

POL	COCKBURN CENTRAL NORTH (MURIEL COURT) STRUCTURE PLAN - DESIGN GUIDELINES	LPP 4.2
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BACKGROUND:

In order to facilitate a high quality and functional built environment for Development Area 19 Cockburn Central North (Muriel Court land precinct), the City of Cockburn has prepared the attached [Design Guidelines](#).

Development Area 19 is a transit orientated development which aims to provide a range of dwelling types and maximise the number of people living and working near the Cockburn Central activity centre and train station. The design guidelines are important to create an attractive and well-designed urban village, which readily allows the principles and intent of the adopted Structure Plan to be achieved.

Both the Structure Plan and Town Planning Scheme No. 3 (TPS 3) require design guidelines to be adopted for the precinct, to achieve some degree of uniformity in design outcomes notwithstanding the highly fragmented land ownership pattern.

PURPOSE:

To establish design guidelines for Development Area 19 in order to achieve high quality development based on good urban design principles. These design guidelines are to be read in conjunction with the adopted Structure Plan, TPS 3 and other adopted Local Planning Policies.

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The design guidelines apply to all land use, subdivision and development within Development Area 19 as per the adopted Structure Plan.

POLICY:

The vision for Development Area 19 is to be one of a high quality and vibrant urban village, contemporary in character which capitalises on and provides a sustainable extension to the Cockburn Central activity centre.

All subdivision and development applications shall be in accordance with the attached design guidelines.

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COCKBURN CENTRAL NORTH (MURIEL COURT) DESIGN GUIDELINES

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INTRODUCTION

The Muriel Court Design Guidelines seek to establish the character of the street, building and public spaces within the Muriel Court Structure Plan area. The Design Guidelines will guide subdivision and building development to respond to the intentions of the Muriel Court Structure Plan in order to create a comfortable and welcoming walkable neighbourhood that complements Cockburn Central Town Centre and maximises the population living and working within walking distance of Cockburn Central Station.

These Design Guidelines are to be read in conjunction with the Muriel Court Structure Plan, Local Planning Policies and the City of Cockburn's Town Planning Scheme No. 3 (TPS 3). Where the Guidelines are silent on any matter, the relevant provision of the Residential Design Codes of Western Australia (R-Codes), the City's Local Planning Policies and TPS 3 will apply.

The Structure Plan area is divided into zoning band precincts. Development proposals will be assessed against the principles and objectives set out in the Design Guidelines for each precinct as well as the general standards and specific standards for each zone.

Applicants are advised that early consultation with the City of Cockburn is encouraged for subdivision/development and should include pre-lodgement meetings.

ARRANGEMENTS OF THE DESIGN GUIDELINES

Vision and Objectives

This document first describes the vision and objectives for the whole of the Muriel Court Structure Plan area. Collectively, all development should contribute to realising this vision and achieving the overall objectives.

Subdivision

The Guidelines emphasise the relationship between built form and the surrounding streets and open spaces. Along with the use of each lot this will be key to achieving the desired character of each precinct.

General Standards

The General Standards apply to all development across the Muriel Court Structure Plan area and guide the design of general building services.

Precinct Standards

This section provides specific guidance on particular buildings envisaged for the Muriel Court Structure Plan area and is dependent on the residential density. The section is broadly split into low, medium and high density and reference should be made to the specific building type mentioned in each density sub section.

Streets

This Section deals with the design of streets and laneways, including pavement widths, footpath requirements, lighting and medians. The Muriel Court Structure Plan sets the road alignments and widths for the area.

VARIATIONS TO THE DESIGN GUIDELINES

The Muriel Court Design Guidelines are implemented as a Local Planning Policy under TPS 3. Development that varies from the requirements of the Guidelines can be approved if the variations are consistent with the objectives and vision of the Structure Plan and Design Guidelines.

VISION FOR MURIEL COURT

The Muriel Court Structure Plan area will be characterised as a high quality, vibrant urban village and contemporary in character that capitalises on and provided a sustainable extension to the Cockburn Central Town Centre.

The objectives of the Design Guidelines are:

Physical Objectives

- Promote a safe, comfortable and easily accessible environment for residents and visitors
- Ensure that buildings address and complement public spaces by providing transparent and engaging interfaces between the street and the private realm
- Ensure that energy efficiency is employed in design and construction

Social Objectives

- Provide a strong sense of place and community
- Promote walking, cycling and public transport through appropriately designed and easily accessible streets and buildings
- Provide for a mix of housing opportunities to cater for our diverse community
- Ensure that ease of access to public open space for residents and visitors

Economic Objectives

- Promote a viable local centre that supplies for daily needs of the community
- Facilitate a development intensity that compliments the Cockburn Central Town Centre and Cockburn Central West

MURIEL COURT STRUCTURE PLAN

The Muriel Court Structure Plan has been designed employing principles that promote a sense of place and community as well as providing a more legible and equitable urban environment that is robust enough to changing circumstances over time.

The Key Principles of the Structure Plan are:

COMMUNITY DESIGN

- Maximise densities within the walkable catchment of the Cockburn Central Regional Centre.
- Providing medium densities beyond the walkable catchment and adjacent areas of high amenity (POS) and high frequency public transport routes (Semple/Muriel Court).
- Minimise the need for the land exchange between landowners whilst recognising the complexities associated with highly fragmented development cells.
- Provide a balanced range of densities to provide a diverse range of housing types.

MOVEMENT NETWORK

- Create a strong east-west movement network that reflects constraints (created by existing lot configurations) that maximises connectivity and efficiency of pedestrian movements and simplifies subdivision design.
- Minimise traffic conflict and promote high quality streetscapes along Muriel and Semple Court by promoting rear loaded lots.
- Provide a street and pedestrian network that enables direct, quick and safe pedestrian and cyclist access to and from the transit facility.
- Create a highly connected and permeable street network with emphasis on Muriel and Semple Courts being the primary 'spine' roads.
- Maximise equity between landowners by sharing where possible, the placement of access streets, laneways and public open spaces etc.

LOT LAYOUT AND PUBLIC PARKLAND

- Within the constraints of the existing lot configuration, develop a robust network of streets and blocks which maximise

efficient movement, the creation of regular shaped lots and maximises solar orientation for dwelling construction.

- Appropriate interfacing of residential lots with surrounding uses such as the Kwinana Freeway and the mixed business zone.
- Maximise the ability for land owners to develop independently given the fragmentation of ownership.
- Provide a range of densities to promote variety in lot product and ensure appropriate density targets are met.
- Placement of public open space to preserve and enhance existing environmental features (wetland and remnant vegetation).
- Provide a suitable balance between active and passive recreation.

ACTIVITY CENTRES, EMPLOYMENT AND SCHOOLS

- Provide office and residential uses within the walkable catchment of Cockburn Central activity centre/train station to support and strengthen the centre as an origin and destination.
- Provide a local centre to provide for the day to day needs of the residents.
- Provide good pedestrian, cycle and vehicular access to existing and possible future schools.

URBAN WATER MANAGEMENT/UTILITIES

- Promote water sensitive urban design and the integration of drainage infrastructure within POS where applicable in accordance with the DoW's requirements.
- Promote a network of streets which facilitate the delivery of essential services and utilities.

SUBDIVISION

Subdivision and amalgamation of land holdings within the Muriel Court Structure Plan area will be required in order to develop land. Subdivision and amalgamation are required to provide for development that is consistent with the Muriel Court Structure Plan and intended character and amenity.

Subdivision and amalgamation shall be consistent with the minimum and maximum lot widths and the laneways locations outlined within these guidelines.

The Minimum and average lot sizes shall be used for creation of lots, particularly for low and medium density coded areas, as shown on the Muriel Court Structure Plan map.

Development over individual long, narrow lots is not permitted unless it can be demonstrated that such development is consistent with the intended character and amenity of the Muriel Court Structure Plan and the provisions of these Design Guidelines.

The Muriel Court Structure Plan has been prepared to provide for development that addresses the street in a traditional manner. Subdivision applications that would create lots that result in lower levels of amenity, compromise streetscapes and poor built form shall not be supported.

The City of Cockburn may require indicative development plans to be prepared to accompany subdivision and amalgamation in order to prove that development can occur in a manner that is consistent with the Muriel Court Structure Plan and the provisions of these Design Guidelines. Such plans shall include a site plan, floor plans and indicative elevation drawings.

Applicants are reminded of the R-Codes requirement for planning approval to be awarded for development on lots less than 260m² prior to subdivision applications being approved.

LANEWAYS

Laneways shall be constructed as per the provisions of these Design Guidelines and as shown on the Muriel Court Structure Plan.

Vehicular access must be from the laneway where they are provided. No direct vehicle access shall be permitted from Muriel or Semple Court.

BATTLE-AXE LOTS

Battle-axe lots are not a preferred outcome for the Muriel Court Structure Plan area. All lots must allow for development that has a street presence and can contribute to the desired built form and character. Irregular shaped lots will generally not be supported.

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	Minimum Lot Width	Maximum Lot Width
R25	8m*	20m*
R40	7.5m - Front Loaded* 5m - Rear Loaded*	10m*
R60	7.5m - Front Loaded* Nil - Rear Loaded*	8m*
R80	6m - Front Loaded* Nil - Rear Loaded* 24m - all other sites	8m* 30m
R160	24m	60m
Local Centre	8m	A maximum lot width is not prescribed, however development should not be constructed such that long, flat facades are created. A maximum building segment should therefore not be more than 12 metres length.
Mixed Business	A minimum lot width of 30m applies. Lots should comprise an adequate area to provide for the construction of residential apartment buildings, whilst maintaining adequate side setbacks.	The existing lot dimensions should be observed to provide sufficient areas in which to develop mixed use buildings that are several stories in height. A maximum lot width of 60m shall be observed.
*Strata lot of green title lot expected to contain a single dwelling		

Table 1: Subdivisional Lot Dimensions

GENERAL STANDARDS

The General Standards are intended to establish a broad framework to influence and guide development within the Muriel Court Structure Plan area. They apply across the entirety of the Muriel Court Structure Plan area and development will incorporate the intent of each of the standards establish here.

DWELLING MIX

It is important to provide for a range of dwelling sizes and types to meet the housing needs of the community. The Muriel Court Structure Plan has sought to address this through the provision of a range of residential densities from R25 through to R160. However, in mixed use and multiple dwelling developments where more than 5 dwellings are proposed, a minimum of one (1) or 10% (whichever is greater) 1 bedroom dwellings shall be provided. This is to establish a range of housing types within an area that has strong walkability and ease of access to frequent public transport and daily needs.

MINIMUM RESIDENTIAL DENSITIES

Development Area 19 of the TPS 3 requires that development accommodate a minimum density of 75% of the density code of the applicable to an area.

As a minimum, the following areas are required to achieve grouped ad multiple dwellings at the equivalent of 75% of the density code applicable to an area where more than one (1) dwelling is proposed.

Lot sizes are to represent a multiple of the land areas below, particularly in the case of proposals where the minimum land areas required are to be considered in conjunction with other subdivision considerations, most notably minimum and maximum lot widths. The City also recommends consideration be given to 'development' requirements detailed elsewhere in these Design Guidelines to ensure suitably developable lots are created.

Density	Min. Land Area (Lot) to Yield 75%	Land Area to Yield 100%
R25	466m ²	350m ²
R40	293m ²	220m ²
R60	200m ²	150m ²
R80	160m ²	120m ²

R160	160m ²	120m ²
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BUILDING EXPRESSION

It is important that buildings present well from all angles as some may be visible from a considerable distance. It is also important that buildings are appropriately detailed at ground level so that they create an attractive, safe and interesting environment for occupants and pedestrians alike.

Buildings should incorporate a mix of high quality materials that contribute towards the intended character of each precinct. Articulation, fine grain detail and glazing elements will help to achieve the desired outcomes and contribute to a high degree of amenity. Long building facades should be broken up with changes in materials, balconies, windows and setback changes to create interplay between light and shade.

At a minimum, any exposed parapet walls must have the same level of finish as the primary façade. Significant portions of wall that are likely to be exposed for prolonged periods should be avoided, however where they exist they are to incorporate detailing to the satisfaction of the City of Cockburn, to add visual interest.

ADDRESSING THE STREET

All development must address and respond to all adjacent streets including rear laneways to enhance safety and security. This requirement seeks to ensure that all frontages are attractive and safe for pedestrians. Building entrances should be clearly identified and easy to access.

All components of podiums relating to tower developments should relate to the street. Active street interfaces are encouraged through the provision of courtyards and outdoor living areas within the front setback area; windows from active habitable rooms and individual entries to ground level dwellings are strongly encouraged.

CORNER TREATMENTS

Buildings on corner sites must address both streets through the provision of windows, a mix of materials and legible entry features.

For single dwellings on corner sites, side fences must be visually permeable above a height of 1.2 metres for 50% of the secondary street boundary. For all other developments, fencing to secondary streets should be visually permeable for the entire boundary length, unless approved by the City of Cockburn for screening purposes.

Solid walls and fences shall not dominate any street frontage.

For R60, R80 and R160 developments, nil street setbacks may be allowed for corner sites where landmark corner features can be achieved and the intended character of the precinct is maintained.

SAFETY IN DESIGN

Buildings are to be designed to allow passive surveillance of communal areas and adjacent public spaces, and should have at least one active habitable room (other than a bedroom), window or balcony overlooking any adjacent street, public space or communal open space.

Loadings and storage areas are to be well lit and/or lockable after hours. Pedestrian entries to all buildings are to be visible from the primary street frontage and be clearly delineated and legible. Measures to ensure the safety of people entering buildings is to be demonstrated in the application for planning approval.

Ground floor non-residential frontages are to be designed as shop fronts with no less than 70% of the shop front glazed with clear glass. Not only does the ability to see in and out of commercial premises at street level contribute to creating an interesting pedestrian environment, it also enhances safety through passive surveillance.

The Western Australian Planning Commission's (WAPC) Planning Bulletin 79 – Designing out Crime Planning Guidelines should be consulted in the design of developments throughout the Muriel Court Structure Plan Area.

SUSTAINABILITY AND ENERGY EFFICIENCY

The Guidelines seek to achieve a standard of architecture that is responsive to the environment in which it is built. The City of

Cockburn seeks development that implements current best practise in sustainable design, construction and management for the benefit of the environment, the community and the local economy.

Buildings should be designed to help minimise operational energy consumption and greenhouse emissions.

Tenancy sub-metering and energy demand reduction measures are to be included in new mixed use and multiple dwelling residential developments. This enables each tenancy to identify their energy consumption and implement measures to reduce demand.

All mechanical devices installed as part of the development such as air conditioners and hot water systems are to have a minimum 5-star energy rating. Solar or gas hot water systems and photovoltaic power generation systems are encouraged.

Proposals for new developments (with the exception of single and grouped dwellings) should be accompanied by a report prepared by a suitably qualified Sustainability Consultant, outlining the design and management elements (including financial and environmental costs of operating the building after construction) proposed to be implemented to optimise sustainability performances.

The heat loading effect of the summer sun on windows should be minimised. Techniques such as external sun shading devices must be considered and dark or reflective tinting should be avoided.

Direct natural lighting should be provided to all living, dining and sleeping areas of each dwelling (not limited to the BCA minimum requirements). However, where reliance on borrowed light is demonstrated to be unavoidable, only non-habitable rooms and kitchens shall be designed with access to borrowed light.

The use of low embodied energy materials including recycled materials in building construction is encouraged. Native vegetation is also encouraged within landscaped areas.

NOISE ATTENUATION

The Kwinana Freeway, North Lake Road and the Perth to Mandurah Railway are all potential major generators of traffic and rail noise. Development, particularly for residential purposes, should therefore be designed to minimise the potential for unacceptable levels of noise generation and intrusion. Similarly, where residential development is located adjacent to mixed use areas or within mixed use development, noise attenuation measures must be provided with the design. An acoustic consultant's report should inform all design elements and be provided along with applications incorporating residential uses for approvals in the following locations:

- All development adjacent to the Kwinana Freeway;
- All development adjoining to the Mixed Business Zone;
- All development adjoining that incorporated a mix of commercial and residential uses; and
- Any development that incorporates residential uses adjacent to North Lake Road.

The WAPC State Planning Policy on Road and Rail Transport Noise should be consulted in the preparation of acoustic reports and design of development.

Generally, non-residential development will not require an acoustic consultant's report to be prepared, unless the City of Cockburn considers a proposed use will cause negative impacts on the surrounding residential uses.

FENCES

Any solid fence fronting onto a street is not to exceed 1.2 metres in height. If a fence is higher than 1.2 metres, infill sections between piers of the fence must be 70% visually permeable.

No at-grade boundary fences may exceed 1.8 metres in height above finished footpath level.

Fences above basements or retaining walls more than 800mm above footpath level shall not exceed more than 1 metre above the finished floor level. Any component of a fence more than 1.2 metres above the footpath level shall be 70% visually permeable.

WATER

Buildings are to be designed to reduce water consumption by occupants through such measures as sub-metering of water use, alternatives to water based building cooling systems, rainwater capture and re-use, water efficient fittings and fixtures and water sensitive landscaping design.

SERVICING

Bin and service enclosures are required to be screened and located away from visually prominent parts of the site.

Serviced should be designed to visually integrate into buildings, rather than be a separate element. No services should protrude above the specified maximum height of the building and should be screened from view. Development will need to conform to the City's Local Planning Policy related to Waste Management Plans in Multiple Unit development.

STORES AND AMENITIES

All grouped and multiple dwellings are required to have individual storage accessible from outside the dwelling. A minimum of 4m² applies, with minimum internal dimensions of 1m. Where 4m² is not achieved, the applicant is to demonstrate the needs of residents will be met.

PRIVATE OPEN SPACE

Private Open Space must be provided for each multiple dwelling that is of a useable size (10 m² for balconies and 12m² for ground floor courtyards) and dimensions (3m). Considerations will be given to smaller areas and dimensions but this must be justified to the satisfaction of the City of Cockburn.

For other dwellings types, private open space must be provided in accordance with the acceptable development provisions of the R-Codes.

Private open space, particularly upper floor balconies, are to be sensitively located or screened to avoid any potential visual privacy impact between dwellings within the lot or on adjacent lots. If screening is necessary, it should be integrated into the building design and must not unduly add to the building bulk.

Balconies shall not extend into any road reserve.

If communal open space is provided with a development, then its location and facilities provided within it should be such that they will not be a source of noise or other nuisance for occupants of the development or those immediately adjoining properties.

GARAGES AND ACCESS

Vehicle access from laneways is mandatory for lots where a rear laneway is present.

Where secondary street access is available, access shall not be from the primary street in order to improve traffic flow and pedestrian amenity. Where access for developments is not available from secondary street and laneways, the primary street may be used. However, garages and car ports shall not dominate the front setback or the primary elevation of the building.

RECIPROCAL ACCESS FROM NORTH LAKE ROAD

Reciprocal access way arrangements and shared vehicle access points are specified for lots adjoining North Lake Road. Please refer to the City of Cockburn's Vehicle Access Policy Plan for North Lake Road.

LOW DENSITY ZONE (R25) STANDARDS

The low density areas, which are those coded R25, are located generally in the western portion of the Muriel Court Structure Plan area, generally away from major movement corridors and the walkable catchment of Cockburn Central Station.

Generally, development within low density areas will be single or grouped dwellings between one and two stories.

Dwellings shall be constructed to a consistent building line along the street which will create an open streetscape. Street trees within the road reserve and landscaping within residential lots will create a leafy character.

BUILD TO LINE

The main building line of the dwelling shall be constructed between 3 metres and 4.5 metres from the street alignment.

Garages shall be setback behind the main building line.

SETBACKS

Side, rear and secondary street setbacks shall be in accordance with the provisions of the R-Codes and the City of Cockburn's Local Planning Policy LPP 1.1.

Boundary walls may be constructed as per the provisions of the R-Codes and the City of Cockburn's boundary wall policy.

MAXIMUM BUILDING HEIGHT

The maximum building height for buildings within the areas coded R25 shall be no higher than two stories with the potential for useable loft space. The height of the external walls shall be no higher than 6m and the maximum height of any pitched roof shall be no higher than 9m.

DESCRIPTION OF LOFT REQUIREMENTS

Any development within the loft space shall appear as part of the main roof and not an additional level.

GROUND FLOOR FINISHED LEVEL

Finished ground floor levels must be within 0.3 metres of the finished floor level of the lot at the front street alignment of the proposed building footprint.

MAXIMUM BUILDING DEPTH

There is no maximum building depth for buildings within the R25 coded area. However, buildings must be designed to provide for natural sun light penetration to all habitable rooms and cross ventilation.

CAR PARKING

Garages and car ports must be setback behind the main building line, at a minimum of 4.5m, in order to minimise visual impact and to allow for visitor parking.

All car parking areas should be screened from view of the street.

VERANDAHS AND BALCONIES

Verandahs and balconies provide amenity for residents and assists in articulating the building line of dwellings.

Verandahs and balconies may extend into the front building line area by 1.5m.

Any verandah or balcony not on the front face of the dwelling is to comply with the setback provisions of the R-Codes.

MINIMUM BUILDING HEIGHT

There is no minimum building height for low density coded R25.

BUILDING INTERFACE AND JUNCTIONS

Where two boundary walls are located adjacent to one another, their junction should be complementary.

This will require the wall ends adjacent to the street to coincide, or alternatively, show a discernible difference of at least 600mm.

Where the boundary walls meet at the roof line or top of wall, the top of wall height shall match or show a discernible difference of 300mm.

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**MEDIUM DENSITY ZONE (R40 & R60)
STANDARDS**

The medium density provisions apply to those areas coded R40 and R60. The medium density areas form a large portion of the developable area with the Muriel Court Structure Plan and so are important in ensuring the dwelling density is achieved.

The medium density areas will comprise single, grouped and multiple dwellings, though the predominant housing forms are likely to be

terraces and attached dwellings over two to three stories.

Due to the denser housing form and smaller lot sizes, the streetscape and quality of parkland will be particularly important to provide a high level of amenity for residents. Streets will be tree-lined and provide attractive links to parks and the local centre.

For the purposes of these guidelines, the provisions of some elements have been separated by R-Code density.

	R40	R60
Built to Line	Buildings must be constructed between 2m and 4m from the street alignment. Upper level balconies and verandahs can protrude beyond the build to line by one (1) metre. Where a balcony projects 1m it shall be at least 2.5m in depth. Garages that are accessed from primary street must be setback 4.5m from the front boundary.	
Setbacks	Side setbacks shall be applied as prescribed by the R-Codes except that boundary walls may be constructed to two side boundaries. Buildings may be constructed up to 1m from the secondary street, up to a length of 9m. Any wall greater than 9m must be setback 2m from the secondary street.	Nil side setbacks may be applied to R60 coded areas.
Boundary Walls	Boundary walls may be constructed to two side boundaries. Upper levels shall be setback from the boundary as per the R-Codes. Garages may be built to the boundary separate to the main dwelling.	Boundary walls may be constructed to both side boundaries to a maximum height of 6m and for two thirds of the length of the boundary. Upper levels more than 6m above ground level will need to be set back from the boundaries as per the R-Codes. Garages may be built to the boundary separate to the main dwelling
Rear Setbacks	Rear setbacks shall be as per the R-Codes. Where there is a rear laneway, garages may be constructed to the laneway boundary.	
Minimum Building Height	There is no minimum building height for R40 coded areas.	The minimum building height in R60 areas shall be two stories and 5.4m to the top of the external wall.
Maximum Building	The maximum building height shall be	The maximum building height

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	R40	R60
Height	9m to the top of the external wall and 12m to the top of any roof ridge line.	shall be 12m to the top of the external wall and 15m to the top of any roof ridge line.
Car Parking	<p>Minimum car parking requirements for Multiple dwellings in accordance with Location A requirements of C3.1 of Part 6 of the R-Codes. Maximum car parking requirements for Multiple dwellings is 1.5 bays.</p> <p>Minimum car parking requirements for Multiple dwellings in accordance with Location A requirements of C3.1 of Part 6 of the Residential Design Codes. Maximum car parking requirements for Single, Grouped and Special Purpose dwellings is 1.5 bays.</p>	
Building Interface and Junctions	Where two boundary walls are located adjacent to one another, their junction should be complementary. This will require the wall ends adjacent to the street to coincide, or alternatively, show a discernible difference or at least 600mm. Where the boundary walls meet at the roof line or top of wall, the top of wall height shall match or show a discernible difference of 300mm.	

HIGH DENSITY ZONE (R80 & R160) STANDARDS

High density areas codes R80 and R160 are located predominantly within the walkable catchment of the train station, along Muriel Court and adjoining the Kwinana Freeway. This is to promote the use of public transport and create a walkable environment. All development will incorporate edges to the street, with courtyards, easily identifiable entries and windows from active habitable rooms overlooking the street from all levels of the building.

Within the areas between the buildings and the property line, the area is to incorporate

courtyards, front entries and be landscaped to a high quality with in-ground planting. Hard paving should be limited to vehicle access areas and where pedestrian paths cross the area. In general hard spaces should not dominate the soft landscaped quality of this space.

Within the high density area it is expected that two dominant built forms will prevail. Land coded R160 are expected to be dominated by mid to high rise apartment towers with internalised courtyards and strong articulation to the street. Within areas coded R80 mid-rise apartment complexes and multi-level terraced housing are expected to dominate.

Promotion of low scale street level commercial uses supported in the high density residential neighbourhood, particularly on prominent street corners and adjacent to public open space.	R160	R80
Build to Line	<p>Podiums to be constructed 3m from the street boundary to a height of four (4) stories. Podiums built to the primary street boundary may be considered, where this occurs podiums are to be a height of three (3) stories.</p> <p>Tower elements to be set back from podium by 3m. Where podiums are built to the primary street boundary tower elements are to be set back 4m.</p> <p>Balconies may protrude beyond the build to line by 1.5m. Balconies may not protrude into the road reserve.</p>	<p>Buildings to be constructed 2m from the street boundary.</p> <p>Buildings built to the primary street boundary may be considered.</p> <p>Balconies may protrude beyond the build to line by 1m. Balconies may not protrude into the road reserve.</p>
Rear Setbacks	<p>Podiums may be constructed to the rear boundary to a height of two (2) stories or 7m. Above this buildings are to be set back 6m or as per the R-Codes – the lesser of the two.</p> <p>Nil setbacks to laneways permitted.</p>	<p>Buildings may be constructed to the rear boundary to a height of two (2) stories or 7m. Above this buildings are to be set back 4m or as per the R-Codes – the lesser of the two.</p> <p>Nil setbacks to laneways permitted.</p> <p>Where lots directly back onto the Kwinana Freeway road reserve rear setbacks may be nil, subject to compliance with any acoustic</p>

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		assessment undertaken.
Side Setbacks	A minimum side setback of three metres shall apply to the podium and seven 7m to any tower element	Nil side setbacks are permissible.
Secondary Street Setbacks	<p>Podiums to be constructed three (3) metres from the street boundary to a height of four (4) stories. Podiums built to the secondary street boundary may be considered.</p> <p>Tower elements to be set back from podium by three 3m. Where podiums are built to the secondary street boundary tower elements are to be set back 4m.</p> <p>Balconies may protrude beyond the setback area by 1.5m. Balconies may not protrude into the road reserve.</p>	<p>Setback to the secondary street of one 1m.</p> <p>Buildings built to the secondary street boundary may be considered.</p> <p>Balconies may protrude to the secondary street boundary. Balconies may not protrude into the road reserve.</p>
Boundary Walls	As per above.	<p>Boundary walls to both side boundaries are permitted.</p> <p>The height of the boundary wall shall be consistent with the height of the building and shall not incorporate unnecessarily tall and unsightly parapets.</p>
Minimum Building Height	A minimum building height of 18 metres shall apply.	A minimum building height of 8m shall apply.
Maximum Building Height	<p>No maximum prescribed building height.</p> <p>Applicants should be aware of the Jandakot Airport Obstacle Limitation Surfaces (OLS) as it applies to their respective sites.</p>	<p>A maximum building height of eight (8) stories or 27m shall apply.</p> <p>Lift overruns and building services may extend the height to 29m, however they shall be designed to appear as minor building elements.</p>
Vehicle Access	Vehicle access shall be from the provided laneways as shown in the Muriel Court Structure Plan.	
Ground Floor Finished Levels	<p>The ground floor finished level shall not be more than 1.2m above the footpath level of the street. The raised ground level can provide for semi-basements to be provided where they do not detract from the amenity of the area.</p> <p>Any semi-basement car park is to be screened from view of the street and appear as an integral part of the building fabric.</p>	
Minimum Ground Floor	Minimum ground floor ceiling height of 2.7m in order to provide for potential	

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Ceiling Height	changes in use over the long term to small scale commercial uses.
Building Articulation	Buildings with long facades should be appropriately detailed and articulated in order to break up the building bulk and ensure friendly, responsive presentation to the street. Façade elements longer than 12m should incorporate window treatments, balconies or changes in setbacks to provide appropriate articulation.
Site Coverage	None prescribed
Car Parking	<p>Minimum car parking requirements for Single, Grouped and Special Purpose dwellings in accordance with Location A requirements of C3.1 of Part 5 of the R-Codes. Maximum car parking requirements for Single, Grouped and Special Purpose dwellings is two (2) bays.</p> <p>Minimum car parking requirements for Multiple dwellings in accordance with Location A requirements of C3.1 of Part 6 of the R-Codes. Maximum car parking requirements for multiple dwellings is 2 bays.</p>
Entrance Location	<p>Individual dwellings and individual and communal entry ways should be clearly defined and able to be identified from the street.</p> <p>Ground level dwellings should incorporate individual front entrances from the street and be supported by complementary courtyard spaces.</p>
Commercial Land Uses	<p>Low scale street level commercial uses are supported in the high density residential neighbourhood, particularly on prominent street corners and adjacent to public open space.</p> <p>Developments incorporating convertible units should consider the possible future servicing needs of commercial uses, particularly mechanical ventilation, waste management and grease traps.</p> <p>Ground floor non-residential frontages are to be designed as shop fronts with no less than 70% of the shop front glazed with clear glass.</p>

MIXED BUSINESS – RESTRICTED USE – OFFICE / RESIDENTIAL STANDARDS

The Mixed Business – Restricted Use – Office / Residential precinct is an extension of the high density neighbourhood found within the walkable catchment of Cockburn Central Train Station.

The form of the precinct will take a similar form to the high density neighbourhood, but with a greater emphasis on commercial uses. In particular, office and ground floor commercial uses are preferred by the City of Cockburn, missed with residential uses. Additionally, as buildings are setback a greater distance from the street, podiums are not required.

Residential uses in the precinct should expect a different level of amenity to that available in the residential area.

RELATIONSHIP TO THE STREET

Developments should incorporate non-residential lower floor uses (and in particular, non-residential ground floor uses) that promote activity and informal surveillance of the street and have facades that add interest and vitality to the public domain.

Upper levels should be designed to promote informal surveillance of the street through the use of balconies and/or large windows.

Buildings should address the street in a traditional manner. In this regard, windows should face the street, entry points should be clearly visible from the street and entrances should not be obscured by columns, plantings or other features.

Buildings should be designed to be adaptable to allow for future use changes. All floors should be clearly defined through the use of colours, materials and features.

Blank screen walls, roller shutters and air vents on walls facing the street are not permitted. Building service areas shall be located away from public view from the street.

RATIONALISATION OF CROSSOVERS

The width and number of crossovers onto a site should be minimised. Vehicle access to

developments should be designed in a way which minimises potential pedestrian/vehicle conflict, or alternative pedestrian access should be provided if necessary. Crossovers shall comply with the City of Cockburn's Vehicle Access Policy Plan for North Lake Road.

LOCATION AND DESIGN OF CAR PARKING

Where car parking levels (including undercroft levels) are visible from a street or public space, high quality architectural detailing's should be incorporated into the façade to minimise obtrusion.

Generally, the majority of car parking for sites should be provided to the rear of buildings or internally within buildings. However, a small portion of car parking may be accommodated at the front of buildings in order to provide for visitor car parking and to allow for vehicle's to access adjoining sites.

Car parking within front setbacks of buildings shall be landscaped to provide shade and assist in visual screening from above. One shade tree shall be provided for every four car parking bays.

CAR PARKING ALLOCATION

Minimum car parking requirements for dwellings in accordance with Location A requirements of C3.1 of Part 6 of the R-Codes. Maximum car parking requirements for dwellings is 1ys.

Non-residential car parking shall be provided as per the provision of TPS 3.

Car parking areas not part of the shared parking arrangements as provided for the City of Cockburn's Vehicle Access Policy Plan for North Lake Road should be screened from view of the street.

Visitor car parking bays shall not dominate the front setback areas and may be shared with commercial parking at the front of buildings. The provision of on-site visitor car parking should take into account car parking demand within the neighbourhood and the need to promote a high quality landscaped environment.

Large areas of open car parking should be avoided, with car parking generally provided within buildings basements or internally.

SEPARATION OF USES

To ensure the amenity and security of residents and commercial tenants in a mixed use development, commercial uses will be required to be separated from residential uses by being located on separate floors of a building.

BUILDING ENTRIES

Mixed use developments shall provide separate entrances for commercial tenants and permanent residents. Entrances for the commercial tenancies and residential apartments shall be readily identifiable.

WASTE MANAGEMENT

All necessary rubbish bin areas, letterboxes, drying areas and similar facilities and services must be separately provided for residential uses.

A waste management plan must be submitted with all applications for development within the precinct in accordance with the City of Cockburn's Local Planning Policy LPP 1.14 – Waste Management in multiple unit developments.

BUILD TO LINE

Within the area between the building and property line, the area is to be landscaped to a high quality with in-ground plantings. Hard paving may be used where vehicle access ways and pedestrian paths cross the area, but must not dominate the soft landscaped space.

Buildings must be constructed 16m from the street boundary. This allows for a 3m landscaping zone, one row of car parking, an access aisle and a 1.5m of landscaping or walkway adjacent to the building.

Upper level balconies may protrude beyond the build to line by 1.5 metres.

SETBACKS

Podiums may be constructed to the rear boundary to a height of two (2) stories or 7m. Above this buildings are to be set back 6m or as per the R-Codes – the lesser of the two.

Side and Secondary Street setbacks: A minimum side setback of 3m shall apply.

MINIMUM BUILDING HEIGHT

A minimum building height of three (3) stories and 12 metres shall apply.

MAXIMUM BUILDING HEIGHT

No maximum prescribed building height. Applicants should be aware of the Jandakot Airport Obstacle Limitation Surfaces (OLS) as it applies to their respective sites.

MINIMUM GROUND FLOOR CEILING HEIGHTS

The minimum ground floor ceiling heights shall be 3.8m above finished ground floor level.

**MIXED BUSINESS – RESTRICTED USE
– NON RESIDENTIAL STANDARDS**

The provisions of the Mixed Business – Restricted Use – Office / Residential precinct shall apply except where outlined below. Reference to residential development should be ignored as it is not a permitted use within this precinct.

MINIMUM BUILDING HEIGHT

No minimum building height applies.

SETBACKS

Rear setbacks must be sufficient to provide for high quality landscaped treatments.

Rear Setbacks: A minimum rear setback of 10 m shall apply.

Side Setbacks: As per the provisions of TPS 3.

BOUNDARY WALL HEIGHT

Boundary wall height shall be as prescribes by TPS 3 for Mixed Business Zone.

READ FENCES

Fences to adjoining residential development must be of masonry construction and 2.2 m in height.

LOCAL CENTRE STANDARDS

The local centre, at the intersection of Muriel Court and the realigned Semple Court, will provide for the daily needs of residents within the precinct. Due to the precinct's proximity to Cockburn Central Activity Centre, the local centre is small in scale. However, the local centre has an important role to play in providing amenity for residents and ensuring that the area develops not just as a dormitory suburb.

The local centre will develop over time, and so the mix of initial uses may be relatively limited. Therefore, buildings that can adapt to change over time to allow more commercial activity will be required. The activities that are envisaged for the local centre are local retail shops, cafes, small offices and possibly community uses. These activities will be complemented by residential development.

Generally, activity non-residential ground floor uses will be required within the local centre zone. Upper floors may be a mix of commercial and residential uses, though adequate separation of uses will be required so that resident amenity can be maintained. Where ground floor commercial floorspace or tenancies are not commercially viable in the short term, they shall be designed such that they can be easily modified in the future.

Buildings will be a minimum of two (2) stories and up to four (4) stories in height. This will allow a critical scale to be developed within the local centre to act as a definable meeting point.

INTERACTIVE FRONTAGE

Development must provide an interactive street frontage to reinforce Semple Court as a vital and attractive pedestrian environment.

PEDESTRIAN AMENITY

Continuous and consistent awnings/verandahs shall be provided, where practicable, on buildings fronting Semple Court within the local centre precinct. Awnings shall be constructed as per the Local Government (Miscellaneous Provisions) Act 1960 requirements and City of Cockburn local law.

SETBACKS

Nil setbacks are permitted within the local centre.

BUILDING SEGMENT WIDTH

A maximum lot width is not prescribed, however development should not be constructed such that long, flat facades are created. A maximum building segment should therefore not be more than 12m in length.

MINIMUM BUILDING HEIGHT

The minimum building height shall be two (2) stories and 8m to the top of the external wall.

MAXIMUM BUILDING HEIGHT

The maximum building height shall be four (4) stories and 15m to the top of the external wall.

GROUND FLOOR FINISHED LEVEL

The ground floor finished level shall be constructed such that seamless access can be provided from the pedestrian footpath into each commercial tenancy. Generally, the finished level of the tenancy should match that of the adjacent footpath.

MINIMUM GROUND FLOOR CEILING HEIGHT (AND ADAPTABLE BUILDING DESIGN).

The minimum ground floor tenancy height shall be 3.9 metres above the finished ground floor level.

MAXIMUM GROUND FLOOR TENANCY WIDTH

The maximum ground floor tenancy width shall be 12m.

MAXIMUM BUILDING DEPTH AND SERVICE AREAS

There is no maximum building depth, however building design should allow service areas and storage spaces to be accommodated within the main façade of the building and not appear as a separate element.

CAR PARKING

For non-residential land uses, car parking shall be as per the provisions of TPS 3.

Minimum car parking requirements for dwellings in accordance with Location A

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requirements of C3.1 of Part 6 of the R-Codes. Maximum car parking requirements for dwellings is 1.5 bays.

Car parking areas should be screened from view of the street and not impact on the visual amenity or pedestrian character of Semple Court.

SERVICING

'Back of house' services must be located away from the street and towards the rear of the site to minimise impact on the pedestrian environment. Consideration must be given to the inclusion of 'back of house' services in design and documentation of development proposals to be assessed and determined by the City of Cockburn. 'Back of house' services include items such as ducting and vents allowing for the mechanical ventilation of kitchen areas, and 'grease traps' for waste storage and disposal purposes.

STREETS

The landscaped design for the Muriel Court Structure Plan area will create a vibrant, pedestrian friendly community that promotes use of public spaces and responds to the medium to high density development that will occur. The design of streets and public open spaces will allow users and residents to connect to the local environment.

Key drivers that should influence landscape design within the structure plan area are:

- Site context;
- Site topography and geotechnical conditions;
- Site drainage and hydrology;
- Local environmental constraints;
- Existing vegetation; and
- Ensure that pedestrians and cyclists are respected such that traffic movements do not impinge upon use of public spaces by pedestrians.

Key sustainability issues that must influence the landscape design include:

- Sustainability water quality and management;
- Sustainable public infrastructure;
- Connectivity and accessibility between lots, streets and public open spaces; and
- Maintaining or transplanting existing trees where possible.

The following guidelines direct the design of new roads and associated infrastructure within the precinct.

STREET PROFILES

Sample Court (25.2 metres)

- Sample Court will be designed within an Integrator B Road, as defined by Liveable neighbourhoods, with a 25.2m road reserve;
- The design speed will be between 40 and 50 km/hr and provide for up to 15,000 vehicles a day.
- Road pavement widths will be sufficient to provide for a traffic lane, segregated bicycle lane and on-street parking;

- 1.5m wide footpaths which are adjacent property boundaries (0.3m offset);
- Within the local centre, the footpaths will be wider and constructed between the property boundary and the kerb; and
- Street lighting in central median, with a minimum width of two (2) metres.

Muriel Court (24.4 metres)

- Muriel Court will be designed as a Neighbourhood Connectors a Road, as defined by Liveable Neighbourhoods, within a 24.4 metre road reserve;
- The design speed will be between 40 and 50 km/hr;
- Segregated bicycle lane for the entirety of the length of Muriel Court;
- Street lighting in central median, with a minimum width of 2m;

18 metre wide roads

- These roads are designed as wide access streets suitable for higher density residential areas and provide for on street parking and street tree planting;
- Street pavement 6m with one verge 6.2m and the other 5.8m. The wider verge on one side will accommodate sewer and stormwater drainage;
- 1.5 metre wide footpaths which are adjacent property boundary (0.3m); and
- 2.1 metre wide on-street car parking bays.

15 metre wide roads

- These roads are for lower density residential areas and some on-street parking (on the carriageway), which provide speed control;
- 4.5m verges and 6m pavement;
- Street trees are to be provided in the road reserve;
- 1.5m wide footpaths which are adjacent property boundary (0.3m offset); and
- 2.1m side on-street car parking bays.

16 metre wide road

As per 15m verges, except that verges are 5m wide each. For lots that abut public open space the road reserve is 14.5 m. The street profile is the same, except on the public open space side the verge is only 3.5m and contains a Dual Use Path (2.1 metres) and no car parking.

12 metre wide road

Low speed shared space environment. Street pavement and footpath to be at the same level and same pavement style and separated by bollards. 6m wide road pavement and 3m wide verges. Street trees are to be provided within the verge.

Laneways

New laneways may be required to provide access to new lots created through subdivision.

- Road Design speed of 10 km/h;
- Laneways are to have 5.0 metre wide road pavement with no footpaths;
- Laneways to have 1m verge where laneway tree and street lighting will be located;
- Flush transition between road surface and road verge;
- Laneways require traffic calming where length is deemed to warrant it;
- Laneway entry off street to be narrow as a traffic calming device

Footpaths

- Footpaths to be provided on both sides of all roads and a minimum of 1.5m wide. All footpaths to be adjacent property boundaries (0.3m offset).
- Footpaths in areas coded R80 and R160 to be constructed from lot boundary to kerb.
- Footpaths in all areas to extend to kerb where adjoining on-street car parking bays.

Street trees

Street trees to be generally located 2.7m from the property boundary.

Street trees spacing and species to be determined by the City of Cockburn's Park Department taking into consideration the street profile of a specific street.

Road construction

- Road pavement – black asphalt;
- Bike lanes for Muriel, Kentucky and Semple Courts – green asphalt with white line;
- Internal roundabouts and road intersections – grey interlocking brick paving with concrete beam;
- Bus embayment – grey interlocking brick paving with concrete beat at interface with asphalt;
- Standard semi mountable concrete kerb to parking embayment;
- Median to Semple, Kentucky and Muriel Court – to be determined in consultation with the City of Cockburn's Engineering Department; and
- 1.5m wide footpaths to be exposed aggregate finish – cream colour and 100mm thick adjacent property boundary.

Street lights

Street lights to be from Western Power's standard decorative range; street lighting should be consistent throughout the structure plan area (matching pole colour, type and fixtures). Street lighting is to be the most energy efficient option available at the time of application. Applicants should consult with Western Power and the City of Cockburn.

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INTERPRETATIONS

Built to Line

The build to line is a line parallel to the property line where the primary façade of the building is required to be located. The intent is to provide a consistent building plane or define edges to the street. Parts of the front façade may be setback from the build to line in order to provide articulation and visual interest.

Main Building Line

The main building line is the primary edge of the building that addresses the street.