The BMP should be updated to incorporate a mechanism through which the area will be maintained in perpetuity to an appropriate standard. A performance principle-based solution should be provided if the required APZ relies on the management of vegetation on adjoining land.	Modification to the BMP is required.
<b>Landscape Management Plan</b>	DFES notes that the landscape management plan should be updated to ensure that it includes a requirement to manage all areas of the site (and verges where applicable) to low threat in perpetuity.  DFES notes that it is unclear from the LMP if the proposed tree planting /separation from buildings will comply with APZ standards. This should be considered as part of any updated LMP.	Modification to the BMP is required.
<b>BAL Contour Map</b>	The inputs (i.e. actual separation distances from each plot to each building, or the separation distances from each plot to each BAL rating ) need to be included in the BMP to demonstrate the methodology applied to determine the BAL outputs within the Contour Map. This would generally be provided in a table.	Modification to the BMP is required.
<b>Photo Errors</b>	Photo ID 8 is labelled as Class C Shrubland however details Class D Scrub. It is unclear if this is an administrative error or if the plot has been incorrectly classified in the vegetation assessment/BAL contour.	Modification to the BMP is required.

## 2. Policy Measure 6.5 c) Compliance with the Bushfire Protection Criteria

Element	Assessment	Action
<b>Location and Siting and Design</b>	<p><b>A1.1 and A2.1 – not demonstrated</b></p> <p>The BAL ratings cannot be validated, as the vegetation classification inputs require modification as per the above table.</p> <p>There are areas of the site exposed to BAL-40/BAL-FZ which represents an extreme risk which does not comply with A1.1.</p>	Modification to the BMP is required. Please demonstrate compliance or provide substantiated evidence of a

	<p>Specifically, the BAL assessment identifies the proposed carwash in BAL-FZ which means <i>“direct exposure to flames from the fire front in addition to heat flux and ember attack”</i> (AS3959). In a ‘no notice’ bushfire event <i>“radiant heat levels and flame contact are likely to significantly threaten building integrity and result in significant risk to people who are unlikely to be adequately protected.”</i></p> <p>The size of the site combined with the classification of the abutting vegetation enables a compliant outcome to be achieved at the planning stage.</p> <p>While the BMP indicates at page 18 that the car wash is a non-habitable structure, DFES considers that the car wash meets the definition of a habitable building as provided on page 52 of the Guidelines, being <i>‘a permanent or temporary structure on land that –</i></p> <ul style="list-style-type: none"> <li><i>a. is fully or partially enclosed; and</i></li> <li><i>b. has at least one wall of solid material and a roof of solid material; and</i></li> <li><i>c. is used for a purpose that involves the use of the interior of the structure by people for living, working, studying or being entertained.’</i> <p>The BMP has not provided sufficient detail to confirm how the enclosed portions of the structure will not be used for the purposes of work, or clarified how it will not be possible for people to be trapped in the carwash in the event of a no notice fire.</p> <p>Noting the discrepancy between the updated plans provided (dated December 2023) and those shown in the BMP (dated October 2023), while the updated plans show the “pump room” in BAL-29, the car wash structure is in BAL-FZ and connected to the pump room and therefore the whole structure is considered to be BAL-FZ.</p> <p>All plans should be consistent to allow accurate assessment. DFES notes that there appears to be the ability to redesign the proposal or manage part of the proposed lot 6 to achieve a compliant BAL rating (of 29 or below) for the proposed car wash.</p> </li></ul>	<p>performance principle-based solution.</p>
<p><b>Vehicular Access</b></p>	<p><b>A3.6 – not demonstrated</b></p> <p>The BMP states compliance with the requirements of A3.6 of the Guidelines, however the submitted information does not demonstrate provision of appropriate turning areas within 30m of all habitable buildings.</p> <p>The BMP should be updated to clearly demonstrate how compliance with all requirements of A3.6 will be achieved. DFES notes that turning areas must not rely on car parks being vacant given the potential of a no notice fire.</p>	<p>Modification to the BMP is required.</p>

<b>Water</b>	<p><b>A4.2 – not demonstrated</b></p> <p>The BMP notes that hydrant connections will be required as part of the implementation table, however, provides no confirmation that Water Corporation WA have confirmed that this can occur. It is unclear if the implementation table is sufficient to require the additional approval for extra hydrants. DFES notes that confirmation should be provided by the Water Corporation WA to ensure that the required hydrants can/will be installed.</p>	Decision Maker to be satisfied.
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**Recommendation – compliance with acceptable solutions not demonstrated – modifications required**

It is critical the bushfire management measures within the BMP are refined to ensure they are accurate and can be implemented to reduce the vulnerability of the development to bushfire. The proposed development has not demonstrated compliance to the following:

1. Element 1: Location,  
Element 2: Siting and Design,  
Element 3: Vehicular Access, and  
Element 4: Water.

As this planning decision is to be made by a Joint Development Assessment Panel please forward notification of the decision to DFES for our records.

If you require further information, please contact me on telephone number 9395 9819.

Yours sincerely



**Naomi Mynott**  
**DIRECTOR LAND USE PLANNING**

2 April 2024

Your Ref: DAP23/004  
Our Ref: DAP406178  
Enquiries: Matt Calabro  
Direct Tel: 9420 2099

06 February 2024

Chief Executive Officer  
City Of Cockburn  
PO BOX 1215  
BIBRA LAKE DC WA 6965

Attention of: Chantala Hill

**Re: DAP23/004 - 9501L Gaebler Road Hammond Park - Commercial Development**

Thank you for your letter dated 17<sup>th</sup> January 2024 requesting comment on the proposed development at Gaebler Road Hammond Park.

Water and Wastewater services are available in the area or the development to connect to. The proposed development does not appear to affect Water Corporation assets. If our assets are affected, the developer may be required to fund new works, or the upgrading of existing works and protection of all works associated with the Water Corporation.

This proposal will require approval by our Building Services section prior to the commencement of works. Infrastructure Contributions and fees may be required to be paid prior to approval being issued.

For further information about building applications, please follow this link:

<https://www.watercorporation.com.au/Developing-and-building/Building/Lodging-a-building-application>

Should you have any queries, please do not hesitate to contact me at [matt.calabro@watercorporation.com.au](mailto:matt.calabro@watercorporation.com.au)

Regards,



Matt Calabro  
Senior Advisor – Land Use Planning  
DEVELOPMENT SERVICES

# **Design Review Report**

## **Lot 9501 Hammond and Gaebler Road, Hammond Park**

City of Cockburn

September 2023

<b>Design Review Report</b>		
Subject	<b>Lot 9501 Hammond and Gaebler Road, Hammond Park</b>	
Date	27-09-2023	
Time	2PM	
Location	City of Cockburn	
Design Reviewers	Name Lisa Shine Simon Venturi Annelise Safstrom	Role Panel Chair Panel Member Panel Member (via Microsoft Teams)
Proponent	Dynamic Planning	
Project Team		
Planning Authority	City of Cockburn	
Stakeholders		
Declarations	None	
<b>Briefings</b>		
Relevant Authorities Project Team		
<b>Design Review Report endorsement</b>		
Reviewer signature	 Lisa Shine	

Introductory Comments	
Design quality evaluation	
	Supported
	Pending further attention
	Not yet supported
	Yet to be addressed
<b>Strengths of the Proposal</b>	<ul style="list-style-type: none"> <li>• A mix of uses that would be appreciated by community.</li> <li>• Appropriate scale of buildings with requirements of corporate brands.</li> <li>• Medical Centre building incorporates face brick as a contextual material and pitched roof form reflecting surrounding context.</li> <li>• Provision of PVs to several buildings.</li> <li>• The development of pocket parks.</li> <li>• Improved interface with the introduction of a pathway along the full length of the wetland buffer zone</li> <li>• Specie selection of low water use and local native.</li> </ul>
<b>Principle 1 Context and character</b>	<i>Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.</i>
	<ul style="list-style-type: none"> <li>a) Lack of structure plan makes it difficult to see the full picture of development in response to the wetland and subsequent setback impacts.</li> <li>b) Lacks local distinctiveness given generic nature of uses and suburban layout, landscape could play a role in addressing this issue.</li> <li>c) The site design does not appreciate the wetland that is located within site with the current building layout response.</li> <li>d) The wetland is a potential community asset that should be respected and addressed, rather than being edged by service areas and a car wash. There is potential for a quality wetland (dampland) to be enhanced over time through, for example, the development of a local 'friends' group.</li> <li>e) The introduction of pocket parks adjacent to the wetland and other areas, has the potential to extend the adjacent bushland/wetland landscape into the development.</li> </ul>
<b>Recommendations</b>	<ol style="list-style-type: none"> <li><b>1. Consider building on the opportunity of an authentic local identity as basis for landscape and layout that addresses the wetland and surrounding roads, with built form having an appropriate sense of frontage or outlook. The introduction of pocket parks is an appropriate opportunity to provide amenity and strengthen local identity.</b></li> <li><b>2. We acknowledge that this opportunity may involve a complex approval process but continue to encourage the proponent in exploring board walk and/or other site beautification opportunities long term.</b></li> <li><b>3. Site sections and a masterplan would assist in understanding the impact of retaining on the interface barrier to the wetland area from the development.</b></li> </ol>
<b>Principle 2 Landscape quality</b>	<i>Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.</i>
	<ul style="list-style-type: none"> <li>a) Encourage some larger trees in the car park, or other appropriate areas and more detail on specie selection to ensure the right balance of appropriate shade and local specie selection.</li> <li>b) The introduction of pockets parks is an opportunity to bring the adjacent landscape into the site and provides public spaces for use by staff and community, with bicycle parking and other park amenity.</li> </ul>

	<p>c) Review the opportunity to provide shade trees along footpaths and bed the site into the landscape context with appropriate tree selection.</p> <p>Landscaping along Hammond Road verge supported.</p> <p>d) The majority of visitors will arrive from Gaebler Road providing an opportunity to review the design of traffic circulation that may reduce hardscaped areas, giving opportunity for more landscape to the south east of the development.</p>
<b>Recommendations</b>	<ol style="list-style-type: none"> <li>1. <b>Consider the functional role of trees, such as, size, planting to provide amenity, reduction of heat island impacts and improved relationship to the wetland and bushland and outline BAL restriction in the prevention of more trees.</b></li> <li>2. <b>Consider the amenity for the pocket parks to be more useable, including shading and views.</b></li> <li>3. <b>Consider a portion of the south east road linked to Hammond Road and the car wash to be reduced, removed or narrowed to provide further landscaping and less hardscape.</b></li> </ol>
<b>Principle 3 Built form and scale</b>	<i>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</i>
	<p>Petrol station located on a prominent corner and although suitable for commercial purposes, presents an inactive façade facing Gaebler Road.</p> <ol style="list-style-type: none"> <li>a) Petrol station located on a prominent corner and although suitable for commercial purposes, presents an inactive façade facing Gaebler Road.</li> <li>b) Medical Centre roof form is supported, although has a limited contribution in unified built form response for the development.</li> <li>c) Opportunity to move Fast Food buildings closer to Hammond Road with parking behind to address the street.</li> </ol> <p>Opportunity to move Fast Food buildings closer to Hammond Road with parking behind to address the street.</p>
<b>Recommendations</b>	<b>Consider alternative ways to improve and unify the built form approach within the limitation of each franchiser.</b>
<b>Principle 4 Functionality and build quality</b>	<i>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.</i>
	<ol style="list-style-type: none"> <li>a) Improved internal pedestrian footpaths within and around the site</li> <li>b) The north-south pedestrian link on west side of KFC and McDonald's is fragmented and does not encourage safe pedestrian movement but the footpath along Hammond Road helps mitigate this issue.</li> </ol>
<b>Recommendations</b>	<ol style="list-style-type: none"> <li>1. <b>Extend footpath along Gaebler Road for the full length to provide a continuous path network around the development.</b></li> <li>2. <b>Seek opportunities as design is further developed for continuity of materiality on all facades.</b></li> </ol>
<b>Principle 5 Sustainability</b>	<i>Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.</i>
	<ol style="list-style-type: none"> <li>a) Encourage the development of a consolidated ESD narrative through obtaining the Sustainability initiatives from Franchisers in order to provide a more wholistic outcome. More detail could then be provided, for example, size of PV/ kilowatts, landscape, materials, energy, water, EV charging etc.</li> </ol>

Recommendations	<b>Need to engage an ESD professional to collate Franchisers current position and then develop a wholistic and detailed ESD narrative for the development.</b>
Principle 6 <b>Amenity</b>	<i>Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.</i>
	<ul style="list-style-type: none"> <li>a) The provision of pocket parks, if they are well designed and provided with the appropriate amenity each park will offer workers and locals comfortable public meeting places that contribute to community connection and identity. Transformer noted on Hammond Rd boundary - seek ways to integrate as it will be dominant once road widened.</li> </ul>
Recommendations	<b>Develop the pocket parks amenity.</b>
Principle 7 <b>Legibility</b>	<i>Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</i>
	<ul style="list-style-type: none"> <li>a) Uncertainty on the timing of the Hammond Road upgrade should be included in the site plan.</li> <li>b) Clarification of retaining wall impacts required.</li> </ul> <p>Opportunity to offer linkage and enhance legibility of wetland.</p>
Recommendations	<b>1. Enhance legibility of wetland with pedestrian path within buffer zone supported, but the impact of the retaining wall needs more clarification.</b>
Principle 8 <b>Safety</b>	<i>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</i>
	Site line analysis for pedestrian movements would be helpful to identify any potential vehicle/servicing conflicts.
Recommendations	<b>Not enough information provided but acknowledge proponent has noted CPTED audited has been undertaken.</b>
Principle 9 <b>Community</b>	<i>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</i>
	<ul style="list-style-type: none"> <li>a) The proposed development offers a mix of uses that would be appreciated by community.</li> <li>b) The provision of pocket parks is a potential community asset.</li> </ul>
Recommendations	<b>Refer to Context and Character Recommendations to consider additional community benefit.</b>
Principle 10 <b>Aesthetics</b>	<i>Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.</i>
	<ul style="list-style-type: none"> <li>a) Signage is all different – as a minimum posts and base colours should be consistent.</li> <li>b) Bin zone visual impact and access conflict could be improved.</li> <li>c) Very little change to materials or colours of the building has occurred from DRP 1 but we acknowledge the introduction to use brick for seating amenity and landscaping to help unify and contribute to a 'sense of place' for the development.</li> <li>d) Consider the visual impact of the firebreak and the panel strongly support the location of the pedestrian path within this zone.</li> <li>e) Consider the location of the fence for the wetland area, and seek approval to minimise its visual impact by locating it a few metres within, instead of on the boundary.</li> </ul>

<b>Recommendations</b>	<ol style="list-style-type: none"> <li>1. Consider how the design can offer a more unified signage strategy for the development and enhance the visual amenity of the development.</li> <li>2. Extend the introduction of brick (the chosen unifying material) into more landscape elements, such as the retaining wall, parts of the path network etc.</li> <li>3. Although some buildings must respond to a standardised template from the operator, the Carwash and Medical Centre buildings could respond more to these fixed templates by picking up colour themes or material link.</li> </ol>
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<b>Concluding Remarks</b>
<p>Site planning, building design, material selection, signage, sustainability initiatives each require unified strategies to bind the development to the place and through implementing every opportunity towards this goal will help with development of context and character for this suburban centre. The wetland(dampland) is a unique and potentially significant asset and the introduction of a pathway along its interface and two pocket parks adjacent is acknowledged as an excellent way to enable connection, when physical access is limited.</p>

Design Review progress			
	<i>Supported</i>		
	<i>Pending further attention</i>		
	<i>Not yet supported</i>		
	<i>Yet to be addressed</i>		
	<i>DR1</i>	<i>DR2</i>	<i>DR3</i>
<b>Principle 1 - Context and character</b>			
<b>Principle 2 - Landscape quality</b>			
<b>Principle 3 - Built form and scale</b>			
<b>Principle 4 - Functionality and build quality</b>			
<b>Principle 5 - Sustainability</b>			
<b>Principle 6 - Amenity</b>			
<b>Principle 7 - Legibility</b>			
<b>Principle 8 - Safety</b>			
<b>Principle 9 - Community</b>			
<b>Principle 10 - Aesthetics</b>			

Reference: EMPC-2435-L2

4<sup>th</sup> July 2023

Attention: To Whom It May Concern,

RE: McDONALD’S NATIONAL STANDARD BIO MOD 450 RESTAURANTS – LOT 9501 CNR GAEBLER ROAD & HAMMOND ROAD, HAMMOND PARK WA – KITCHEN EXHAUST SYSTEM DESIGN COMPLIANCE CERTIFICATE

We hereby certify that the kitchen exhaust systems documented within the mechanical services standard template documents for a standalone McDonald’s BIO MOD 450 restaurant comply with the Deemed-to-Satisfy requirements of the NCC2022, and the relevant referenced Australian Standards, including AS1668.2-2012 (Amdt 1&2) requirements for the exhaust air discharges.

The following is the list of the relevant mechanical services drawings and specification.

Mechanical Services Drawings (Refer attached):

Drawing No.	Title	Revision
M00	COVER SHEET	F
M001	LEGEND & GENERAL NOTES	B
M002	EQUIPMENT SCHEDULES	F
M100-1	MECHANICAL LAYOUT – WITH PARTY	G
M100-2	MECHANICAL LAYOUT – NO PARTY	G
M200	MECHANICAL ROOF PLAN	E
M300	SECTION SHEET 1	C
M301	SECTION SHEET 2	C
M302	SECTION SHEET 3	C
M400	MECHANICAL DETAILS – SHEET 1	B

Mechanical Services Specification Document:

Document No.	Title	Revision
450.1	McDonald’s Mechanical Services Master Specification	D

Furthermore, it is to be noted that the three main cooking appliances (two deep fat fryers and one clam-shell grill) are each provided with an exhaust hood which extract cooking fumes through sealed sheetmetal ducts to the roof mounted vertical discharge kitchen exhaust fans. Each hood is fitted with washable baffles type grease filters which will be regularly cleaned. In addition, hoods may also be fitted with disposable filters (Shepherd Filters) with a filter media able to capture up to 98% of airborne grease before it enters the extraction system (Refer attached).

The kitchen exhaust discharge points in this site are located;

- around 70m away from site boundary on Gaebler Road,
- around 35m away from the site boundary on Hammond Road,
- around 50m away from the closest points on the rear site boundary, and
- around 47m away from the side boundary.

Which is significantly more than the AS1668.2 required minimum 6m separation and will provide more than adequate distance for dilution of the odours discharged through the kitchen exhaust fans. This will ensure no nuisance caused to the neighbouring properties from the odours. Approximate location of the kitchen exhaust discharge points are marked on the attached site plan.

Any general waste produced by the restaurant will be placed in garbage bags, sealed, and deposited in an 1100L bin for general rubbish until pick up, which is twice a week. The bin store area itself is naturally ventilated to reduce the build-up of odours.

Please do not hesitate to contact the undersigned if you require further information.

Kind Regards,



Shirin Haghighi

Senior Mechanical Engineer (B.Eng. MIEAust MAIRAH)

P: (08) 9201 1919

E: [shirin@empconsulting.com.au](mailto:shirin@empconsulting.com.au)



### SITE CRITERIA

<b>1. Site Area</b>	
a. Lot 1	2,487m <sup>2</sup>
b. Lot 2	2,546m <sup>2</sup>
c. Lot 3	3,747m <sup>2</sup>
d. Lot 4	2,861m <sup>2</sup>
e. Lot 5	2,848m <sup>2</sup>
<b>Total</b>	<b>14,489m<sup>2</sup></b>
<b>2. Landscaping</b>	
a. Provided	2,602m <sup>2</sup>
i. Soft	901m <sup>2</sup>
ii. Hard	3,503m <sup>2</sup>
<b>Total</b>	<b>3,503m<sup>2</sup></b>
<b>3. Floor Area (GFA)</b>	
a. Convenience Store	192m <sup>2</sup>
b. Food Restuarant	940m <sup>2</sup>
c. Medical Centre	350m <sup>2</sup>
<b>Total</b>	<b>1,482m<sup>2</sup></b>
<b>4. Carparking</b>	
a. Cars Provided	Carbays
i. On grade	121
ii. Drive Thru'	32
iii. Fuel Canopy	8
<b>Total</b>	<b>161</b>

**Note:**  
Boundary Dimensions & Lot Areas Require Confirmation.

**Landscaping**  
 A. Hard Landscaping  
 Defined as paved walkways either open or covered.  
 B. Soft Landscaping  
 Defined as vegetative landscaping.

**Net Floor Area - NFA**  
 A. Net Floor Area of a Tenancy on this plan is defined as the area between external or tenancy dividing walls.  
 B. This area is inclusive of toilets if the toilets are exclusive to the Tenancy.

**Gross Floor Area - GFA**  
 A. All Floor Areas on this plan are shown as GROSS FLOOR AREA. Unless otherwise noted as Net Floor Area.  
 B. Definition of Gross Floor Area is defined as:  
 i. GROSS FLOOR AREA OF TENANCY:  
 Gross Floor Area of an individual Tenancy is defined as the area contained between the centre line of common tenancy walls and the outside edge of external walls.  
 ii. GROSS FLOOR AREA OF A BUILDING:  
 Gross Floor Area of a Building is defined as the total area contained between the outside edge of external walls.

### SITE PLAN

SCALE: 1 : 500

**PRELIMINARY**



# SHEPHERD FILTERS

"PROTECTING YOUR HOOD"  
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## KITCHEN EXHAUST GREASE SOLUTION

SHEPHERD FILTERS is pleased to submit a general information proposal for its **disposable kitchen grease filters**, which help those in the foodservice industry better manage grease within kitchen exhaust systems. We will consider the shortcomings and risks of the current system and thereafter, provide the appropriate solution and benefits that Shepherd Filters offer.

Shepherd Filters are helping small, medium and large restaurant operations, hotels & resorts and fast food chains all over the world to save money and reduce their fire risk with an easy-to-use system.

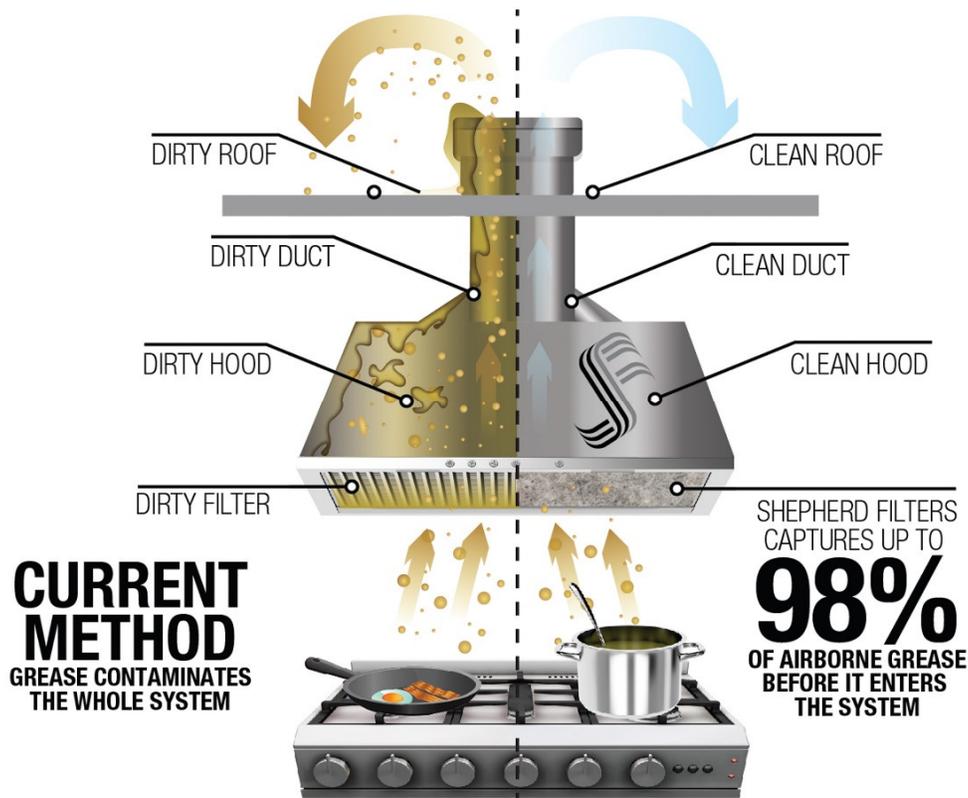
### ASK YOURSELF THESE IMPORTANT QUESTIONS

Would you like to make sure you aren't wasting money on kitchen grease filter cleaning and exhaust cleaning if there is a better way?

Does filter cleaning happen enough or too frequently (we know some filters need more cleaning than others, so why do them all at the same rate)?

How clean is your kitchen exhaust, has the duct been cleaned according to standards?

Are you covered by insurance in the event of a fire?





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FILTERS**  
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## PROBLEMS IDENTIFIED WITH CURRENT KITCHEN GREASE EXHAUST MAINTENANCE

### 1.0 KITCHEN GREASE FILTER PURPOSE & PROBLEMS

The kitchen grease filter is the first line of defense to protect the kitchen exhaust system in preventing grease accumulation and the subsequent risk of fire. New standards now often require UL1046 approved frames to act as a flame barrier and current honeycomb/mesh filters do not comply. Countries like the USA and UK have banned their use.

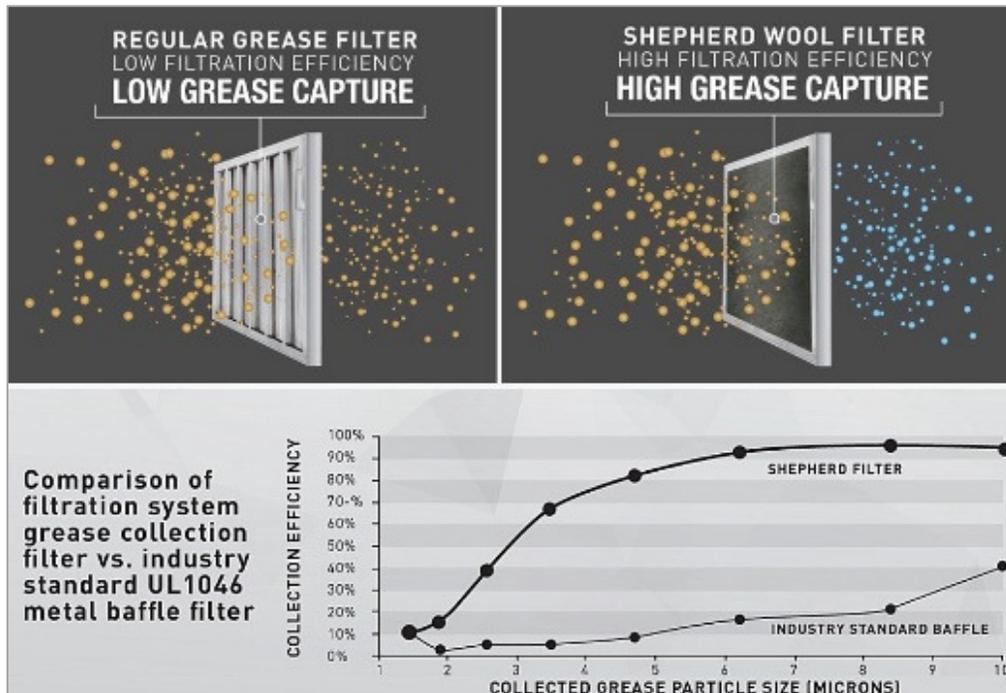
Moreover, current metal kitchen filters only stop between 20-40% of the airborne grease, allowing the rest to pass through into the hood/canopy, duct and fan. This results in ongoing frequent costly cleans.

### 1.0 A DISPOSABLE KITCHEN GREASE FILTER SOLUTION

Shepherd Filters wool filter media provides the best solution by capturing up to an impressive 98% of airborne grease before it enters your kitchen exhaust system, equating to a cleaner system, year-round. These disposable filters significantly reduce the need to clean filter frames. The amount of grease entering your kitchen exhaust system is also greatly reduced.

Our special stainless steel Shepherd Filter frames are easy to use and come with the peace of mind that they are:

- ✓ UL1046 flame barrier tested
- ✓ Airflow tested & certified; and
- ✓ HACCP approved





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## 2.0 PROBLEMS WITH CLEANING KITCHEN GREASE FILTERS

A frequent and ongoing problem that can be costly, disruptive and cumbersome. Food Safety and Australian Standard 1851 states these must be cleaned regularly.

### Cleaning filters using a filter exchange company:

- Some filters are exchanged too frequently when they don't need to be, whereas others are not exchanged often enough
- Filter exchange companies often arrive during service times, which can be disruptive
- In addition to this exchange service, in-house staff sometimes even need to wash filters in between exchanges

### Cleaning filters in-house:

- Time consuming and costly in terms of labour
- A waste of water and unnecessary exposure to unpleasant chemicals
- Environmentally unfriendly
- Can lead to frequent dishwasher breakdowns
- Not done well

## 2.0 OUR EFFICIENT, FASTER DISPOSABLE FILTER SOLUTION

Shepherd Filters offer a time and money-saving solution in comparison. Our filters are easy for staff to change and are disposed in the regular waste bin within minutes.

- 100% naturally fire-retardant wool
- 100% disposable and biodegradable and therefore environmentally friendly
- Only change the filters that need changing
- Change our filters before you turn equipment on or at end of day clean down, and you will never be disrupted again



*Filters only take seconds to change, minutes a week.*



# SHEPHERD FILTERS

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## HOW OFTEN DO WE NEED TO CHANGE THE FILTERS?

Frequency may vary based on hours of operation (i.e. breakfast, lunch and dinner or just lunch and dinner), types of cooking and the equipment being used (i.e. grill, fryer, combi).

HOW OFTEN DO I NEED TO CHANGE THE FILTER?		
	<b>HEAVY DISCHARGE ITEMS</b> Char Grill, Wok Tables, Griddle Plates	<b>1-7 DAYS</b>
	<b>MEDIUM DISCHARGE ITEMS</b> Countertop Units	<b>7-14 DAYS</b>
	<b>LOW DISCHARGE ITEMS</b> Combi Oven, Oven Ranges	<b>10-30+ DAYS</b>

The images below offer a more precise guide based on your circumstances. We provide this filter change guide to all new installs, which is placed on the kitchen wall for your reference:



**BELOW IS AN EXAMPLE OF FILTERS ABOVE GRILLS/HOTPLATES ON THE LEFT:**



**NOTICE THE DIFFERENCE COMPARED TO THE FRYERS AND OVENS ON THE RIGHT.**



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## 3.0 CANOPY, HOOD AND DUCT CLEANING PROBLEMS

Australian Standards 1851 states that hood and canopy cleaning is to be checked for excessive grease accumulation monthly (at a minimum) and six to twelve months for the duct and fan, depending on your insurance policy requirements. It's messy, disruptive and some kitchen exhaust systems are dirty again just one month after a clean when using traditional filters. **Any excess build-up will put a store at risk for a fire and can quickly build up in between cleans.**

Many find this costly and it is important to check the work is done/cleaned properly as the responsibility can still be on the restaurant. Certificates issued by cleaning contractors with clauses or fine print can make the certificate worthless in the event of a fire and insurance companies may void the claim. Shepherd Filters frequently inspects kitchen exhausts after scheduled cleans and finds either:

- A sub-standard clean has occurred; or
- Not all areas of the system were cleaned by service companies due to poor access.

**Here are true examples when inspecting systems just days after a clean:**



## 3.0 CANOPY, HOOD AND DUCT SOLUTION

Shepherd Filters stop you having to guess when your system is dirty. A clean system protected by the Shepherd Filters Solution means you can greatly reduce the extensive hood, canopy and duct cleaning required, which will see you save for years. A simple mini spot inspection and clean only when required is all you will need to do. **The images below show the inside of a hood that remains very clean and any grease accumulation has been drastically reduced:**



SHEPHERD FILTERS CUSTOMER AFTER 4 MONTHS



SHEPHERD FILTERS CUSTOMER AFTER 2 YEARS

[www.shepherdfilters.com](http://www.shepherdfilters.com)

[hello@shepherdfilters.com.au](mailto:hello@shepherdfilters.com.au)

Ph:1 300 364 777

5



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#### 4.0 FILTER TRACK GREASE PROBLEMS

Another ongoing and messy task that is often overlooked or not fulfilled by filter exchange companies or staff. AS1851 states that tracks/gutters are to be checked monthly. Left untouched, it also poses a fire risk.

#### 4.0 REDUCED GREASE FILTER TRACKS SOLUTION

Shepherd Filters hold the grease within the wool sheet, reducing the amount of grease draining into the tracks and in turn, reduces labour costs. Below are true examples:



**WITHOUT SHEPHERD FILTERS**



**WITH SHEPHERD FILTERS**

#### 5.0 FAN/ROOF GREASE PROBLEMS

Grease accumulation on a fan can build up very quickly and go unnoticed, causing unbalanced fans and excessive loading and affect airflow. This also can result in a fan's premature failure.



Shepherd filters recently had a client that found out his kitchen exhaust system had never been cleaned properly, resulting in failure. After the fan was replaced, proper cleaning of the entire system was carried out and the loss of income due to his restaurant shutdown cost him over \$30,000 which was not covered by insurance.

#### 5.0 CLEAN FAN/ROOF GREASE SOLUTION

Due to Shepherd Filters greatly reducing grease by up to 98% grease from entering your kitchen exhaust system, the fan will not only stay cleaner, it will also extend its lifespan and improve the balance of airflow throughout your entire system. Rooftop and equipment i.e. HVAC coils, return air units etc. will not require the same frequency of cleaning and maintenance due to grease.



**SHEPHERD  
FILTERS**  
"PROTECTING YOUR HOOD"  
WWW.SHEPHERDFILTERS.COM



## 6.0 FIRE RISK PROBLEM

Insurance is for when a fire occurs, it can surely be agreed that preventing a fire is the overall objective for anyone. Sometimes there is a potential fire risk even weeks after a duct clean due to grease accumulation in between cleans or sub-standard cleans in general. **Kitchen exhaust fires due to grease build-up leads to insurance companies rejecting claims to rebuild or never covering the loss of income.**

We have seen many fires affect restaurants, **many of which never recover** due to the amount of time and energy spent on fixing the damage caused, letting go of staff and lost income.



## 6.0 FIRE RISK REDUCTION SOLUTION

Shepherd Filters reduce the risk of grease build-up between cleans. This keeps your chance of fire spreading down and any fire suppression systems can function and perform properly.

**Sleep well knowing that grease build-up is not an issue you have to deal with.**

### STAY COMPLIANT AND CLEANING COSTS REDUCED AND INSURANCE IS VALID

A flawed system involves guessing whether a system really does require cleaning and when it doesn't. What is too much and what is not enough? Moreover, one shouldn't have to check the cleaner's work was thorough and to standard! **Cheaper also isn't always the best but don't waste your money either.**

### SHEPHERD FILTERS APPROVALS

Shepherd Filters certifications/approvals include:

- Australian Standards AS1668.0E6 Kitchen Exhaust Hoods incorporating Grease Removal Devices
- NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
- UL Standard 1046 for Grease Filters for Exhaust Ducts
- HACCP Approval; and
- Members of the International Kitchen Exhaust Cleaning Association (IKECA)





# SHEPHERD FILTERS

"PROTECTING YOUR HOOD"  
WWW.SHEPHERDFILTERS.COM



## OUR HAPPY CUSTOMERS



*"Thank you for our Shepherd Filters system. It was really easy for me to change the filter sheets and your installation support has been wonderful. I was concerned about the state of our ducting, so now having a clean system is very important to me as a business owner, and the grease being captured shows the filters are doing their job."*

**Owner Café 389 Scarborough**

*"We have found Shepherd Filters to be stopping grease from entering our kitchen exhaust system. As an engineer of a large hotel I value the importance of peace of mind, knowing our system is protected. We recommend Shepherd Filters as a preventative maintenance solution for kitchen exhaust systems. Our staff have found the filters quick and easy to change without disruptions to service times."*

**Director of Engineering, Marriott Hotel**

*"We have installed Shepherd Filters to many of our Kitchens in the Convention Centre and have been thrilled with the performance and the ease of changing them out. The exhaust ducts remain almost grease free and we have cut right down on the frequency of our duct cleaning. The Staff at Shepherd Filters were easy to deal with and the training provided to our F&B chefs and stewards was very clear, precise and helpful."*

**Building Services Manager, Brisbane Convention & Exhibition Centre**

*"The Copthorne Hotel in Wellington was having issues with kitchen duct cleaning and was taken aback with the costs involved in keeping the hood, ducting and fan clean. We knew there had to be a better way. Using Shepherd Filters kitchen grease filters, we found the three-monthly kitchen duct cleans could be extended to half-yearly and the half-yearly could be extended to an annual clean. Over time, the duct cleans have been dramatically reduced, which is saving the hotel an immense amount of money. The restaurant does an average 300 to 400 meals a day for breakfast, lunch and dinner. The other benefits the head chef has noticed is in the noise level reduction within the kitchen, which the dining public were previously exposed to. As this is in the back kitchen, the noise levels have dropped quite dramatically. In the past, duct cleaners have set off the fire alarms in the middle of night, which created a huge headache for the hotel as it resulted in the evacuation of guests. With the requirement for duct cleans reduced, false alarms are a thing of the past. Very happy!"*

**Exec. Chef/F&B Manager, Copthorne Hotel, Wellington, NZ**



**SHEPHERD  
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## SHEPHERD FILTERS SUMMARY OF BENEFITS

The Shepherd Filters solution would dramatically reduce the amount of grease entering your kitchen exhaust systems. You will have a cleaner, better operating and safer kitchen exhaust system, daily.

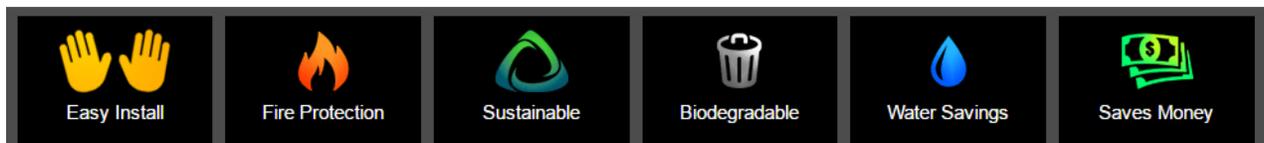
- **SAVE ON COSTLY FILTER & DUCT CLEANING!**
- A cleaner kitchen exhaust system 365 days a year greatly reduces your risk of fire
- Fast and easy to install in minutes, replace sheets as needed saving staff time
- Stopping up to 98% of grease entering the kitchen exhaust system, compared to 20-40% of normal metal kitchen filters
- Meet the new Australian Standards
- HACCP approved
- Won "Best New Hospitality Product" at Fine Foods Australia 2017
- Made from 100% Australian Wool, supporting Australian farmers and disabled workers
- Help the environment
- Quick and easy to change, your staff will appreciate the improvement in their daily routines.



We provide full support in getting the product installed and train your staff accordingly as to how and when to change a wool filter media via an easy to understand schedule guide, featured on the kitchen wall.

EMAIL US TODAY

[hello@shepherdfilters.com.au](mailto:hello@shepherdfilters.com.au)





## Specification Sheet



FRAME SIZE (H X W)		SF FILTER FITS
(mm)	(INCH)	
254 X 395 X 50	10 X 16 X 2	SF 350 X 550
254 X 495 X 50	10 X 20 X 2	SF 350 X 550
295 X 495 X 50	12 X 20 X 2	SF 350 X 550
330 X 495 X 50	13 X 20 X 2	SF 350 X 550
380 X 455 X 50	15 X 18 X 2	SF 450 X 550
395 X 395 X 50	16 X 16 X 2	SF 450 X 450
395 X 495 X 50	16 X 20 X 2	SF 450 X 550
395 X 622 X 50	16 X 25 X 2	SF 450 X 650
495 X 495 X 50	20 X 20 X 2	SF 550 X 550
495 X 595 X 50	20 X 23 X 2	SF 550 X 650
495 X 622 X 50	20 X 25 X 2	SF 550 X 650
595 X 595 X 50	23 X 23 X 2	SF 650 X 650

Stainless Steel Frame #403    100% Wool    Biodegradable and Environmentally Friendly

FILTER FRAME WITH WOOL 495 X 495mm	AIRFLOW			
	%	50%	100%	150%
	M/S	0.7	1.5	2.25
	M3/S	0.17	0.36	0.55
	CFM	360	780	1170
STATIC PRESSURE				
PA (PASCALS)	42	55	67	



[www.shepherdfilters.com](http://www.shepherdfilters.com) | [info@shepherdfilters.com](mailto:info@shepherdfilters.com)

# McDONALDS STANDARD DOCUMENTS

## BIO MOD 450

### MECHANICAL SERVICES

DRAWING LIST		
NO.	DRAWING TITLE	Current Revision
M000	COVER SHEET	F
M001	LEGEND & GENERAL NOTES	B
M002	EQUIPMENT SCHEDULES	F
M100-1	MECHANICAL LAYOUT - WITH PARTY	G
M100-2	MECHANICAL LAYOUT - NO PARTY	G
M200	MECHANICAL ROOF PLAN	E
M300	SECTION SHEET 1	C
M301	SECTION SHEET 2	C
M302	SECTION SHEET 3	C
M400	MECHANICAL DETAILS - SHEET 1	B

**NOTES FOR USERS OF THIS REVIT MODEL -**

1. The Front of House (FOH) has two Decor options, With Party and No Party. View templates have been created using the Worksets visibility to make the various layouts appear for With Party and No Party FOH Mechanical Layouts.

DWG	VIEW TEMPLATE
M100-1	FLOORPLAN WITH PARTY
M100-2	FLOORPLAN NO PARTY
M301	(SECTIONS 1) SECTION AC2 FOH - NO PARTY
M301	(SECTION 4) SECTION AC2 FOH - WITH PARTY

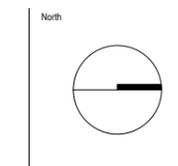
2. These template layouts show two design scenarios for Air conditioning units, with Outside Air Economy Mode and Without Outside Air Economy Mode. Consultant to ammend model to suit the design option chosen for each specific site to comply with the NCC 2019.

Consultant to remove these notes once Coordination / Reviews have been finalised.

Revisions	General Notes	Drawing Notes		
F REVISED AS CLOUDED 01.05.2023	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.	THESE DRAWINGS ARE STANDARD TEMPLATE DESIGN DRAWINGS, PRODUCED BASED ON SPECIFIC OUTDOOR DESIGN CONDITIONS AND BUILDING ORIENTATION. CONSULTING ENGINEERS ARE REQUIRED TO CARRY OUT SYSTEMS DETAIL DESIGN FOR ANY INDIVIDUAL RESTAURANT AND MODIFY THESE DRAWINGS TO SUIT SITE SPECIFIC PARAMETERS.		
E REVISED AS CLOUDED 15.02.2023				
D REVISED AS CLOUDED 07.12.2022				
C REVISED AS CLOUDED 13.09.2022				
B REVISED AS CLOUDED 15.06.2022				
A FIRST RELEASE 08.02.2022				
Issue	Description	Date	Chk	Int

Issue	Description	Date	Chk	Int
F	REVISED AS CLOUDED	01.05.2023		
E	REVISED AS CLOUDED	15.02.2023		
D	REVISED AS CLOUDED	07.12.2022		
C	REVISED AS CLOUDED	13.09.2022		
B	REVISED AS CLOUDED	15.06.2022		
A	FIRST RELEASE	08.02.2022		

Drawing Notes
THESE DRAWINGS ARE STANDARD TEMPLATE DESIGN DRAWINGS, PRODUCED BASED ON SPECIFIC OUTDOOR DESIGN CONDITIONS AND BUILDING ORIENTATION. CONSULTING ENGINEERS ARE REQUIRED TO CARRY OUT SYSTEMS DETAIL DESIGN FOR ANY INDIVIDUAL RESTAURANT AND MODIFY THESE DRAWINGS TO SUIT SITE SPECIFIC PARAMETERS.



Project
MCDONALDS BIOMOD 450
Location
ENTER ADDRESS VIA PROJECT INFORMATION

PRELIMINARY NOT TO BE USED DURING CONSTRUCTION		
Scale	Series	
@ A3	BIO MOD 450	
Drawing	Project Number	Drawing Number
COVER SHEET	2435	M000
Issue		F

## LEGEND

	SIDE BLOW AIR TERMINAL		EXTERNALLY INSULATED SHEET METAL DUCT (R-VALUES TO THE NCC2019)
	4-WAY SUPPLY DIFFUSER		INTERNALLY INSULATED SHEET METAL DUCT. (R-VALUES TO THE NCC2019)
	3 WAY SUPPLY DIFFUSER		INSULATED ACOUSTIC FLEXIBLE DUCT
	JET DIFFUSER		UNINSULATED FLEXIBLE DUCT (EXHAUST DUCTS)
	LINEAR SLOT DIFFUSER/LINEAR BAR GRILLE		TURNING VANES
	RETURN/EXHAUST/TRANSFER GRILLE		MAIN SWITCH BOARD
	SPIGOT		CONTROL PANEL
	FILTER		ACTRON AIR GROUP CONTROLLER
	MANUAL VOLUME CONTROL DAMPER		TEMPERATURE SENSOR IN DUCT
	CEILING ACCESS PANEL (BY BUILDER)		TEMPERATURE SENSOR IN ROOM
			THERMOSTAT
			DOOR UNDERCUT (BY BUILDER)
			DUCT SET DOWN / SET UP
			TUNDISH (BY HYDRAULIC CONTRACTOR)

## ABBREVIATIONS

E	EXHAUST
E/A	EXHAUST AIR
MSB	MAIN SWITCH BOARD
O/A	OUTSIDE AIR
R/A	RETURN AIR
S/A	SUPPLY AIR
S	SUPPLY
ESC	ELECTRICAL SUB-CONTRACTOR
MSC	MECHANICAL SUB-CONTRACTOR
KES	KITCHEN EQUIPMENT SUPPLIER
HSC	HYDRAULIC SUB-CONTRACTOR
GSS	GALVANISED STEEL SHEET

## TAGS

AC.X	EQUIPMENT TAG
	GRILLE TAG

## GENERAL NOTES

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATION DOCUMENT, ARCHITECTURAL AND OTHER SERVICES DRAWINGS.
- ALL DIMENSIONS ARE IN MM, UNLESS OTHERWISE NOTED.
- ALL DUCTWORK SIZES INDICATE CLEAR AIRWAY DIMENSIONS.
- FINAL LOCATION OF ALL WALL MOUNTED CONTROLLERS, DEVICES, AND INSTRUMENTS TO BE COORDINATED WITH THE EQUIPMENT & FURNITURE LAYOUT, AND BE APPROVED BY THE SUPERINTENDENT.
- PROVIDE MANUAL VOLUME CONTROL DAMPERS FOR AIR BALANCING AS REQUIRED, WHETHER SHOWN ON THE DRAWING OR NOT.
- MECHANICAL SUB-CONTRACTOR TO COORDINATE WITH THE STRUCTURAL DETAILER TO MODIFY TRUSS WEBS TO SUIT DUCTWORK LAYOUT.
- PIPE CONDENSATE DRAIN FROM AIR CONDITIONING UNITS TO THE TUNDISH PROVIDED BY THE H.S.C. COORDINATE WITH THE HYDRAULIC SUB-CONTRACTOR ON THE EXACT LOCATION OF THE TUNDISH.
- PIPE THE DRAIN FROM EACH KITCHEN EXHAUST FAN TO THE TUNDISH PROVIDED BY THE H.S.C.
- HEAVY DUTY FLEXIBLE CONNECTIONS TO BE FITTED WHERE RIGID DUCTS CONNECT TO THE EQUIPMENT.
- PROVIDE GSS SUN SHIELD OVER THE FLEXIBLE CONNECTIONS EXPOSED TO THE SUN.
- PROVIDE HINGED, GASKETTED AND INSULATED ACCESS PANEL FOR EACH FILTER BANK.
- ALL AIR CONDITIONING SUPPLY, RETURN, AND TRANSFER GRILLES TO BE PROVIDED WITH INTERNALLY INSULATED CUSHION HEADS. R-VALUES OF SUPPLY AND RETURN AIR CUSHION BOXES TO BE EQUAL TO THE CONNECTING DUCT. CUSHION HEADS OVER TRANSFER GRILLES TO BE INTERNALLY LINED WITH 25mm ACOUSTIC INSULATION.
- ALL DIFFUSER AND GRILLE CUSHION BOXES TO BE SUPPORTED FROM BUILDING STRUCTURE VIA FOUR(4) THREADED DROP RODS ATTACHED TO CORNERS OF THE PLENUM. HANGING VIA DROP RODS INSERTED INTO THE CUSHION BOXES IS NOT ACCEPTABLE, EXCEPT FOR THE EXHAUST AND TRANSFER AIR GRILLES PLENUMS.
- FANS TO BE ISOLATED FROM THEIR UPSTAND WITH VIBRATION ISOLATION PADS.
- EXHAUST DUCTS BETWEEN CANOPY HOODS AND FANS TO BE RUN VERTICALLY WITH NO BENDS. WHERE THIS IS NOT POSSIBLE DUE TO CLASH WITH BUILDING STRUCTURE, PROVIDE AN OFFSET IN THE DUCT ROUTE WITH THE USE OF RADIUS BENDS. PROVIDE AN ACCESS PANEL ON THE DUCT BETWEEN THE TWO BENDS TO AS4254.2. COORDINATE WITH BUILDER FOR THE LOCATION OF THE REQUIRED ACCESS PANELS ON THE CEILING.
- ALL AIR CONDITIONING UNITS TO BE MOUNTED ON GALVANISED STEEL SUPPORTING STRUCTURE VIA VIBRATION ISOLATION MOUNTS.
- IN-LINE FANS TO BE MOUNTED ON GALVANISED STEEL SUPPORTING STRUCTURE VIA VIBRATION ISOLATION MOUNTS.

Revisions		General Notes		Drawing Notes	
B	REVISED AS CLOUDED	14.04.2022		Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.	
A	FIRST RELEASE	08.02.2022		THESE DRAWINGS ARE STANDARD TEMPLATE DESIGN DRAWINGS, PRODUCED BASED ON SPECIFIC OUTDOOR DESIGN CONDITIONS AND BUILDING ORIENTATION. CONSULTING ENGINEERS ARE REQUIRED TO CARRY OUT SYSTEMS DETAIL DESIGN FOR ANY INDIVIDUAL RESTAURANT AND MODIFY THESE DRAWINGS TO SUIT SITE SPECIFIC PARAMETERS.	
Issue	Description	Date	Clk	Int	

<p>North</p> 	<p>Client</p>  <p>McDonald's Australia Limited ABN 43 005 496 928 12 9876 6666</p> 	<p>Architect</p>  <p>Consultant</p>  <p>PO BOX 83 MOUNT HAWTHORN 6915 PH 9201 1919 www.empconsulting.com.au</p>	<p>Project</p> <p>MCDONALDS BIOMOD 450</p> <p>Location</p> <p>ENTER ADDRESS VIA PROJECT INFORMATION</p>	<p>Scale</p> <p>NTS</p> <p>Drawing</p> <p>LEGEND &amp; GENERAL NOTES</p> <p>Project Number</p> <p>2435</p> <p>Drawing Number</p> <p>M001</p> <p>Issue</p> <p>B</p>
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**PRELIMINARY**  
NOT TO BE USED DURING CONSTRUCTION

Scale	Series
NTS	BIO MOD 450
Drawing	LEGEND & GENERAL NOTES
Project Number	Drawing Number
2435	M001
Issue	B

## AIR GRILLES SCHEDULE - WITH PARTY ROOM

TAG	DESCRIPTION	NOMINAL SIZE	NECK SIZE (mm)	MODEL NUMBER	FINISH
A1	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	250x250	LFD41	STD WHITE
A2	4 WAY BLOW LOUVRED FACE DIFFUSER	300x300	150x150	LFD41	STD WHITE
A3	4 WAY BLOW LOUVRED FACE DIFFUSER	300x300	200x200	LFD41	STD WHITE
A4	4 WAY BLOW LOUVRED FACE DIFFUSER	400x400	200x200	LFD41	STD WHITE
A5	2 WAY BLOW LOUVRED FACE DIFFUSER	450x450	300x300	LFD25	STD WHITE
A6	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD41	STD WHITE
A7	3 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD31	STD WHITE
A8	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	350x350	LFD41	STD WHITE
A9	3 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD31	STD WHITE
A10	3 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD31	STD WHITE
A11	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD41	STD WHITE
A12	4 WAY BLOW LOUVRED FACE DIFFUSER	300x300	150x150	LFD41	STD WHITE
A13	4 WAY BLOW LOUVRED FACE DIFFUSER	300x300	150x150	LFD41	STD WHITE
A14	3 WAY BLOW LOUVRED FACE DIFFUSER	450x450	200x200	LFD31	STD WHITE
A15	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	350x350	LFD41	STD WHITE
A16	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD41	STD WHITE
A17	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD41	STD WHITE
A18	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD41	STD WHITE
A19	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	300x300	LFD41	STD WHITE
A40	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	300x300	LFD41	BLACK
A41	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	300x300	LFD41	BLACK
A42	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	300x300	LFD41	BLACK
A43	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	250x250	LFD41	BLACK
A44	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	200x200	LFD41	BLACK
A45	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	200x200	LFD41	BLACK
A46	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	250x250	LFD41	BLACK
A47	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	250x250	LFD41	BLACK
C1	HALF CHEVRON GRILLE	850x600		RC3AR45	STD WHITE
C2	HALF CHEVRON GRILLE	850x600		RC3AR45	STD WHITE
C3	HALF CHEVRON GRILLE	850x600		RC3AR45	STD WHITE
C4	HALF CHEVRON GRILLE	600x600		RC3AR45	STD WHITE
C5	HALF CHEVRON GRILLE	350x300		RC3AR45	STD WHITE
C6	HALF CHEVRON GRILLE	350x300		RC3AR45	STD WHITE
C7	HALF CHEVRON GRILLE	600x400		RC3AR45	STD WHITE
C8	HALF CHEVRON GRILLE	600x400		RC3AR45	STD WHITE
C16	HALF CHEVRON GRILLE	200x200		RC3AR45	BLACK
C17	HALF CHEVRON GRILLE	200x200		RC3AR45	STD WHITE
C18	HALF CHEVRON GRILLE	200x200		RC3AR45	BLACK
C19	HALF CHEVRON GRILLE	250x250		RC3AR45	BLACK
C20	HALF CHEVRON GRILLE	200x200		RC3AR45	BLACK
C21	HALF CHEVRON GRILLE	250x250		RC3AR45	BLACK
C22	HALF CHEVRON GRILLE	500x500		RC3AR45	STD WHITE
C23	HALF CHEVRON GRILLE	500x500		RC3AR45	BLACK
C24	HALF CHEVRON GRILLE	300x300		RC3AR45	STD WHITE
C25	HALF CHEVRON GRILLE	400x400		RC3AR45	STD WHITE
C26	HALF CHEVRON GRILLE	600x600		RC3AR45	STD WHITE
C31	HALF CHEVRON GRILLE	1000x600		RC3AR45	BLACK
C32	HALF CHEVRON GRILLE	1000x600		RC3AR45	BLACK
C33	HALF CHEVRON GRILLE	1000x600		RC3AR45	BLACK
C34	HALF CHEVRON GRILLE	600x600		RC3AR45	BLACK
C35	HALF CHEVRON GRILLE	600x600		RC3AR45	BLACK
C36	HALF CHEVRON GRILLE	1000x600		RC3AR45	BLACK
F1	VANDAL PROOF DOOR GRILLE	600x150		DG	BLACK
G20	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G21	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G22	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G23	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G24	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G25	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G26	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G27	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G28	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G29	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G30	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
S10	JET DIFFUSER			HOLYOAKE JD300	BLACK
S11	JET DIFFUSER			HOLYOAKE JD300	BLACK
S12	JET DIFFUSER			HOLYOAKE JD300	BLACK

Note: COLOUR OF GRILLES IN TOILETS TO MATCH CEILING COLOUR.

## AIR GRILLES SCHEDULE - NO PARTY ROOM

TAG	DESCRIPTION	NOMINAL SIZE	NECK SIZE (mm)	MODEL NUMBER	FINISH
A1	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	250x250	LFD41	STD WHITE
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A3	4 WAY BLOW LOUVRED FACE DIFFUSER	300x300	200x200	LFD41	STD WHITE
A4	4 WAY BLOW LOUVRED FACE DIFFUSER	400x400	200x200	LFD41	STD WHITE
A5	2 WAY BLOW LOUVRED FACE DIFFUSER	450x450	300x300	LFD25	STD WHITE
A6	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD41	STD WHITE
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A11	4 WAY BLOW LOUVRED FACE DIFFUSER	600x600	400x400	LFD41	STD WHITE
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A23	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	300x300	LFD41	BLACK
A24	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	200x200	LFD41	BLACK
A25	4 WAY BLOW LOUVRED FACE DIFFUSER	400x400	250x250	LFD41	BLACK
A26	4 WAY BLOW LOUVRED FACE DIFFUSER	400x400	200x200	LFD41	BLACK
A27	4 WAY BLOW LOUVRED FACE DIFFUSER	450x450	250x250	LFD41	BLACK
C1	HALF CHEVRON GRILLE	850x600		RC3AR45	STD WHITE
C2	HALF CHEVRON GRILLE	850x600		RC3AR45	STD WHITE
C3	HALF CHEVRON GRILLE	850x600		RC3AR45	STD WHITE
C4	HALF CHEVRON GRILLE	600x600		RC3AR45	STD WHITE
C5	HALF CHEVRON GRILLE	350x300		RC3AR45	STD WHITE
C6	HALF CHEVRON GRILLE	350x300		RC3AR45	STD WHITE
C7	HALF CHEVRON GRILLE	600x400		RC3AR45	STD WHITE
C8	HALF CHEVRON GRILLE	600x400		RC3AR45	STD WHITE
C9	HALF CHEVRON GRILLE	1000x600		RC3AR45	BLACK
C10	HALF CHEVRON GRILLE	1000x600		RC3AR45	BLACK
C14	HALF CHEVRON GRILLE	1000x600		RC3AR45	BLACK
C15	HALF CHEVRON GRILLE	800x700		RC3AR45	BLACK
C16	HALF CHEVRON GRILLE	200x200		RC3AR45	BLACK
C17	HALF CHEVRON GRILLE	200x200		RC3AR45	STD WHITE
C18	HALF CHEVRON GRILLE	200x200		RC3AR45	BLACK
C19	HALF CHEVRON GRILLE	250x250		RC3AR45	BLACK
C20	HALF CHEVRON GRILLE	200x200		RC3AR45	BLACK
C21	HALF CHEVRON GRILLE	250x250		RC3AR45	BLACK
C22	HALF CHEVRON GRILLE	500x500		RC3AR45	STD WHITE
C23	HALF CHEVRON GRILLE	500x500		RC3AR45	BLACK
C24	HALF CHEVRON GRILLE	300x300		RC3AR45	STD WHITE
C25	HALF CHEVRON GRILLE	400x400		RC3AR45	STD WHITE
C26	HALF CHEVRON GRILLE	600x600		RC3AR45	STD WHITE
F1	VANDAL PROOF DOOR GRILLE	600x150		DG	BLACK
G1	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G2	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G3	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G4	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G5	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G6	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G7	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G8	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G9	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G10	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G11	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
G12	LINEAR SLOT DIFFUSER - 25mm	900Lx3-SLOT		RCL3S25	BLACK
S1	JET DIFFUSER			HOLYOAKE JD300	BLACK
S2	JET DIFFUSER			HOLYOAKE JD300	BLACK
S3	JET DIFFUSER			HOLYOAKE JD300	BLACK

NOTE:

- INDICATED STATIC PRESSURES ARE ESTIMATED FOR CLEAN FILTERS
- IT ROOM EXHAUST FAN TO COME COMPLETE WITH A THERMOSTAT FAN CONTROLLER EQUAL TO "FANTECH TFC6".
- DE-SUPERHEATER & PUMP TO BE FITTED TO LEAD COMPRESSOR BY ACTRON AIR.
- JET DIFFUSERS (S1, S2 & S3) TO BE SET TO DIFFUSE MODE.
- KITCHEN CANOPY HOODS TO BE SUPPLIED AND INSTALLED BY K.E.S. CANOPY HOODS EXHAUST AIR FLOW RATES ARE AS ADVISED BY THE K.E.S.
- ALL DIFFUSERS & GRILLES TO BE PROVIDED WITH SIDE ENTRY CUSHION BOXES WITH THE SPIGOT SIZE MATCHING FLEXIBLE DUCT SIZE IN ACCORDANCE WITH THE FLEXIBLE DUCTS SCHEDULE. TOP ENTRY PLENUMS ARE ONLY APPROVED IN THE BACK OF HOUSE WHERE SPACE IS LIMITED. PROVIDE BUTTERFLY DAMPER AT EACH SPIGOT FOR AIR BALANCING.
- ALL DIFFUSERS & GRILLES TO BE OF REMOVABLE CORE TYPE.
- ALL EXHAUST FANS, EXCLUDING FAN-2, FAN-3, FAN-4 AND FAN-8 TO BE PROVIDED WITH BACKDRAFT SHUTTERS.
- ALL FANS WITH SINGLE PHASE MOTORS TO BE PROVIDED WITH SPEED CONTROLLERS.
- COORDINATE COLOUR OF ALL THE DIFFUSERS & GRILLES WITH THE ARCHITECT PRIOR TO PROCUREMENT.

## FAN SCHEDULE - AC-1 WITHOUT ECONOMY CYCLE

UNIT No.	APPLICATION	FLOW RATE (L/s)	ESTIMATED E.S.P (Pa)	Model	POWER (kW)	FLA (A)	NUMBER OF PHASES	WEIGHT (kg)
FAN-1	TOILET EXHAUST	285	185.0	GUE314V / TGUE314 (FOR WA STORE)	0.220	1.10	1	14/32
FAN-2	FRY EXHAUST	430	270.0	CGD354M-MM	0.550	1.63	3	85
FAN-3	FILLET EXHAUST	430	270.0	CGD354M-MM	0.550	1.63	3	85
FAN-4	GRILL EXHAUST	550	270.0	CGD404M-MM	0.550	1.63	3	90
FAN-5	WASH-UP EXHAUST	100	100.0	CEEC25D	0.170	1.26	1	6
FAN-6	IT ROOM	200	100.0	CE356V	0.070	0.32	1	20
FAN-7	MAKEUP AIR TO CANOPY HOODS	600	180.0	PUE354ER	0.370	1.85	1	24

\* INCLUDES 35Pa PRESSURE DROP ACROSS THE NON-RETURN DAMPER.

## FAN SCHEDULE - AC1 WITH ECONOMY CYCLE

UNIT No.	APPLICATION	FLOW RATE (L/s)	ESTIMATED E.S.P (Pa)	Model	POWER (kW)	FLA (A)	NUMBER OF PHASES	WEIGHT (kg)
FAN-1	TOILET EXHAUST	285	185.0	GUE314V / TGUE314 (FOR WA STORE)	0.220	1.10	1	14/32
FAN-2	FRY EXHAUST	430	270.0	CGD354M-MM	0.550	1.63	3	85
FAN-3	FILLET EXHAUST	430	270.0	CGD354M-MM	0.550	1.63	3	85
FAN-4	GRILL EXHAUST	550	270.0	CGD404M-MM	0.550	1.63	3	90
FAN-5	WASH-UP EXHAUST	100	100.0	CEEC25D	0.170	1.26	1	6
FAN-6	IT ROOM	200	100.0	CE356V	0.070	0.32	1	20
FAN-7	MAKEUP AIR TO CANOPY HOODS	600	180.0	PUE354ER	0.370	1.85	1	24
FAN-8	RELIEF AIR FAN	3150	70.0	AP0716BP/725	0.830	2.20	3	60

\* INCLUDES 35Pa PRESSURE DROP ACROSS THE NON-RETURN DAMPER.

## INDIRECT EVAPORATIVE COOLER UNIT SCHEDULE (USE WHERE APPLICABLE)

UNIT No.	SUPPLY AIR (L/s)	AMBIENT (°CDB/°CWB)	ESTIMATED E.S.P (Pa)	Model	POWER (kW)	FLA (A)	NUMBER OF PHASES	WATER SUPPLY	WEIGHT (kg)	DRAIN FLOW RATE (L/min)
PCU-1	1000	36.6/23.2°C	170	SEELEY INTERNATIONAL CW-H15	1.80	4.9	3	20L/min@100kPa-800kPa	350	15L/min

NOTE: THIS SCHEDULE HAS ONLY BEEN PROVIDED AS A SAMPLE AND GUIDE. CONSULTING ENGINEER TO MODIFY OR REMOVE TO SUIT THE REQUIREMENTS OF EACH SITE. REFER THE SPECIFICATION DOCUMENT FOR FURTHER DETAILS ON THIS UNIT.

## FLEXIBLE DUCT SCHEDULE (U.O.N.)

AIR VOLUME (L/S)	DUCT DIAMETER (mm)
<20 L/S	ø150
20-45 L/S	ø150
46-80 L/S	ø200
81-150 L/S	ø250
151-220 L/S	ø300
221-330 L/S	ø350
331-460 L/S	ø400
461-600 L/S	ø450
601-800 L/S	ø500
801-1100 L/S	ø550

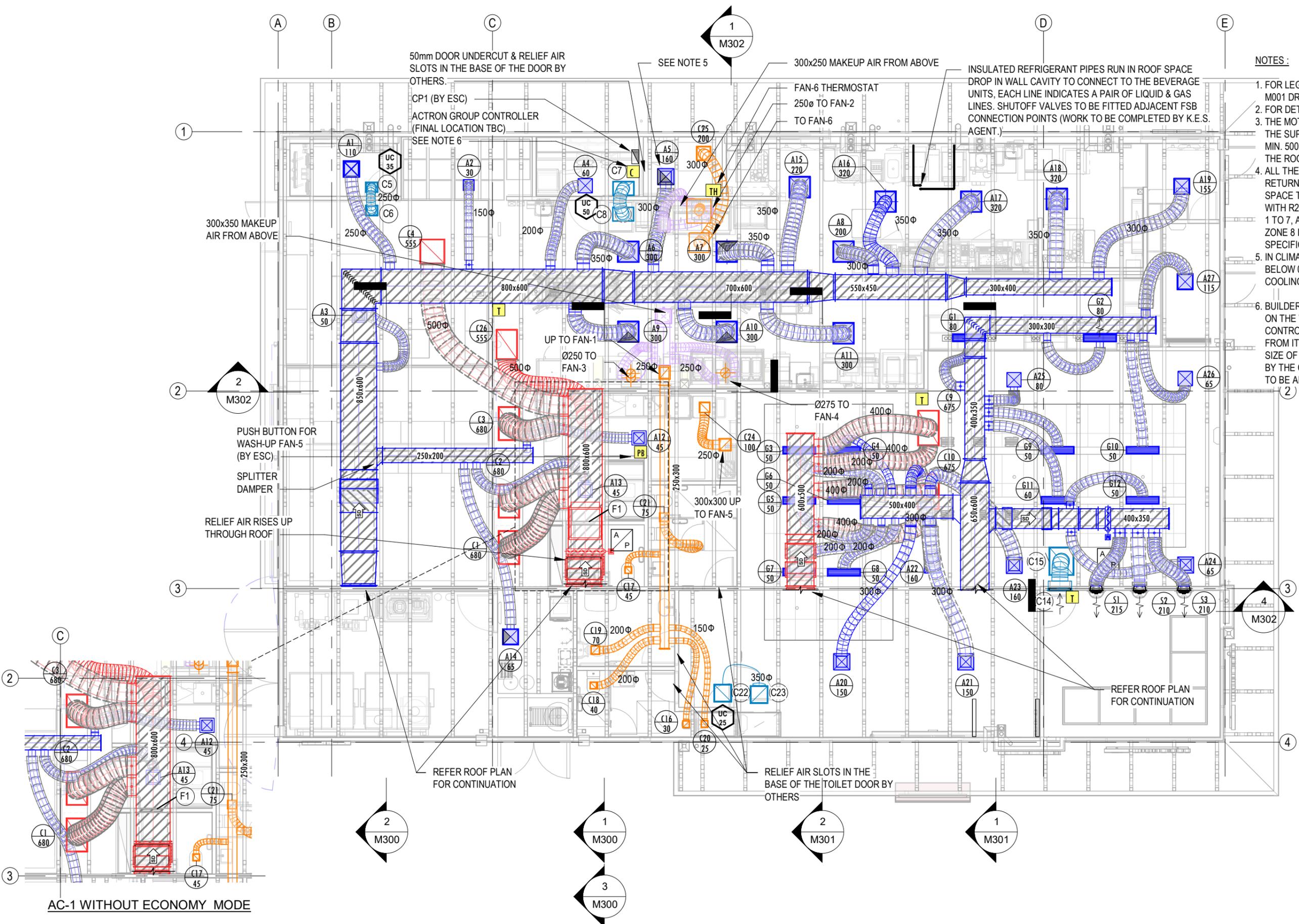
## AC UNIT SCHEDULE

UNIT No.	AREA SERVING	SUPPLY AIR (L/s)	OUTSIDE AIR (L/s)	TOTAL COOLING / SENSIBLE COOLING	AIR ON COIL (°CDB)	AIR ON COIL (°CWB)	AMBIENT (°CDB/°CWB)	ESTIMATED EXTERNAL STATIC PRESSURE (Pa)	ACTRON AIR MODEL	WEIGHT	NUMBER OF PHASES	FULL LOAD AMPS
AC 1	KITCHEN	3600	450	65kW / 57kW	25 °C	16.5 °C	34.3/20.5	250	PKY700_RSST (SEE NOTE 3)	1000	3	60.5
AC 2	DINING & PLAYLAND	2250	850	38kW / 36kW	27 °C	18.5 °C	34.3/20.5	225	PKY500_LFST	900	3	41.7

Revisions	Date	Chk	Int
F	15.02.2023		
E	07.12.2022		
D	13.09.2022		
C	15.06.2022		
B	14.04.2022		
A	08.02.2022		

General Notes
Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/





- NOTES:**
1. FOR LEGEND & GENERAL NOTES REFER M001 DRAWING.
  2. FOR DETAILS REFER M400.
  3. THE MOTORISED DAMPER TO MODULATE THE SUPPLY AIR TO PLAYLAND BETWEEN MIN. 500 L/s AND MAX. 700 L/s TO MAINTAIN THE ROOM TEMPERATURE.
  4. ALL THE AIR CONDITIONING SUPPLY AND RETURN AIR DUCTWORK IN THE ROOF SPACE TO BE INTERNALLY INSULATED WITH R2.0 INSULATION FOR CLIMATE ZONES 1 TO 7, AND R3.0 INSULATION FOR CLIMATE ZONE 8 IN ACCORDANCE WITH THE SPECIFICATION DOCUMENT.
  5. IN CLIMATES WITH WINTER DESIGN CONDITIONS BELOW 0°C, PROVIDE A VAV DIFFUSER WITH COOLING / HEATING CHANGEOVER CONTROLS.
  6. BUILDER TO PROVIDE AND FIT AN ACCESS PANEL ON THE WALL ( BEHIND THE ACTRON AIR GROUP CONTROL TOUCH PANEL ) SO IT IS ACCESSIBLE FROM IT ROOM FOR FUTURE UPGRADES. SIZE OF THE ACCESS PANEL TO BE CONFIRMED BY THE CONTRACTOR. SIZE IS ESTIMATED TO BE APPROX. 300x300.

**AC-1 WITHOUT ECONOMY MODE**

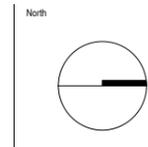
Revisions	Date	Chk	Int
G BACKGROUND UPDATED	01.05.2023		
F ARCHITECTURAL BACKGROUND UPDATED	15.02.2023		
E REVISED AS CLOUDED	07.12.2022		
D REVISED AS CLOUDED	13.09.2022		
C REVISED AS CLOUDED	15.06.2022		
B REVISED AS CLOUDED	14.04.2022		
A FIRST RELEASE	08.02.2022		

**General Notes**

Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.

**Drawing Notes**

THESE DRAWINGS ARE STANDARD TEMPLATE DESIGN DRAWINGS, PRODUCED BASED ON SPECIFIC OUTDOOR DESIGN CONDITIONS AND BUILDING ORIENTATION. CONSULTING ENGINEERS ARE REQUIRED TO CARRY OUT SYSTEMS DETAIL DESIGN FOR ANY INDIVIDUAL RESTAURANT AND MODIFY THESE DRAWINGS TO SUIT SITE SPECIFIC PARAMETERS.



**Project**  
MCDONALDS BIOMOD 450

**Location**  
ENTER ADDRESS VIA PROJECT INFORMATION

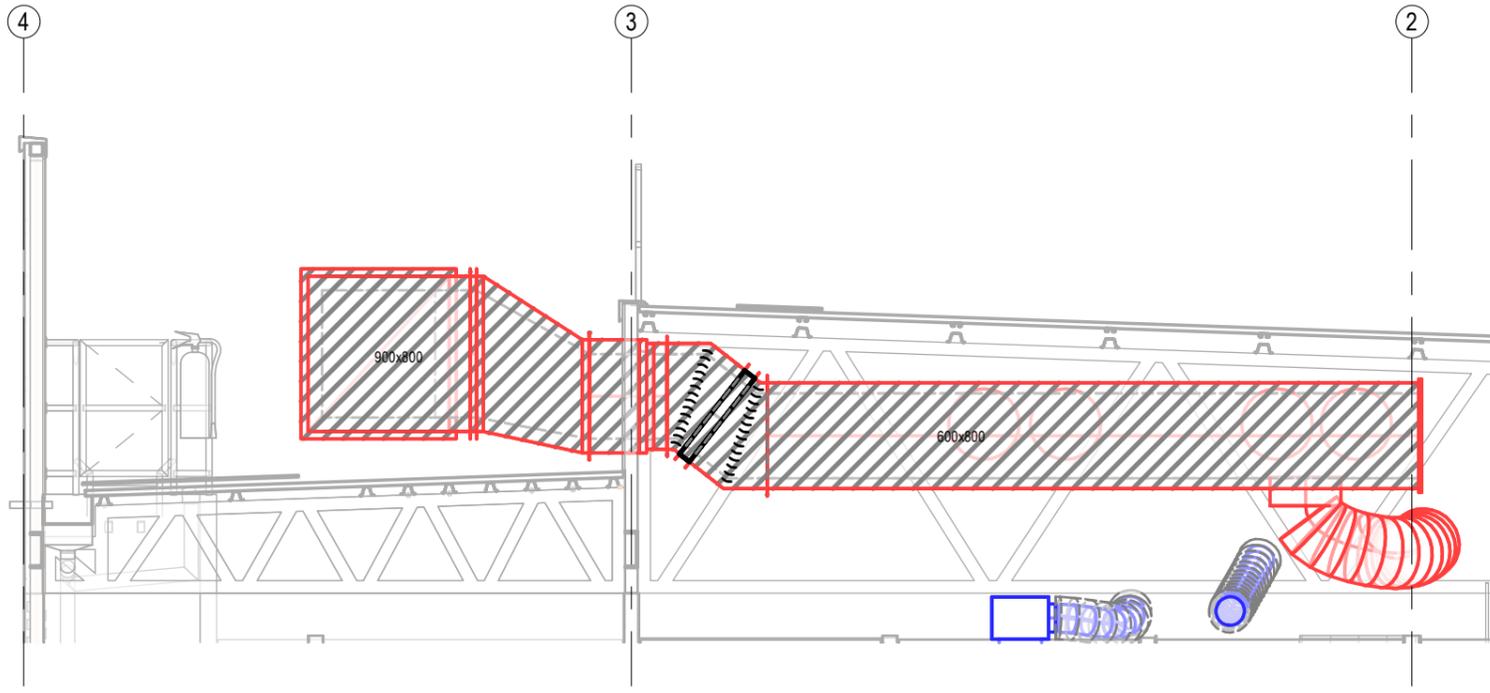
**PRELIMINARY**  
NOT TO BE USED DURING CONSTRUCTION

Scale: 1:100 @ A3  
Series: BIO MOD 450

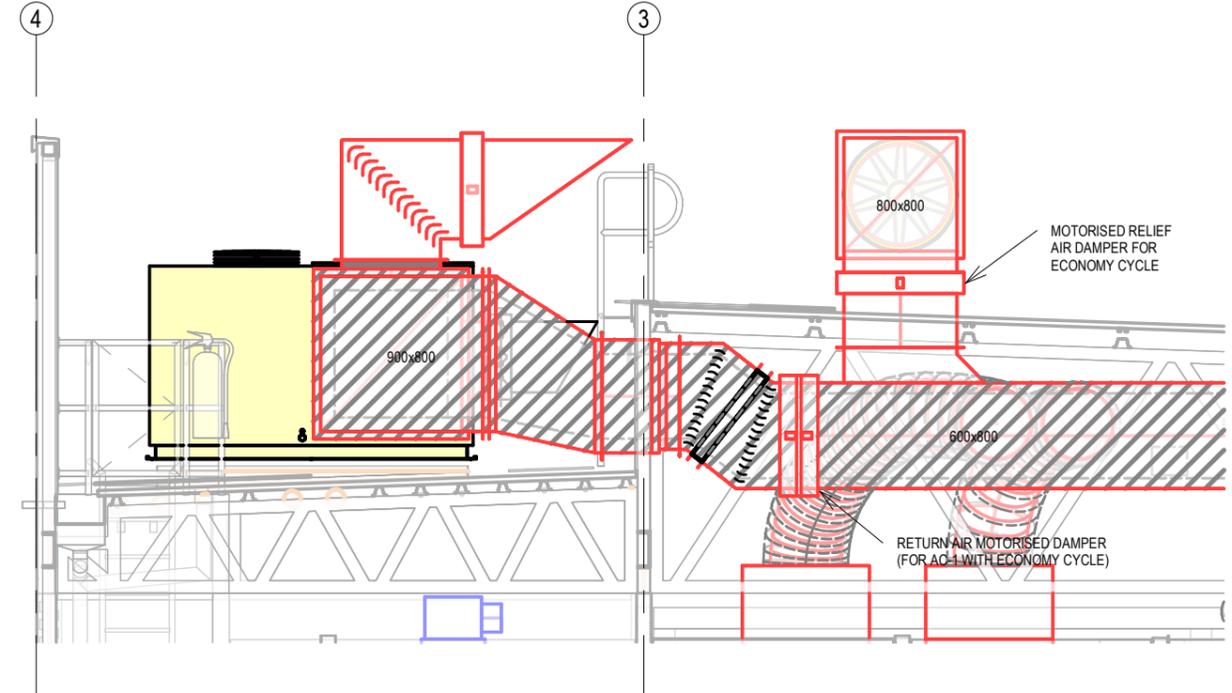
**Drawing**  
MECHANICAL LAYOUT - NO PARTY

Project Number: 2435  
Drawing Number: M100-2  
Issue: G

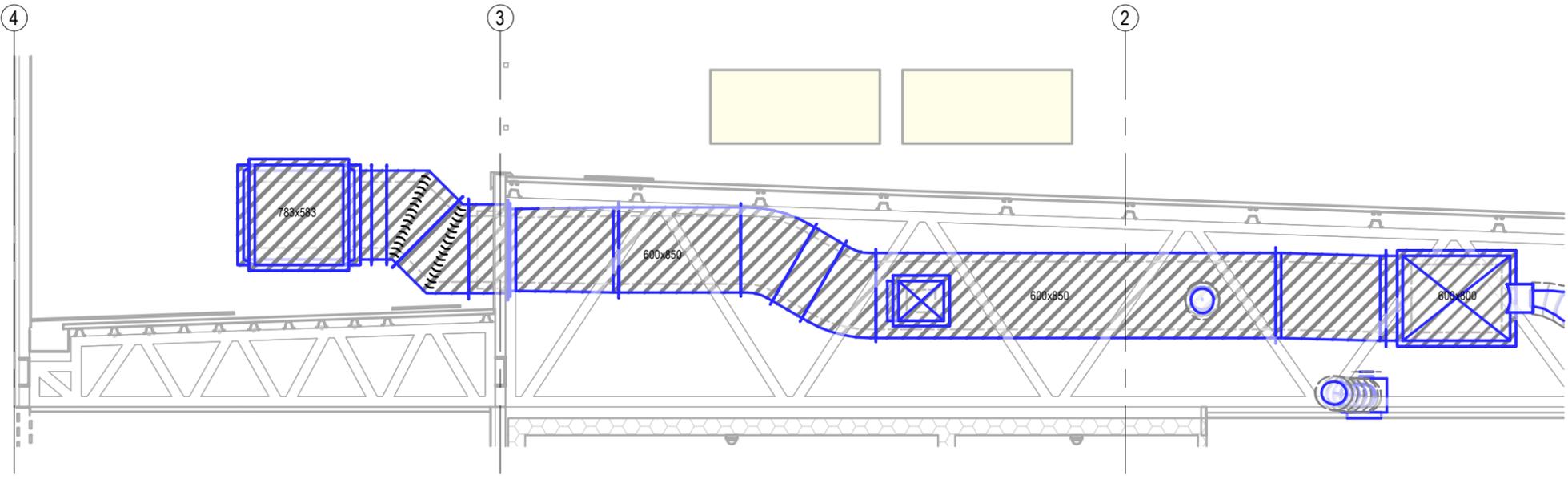




**SECTION 1** (AC-1 NO ECONOMY CYCLE)  
SCALE 1 : 50 M300

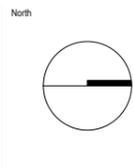


**SECTION 3** (AC-1 WITH ECONOMY CYCLE)  
SCALE 1 : 50 M300



**SECTION 2**  
SCALE 1 : 50 M300

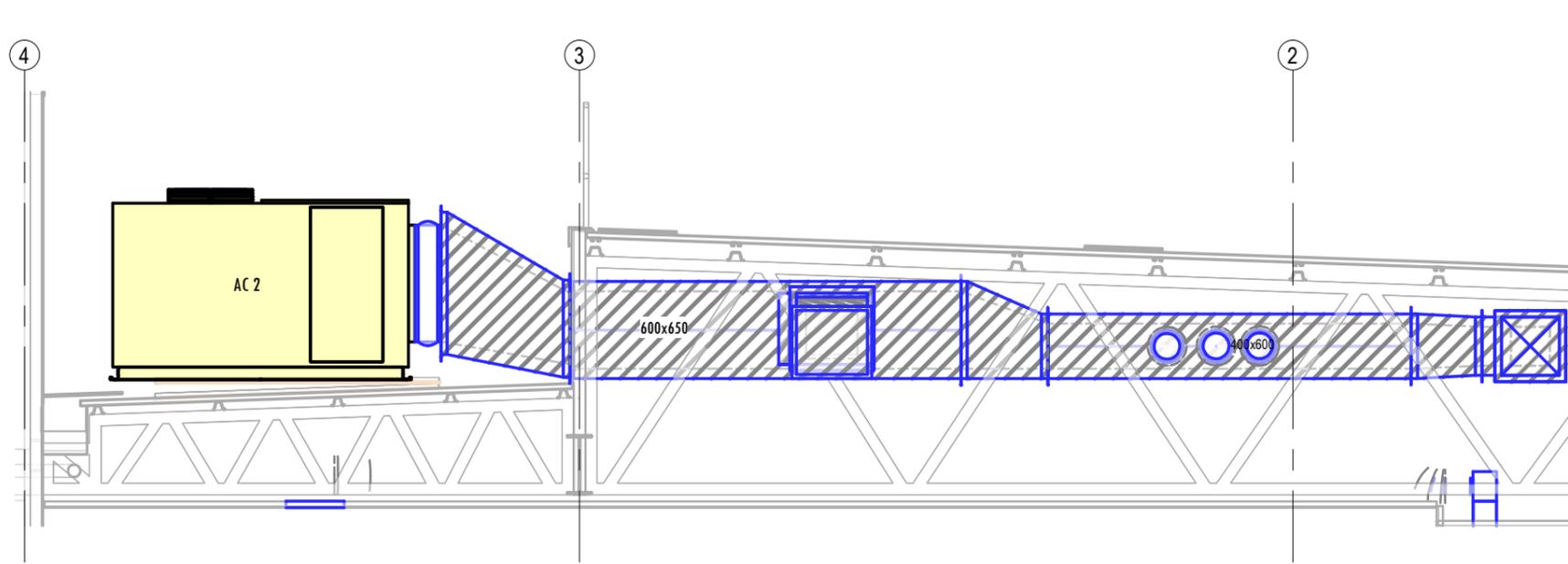
Revisions	General Notes	Drawing Notes
C ARCHITECTURAL BACKGROUND UPDATED 15.02.2023 B REVISED AS CLOUDED 07.12.2022 A FIRST RELEASE 08.02.2022	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.	THESE DRAWINGS ARE STANDARD TEMPLATE DESIGN DRAWINGS, PRODUCED BASED ON SPECIFIC OUTDOOR DESIGN CONDITIONS AND BUILDING ORIENTATION. CONSULTING ENGINEERS ARE REQUIRED TO CARRY OUT SYSTEMS DETAIL DESIGN FOR ANY INDIVIDUAL RESTAURANT AND MODIFY THESE DRAWINGS TO SUIT SITE SPECIFIC PARAMETERS.



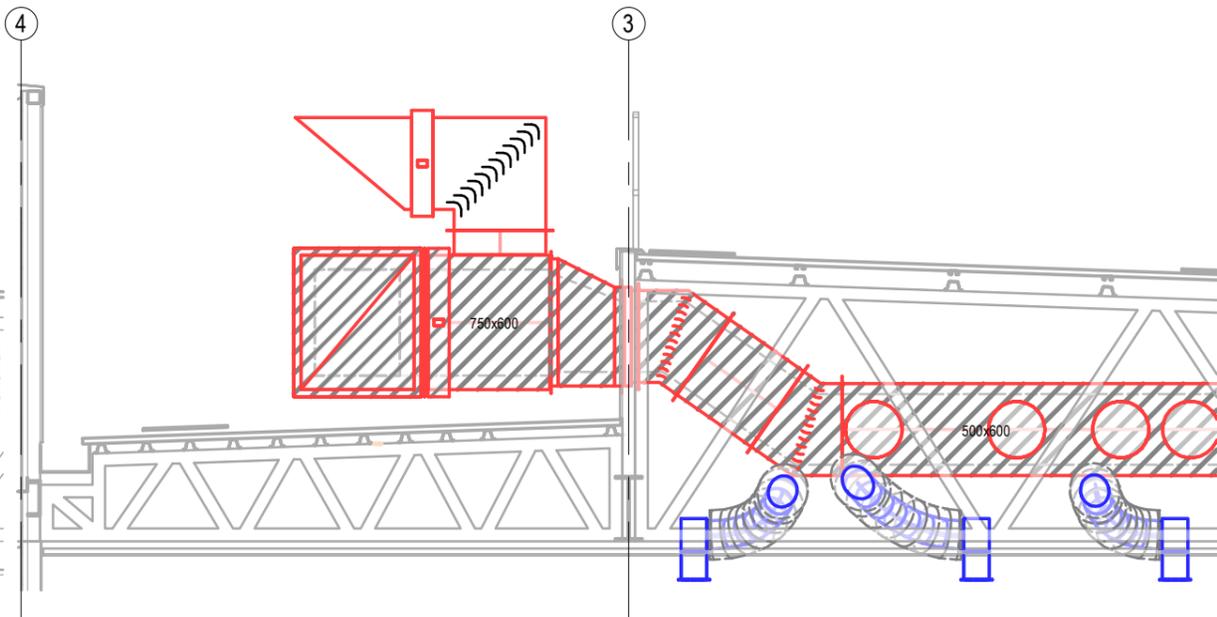
Project: MCDONALDS BIOMOD 450  
Location: ENTER ADDRESS VIA PROJECT INFORMATION

**PRELIMINARY**  
NOT TO BE USED DURING CONSTRUCTION

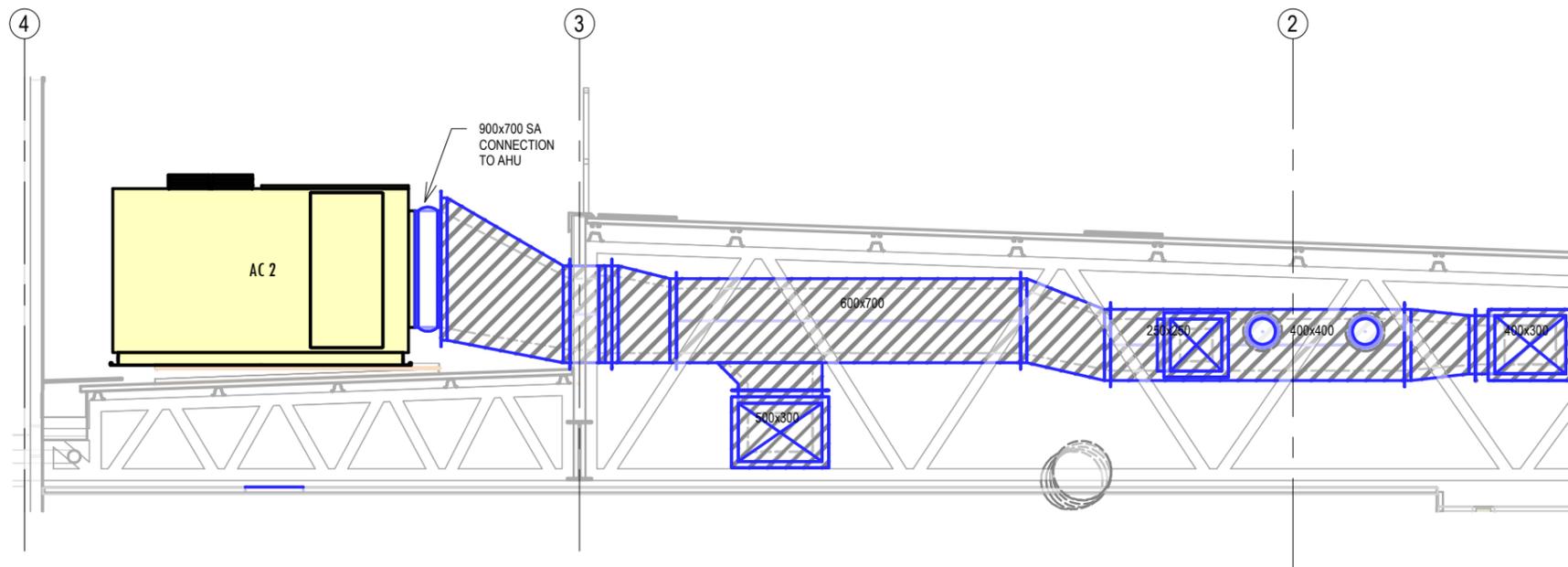
Scale	Series	
1 : 50 @ A3	BIO MOD 450	
SECTION SHEET 1		
Project Number	Drawing Number	Issue
2435	M300	C



**SECTION 1** ( NO PARTY DECOR )  
SCALE 1 : 50 M301

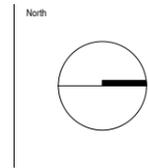


**SECTION 2** ( THE OPTION WITH ECONOMY CYCLE IS SHOW IN THIS SECTION )  
SCALE 1 : 50 M301



**SECTION 4** ( WITH PARTY DECOR )  
SCALE 1 : 50 M301

Revisions	General Notes	Drawing Notes
<p>C ARCHITECTURAL BACKGROUND 15.02.2023 UPDATED</p> <p>B REVISED AS CLOUDED 15.06.2022</p> <p>A FIRST RELEASE 08.02.2022</p> <p>Issue Description Date Clk Int</p>	<p>Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.</p>	<p>THESE DRAWINGS ARE STANDARD TEMPLATE DESIGN DRAWINGS, PRODUCED BASED ON SPECIFIC OUTDOOR DESIGN CONDITIONS AND BUILDING ORIENTATION. CONSULTING ENGINEERS ARE REQUIRED TO CARRY OUT SYSTEMS DETAIL DESIGN FOR ANY INDIVIDUAL RESTAURANT AND MODIFY THESE DRAWINGS TO SUIT SITE SPECIFIC PARAMETERS.</p>



Project  
MCDONALDS BIOMOD 450

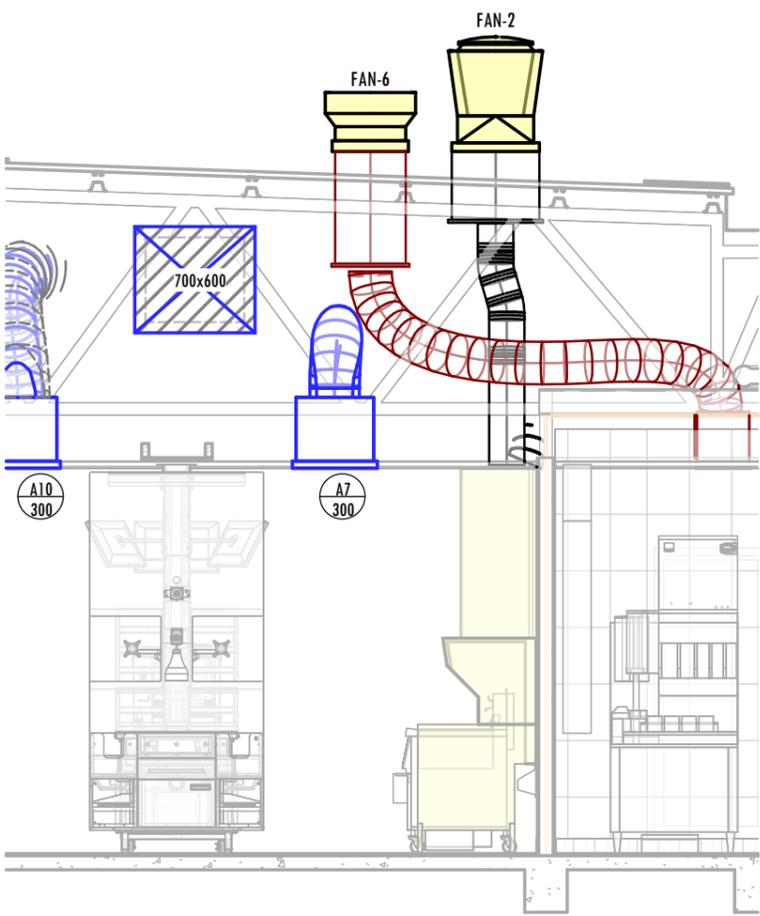
Location  
ENTER ADDRESS  
VIA PROJECT INFORMATION

**PRELIMINARY**  
NOT TO BE USED DURING CONSTRUCTION

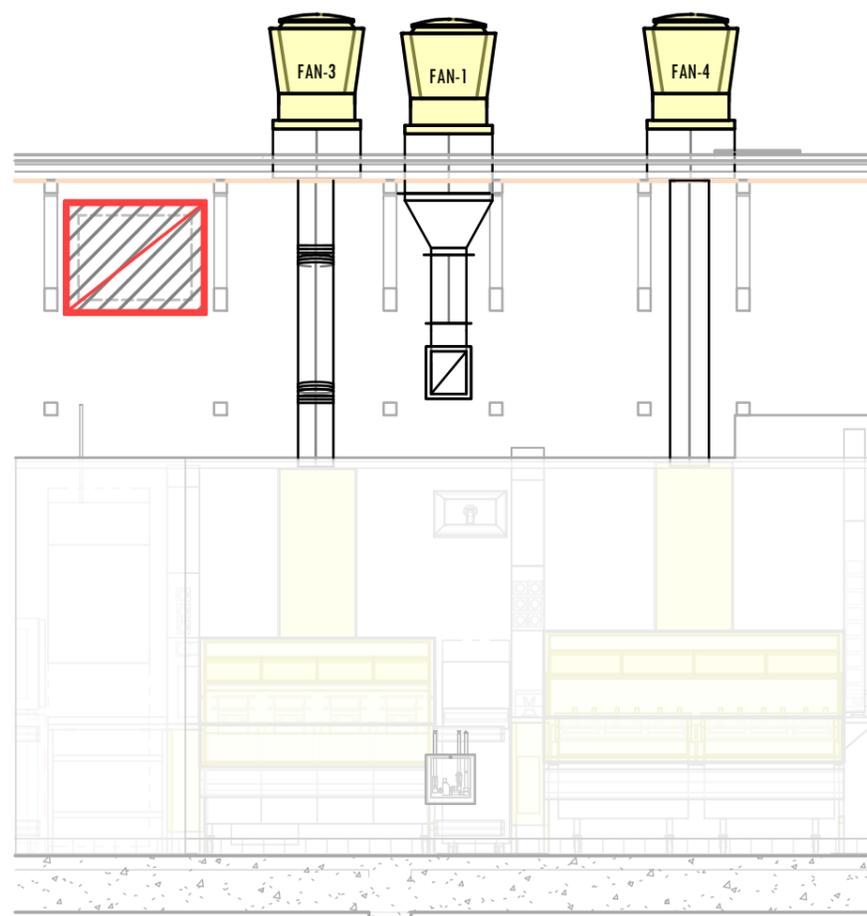
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Series BIO MOD 450

Drawing SECTION SHEET 2

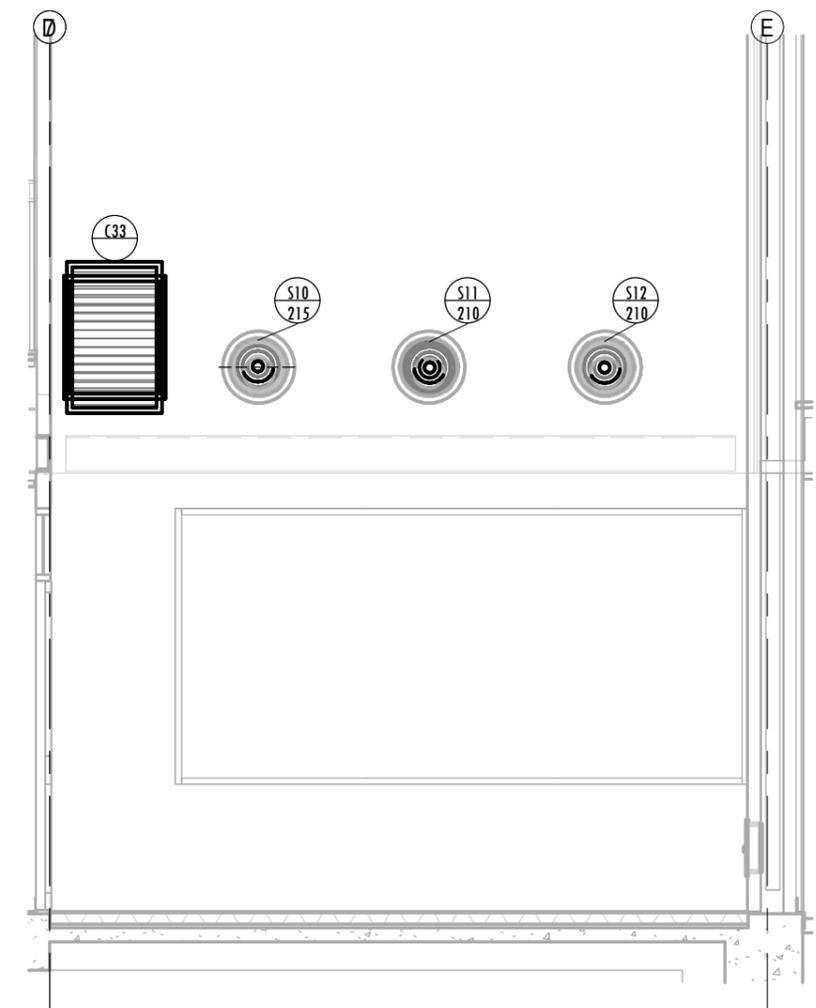
Project Number 2435  
Drawing Number M301  
Issue C



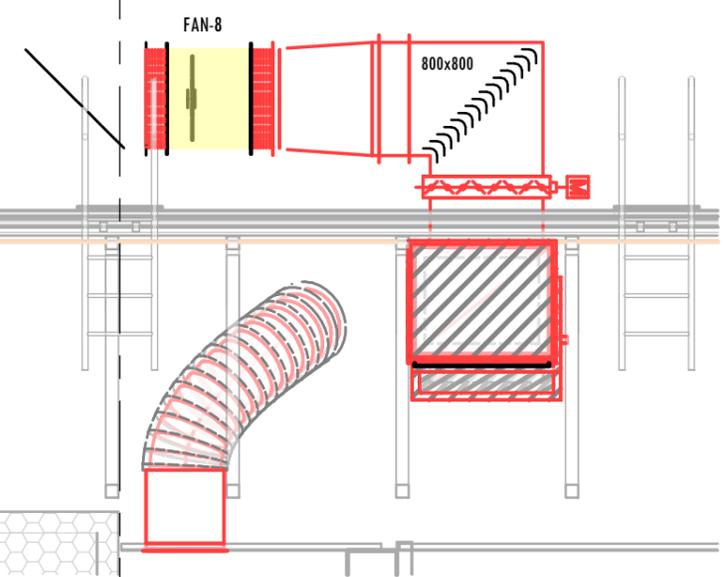
**SECTION 1**  
SCALE 1:50  
M302



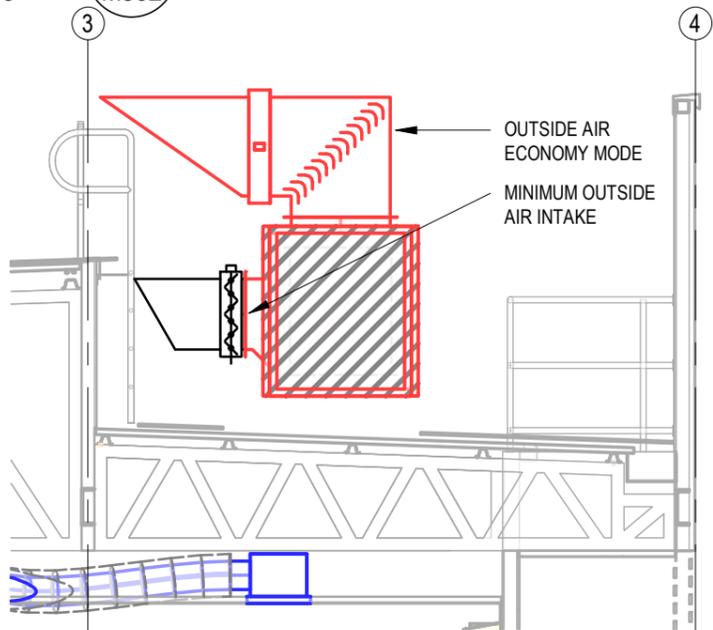
**SECTION 2**  
SCALE 1:50  
M302



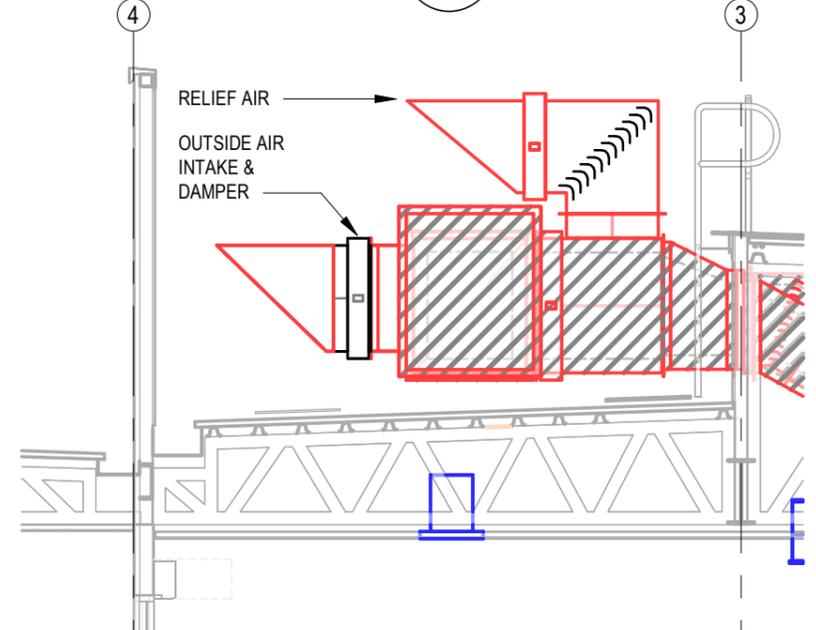
**SECTION 4**  
SCALE 1:50  
M302



**SECTION 3**  
SCALE 1:50  
M302 (AC-1 WITH ECONOMY CYCLE)



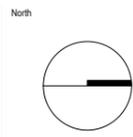
**SECTION 5**  
SCALE 1:50  
M302 (AC-1 WITH ECONOMY CYCLE)



**SECTION 6**  
SCALE 1:50  
M302 (AC-2 WITH ECONOMY CYCLE)

**PRELIMINARY**  
NOT TO BE USED DURING CONSTRUCTION

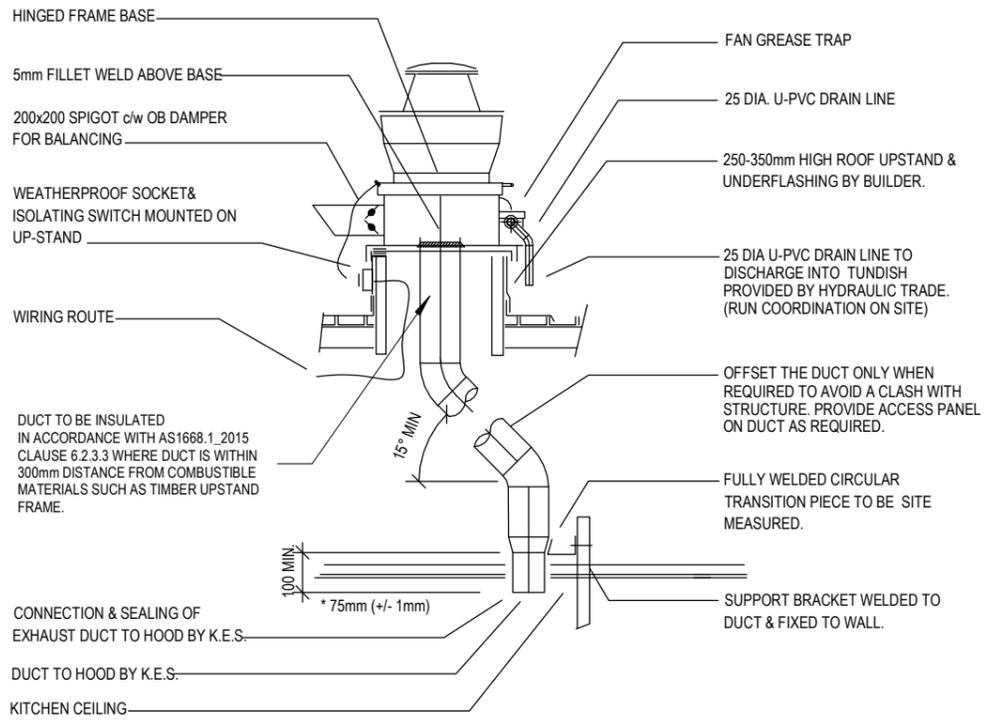
Revisions	General Notes	Drawing Notes
<p>C ARCHITECTURAL BACKGROUND UPDATED 15.02.2023</p> <p>B REVISED AS CLOUDED 15.06.2022</p> <p>A FIRST RELEASE 08.02.2022</p> <p>Issue Description Date Clk Int</p>	<p>Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.</p>	<p>THESE DRAWINGS ARE STANDARD TEMPLATE DESIGN DRAWINGS, PRODUCED BASED ON SPECIFIC OUTDOOR DESIGN CONDITIONS AND BUILDING ORIENTATION. CONSULTING ENGINEERS ARE REQUIRED TO CARRY OUT SYSTEMS DETAIL DESIGN FOR ANY INDIVIDUAL RESTAURANT AND MODIFY THESE DRAWINGS TO SUIT SITE SPECIFIC PARAMETERS.</p>



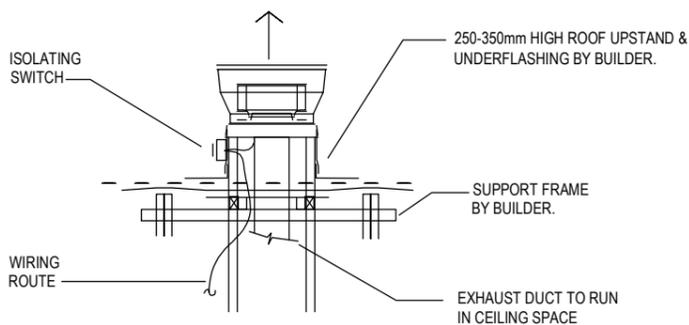
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Location: ENTER ADDRESS VIA PROJECT INFORMATION

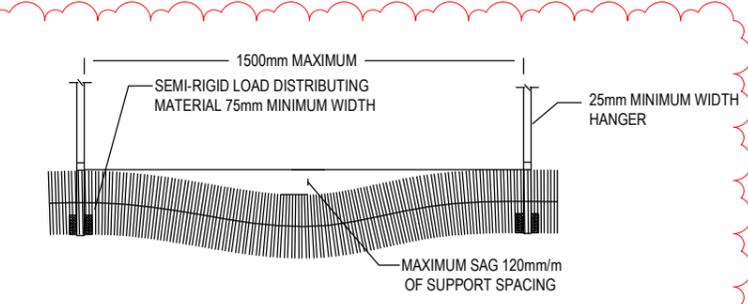
Scale	Series
1:50 @ A3	BIO MOD 450
Drawing: SECTION SHEET 3	
Project Number: 2435	Drawing Number: M302
Issue: C	



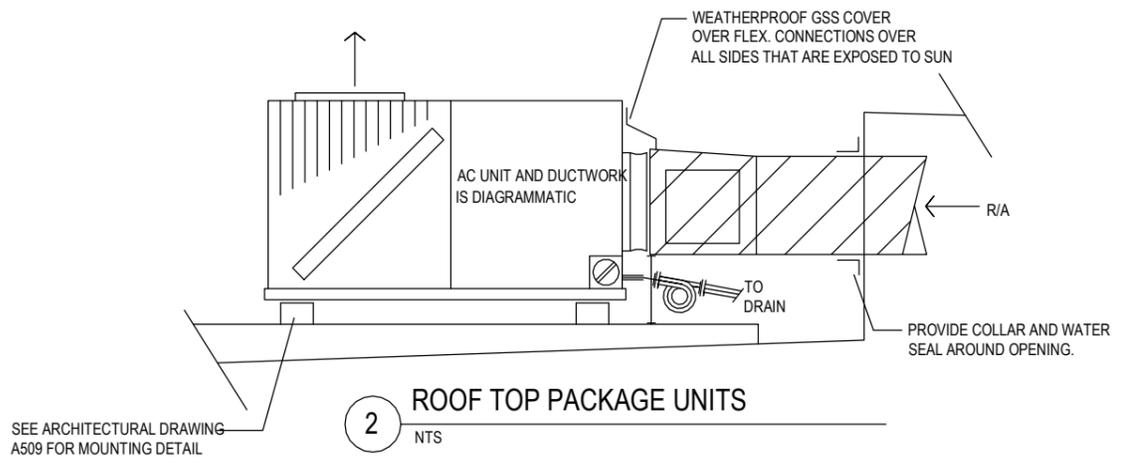
**1 KITCHEN EXHAUST FAN DETAIL**  
(SHOWN FOR CGD SERIES)



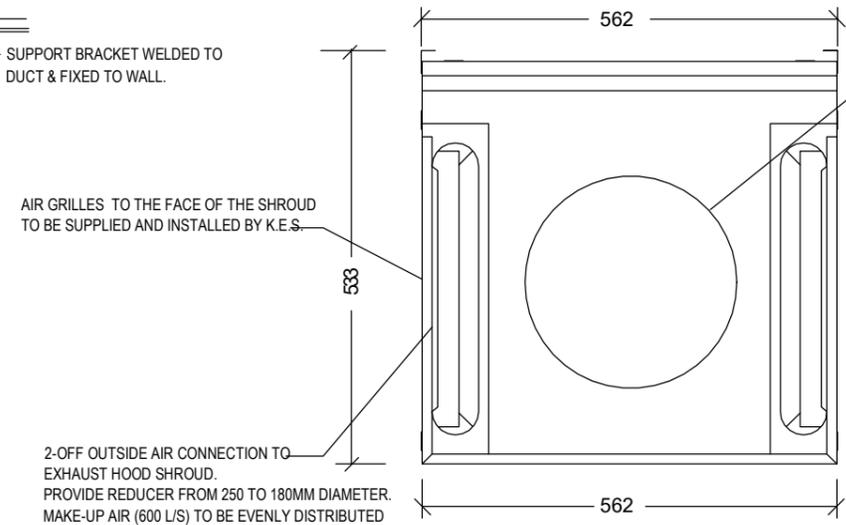
**3 TYPICAL ROOF MOUNTED FANS**  
EXCLUDING KITCHEN EXHAUST FANS  
NTS



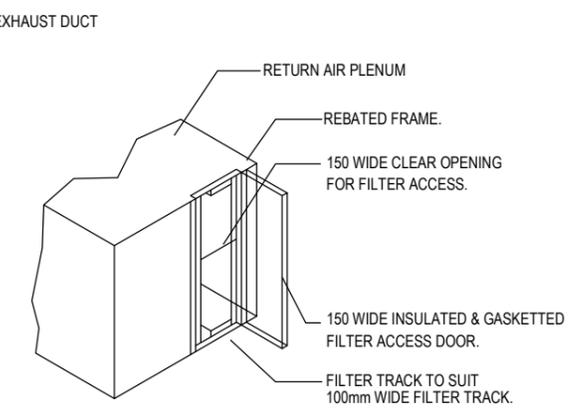
**6 FLEXIBLE DUCT MOUNTING DETAIL**  
NTS



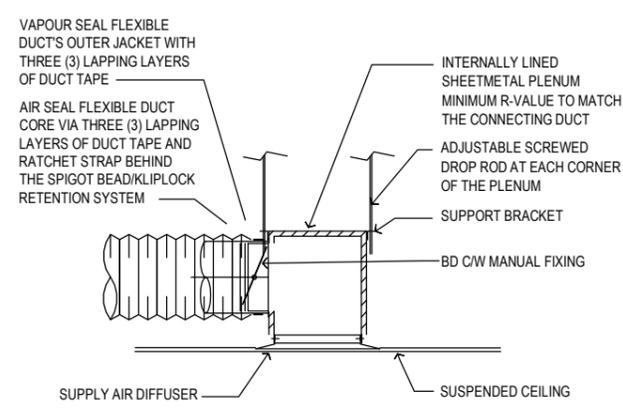
**2 ROOF TOP PACKAGE UNITS**  
NTS



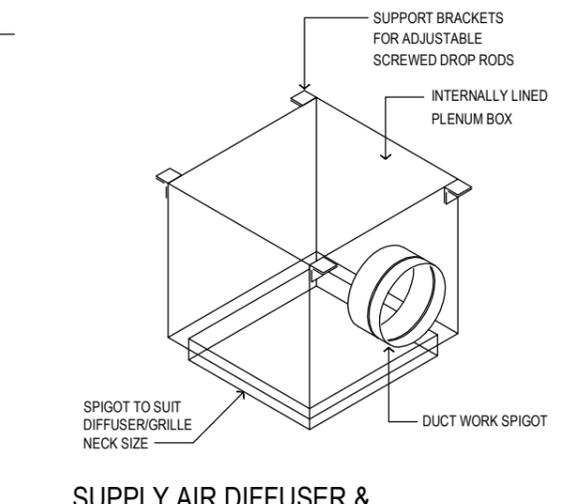
**4 OUTSIDE AIR CONNECTION TO KITCHEN EXHAUST SHROUD**  
(FOR FRY HOOD, FILET HOOD & GRILL HOOD)  
NTS



**5 RETURN AIR FILTER DETAIL**  
NTS (WHERE INSTALLED IN DUCTWORK)



**7 SUPPLY AIR DIFFUSER**  
NTS



**8 SUPPLY AIR DIFFUSER & RETURN AIR GRILLE PLENUM BOX**  
NTS

Revisions	General Notes	Drawing Notes
B DETAIL 6 REVISED A FIRST RELEASE Issue Description	Do not scale this drawing. The drawing shows design intent only. All dimensions to be checked on site prior to construction or production. Construction details to be confirmed by contractor/manufacturer. This is a computer generated drawing. Do not amend by hand. Figure dimensions are to be used. Contact architect for clarification if dimensions are not clear. All dimensions are in millimeters. All discrepancies and omissions on site must be reported to the architect for their comments or approval prior to commencing work.	Date Chk Int 01.05.2023 08.02.2022

Document Set ID: 11896887  
Version: 1, Version Date: 08/05/2024

Client	Architect	Project
McDonald's Australia Limited ABN 43 005 496 928 12 9876 6666	IWA Consultant EMP CONSULTING PO BOX 83 MOUNT HAWTHORN 6915 PH 9201 1919 www.empconsulting.com.au	MCDONALDS BIOMOD 450 Location ENTER ADDRESS VIA PROJECT INFORMATION

Scale	Series
@ A3	BIO MOD 450

Drawing	Project Number	Drawing Number	Issue
MECHANICAL DETAILS - SHEET 1	2435	M400	B

PRELIMINARY
NOT TO BE USED DURING CONSTRUCTION

North

Client

Architect

Project
MCDONALDS BIOMOD 450

Scale	Series
@ A3	BIO MOD 450

Drawing	Project Number	Drawing Number	Issue
MECHANICAL DETAILS - SHEET 1	2435	M400	B

To: Chris West  
Buildplus Group

From: Stantec Australia Pty Ltd  
226 Adelaide Terrace Perth

Project/File: 300305045\_Lot 9501 Gaebler Road, Hammond Park

Date: 06 March 2024

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**Reference: 300305045**

## 1 Introduction

This Technical Memo has been prepared by Stantec to provide a response to the traffic related queries raised by the City of Cockburn during the meeting conducted on 05 February 2024 for the proposed development in Hammond Park within the City of Cockburn. The following sections describe the site location and the issues raised during meeting.

### 1.1 Site Location

The Site is located in the suburb of Hammond Park, in the corner of Hammond Road and Gaebler Road, as shown in **Figure 1-1**. The Site is within the City of Cockburn.

**Figure 1-1 - Aerial Image of Site**



Source: Metromap (base map)

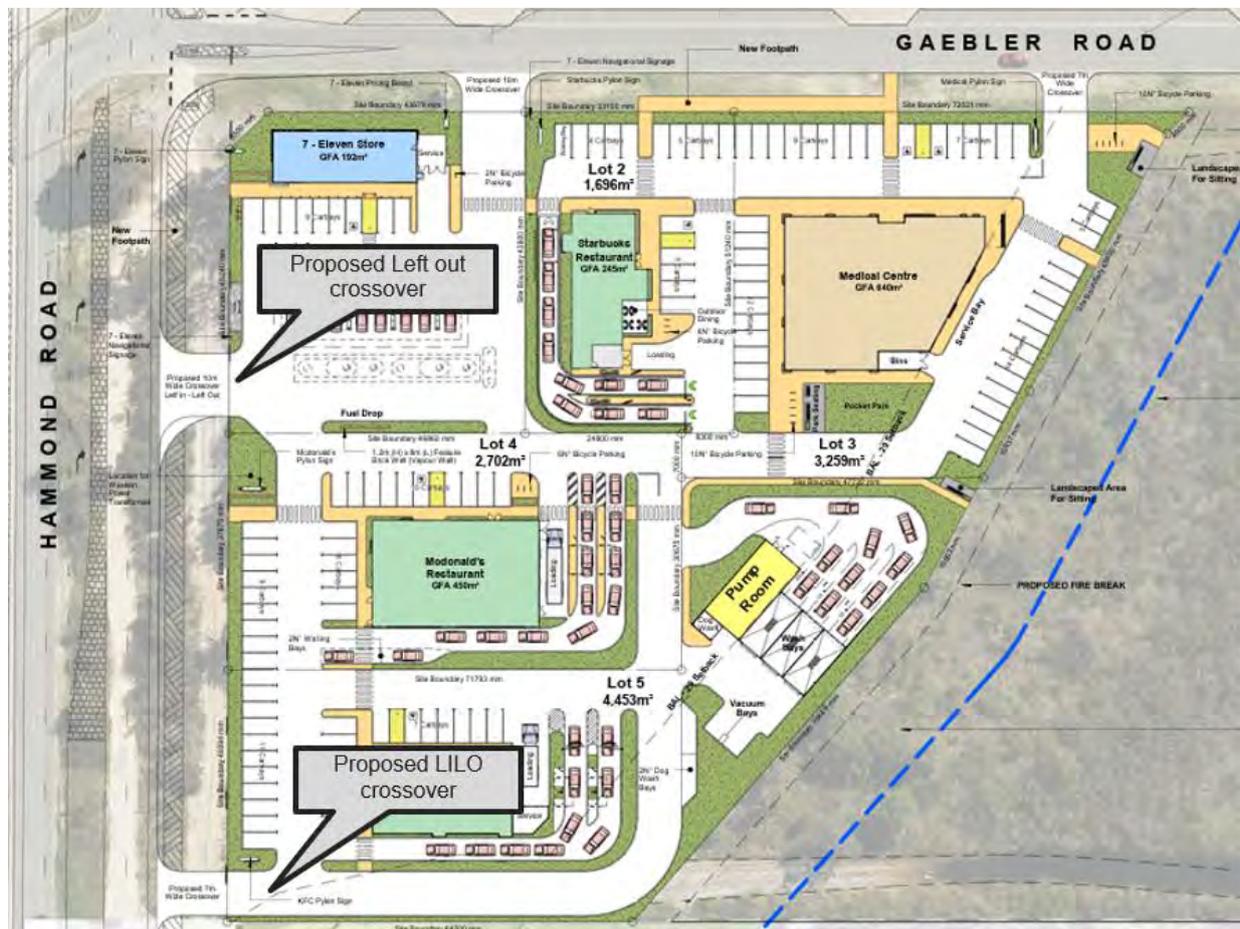
Reference: 300305045

## 1.2 Hammond Road Crossovers

Having the two crossovers onto Hammond Road can improve traffic flow and safety, especially for fuel delivery. Fuel trucks will be able to leave the proposed service station site more quickly and efficiently without obstructing the path of other cars or having to traverse through the site, which eases traffic congestion and reduces potential vehicle and pedestrian conflicts. This is to be achieved by constructing a designated left-out only exit for the northern crossover onto Hammond Road. **Figure 1-2** shows proposed access arrangements along Hammond Road – noting that the final crossover design will be provided to suit a left-out movement arrangement only and as much separation from the Gaebler Road intersection as practicable.

Having a dedicated exit onto Hammond Road that is to be used by the tanker vehicles can streamline operations within the service station. Tanker trucks require more space when turning and manoeuvring, so separating their entry and exit points can prevent congestion and improve overall site efficiency.

**Figure 1-2 Proposed Hammond Road Crossovers**



Swept path analysis has been conducted with a 17.2 fuel truck and 19m semi as shown in **Figure 1-3** to **Figure 1-8**. The issues of vehicle encroachment are minor and can be designed out during the detailed design process for the site and road upgrades.

Reference: 300305045

Figure 1-3 Swept Path – 17.2m Fuel Truck – Left Out

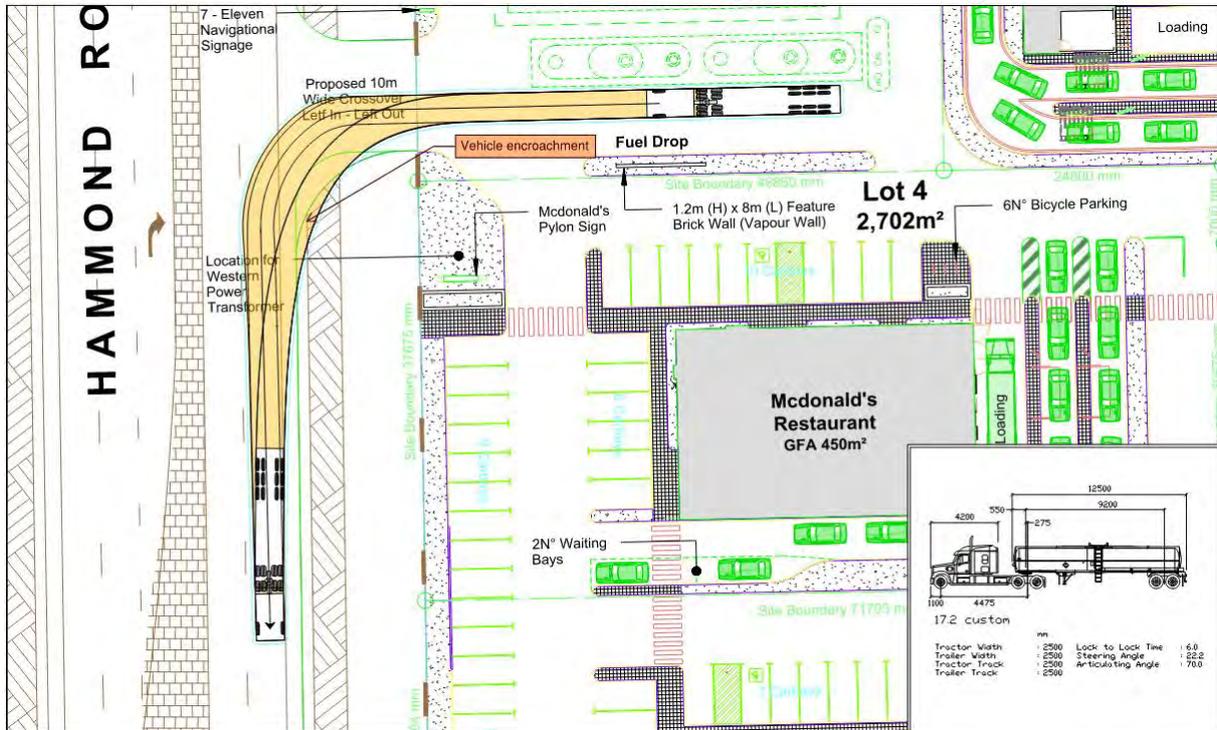


Figure 1-4 Swept Path – 19m Semi Trailer – Left Out

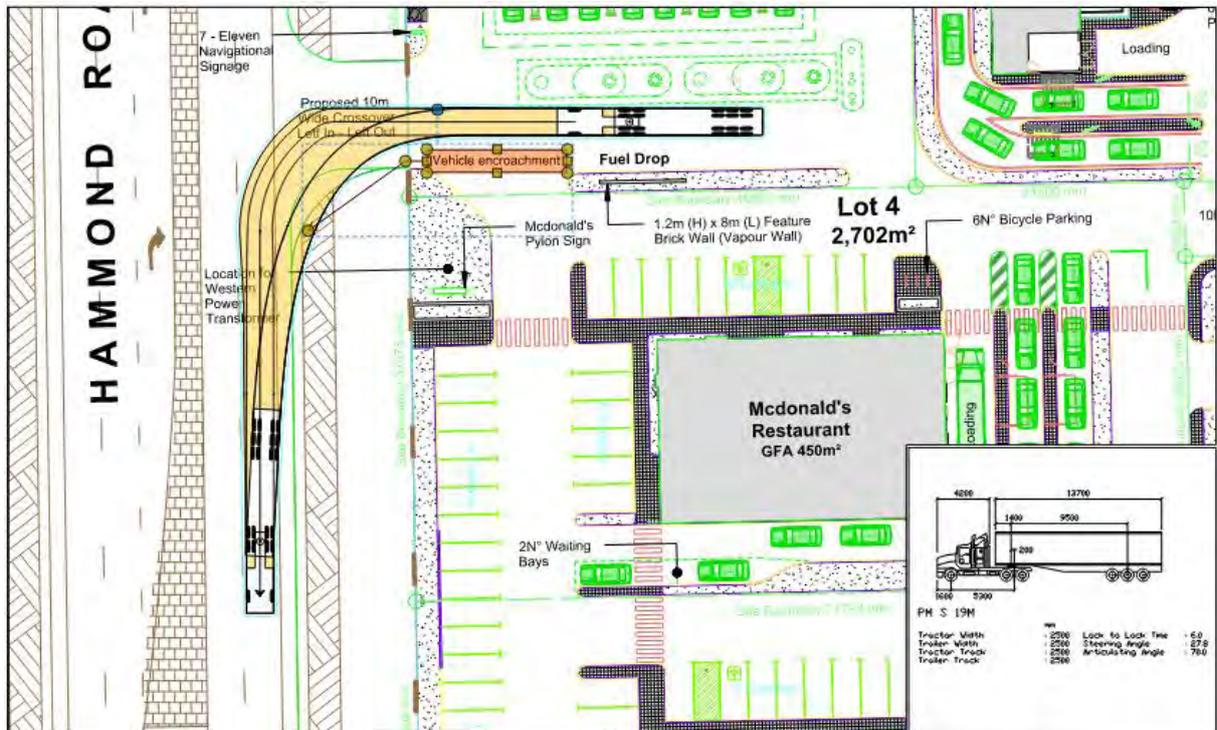
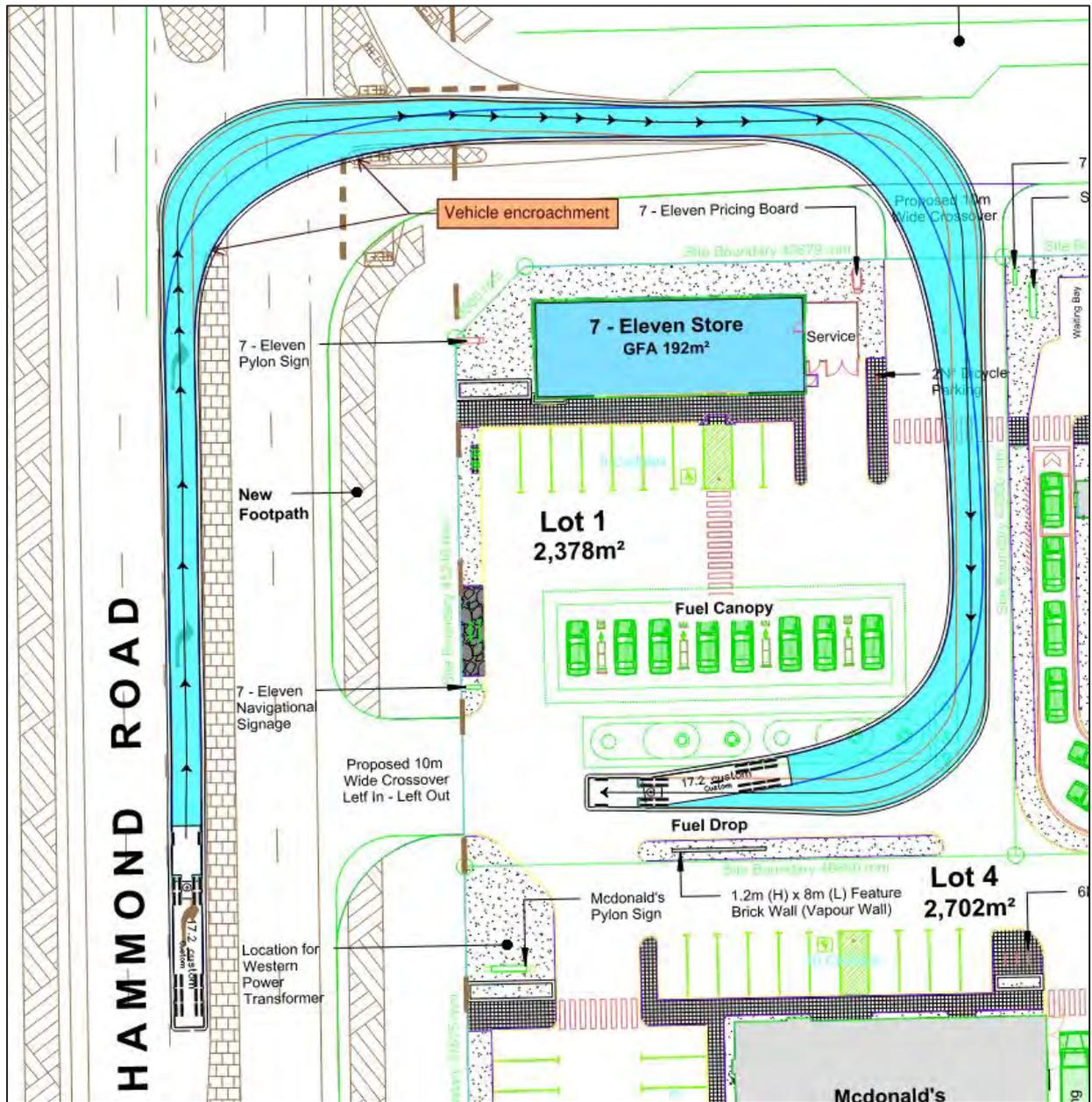


Figure 1-5 Swept Path – 17.2m Fuel Truck – Right In (Hammond Road South)



**Figure 1-6 Swept Path – 19m Semi Trailer – Right In (Hammond Road South)**

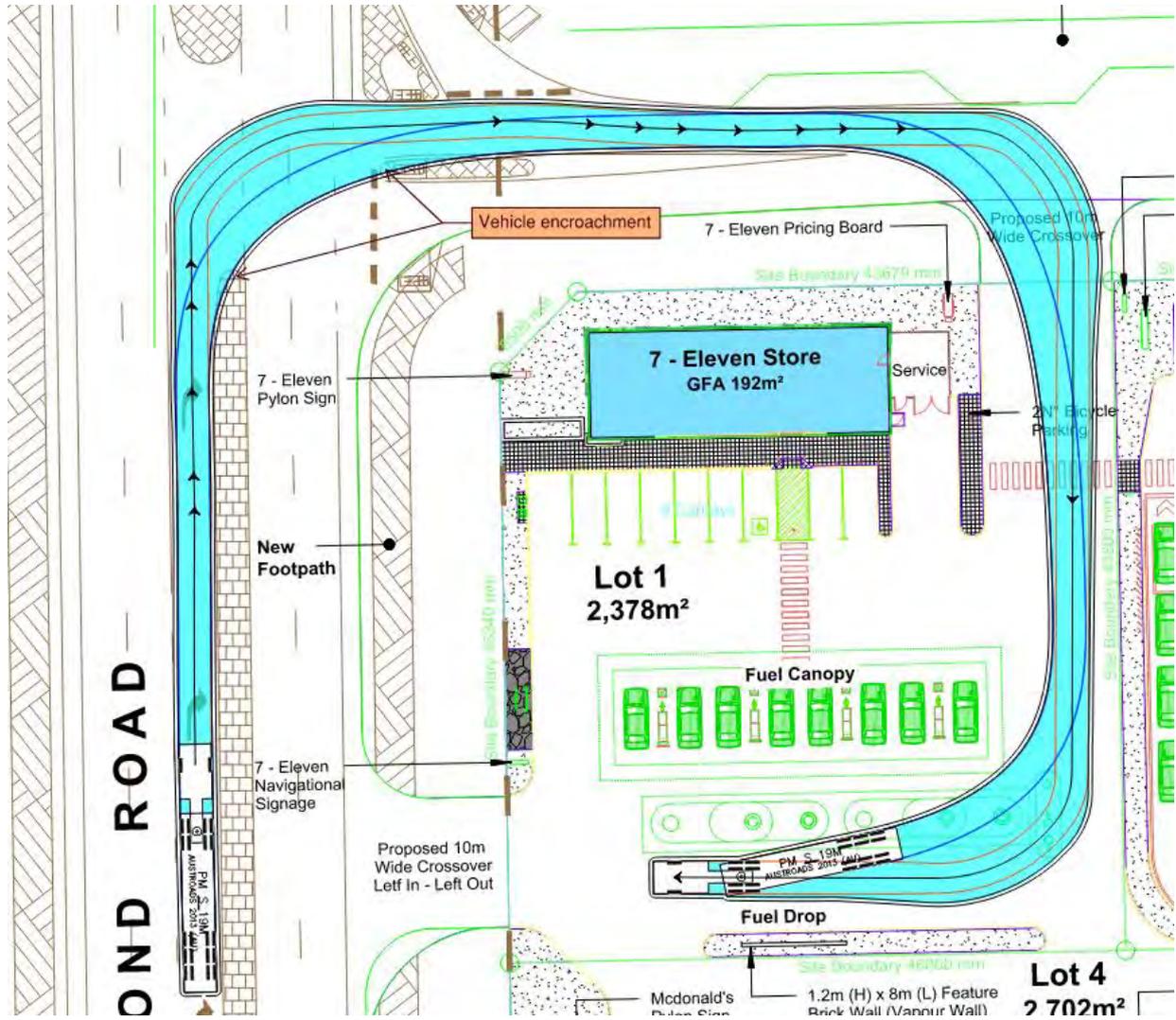
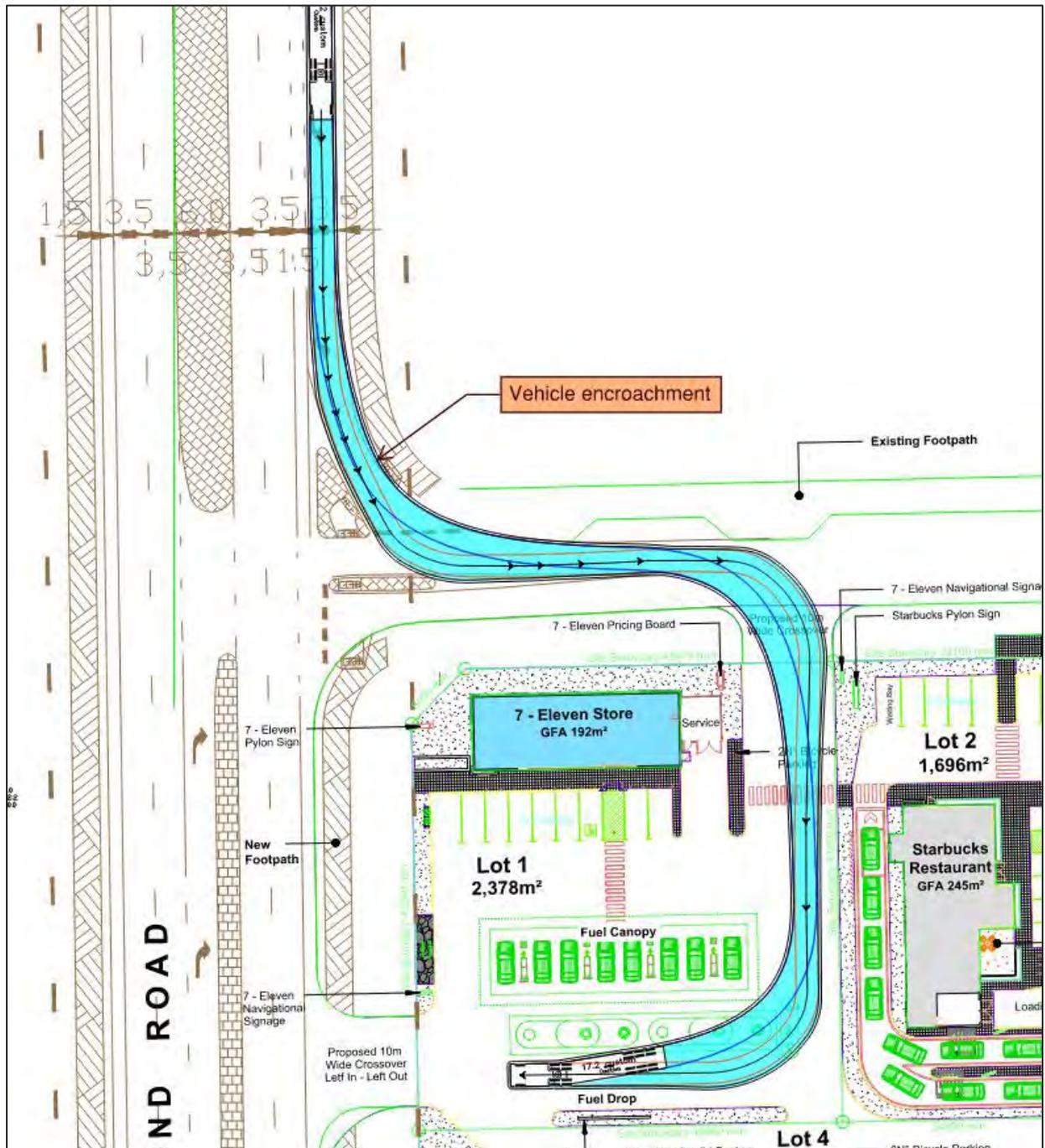
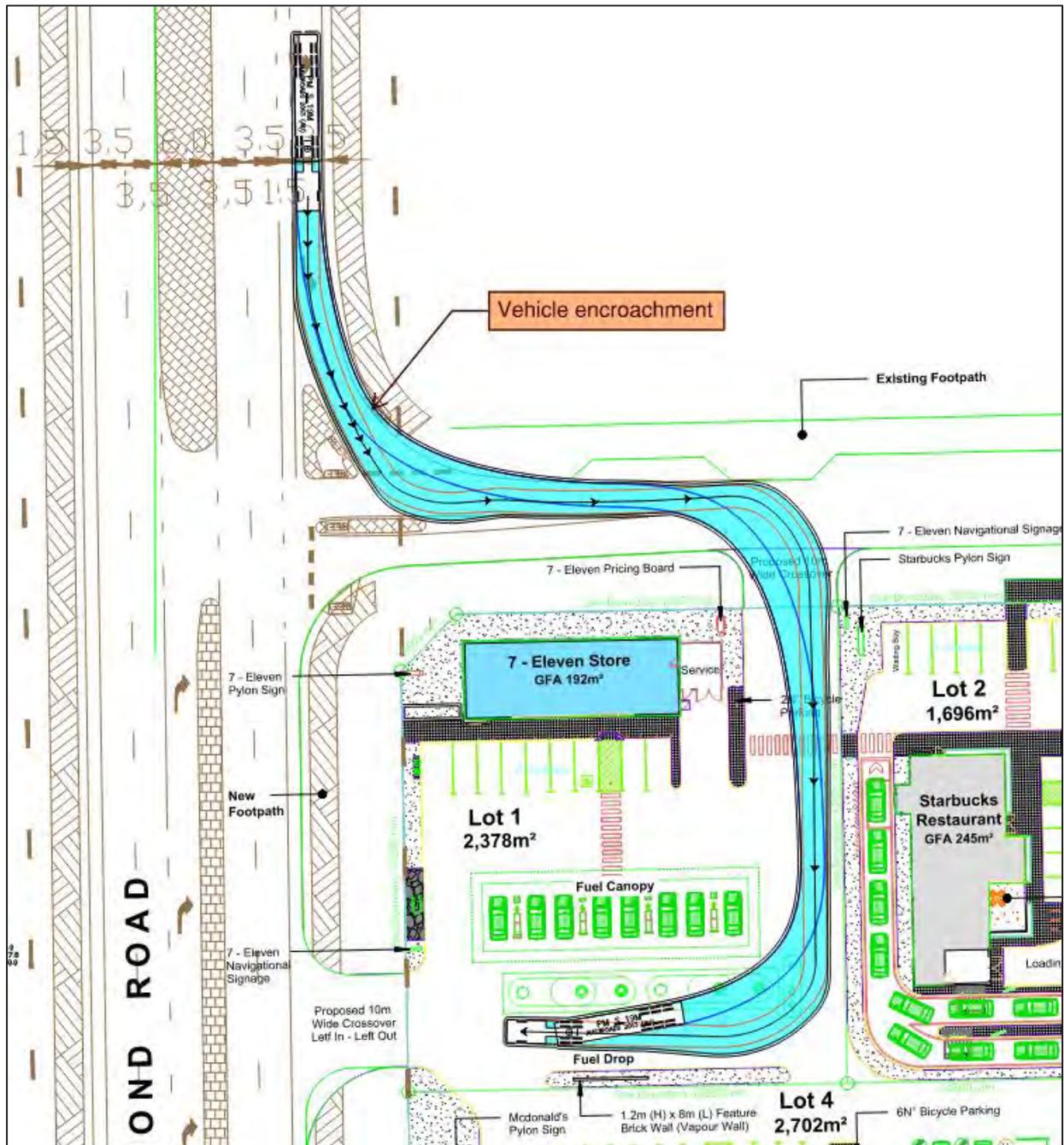


Figure 1-7 Swept Path – 17.2m Fuel Truck – Right In (Hammond Road North)



Reference: 300305045

Figure 1-8 Swept Path – 19m Semi Trailer – Right In (Hammond Road North)



Reference: 300305045

### 1.3 Changes to Internal Road Layout

Consideration has been given to changes to the internal road layout in efforts to minimise queuing and congestion issues that may impact external road network. Closing the entry between the Service station and Starbucks adjacent to “Crossover C” will prevent people from accessing / egressing the Starbucks site via that crossover thereby better regulating traffic flow inside the service station and significantly reducing the risk of congestion related queue backs onto Gaebler Road. **Figure 1-9** shows the crossover locations and closure location.

Cars wishing to access the Starbucks site can do so via access D or A. Wayfinding directional signage can be provided to direct traffic to the most appropriate entry point. This will help improve overall traffic management. These changes in addition to the lower tendency for fuel cycle peaks occurring at 7-11 service stations means the significantly lower likelihood of queues forming within the service station site which will lead to a smoother flow of traffic within the service station premises and site as a whole.

**Figure 1-9 Development Crossovers & proposed closure location**



Reference: 300305045

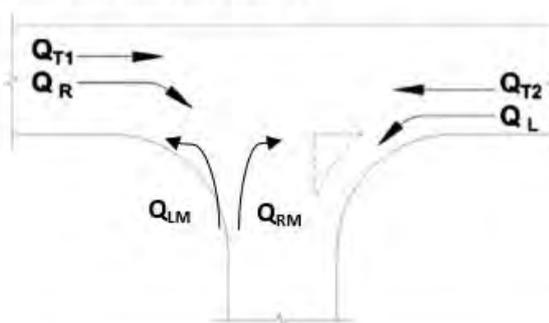
## 1.4 Turn Warrant Assessment – Southern Access on Hammond Road

Main Roads Western Australia supplement to Austroads Guide to Road Design Part 4A -A.8 which provides a warrant for the preferred minimum turn treatments on major roads (i.e. the road that has traffic priority over another at an intersection).

As per Main Roads Western Australia supplement to Austroads Guide to Road Design Part 4A - A.8, it is important to note that these warrants focus on safety performance outcomes and not operational performance. Additionally, it is developed for intersections on new roads and is not intended for direct application to accesses and driveways.

The warrants have been analysed for the 2035 analysis year with the assumption that Hammond Road / Gaebler Road will be upgraded as part of Hammond Road upgrade;

Figure 2.27: Calculation of the major road traffic volume  $Q_M$



Road type	Turn type	Splitter island	$Q_M$ (veh/h)
Two-lane two-way	Right	No	$= Q_{T1} + Q_{T2} + Q_L$
		Yes	$= Q_{T1} + Q_{T2}$
	Left	Yes or no	$= Q_{T2}$
Four-lane two-way	Right	No	$= 50\% \times Q_{T1} + Q_{T2} + Q_L$
		Yes	$= 50\% \times Q_{T1} + Q_{T2}$
	Left	Yes or no	$= 50\% \times Q_{T2}$
Six-lane two-way	Right	No	$= 33\% \times Q_{T1} + Q_{T2} + Q_L$
		Yes	$= 33\% \times Q_{T1} + Q_{T2}$
	Left	Yes or no	$= 33\% \times Q_{T2}$

Source: TMR (2016a).

Figure 1-10 and Figure 1-11 shows turn warrant assessment results for 2035 scenario during AM and PM peak.

Reference: 300305045

### Figure 1-10 Hammond Road (Southern Access) – AM Peak

**INTERSECTION WARRANTS**  
 Main Roads WA Supplement to Austroads Guide to Road Design - Part 4 A.8

DESIGN SPEED = 70km/h  
 SPLITTER ISLAND YES / NO = No  
 DUAL CARRIAGEWAY YES / NO = Yes

MOVEMENT	COUNT (v/h)	HV (%)
Q <sub>T1</sub>	0	0
Q <sub>R</sub>	0	0
Q <sub>T2</sub>	356	3.5
Q <sub>L</sub>	7	0
Q <sub>LM</sub>	33	0
Q <sub>RM</sub>	0	0

**RIGHT TURN ASSESSMENT**

Q<sub>m</sub> = 363  
 % HV = 3.433  
 x = 0.00  
 TREATMENT = SR

**LEFT TURN ASSESSMENT**

Q<sub>m</sub> = 356  
 % HV = 3.500  
 x = 1.02  
 TREATMENT = BAL  
 OFFSET? = NO

Source: Austroads GTM Part 6 - 2017

Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings

Figure 2.27: Calculation of the major road traffic volume Q<sub>m</sub>

Road type	Turn type	Splitter island	Q <sub>m</sub> (veh/h)
Two-lane two-way	Right	No	= Q <sub>T1</sub> + Q <sub>T2</sub> + Q <sub>L</sub>
	Right	Yes	= Q <sub>T1</sub> + Q <sub>T2</sub>
Four-lane two-way	Left	Yes or no	= Q <sub>T2</sub>
	Right	No	= 50% x Q <sub>T1</sub> + Q <sub>T2</sub> + Q <sub>L</sub>
Six-lane two-way	Right	Yes	= 50% x Q <sub>T1</sub> + Q <sub>T2</sub>
	Left	Yes or no	= 50% x Q <sub>T2</sub>
Six-lane two-way	Right	No	= 33% x Q <sub>T1</sub> + Q <sub>T2</sub> + Q <sub>L</sub>
	Right	Yes	= 33% x Q <sub>T1</sub> + Q <sub>T2</sub>
	Left	Yes or no	= 33% x Q <sub>T2</sub>

Source: TMR (2016a).

### Figure 1-11 Hammond Road (Southern Access) – PM Peak

**INTERSECTION WARRANTS**  
 Main Roads WA Supplement to Austroads Guide to Road Design - Part 4 A.8

DESIGN SPEED = 70km/h  
 SPLITTER ISLAND YES / NO = No  
 DUAL CARRIAGEWAY YES / NO = Yes

MOVEMENT	COUNT (v/h)	HV (%)
Q <sub>T1</sub>	0	0
Q <sub>R</sub>	0	0
Q <sub>T2</sub>	499	3.5
Q <sub>L</sub>	13	0
Q <sub>LM</sub>	60	0
Q <sub>RM</sub>	0	0

**RIGHT TURN ASSESSMENT**

Q<sub>m</sub> = 512  
 % HV = 3.411  
 x = 0.00  
 TREATMENT = SR

**LEFT TURN ASSESSMENT**

Q<sub>m</sub> = 499  
 % HV = 3.500  
 x = 1.78  
 TREATMENT = AUL(S)  
 OFFSET? = NO

Source: Austroads GTM Part 6 - 2017

Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings

Figure 2.27: Calculation of the major road traffic volume Q<sub>m</sub>

Road type	Turn type	Splitter island	Q <sub>m</sub> (veh/h)
Two-lane two-way	Right	No	= Q <sub>T1</sub> + Q <sub>T2</sub> + Q <sub>L</sub>
	Right	Yes	= Q <sub>T1</sub> + Q <sub>T2</sub>
Four-lane two-way	Left	Yes or no	= Q <sub>T2</sub>
	Right	No	= 50% x Q <sub>T1</sub> + Q <sub>T2</sub> + Q <sub>L</sub>
Six-lane two-way	Right	Yes	= 50% x Q <sub>T1</sub> + Q <sub>T2</sub>
	Left	Yes or no	= 50% x Q <sub>T2</sub>
Six-lane two-way	Right	No	= 33% x Q <sub>T1</sub> + Q <sub>T2</sub> + Q <sub>L</sub>
	Right	Yes	= 33% x Q <sub>T1</sub> + Q <sub>T2</sub>
	Left	Yes or no	= 33% x Q <sub>T2</sub>

Source: TMR (2016a).

Reference: 300305045

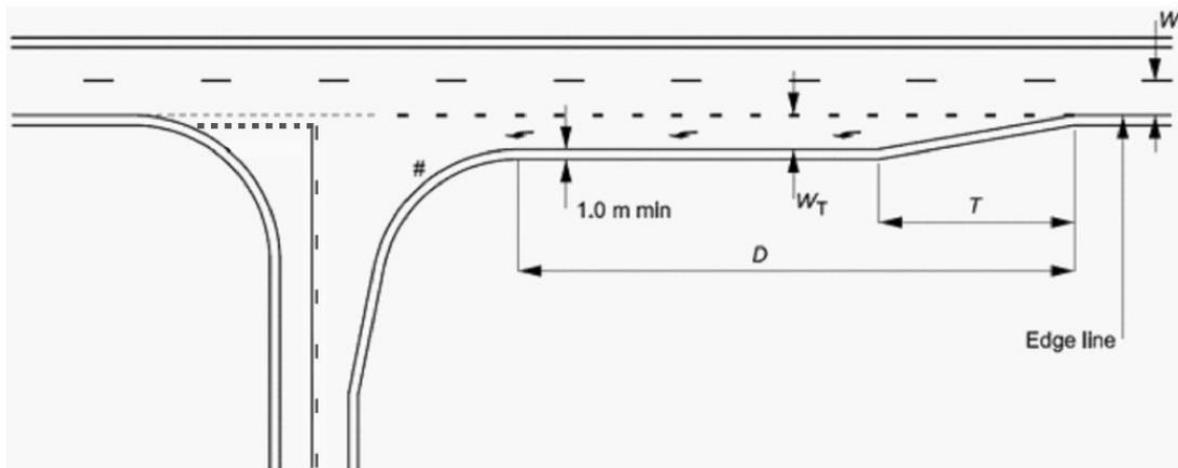
### 1.4.1 PROVISION OF A SHORT LANE LEFT TURN LANE

The different types of left-turn treatments and their selection criteria based on volume warrants and safety are discussed in *Austrroads' Guide to Road Design*. When choosing an appropriate left-turn treatment, several factors come into play. These factors include the volume and type of traffic that will be making the left turn, as well as the volume, speed, and type of traffic with which the turning traffic will merge. Other considerations include the estimated entry speed, desired speeds during the turn and when exiting, and any local restrictions such as turn angles, property boundaries, and the presence of service utilities or structures.

As part of the development proposal for the site, southern access along Hammond Road will likely be limited to left-in/left-out movements only. To accommodate this, a proposed design for the access intersection includes a short left-turn lane on the north approach. This dedicated lane allows vehicles to make left turns at the intersection without obstructing the flow of through traffic. The following design considerations have been extracted from *Austrroads: Guide to Road Design Part 4A: Unsignalized and Signalised Intersections*:

**Figure 1-12** illustrates an AUL(S) turn treatment, which is suitable for areas with moderate through and turning traffic volumes. The required length for the treatment can be found in **Table 1-1**.

**Figure 1-12 AUL(S) treatment with a short left-turn lane**



The dimensions of the treatment are defined as follows. Values of  $D$  and  $T$  are provided in Table

$W$  = Nominal through lane width (m) (including widening for curves). For a new intersection on an existing road, the width is to be in accordance with the current link strategy.

$W_T$  = Nominal width of the turn lane (m), including widening for curves based on the design turning vehicle = 3.0 m minimum.

$T$  = Physical taper length (m) given by Equation 5 being:  $T = \frac{0.33VW_T}{3.6}$

$V$  = Design speed of major road approach (km/h).

Source: *Austrroads: Guide to Road Design Part 4A: Unsignalized and Signalised Intersections*

Reference: 300305045

**Table 1-1 Dimensions for AUL(S) treatment on major leg**

Design speed of major road approach (km/h)	Diverge/deceleration length $D$ (m) <sup>1</sup>	Taper length $T$ (m) <sup>2</sup>
50	15	15
60	25	15
70	35	20
80	45	20
90	55	25
100	70	30
110	85	30
120	100	35

**Source: Austroads: Guide to Road Design Part 4A: Unsignalized and Signalised Intersections**

Prior to Hammond Road being upgraded, Access A is likely to be full movement at the time of development opening. Through negotiation with the City of Cockburn, there could be a justifiable argument for the provision of right turn movements into the site at access A as part of the duplication works. This provision would remove a significant proportion of right turn in demand away from the intersection at Gaebler Road, which would improve the performance of the intersection – particularly at school peaks. The provision of a right turn in would likely require a right turn pocket be provided within the median to ensure that turning vehicles are kept clear of the north bound through traffic.

## 1.5 Provision of Roundabout at Hammond Road / Gaebler Road Intersection

Within the development Traffic Impact Assessment (TIA), intersection analysis shows that the intersection of Hammond Road and Gaebler Road, in both the opening year scenario with the existing layout, and the horizon year scenario with the proposed duplication upgrades along Hammond Road, is expected to operate satisfactorily with regard to LoS and DoS. This means that the intersection is expected to be able to accommodate the traffic generated by the proposed development in addition to the background traffic without significant congestion or delays.

Based on the analysis undertaken, the existing intersection layout, along with the recommended upgrades, is sufficient to handle the anticipated traffic volumes without the need for a roundabout or traffic signals. As such, with the intersection expected to operate satisfactorily and accommodate future traffic demands without substantial congestion or delays, there is no current compelling need to introduce significant intersection upgrades beyond the current configuration proposed within the City’s concept design.

While traffic signals could in the future be incorporated into the proposed future intersection design with only minor complications, the Introduction of a dual lane roundabout at this location, which is adjacent to an existing school in addition to the proposed development, can indeed raise concerns about the safety of children, especially if they walk or bike to the school site. Large roundabouts can be more challenging for pedestrians to navigate compared to channelised priority control and signalised intersections, due to

Reference: 300305045

the higher speed turns typically seen at roundabouts and the tendency for drivers entering roundabouts to only focus on traffic coming from their immediate right. Due to this, there may be increased higher speed interaction between vehicles and pedestrians and cyclists.

Some potential safety concerns for school children / pedestrians at roundabouts include:

- **Vehicle speed:** If vehicles are not slowing down sufficiently when approaching and navigating the roundabout, they can pose a risk to school children / pedestrians crossing the entry and exit points.
- **Lack of visibility:** Pedestrians may have difficulty seeing approaching vehicles or judging gaps in traffic, particularly at larger roundabouts with multiple lanes.
- **Complex traffic flow:** Roundabouts with multiple entry and exit lanes can be confusing for pedestrians to navigate, increasing the risk of accidents.

Priority intersections and roundabouts serve similar functions but have different designs and operational characteristics. In the future, if the proposed Hammond Road / Gaebler Road intersection is converted to a signalised junction, it will provide signal-controlled crossing points for pedestrians, including school children and their parents. Pedestrian signals indicate when it's safe to cross and when followed, reduce the risk of conflicts with vehicles. Pedestrians can anticipate the timing of signal changes, allowing them to plan their crossings more safely. This predictability is especially beneficial for school children who may be less experienced in navigating traffic.

Signalized junctions often include features such as speed limit enforcement and signal timing adjustments that can help reduce vehicle speeds, making it safer for pedestrians, particularly school children, to cross the road. Signalized junctions are designed to meet accessibility standards, including features such as kerb ramps and tactile paving ensuring that they are usable for all pedestrians, including those with disabilities or mobility impairments.

Regards

**STANTEC AUSTRALIA PTY LTD**



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## PART C – OTHER BUSINESS

### 1. State Administrative Tribunal Applications and Supreme Court Appeals

The DAP notes the status of the following State Administrative Tribunal Applications and Supreme Court Appeals:

Current SAT Applications				
File No. & SAT DR No.	LG Name	Property Location	Application Description	Date Lodged
DR169/2023 DAP/23/02486	City of Swan	Lot 1 (No.9) Waterhall Road, South Guildford	Child Care Premises	13/11/2023
DR179/2023 DAP/22/02358	Shire of Serpentine Jarrahdale	Lot 806 South Western Highway, Byford	Proposed Showroom and Fast Food/Takeaway Development	4/12/2023
DR175/2023 DAP/22/02166	City of Joondalup	1 Lyell Grove (Lot 2), Woodvale	Child Care Premises	30/11/2023
DAP/23/02545 PA23/588	Shire of Serpentine Jarrahdale	Lot 218 (No.575) Abernethy Road, Oakford	Proposed Educational Establishment	19/12/2023

Current Supreme Court Appeals				
File No.	LG Name	Property Location	Application Description	Date Lodged
DAP/23/02496 CIV 2251 of 2023	City of Swan	Lot 2 & 67 (No.163) and Lot 18 (No.159) James Street, Guildford	Proposed redevelopment of Vaudeville Theatre	03/11/2023

\*Matters finalised during the last meeting cycle.

### 2. General Business

### 3. Meeting Closure

In accordance with Section 7.3 of the DAP Standing Orders 2024 a DAP member must not publicly comment on any action or determination of a DAP.