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# STRUCTURE PLAN

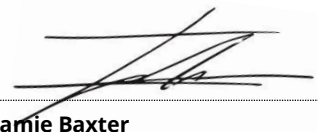
LOT 22 MAYOR ROAD, LAKE COOGEE

## DOCUMENT CONTROL

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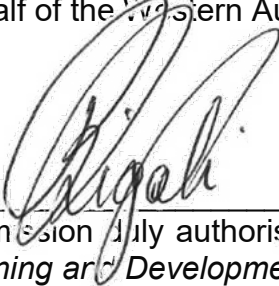
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This structure plan is prepared under the provisions of the City of Cockburn Town Planning Scheme No. 3.

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON: **12 APRIL 2021**

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

12 APRIL 2021

Date

12 APRIL 2031

Date of Expiry

## ▲ TABLE OF AMENDMENTS

AMENDMENT NO.	SUMMARY OF THE AMENDMENT	AMENDMENT TYPE	DATE APPROVED BY WAPC

## ▲ TABLE OF DENSITY PLANS

DENSITY PLAN NO.	AREA OF DENSITY PLAN APPLICATION	DATE ENDORSED BY WAPC

## EXECUTIVE SUMMARY

This Structure Plan (SP) encompasses Lot 22 Mayor Road, Lake Coogee (the subject site), which is in the City of Cockburn. The subject site is situated to the south of Mayor Road, near the intersection of Rockingham Road, and has a total land area of 7,453m<sup>2</sup>.

The intent of this SP is to guide the subdivision and subsequent development of the subject site for residential purposes, along with ensuring appropriate provision of access via two (2) new public roads.

The subject site is proposed to be subdivided and developed for residential purposes, with vehicle access provided via new public roads under construction (or proposed to be constructed), originating from Yindi Way to the south and Preston Drive to the west of the subject site. There will be no permanent vehicle access provided from the development to Mayor Road. Public Open Space (POS) is to be provided by way of cash in lieu.

This SP takes into account the statutory and strategic planning framework applicable to the subject site, outlining development principles and assessments as they relate to the considerations of the land.

## STRUCTURE PLAN SUMMARY

ITEM	DATA		SECTION NUMBER REFERENCED IN PART 2 OF REPORT
Total area covered by the Structure Plan	0.7453 hectares		1.2.2 Area and Land Use
Area of each land use proposed: Residential Local Road Reserves MRS Other Regional Roads Reserve	0.5688 hectares 0.1568 hectares 0.0287hectares	8 lots	3.1 Land Use
Total estimated lot yield	8 lots		3.3 Residential Density
Estimated number of dwellings	21 dwellings		3.3 Residential Density
Estimated residential site density	29 dwellings per site hectare		3.3 Residential Density
Estimated population	53 people based on 2.55 persons per household		3.3 Residential Density
Estimated area and percentage of public open space given over to: - Regional open space - District open space - Neighbourhood parks - Local parks	Nil		3.2 Public Open Space
Estimate percentage of natural area	Nil		

*Note: All information and areas are approximate only and are subject to survey and detailed design.*

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## TECHNICAL APPENDICES

APPENDIX NUMBER	DOCUMENT TITLE	NATURE OF DOCUMENT	REFERRAL/APPROVAL AGENCY	APPROVAL STATUS AND MODIFICATIONS
1	Local Water Management Strategy	Approval Required	Department of Water and Environmental Regulation, City of Cockburn	Already Approved
2	Traffic Impact of Additional Lots	Supporting Document	N/A	N/A



# PART ONE

IMPLEMENTATION



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## 1. STRUCTURE PLAN AREA

This Structure Plan applies to Lot 22 Mayor Road, Lake Coogee (formerly Munster), being the land contained within the inner edge of the line denoting the Structure Plan boundary on the Structure Plan map (Refer Plan 1 situated at the end of Part 1 of this Structure Plan report).

## 2. OPERATION

In accordance with Schedule 2, Part 4 of the Planning and Development (Local Planning Schemes) Regulations 2015, this Structure Plan shall come into operation when it is approved by the Western Australian Planning Commission (WAPC) pursuant to Schedule 2, Part 4, Clause 22 of the Regulations.

## 3. STAGING

This Structure Plan is to be developed in a single stage, noting that there are no specific triggers that would require staging of the development.

## 4. SUBDIVISION & DEVELOPMENT REQUIREMENTS

No.	Category	Requirement
4.1	Land use permissibility	The land use classifications within the structure plan area are shown on Plan 1 (the structure plan map). These will guide the future subdivision and development of the land for residential purposes.  Land use permissibility within the structure plan area shall be in accordance with the structure plan map and the corresponding zones and reserves set out in the City of Cockburn Town Planning Scheme No. 3.
4.2	Residential density	Residential densities applicable to the structure plan area are shown on the structure plan map.
4.3	Development standards	Variations to State Planning Policy 7.3: Residential Design Codes set out in:  (a) Planning Bulletin 112: Medium-density Single House Development Standards - Development Zones; and  (b) City of Cockburn Local Planning Policy 1.16: Single House Standards for Medium Density Housing in the Development Zone,  may be applied to residential development within the structure plan area.
4.4	Access restrictions	Where an application proposes to create vacant lots abutting Mayor Road, the City of Cockburn may recommend a covenant preventing vehicular access onto Mayor Road be lodged on the Certificate(s) of Title of the proposed lot(s) at the full expense of the landowner/ applicant.  The two (2) existing dwellings will be permitted to continue vehicle access via Mayor Road.
4.5	Temporary Stormwater Management	In the event the stormwater network is not complete to the west of the Site at the time of subdivision, a temporary drainage basin protected by Easement in favour of the City of Cockburn will be required to be constructed and maintained in a suitable location on the Site.

No.	Category	Requirement
4.6	Transport noise	Any application to subdivide land within the structure plan area is to be supported by an acoustic assessment, prepared by a suitably qualified consultant, which quantifies the impact of transport noise and identifies measures required to mitigate that noise, in accordance with State Planning Policy 5.4: Road and Rail Noise.
4.7	Treatment of road reserve	Footpaths are to be constructed on one-side of all roads within the structure plan area. Street trees should be provided in accordance with City of Cockburn Local Planning Policy 5.18: Subdivision and Development - Street Trees.
4.8	Road widening	Land which falls within the Other Regional Roads reservation under the Metropolitan Region Scheme will be required for the future extension and widening of Beeliar Drive (currently Mayor Road). The treatment of this road widening is to be determined at subdivision stage.
4.9	Notifications on title (all lots)	In respect of applications to subdivide land within the structure plan area, the City of Cockburn may recommend the following notification be placed on the certificate of title: This land may be affected by midge from nearby lakes and/or wetlands. Enquiries can be made with the City of Cockburn Environmental Services.
4.10	Notifications and covenants on title (specific lots)	Where the acoustic assessment indicates that lots are likely to be affected by levels of transport noise which merit advising the landowner of the impact of transport noise, the City of Cockburn may recommend the following notification be placed on the certificate of title: "This lot is situated in the vicinity of a transport corridor and is currently affected, or may in the future be affected by transport noise."
4.11	Public open space	In approving an application to subdivide land within the structure plan area, the Western Australian Planning Commission may require a cash-in-lieu contribution by the landowner/applicant to the local government for the provision of 10% public open space.
4.12	Site contamination	As the site has, historically, been used for horticultural purposes, the potential for soil and groundwater contamination exists. For this reason, the City of Cockburn recommends:  (a) the proponent liaise with the Department of Water and Environmental Regulation (contaminated sites branch) in relation to the potential for soil and groundwater contamination; and  (b) any future application to subdivide the site be referred to the Department of Water and Environmental Regulation (contaminated sites branch).

## 5. LOCAL DEVELOPMENT PLANS

Local development plans are to be prepared in accordance with Part 6 of Schedule 2 of the Planning and Development (Local Planning Schemes) Regulations 2015, prior to the creation or development of lots:

- ▲ that have direct frontage to the 8m laneway; and
- ▲ where visitor parking, vehicle access and egress needs to be controlled.

## 6. OTHER REQUIREMENTS

The developer is to make satisfactory arrangements with the City of Cockburn to provide proportional contributions toward those items of development infrastructure defined in the City of Cockburn Town Planning Scheme No. 3 for Development Contribution Area 6 (DCA6) and Development Contribution Area 13 (DCA13).

## 7. ADDITIONAL INFORMATION

ADDITIONAL INFORMATION	APPROVAL STAGE	CONSULTATION REQUIRED

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8791\_LSP01D\_20210304 Munster (Local Structure Plan) · DRAWN: REYNE DIAL · DATE CREATED: 2021.03.04 · PROJECTION: MGA50 GDA94 · CADASTRE: LANDGATE · NATION PLANNING: 8000-8999/8791/DRAFTINGW-CAD · REYNE DIAL · 2021.03.04





# PART TWO

EXPLANATORY SECTION



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# 1. PLANNING BACKGROUND

## 1.1 INTRODUCTION AND PURPOSE

Part Two of this Structure Plan comprises an explanatory report that outlines site details, the applicable planning framework, site conditions and constraints and the design rationale for the Structure Plan.

Part Two should be read in conjunction with the Structure Plan Map (Plan 1) and any figures and appendices that relate to applicable site investigations.

The purpose of the Structure Plan is to guide the subdivision and subsequent development of Lot 22 Mayor Road, Lake Coogee for residential purposes. The preparation of a Structure Plan is in accordance with the requirements for Development Areas under Part 5.4 of the City's Town Planning Scheme No. 3 (TPS3) and Part 4 of the deemed provisions of the Planning and Development (Local Planning Schemes) Regulations 2015.

## 1.2 LAND DESCRIPTION

### 1.2.1 LOCATION

The subject site is described as Lot 22 Mayor Road, Lake Coogee and is located within the City of Cockburn local government area.

The subject site is situated to the south of Mayor Road and directly to the west of the intersection of Rockingham Road and Mayor Road / Beeliar Drive. The subject site is located to the west of the City of Cockburn local government area and approximately 20 kilometres southwest of the Perth Central Business District.

Cockburn Central train station is located approximately seven (7) kilometres east of the subject site. Bus Routes 530, 531 and 532 provide connections between the subject site and the Cockburn Central Train Station, and bus route 549 provides a connection between the subject site and the Fremantle Train Station. Bus stops are located approximately 200 metres east of the subject site along Beeliar Drive and 350 metres west along Mayor Road.

South Coogee Primary School is located approximately one (1) kilometre to the east of the subject site, St Jerome's Primary School approximately 800 metres to the north and Coogee Primary School approximately 1.2 kilometres to the west.

Lakeland Senior High School is located approximately five (5) kilometres northeast of the subject site. Fremantle College is located approximately seven (7) kilometres north of the subject site.

**Refer to Figure 1 – Regional Location and Refer to Figure 2 – Local Location.**

### 1.2.2 AREA AND LAND USE

The subject site encompasses the whole of Lot 22 Mayor Road, Lake Coogee and has a total land area of 7,453 m<sup>2</sup>.

The subject site currently contains two (2) residential dwellings; one (1) in the north west corner of the site and one (1) in the north east corner, with both taking vehicle access directly to Mayor Road.

Refer to Figure 3 – Site Plan.

### 1.2.3 LEGAL DESCRIPTION AND OWNERSHIP

The Certificate of Title details for the subject site are summarised in the following table.

**Table 1 – Certificate of Title Particulars**

LOT	SURVEY	VOLUME/FOILIO	AREA	REGISTERED PROPIETORS
22	P003562	607/166A	7,453m <sup>2</sup>	Frances Silich Ivanka Gryska Michael Tomasich

## 1.3 PLANNING FRAMEWORK

### 1.3.1 ZONING AND RESERVATIONS

The subject site is primarily zoned 'Urban' under the provisions of the Metropolitan Region Scheme (MRS), with a two-metre-wide strip along the northern portion of the site reserved for 'Other Regional Roads' under the MRS. As part of a future application for subdivision approval, this MRS reserved portion of the subject site will be required for the future widening of Beeliar Drive (currently Mayor Road).

The subject site is zoned 'Development' under the provisions of the City of Cockburn Town Planning Scheme No. 3 (TPS3). The purpose of the Development zone is 'to provide for future residential, industrial or commercial development to be guided by a comprehensive Structure Plan prepared under the Scheme'. In this regard, Development Areas are designed to:

- ▲ Identify areas requiring comprehensive planning; and
- ▲ Coordinate subdivision and development in areas requiring comprehensive planning.

The subject site is located within Development Area 5 (DA5) under TPS3; with Table 9 of TPS3 identifying that DA5 is to predominantly provide for new residential development.

TPS3 also states that the subdivision and development of land within a Development Area is generally to accord with any agreed structure plan pertinent to the land. Refer to Section 5.2 of TPS3.

The subject site is subject to Development Control Area 6 (DCA6), which establishes a developer contribution arrangement specifically for the Munster locality, and Development Contribution Area 13 (DCA 13), which establishes a developer contribution arrangement for the upgrade of local and regional recreational and landscape facilities within the whole of the City of Cockburn.

### 1.3.2 PLANNING STRATEGIES

The Perth and Peel @ 3.5 Million Framework was adopted in March 2018 and is a spatial framework, a high-level strategic plan that establishes a vision for the future growth of the Perth and Peel metropolitan region. The Framework aims to achieve a more consolidated urban form to meet

long-term housing needs and strengthen key activity centres and employment nodes as the Perth and Peel population grows to 3.5 million.

The framework identifies the subject site as being located within the South Metropolitan Peel Sub-Region. The City of Cockburn is assigned an urban infill target of an additional 14,680 dwellings to achieve a City of 3.5 million.

The SP responds to objectives outlined in Perth and Perth @ 3.5 million by introducing a planning framework to facilitate the orderly development of the subject site for new residential dwellings in close proximity to existing community infrastructure, public open space and high frequency public transport services.

### 1.3.3 PLANNING POLICIES

#### ***Liveable Neighbourhoods***

Liveable Neighbourhoods is an operational policy, adopted by the WAPC, for the design and assessment of new structure plans and subdivisions. The elements of Liveable Neighbourhoods primarily relate to larger-scale structure plans and subdivisions and accordingly a detailed assessment of this structure plan against these elements is not considered necessary in this instance due to its small scale and simple nature.

It is acknowledged that the general intent and objectives of Liveable Neighbourhoods are considered relevant in terms of addressing such elements as connectivity and walkability, provision of public parkland, urban water management and utilities. A detailed description of the design rationale for the SP is therefore provided in Section 3 of this Structure Plan report.

#### ***LPP 1.11 – Residential Rezoning and Subdivision Adjoining Midge Infested Lakes and Wetlands***

The City's Policy Residential Rezoning and Subdivision Adjoining Midge Infested Lakes and Wetlands outlines the City's approach with respect to new residential development in close proximity to midge infested lakes and wetlands.

The Policy identifies that the subject site is located within 500 metres of Market Garden Swamp 3 (to the southwest) and is therefore potentially subject to midge infestation during the spring and summer seasons. As such and in accordance with Clause 2 of the Policy, a Notification will be placed on all future titles stating that:

- ▲ This land may be affected by midge from nearby lakes and/or wetlands. Enquiries can be made with the City of Cockburn Environmental Services.

#### ***LPP 1.1 – Residential Design Codes Alternative Deemed to Comply Provisions***

The purpose of the City's Policy Residential Design Codes Alternative Deemed to Comply Provisions is to supplement the existing 'deemed to comply' criteria and 'design principles' of the R-Codes with alternative standards that the City believes either meet the general objectives of the Codes or are warranted to address specific local objectives.

The Policy does not seek to replace or provide more onerous requirements than the existing R-Codes provisions and therefore a development may be deemed to be compliant if it conforms to

either the 'deemed to comply' provisions of the R-Codes, the 'design principles' of the R-Codes, or the provisions of the Policy.

The requirements under the City's Policy can be applied at the future subdivision and development stages.

#### ***LPP 1.2 – Residential Design Guidelines***

The City's Policy Residential Design Guidelines aims to improve the design of medium to high density residential developments within the City of Cockburn. The Policy applies to all grouped and/or multiple dwelling developments within the TPS3 scheme area, as well as all single houses on lots with a frontage of less than 10 metres wide or lots less than 260 m<sup>2</sup>.

The requirements of the Policy will need to be addressed in relation to any single dwelling development with a frontage of less than 10 metres at the development application stage.

#### ***LPP 1.16 – Single House Standards for Medium Density Housing in the Development Zone***

The City's Policy Single House Standards for Medium Density Housing in the Development Zone replaces the deemed to comply provisions of the R-Codes with respect to certain elements, for single dwelling residential development in R25-R60 density coded areas.

The requirements of the Policy will need to be addressed in relation to any single dwelling development at the development application stage, given the proposed R40 density coding of the SP.

#### ***LPP 5.6 – Vehicle Access***

The City's Policy Vehicle Access provides a framework for the planning and development of safe and efficient movement of motorists, public transport users, pedestrians and cyclists, where a coordinated approach to vehicle access is required. The objectives of the Policy are as follows:

- ▲ provide for safe and efficient movement of motorists, public transport users, pedestrians and cyclists;
- ▲ provide for safe and efficient movement of waste management and other service vehicles;
- ▲ minimise the potential for conflict between through and local traffic;
- ▲ provide visually attractive road environments; and
- ▲ provide for reasonable property access that is direct, convenient and safe.

In accordance with the above, the Structure Plan layout has been designed to provide for the safe and efficient movement of pedestrians and vehicles, whilst allowing for direct, safe and convenient property access from gazetted public roads. This is discussed further in the report.

### **1.3.4 OTHER APPROVALS AND DECISIONS**

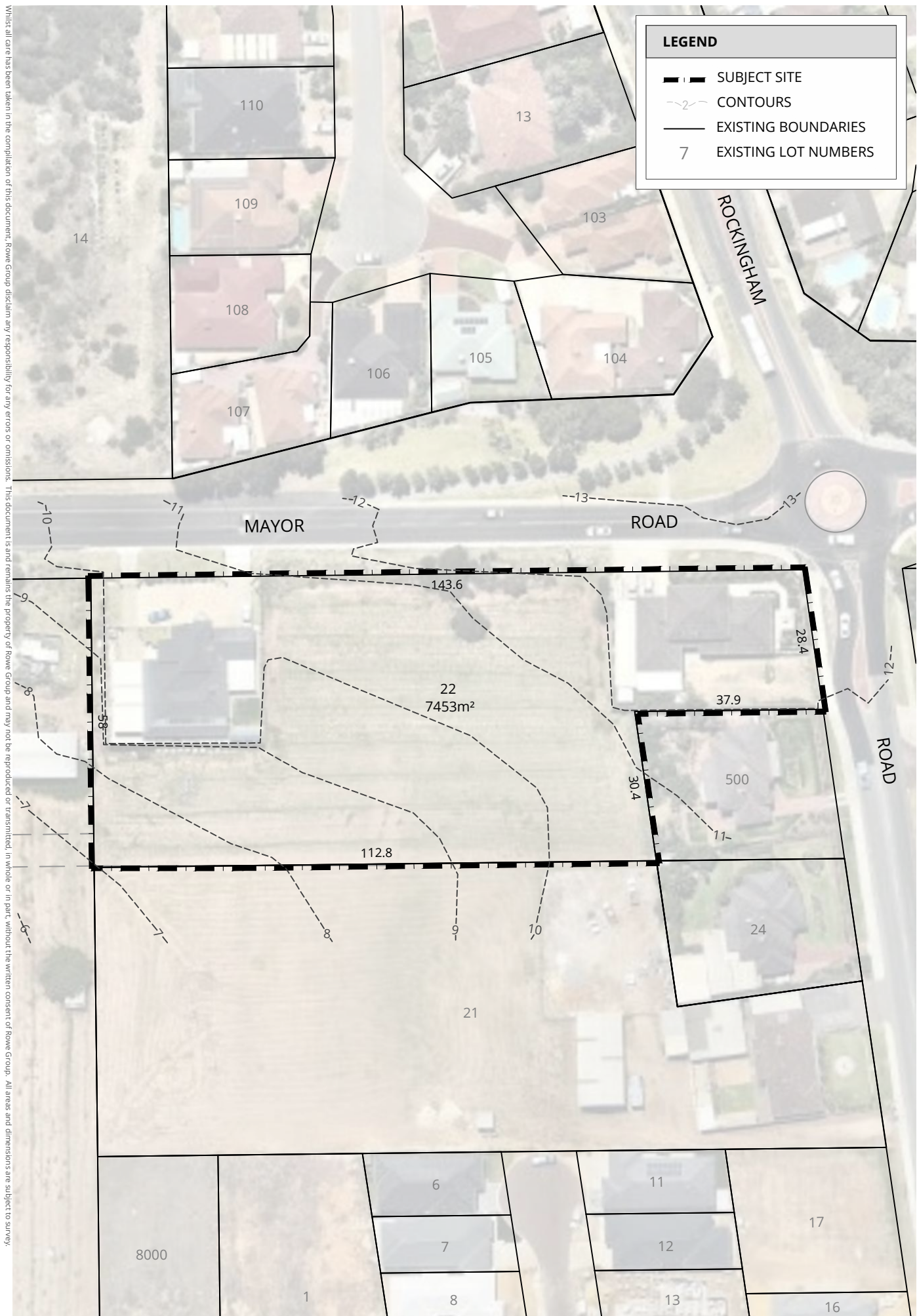
The WAPC endorsed a Structure Plan for the adjacent Lot 51 Mayor Road, Lake Coogee on 27 May 2019. As the adjacent Lot 51 is owned by one of the landowners of Lot 22, the initial reporting for the Lot 51 Structure Plan also considered Lot 22.

The approved 2016 Local Water Management Strategy (LWMS) for the subject site also included Lots 18, 19 and 25 Rockingham Road, as well as Lot 22 and Lot 51 Mayor Road, Lake Coogee. This combined LWMS co-ordinates drainage infrastructure in the locality and results in drainage for Lot 22 being conveyed to the open space areas to the south on Lot 51.

### 1.3.5 PRE-LODGEMENT CONSULTATION

In formulating this SP proposal, the landowner's have liaised with the City of Cockburn planning services in February 2020, with reference to the road layout, shared drainage arrangements with Lot 51 and the approach to POS provision (i.e. cash in lieu).





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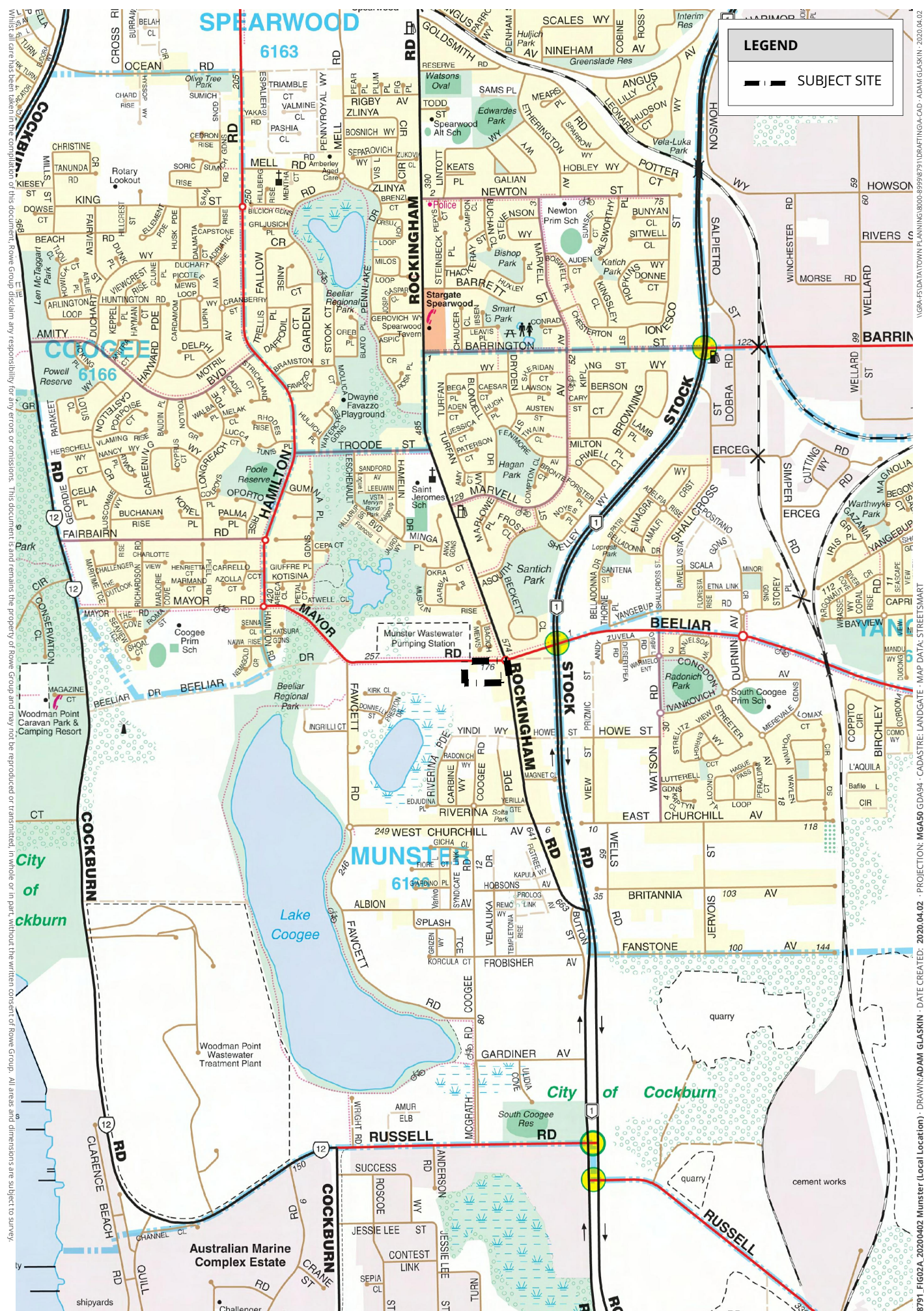
8791\_FIG03A\_20200401 Munster (Site Plan) · DRAWN: ADAM GLASKIN · DATE CREATED: 2020.04.01 · PROJECTION: MGA50 GDA94 · CADASTRE: LANDGATE · AERIAL: NEARMAP2018.02.14 · V:\GRA-FS\DATA\TOWN PLANNING\8700-8999\8791\DRAWING\GA-CAD · ADAM GLASKIN · 2020.04.02

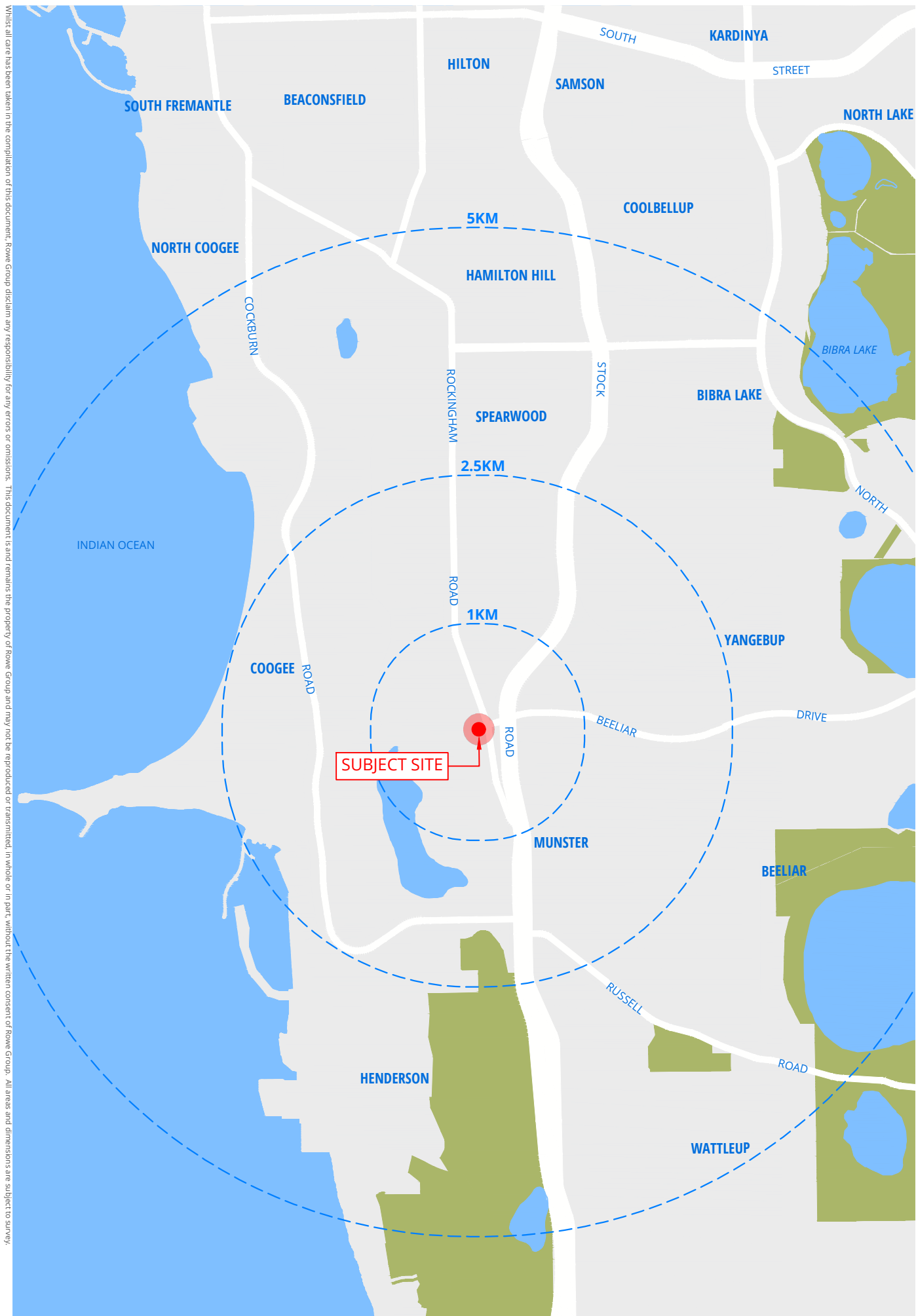


0 25 m  
SCALE @ A4: 1:1000



FIGURE 3  
SITE PLAN





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8791\_FIG01A\_Munster (Regional Location) · DRAWN: ADAM GLASKIN · DATE CREATED: 2020.04.01 · PROJECTION: MGA50 GDA94 · 1\GDA-F5\DATA\TOWN PLANNING\8700-8999\8791\DRAWING\GA-CAD · ADAM GLASKIN · 2020.04.02



0 1250 m  
SCALE @ A4: 1:50,000



FIGURE 1  
REGIONAL LOCATION

## 2. SITE CONDITIONS AND CONSTRAINTS

### 2.1 BIODIVERSITY AND NATURAL AREA ASSETS

The subject site was previously zoned 'Rural', is now predominantly zoned 'Urban' and has been used historically for a market garden and for residential purposes. There is no remaining remnant vegetation on the subject site.

There is no wetland or other environmental feature associated with the landholding.

### 2.2 LANDFORM AND SOILS

The subject site is predominantly underlain by sands derived from Tamala Limestone and is identified as having no known risk of acid sulfate soils.

The subject site slopes from 12 metres AHD in the north east portion of the site down to 7 metres AHD in the south west corner of the land.

It is noted that the subject site was previously a market garden. It is therefore suggested that a preliminary site investigation be carried out as part of the future subdivision application, to determine whether the subject site may be contaminated.

### 2.3 GROUNDWATER AND SURFACE WATER

Lake Coogee, located approximately 500 metres southwest of the subject site, is considered to be an expression of the regional groundwater table (refer to Appendix 1 – Local Water Management Strategy). The long term water level records within Lake Coogee, as monitored by the Department of Water and Environmental Regulation (DWER), indicate that the average annual minimum and maximum water levels within Lake Coogee are 0.3 metres AHD and 0.8 metres AHD, respectively. This represents an average annual fluctuation of 0.5 metres AHD. The maximum recorded water level within Lake Coogee was 1.06 metres AHD, measured on 21 August 1967.

By applying the average seasonal variation within Lake Coogee to the minimum groundwater level of 0.8 metres AHD, an estimated average annual maximum groundwater level (AAMGL) of 1.3 metres AHD was estimated for the subject site (refer to Appendix A – Local Water Management Strategy). Similarly, by applying the maximum recorded water level within Lake Coogee, an estimated maximum groundwater level (MGL) of 1.58 metres AHD has been adopted for the subject site.

The depth to the adopted MGL across the developable portion of the subject site is therefore estimated to range from 1.42 metres in the southwestern portion of the subject site and groundwater elevations will be close to or at the surface.

The average annual maximum AAMGL and maximum groundwater level MGL at the subject site are estimated to be 1.3 metres AHD and 1.58 metres AHD, respectively.

There are no permanent surface water features within the subject site and any runoff that does not infiltrate onsite will flow toward the resource enhancement wetland (REW) in the western portion of the subject site.

Groundwater quality investigations have not been undertaken, as advice received from the DWER confirms that assessment of the pre-development groundwater quality conditions was not required prior to the development of an LWMS due to the following considerations:

- ▲ the developable yield of the subject site is low;
- ▲ a large distance to groundwater for a majority of the developable portion of the subject site will reduce urban environmental impacts; and
- ▲ nutrient inputs of the proposed land use are less intensive than the previous land use.
- ▲ similarly, surface water quality investigations have not been undertaken, as there are no defined surface water channels within the subject site and most rainfall events are either infiltrated on site or discharged from the subject site as shallow sheet flow.

The approved LWMS is discussed in further detail at Section 3.5.

## 2.4 BUSHFIRE HAZARD

State Planning Policy 3.7 – Planning in Bushfire Prone Areas (SPP 3.7) seeks to guide the implementation of effective risk based land use planning and development to preserve life and reduce the impact of bushfire on property and infrastructure. SPP 3.7 applies to strategic planning proposals, including Structure Plans over land designated as bushfire prone by the Map of Bushfire Prone Areas prepared by the Department of Fire and Emergency Services. Given Lot 22 is not designated as Bushfire Prone, SPP 3.7 is not applicable to the Structure Plan area.

## 2.5 HERITAGE

A desktop search indicates that the subject site has no known European heritage significance.

A desktop search of the Department of Aboriginal Affairs' Aboriginal Heritage Inquiry System indicates the subject site has no known Aboriginal heritage significance.

## 3. LAND USE AND SUBDIVISION REQUIREMENTS

### 3.1 LAND USE

The City of Cockburn Town Planning Scheme No. 3 (TPS3) states that the development and use of land within a 'Development Zone' is to be guided by a comprehensive Structure Plan. The land uses proposed as part of this SP are as indicated on 'Plan 1 – Structure Plan Map'.

This SP identifies a 'Residential' zoning across the site, with the R40 density code allocated to the majority of the land and R60 allocated to the portion of the site on the corner of Mayor Road and Rockingham Road commensurate with other Structure Plans to the south along this road.

The total land area for the residential component is 0.5688 hectares.

### 3.2 PUBLIC OPEN SPACE

The provision of Public Open Space (POS) within new residential areas is a key factor in the consideration of structure plans, particularly in terms of the dimensions and functions of the POS areas provided. There are several City policies that are relevant in terms of assessing the location and layout of POS areas, however it is ultimately the Western Australian Planning Commission that determines the required POS provision, having regard to Liveable Neighbourhoods and Development Control (DC) Policy 2.3 – Public Open Space in Residential Areas (DC2.3). Both DC2.3 and Liveable Neighbourhoods require a minimum contribution of 10% of the gross subdividable area to be given up for public parkland.

Figure 4 demonstrates the location of existing parkland within a 400 m radius of the subject site. As can be seen from Figure 4, sufficient and multiple parklands are proposed or constructed to the south and south-west of the site all within the 400 m radius.

A consolidated area of open space will be constructed directly abutting the south-west corner of the lot on the adjacent Lots 21, 51 and 8000. This area of open space will be directly accessible to all future lots within the Structure Plan area, with the maximum walking distance to this park from a proposed lot within the Site being 160 m.

Given the available open space in proximity and the small POS provision requirements for Lot 22 (i.e. 716 m<sup>2</sup>), it is considered appropriate to provide the 10% POS provision by way of cash in lieu as a condition of subdivision approval.

**Refer Figure 4 – Surrounding Density and Open Space Distribution.**

### 3.3 RESIDENTIAL

One of the primary aims of this SP is to provide for higher density lot sizes and diversity of dwelling types, in accordance with the aims and objectives of Perth and Peel @ 3.5 Million – South Metropolitan Peel Sub-Region framework. In this regard, the SP proposes residential densities of R40 and R60, allowing medium density development to occur.

Figure 4 demonstrates the existing density surrounding the Site. As can be seen from Figure 4, the immediate surrounds of the Site is made up of R30, R40 and R60 residential density coding. The

pattern of development is such that R40 coded areas are predominant immediately west of the Site along Mayor Road and to the west, south and south-west adjacent to parkland locations, R60 coded areas provide a ribbon of higher density along Rockingham Road and R30 areas are found in the areas between Rockingham Road and the parkland. There is a general “building” of density from the older R20 coded areas south of Yindi Way to the more recently subdivided areas closer to the Mayor Road / Rockingham Road intersection.

The density proposed is considered appropriate on the basis that:

- ▲ it is consistent with the surrounding pattern of development;
- ▲ it will provide for increased density adjacent to Mayor Road and Rockingham Road, which is consistent with the State Government objectives of increasing densities along transit corridors. Provision of pedestrian access to Mayor Road will enable residents to use public transport services that service Mayor Road, Stock Road and Rockingham Road. There are four (4) bus stops in a range of 100 to 150m from the subject site on these adjacent roads;
- ▲ providing increased density around Parks and Recreation areas (to the south and south-west) is in accordance with the provisions of Liveable Neighbourhoods and will provide for increased passive surveillance of public parkland areas; and
- ▲ The density proposed will contribute to diversity in lot sizes and dwelling types, in accordance with the aims and objectives of Perth and Peel @ 3.5 Million framework.

The total area allocated for residential development is 5688m<sup>2</sup>. Based on the proposed subdivision layout shown in Figure 5, it is anticipated that a yield of circa 21 dwellings will be achieved as per the following:

- ▲ Lot 1 at R40 density has the potential for 7 dwellings (grouped)
- ▲ Lots 2-5 and 7-8 at the R40 density as single lots equals 6 dwellings; and
- ▲ Lot 6 at the R60 density has the potential for 8 dwellings (grouped).

Based on the above and the average household size of 2.55 people (Census, 2016), the estimated population for the subject site is 53.

**Refer to Figure 5 – Subdivision Concept Plan.**

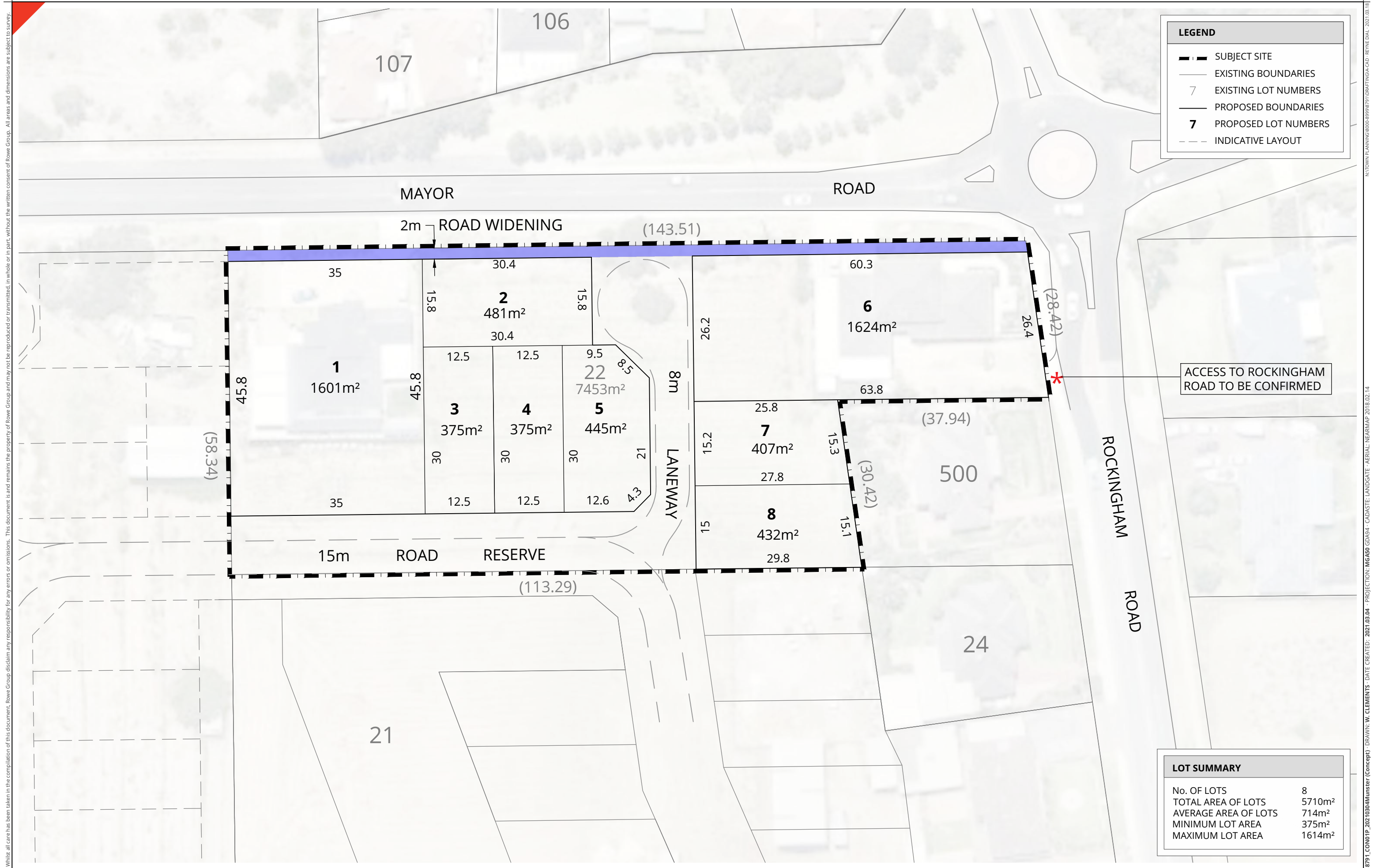
## 3.4 STREET TREES

In accordance with the City of Cockburn Local Planning Policy 5.18: Subdivision and Development - Street Trees, street trees will be provided at the rate of one (1) street tree per lot. Figure 5 demonstrates one possible way of providing street trees at this rate within the subject site.



## SURROUNDING RESIDENTIAL DENSITY AND OPEN SPACE DISTRIBUTION

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8791-CON-01-P 20210304Munster (Concept) - DRAWN: W. CLEMENTS - DATE CREATED: 2021.03.04 - PROJECTION: MGA50 GDA94 - CADASTRE: LANDGATE - AERIAL: NEARMAP 2018.02.14

## 3.5 MOVEMENT NETWORKS

Access to the subject site is to be provided by new public roads, which will connect with future extension of Carine Parade in the south through Lot 21 and the future extension of Monger Road / Preston Road in the west through Lot 51. One (1) of the owners of Lot 22 owns the adjacent Lot 51 and it is therefore possible that Lots 22 and 51 could be constructed at the same time or as part of rolling stages.

It is anticipated that most residents will access the site primarily via the Rockingham Road and Yindi Way intersection south of the subject site, and then utilising the extension of Carine Parade through Lot 21. Access to the R60 site via Rockingham Road may be considered at the subdivision stage, subject to detailed design, to the satisfaction of the City. Treatments to discourage laneway traffic from using this access onto Rockingham Road may also be requested by the City via Local Development Plan provisions at the subdivision stage.

It is noted that no permanent vehicle access is to be provided to Mayor Road, however, the access to the two existing dwellings will continue until demolition of the houses, which may not occur as part of the initial subdivision of the subject site.

Internal vehicle access is to be provided via new public roads, varying in width from an 8 metre laneway through to a 15 metre wide road. The proposed public roads will provide for the safe and efficient movement of vehicles and pedestrians throughout the structure plan area, as well as direct and convenient access to all proposed residential lots. Pedestrian paths will be provided along all roads within the Structure Plan area.

A Transport Impact Statement (TIS) was prepared by KCTT in support of the development of both Lots 22 and 51 Mayor Road as part of the approval of the Structure Plan for Lot 51. The TIS provided detailed commentary and analysis on the potential traffic and transport impacts associated with the proposed subdivision and subsequent development of the subject site for residential purposes. The scope of the TIS included detailed assessment of the following:

- ▲ Existing traffic flows and vehicular volumes on roads that front the subject site, including Mayor Road, Rockingham Road and Coogee Road;
- ▲ Collation of existing crash data on roads that front the subject site, including Mayor Road and Rockingham Road and review of accidents at the intersection of Rockingham Road and Mayor Road;
- ▲ Confirmation of trip attraction rates and requirements for cars, bicycles and pedestrians;
- ▲ Provision of a Transport Impact Statement in accordance with WAPC Guidelines; and
- ▲ Trip Models for 2016 and 2026.

The TIS can be provided on request. As adjunct to the TIS, KCTT has prepared a further report titled *"Traffic Impact of Additional Lots"* for the Lot 22 Structure Plan (a copy is contained in Appendix 2). The further report concludes:

- ▲ The additional traffic impact from the proposed addition would be 189 daily vehicular trips and 17 vehicular trips in the peak hour. When combined with the previously

approved structure plan traffic on the adjacent Lot 51, the impact would be moderate as per WAPC Guidelines.

However, having in mind the surrounding road network traffic, KCTT believe that the impact of the additional lots could be considered negligible; and

- ▲ The expected traffic impact of the proposed development is not expected to change in time given that the same land use remains.

## 3.6 WATER MANAGEMENT

A Local Water Management Strategy (LWMS) was prepared by Emerge Associates in support of a previously proposed structure plan incorporating both Lot 22 Mayor Road, Lake Coogee (the subject site) and Lot 51 Mayor Road, Munster (west of the subject site). Additionally, the LWMS included neighbouring sites (former Lots 18, 19 and 25 Rockingham Road, Munster), which have since been progressed through separate and now approved structure plans.

The then Department of Water approved the LWMS on 21 July 2016, which was then supported by the City on 28 July 2016. A copy of the approved LWMS is contained in Appendix 1. It is proposed that the approved LWMS and outlined management strategies contained in Appendix 1 be adopted as the LWMS applicable to this proposed Structure Plan.

The intention of the LWMS is to provide a coordinated drainage strategy across landholdings, to make efficient use of required drainage infrastructure. The drainage strategy within Lots 18, 19 and 25 Rockingham Road included the use of a temporary basin, sized to retain runoff generated during the 5-year average recurrence interval (ARI) storm event. The detailed design and implementation of a permanent stormwater management approach was deferred pending the subdivision of Lot 51 Mayor Road. Lot 22 will connect into this permanent solution via the Lot 51 roadways.

The LWMS has been approved in accordance with Better Urban Water Management (WAPC 2008a), State Planning Policy 2.9 Water Resources (WAPC 2006a) and Planning Bulletin 92 Urban Water Management (WAPC 2008b). Water will be managed using an integrated water cycle management approach, developed using the philosophies and design approaches described in the Stormwater Management Manual for Western Australia (DWER 2007).

The overall objective for integrated water cycle management for residential developments is to minimise pollution and maintain an appropriate water balance. The LWMS design objectives seek to deliver best practice outcomes using a Water Sensitive Urban Design (WSUD) approach, including detailed management approaches for:

- ▲ Potable water consumption;
- ▲ Flood mitigation;
- ▲ Stormwater quality management; and
- ▲ Groundwater management.

The criteria proposed within the LWMS are based on the characteristics of the existing environment and a contemporary best-practice approach to integrated water cycle management.

The overall approach to water conservation is to reduce the amount of scheme water required within the development at both a lot and an estate scale. The water conservation measures proposed include fit-for-purpose water sources, scheme water for potable uses within lots and potentially harvested rainwater for irrigation of private lot gardens and to supplement potable water use within dwellings. Within the lot, in addition to the potential use of rainwater tanks, scheme water will also be reduced by use of water efficient fittings and appliances and implementation of waterwise gardens.

Stormwater management measures focus on the quantity and quality of surface runoff. The principle behind the stormwater management strategy for the subject site is to mimic the existing hydrology. The first 15 mm of runoff from the subject site will be retained as close to source as possible using a combination of soakwells and subsurface storage chambers within the proposed new road reserves. Runoff from events greater than the first 15 mm of rainfall will be conveyed downstream via surface flow and the road network to be discharged into the adjacent wetland buffer, at peak flow rates that do not exceed the pre-development conditions. Stormwater quality will be addressed using a treatment train approach, utilising the storage provisions indicated above.

A summary of the relevant stormwater design criteria and how these will be addressed for the subject site is provided in the following table. Further details on the proposed stormwater management methodology can be found in the LWMS included as Appendix 1.

In the event the stormwater network is not complete to the west of the Site at the time of subdivision, a temporary drainage basin protected by Easement in favour of the City of Cockburn will be required to be constructed and maintained in a suitable location on the Site.

Table 2 – Stormwater Design Criteria.

CRITERIA NUMBER	DESCRIPTION	MANNER IN WHICH COMPLIANCE IS ACHIEVED
SW1	Retain the first 15 mm of runoff at source or as close to source as practicable.	The first 15 mm of runoff from road reserve and impervious portions of the front of lots will be retained in subsurface storage within road reserves. All lots will retain the 100 year ARI event runoff from the roof and rear of lots within the lot. Storage can be provided within soakwells, RWTs and infiltration within the rear of the lots.
SW2	The post-development critical 5 year and 100 year ARI peak flows leaving the development shall not exceed the pre- development conditions.	All runoff in excess of the storage provided in lots and road reserves will be discharged into the adjacent wetland buffer. This is consistent with the existing hydrology of the subject site. Surface runoff modelling has demonstrated that the post-development discharge rates will not exceed the pre-development conditions.
SW3	The piped drainage network will be designed to convey stormwater runoff generated during the 5 year ARI rainfall event.	The piped network will be sized to convey the 5 year ARI event, thus ensuring minor roads will remain passable in a 5 year ARI event.
SW4	Reduce nutrient loads by applying appropriate non-structural measures.	Minimising use of fertilisers for the establishment and maintenance of vegetation within POS areas and road verges.  Use of WWG principles in POS.  Street sweeping and removal of sediments and gross pollutants
SW5	Finished floor levels must achieve a minimum of 500 mm clearance above the 100 year ARI flood levels.	Earthworks strategy to be designed such that all lots will be at least 500 mm above the 100 year ARI event flood levels in the adjacent wetland.

### 3.7 EDUCATION FACILITIES

The subject site is well serviced by existing education facilities, with South Coogee Primary School located approximately one (1) kilometre to the east, St Jerome's Primary School approximately 800 metres to the north and Coogee Primary School approximately 1.2 kilometres to the west of the subject site. A further six (6) public primary schools are available within a five (5) kilometre radius of the subject site.

Lakeland Senior High School is located approximately five (5) kilometres northeast from the subject site. Fremantle College is located approximately seven (7) kilometres north of the subject site.

Challenger Institute of Technology is located approximately one kilometre to the south of the subject site, with Murdoch University located approximately seven (7) kilometres to the northeast. The University of Notre Dame is also located approximately nine (9) kilometres north of the subject site within the Fremantle Strategic Metropolitan Centre.

No additional education facilities are proposed as part of this Structure Plan.

## 3.8 ACTIVITY CENTRES AND EMPLOYMENT

The subject site is located approximately nine (9) kilometres south of the Fremantle Strategic Metropolitan Centre, which provides a full range of economic and community services for the surrounding area and is a significant employment node within the south metropolitan region.

The nearest secondary centre is located approximately seven (7) kilometres east of the subject site at Cockburn Central. Secondary centres share similar characteristics with strategic metropolitan centres but serve smaller catchments and offer a more limited range of services, facilities and employment opportunities. They perform an important role in the City's economy and provide essential services to their catchments. Cockburn Central also serves an important public transport node, accessed via existing high frequency bus services operating along Mayor Road / Beeliar Drive and providing connections to the Perth to Mandurah railway line via Cockburn Central Train Station and the broader bus network via the Cockburn Central Bus Station.

The nearest neighbourhood centre is Beeliar Village, which is located approximately one (1) kilometre to the east of the subject site and provides for a range of daily and weekly household shopping needs, community facilities and other convenience services. Phoenix Shopping Centre is also located approximately three (3) kilometres to the north of the subject site.

Additional local centres in close proximity to the subject site include the Churchill Avenue Local Centre to the south and the Marvell Avenue Local Centre to the north.

## 3.9 INFRASTRUCTURE COORDINATION, SERVICING AND STAGING

### 3.9.1 EARTHWORKS

The following items will be requirements of the future WAPC Subdivision Approval:

- ▲ Provision of a pre-works geotechnical report to the City certifying that the land is physically capable of development and advising of any remediation and compaction required;
- ▲ Earthworks of the Site such that the proposed lots can accommodate their intended use, and finished ground levels match levels at the boundary of the Site or otherwise coordinate with the proposed finished ground level of adjoining landholdings; and
- ▲ Provision of a post-works geotechnical report certifying that all subdivision works have been carried out in accordance with the pre-works geotechnical report.

The subject site generally falls to the south western corner of the lot and generally comprises sandy material overlying limestone. A geotechnical report should be prepared by a suitably qualified geotechnical engineer to determine the character of the site and proposed treatments to achieve the Developer's desired lot classification.

Future earthworks design should be undertaken to achieve an optimal balance of cut-to-fill, excavation and reuse/disposal of limestone, imported fill, and retaining wall heights. While cut-to-fill of sandy material will be utilised wherever possible, the nature of the existing landform will likely necessitate imported fill and construction of retaining walls of various heights.

Retaining walls will be necessary to create flat pads within lots, which will likely be desired by the Developer. Mass reconstituted limestone walls are typically utilised in the City of Cockburn and it is envisaged that they will also be utilised for the subject development.

The City impose a Moratorium on bulk earthworks during the dry months each year (1 October – 31 March). Bulk earthworks of the Site during the Moratorium may be possible; however this would likely necessitate the use of modified work practices which may increase the cost of development.

### 3.9.2 ROADS AND FOOTPATHS

The construction of roads fronting all proposed lots will be a requirement of the future WAPC Subdivision Approval.

Mayor Road bounds the site to the north and Rockingham Road bounds a portion of Lot 22 to the east. Future road connections are proposed to the subject site from the adjacent Lot 51 to the west and Lot 21 to the south. The proposed network through Lot 22 will extend and connect these future roads completing the road network in this area. Pending the timing of development of Lots 21 and 51, temporary turn around facilities may be required on the site.

Proposed roads within the subdivision will likely have 6 m wide kerbed pavements. The proposed 8 m laneway will terminate in an 18 m diameter cul-de-sac head to facilitate rubbish collection.

A condition of subdivision approval will require an extension to the City's pedestrian and cycling network along Mayor Road and Rockingham Road, consistent with the City's Long Term Cycle Network (2020). In addition, it is envisaged that a 1.8m wide grey concrete footpath on one side of all proposed streets within the subdivisional area.

A path exists in the northern verge of Mayor Road. It is likely that a pram ramp crossing will be required to connect the proposed path network to the Mayor Road path.

### 3.9.3 DRAINAGE

Adequate drainage of the land in accordance with an Urban Water Management Plan (UWMP) approved by the City will be a requirement of the future WAPC Subdivision Approval.

In accordance with the LWMS and future UWMP, we expect that the following infrastructure will be required to satisfy the anticipated WAPC Subdivision Approval conditions:

- ▲ Sub-surface retention of the 1 year Average Recurrence Interval (ARI) event. It is envisaged that this will be achieved via installation of Stormtech chambers (or similar) in road reserves and POS;

- ▲ Discharge of runoff from the road network to Stormtech chambers will be via inlet pits adjacent to the road pavement;
- ▲ A concrete pipe network designed to convey the 5 year ARI event. The network will be connected to the aforementioned entry pits and act as an overflow for the Stormtech chambers;
- ▲ The pipe network will discharge direct to the existing POS or wetland. Emerge have advised that installation of a basin to retain/treat flow will not be a requirement of the UWMP; and
- ▲ Flood routing of the Site to ensure that overland runoff from the proposed lots does not illegally discharge to adjacent lots, and to ensure flooding of the site does not occur below a 100 year ARI event.

### 3.9.4 WASTEWATER RETICULATION

The existing as-constructed wastewater information is summarised below:

- ▲ 2,250mm diameter (DN2250) reinforced-concrete, plastic-lined Bibra Lake trunk main in the Mayor Road reserve, passing into Water Corporation land to the north;
- ▲ DN250 asbestos cement pressure main in the western verge of Rockingham Road;
- ▲ DN150 PVC pressure main in the eastern verge of Rockingham Road; and
- ▲ DN150 PVC gravity mains to the south in the Public Open Space (POS) west of Erie Lane, and in Monger Drive and Carine Parade.

The two (2) existing Mayor Road residences do not appear to be connected to wastewater reticulation. It is assumed that the residences have on-site septic systems.

The Water Corporation has advised that the subject site is capable of being serviced with gravity fed wastewater reticulation and is addressed in their scheme planning. The subject land is proposed to discharge to the existing gravity network to the south west of the subject site via Lot 51. It is envisaged that the subject site will discharge to DN150 reticulation in the POS area west of Erie Lane.

Regardless of the servicing strategy, disconnection of plumbing to septic systems and connection to the proposed reticulated wastewater services will be required upon completion of the wastewater reticulation works.

The Developer will be required to enter into a standard Land Development Agreement with the Water Corporation for the provision of wastewater. As part of the Agreement, the Developer will be required to pay Headworks charges on a per-lot basis and other similar fees to subdivide the land.

### 3.9.5 WATER RETICULATION

The provision of water services to the proposed lots will be a requirement of the future WAPC Subdivision Approval.

There is a DN150 reinforced concrete reticulation main in the southern verge of Mayor Road, a DN100 cast iron reticulation main within the western verge of Rockingham Road and a DN100 PVC

reticulation main in Erie Lane. There is also a DN305 supply main in the northern verge of Mayor Road and a DN760 supply main within the eastern verge of Rockingham Road.

The two (2) existing residences appear be serviced from the DN150 Mayor Road reticulation main.

Water Corporation have advised that the subject site is capable of being serviced with water reticulation and is addressed in their scheme planning. Water mains constructed to service the subdivision will be connected to the aforementioned Mayor Road and Erie Lane reticulation mains via future subdivisional roads. Proposed mains may also connect to future mains within Lot 51 Mayor Road and Lot 21 Rockingham Road given these may be installed prior to development of the subject land. It is envisaged that mains within the subdivision will be DN100 PVC reticulation.

Relocation of the services to the two (2) existing Mayor Road residences may be necessary, subject to the precise locations of services in relation to proposed cadastral boundaries. If necessary, relocation of the services will require replumbing of water pipes within the proposed lots to suit revised service locations.

The Developer will be required to enter into a standard Land Development Agreement with the Water Corporation for the provision of water reticulation. As part of the Agreement, the Developer will be required to pay Headworks charges on a per-lot basis and other similar fees to subdivide the land.

### 3.9.6 UNDERGROUND POWER

Provision of underground power services to all proposed lots will be a requirement of the future WAPC Subdivision Approval.

As-constructed underground and overhead power infrastructure is summarised below:

- ▲ 22 kV overhead high voltage (HV) and low voltage (LV) cables in the southern verge of Mayor Road. The HV cable (CC 501.0) originates from the Cockburn Cement Zone Substation on Russell Road, Munster; and
- ▲ Underground HV cable in the southern verge of Mayor Road fronting a portion of the Site, supplying the Water Corporation lot to the north of the Site.

Western Power's Underground Distribution Scheme (UDS) policy details that all new land developments are provided with an authority point of connection via an underground power service. New residential subdivisions are provided with a minimum load allocation of 4.7 kVA per lot for single-dwelling lots and 4 kVA per dwelling for multi-dwelling lots.

The power distribution system is reticulated via the provision of HV switchgears at 22 kV, with transformers stepping the voltage down to 415 V. LV cables are then installed to distribution pillars located within lots.

For the combined subdivision of Lots 22 and 51, the estimated the maximum demand load is approximately 176 kVA based on the standard Western Power After Diversity Maximum Demand (ADMD) load allocation for the region. On this basis the combined development will likely require one Western Power owned switchgear and one Western Power owned transformer to reticulate the distribution system throughout the proposed development, however this must be confirmed during detailed design. If required, the transformer and switchgear will be located within road

reserve widenings adjacent to proposed lots or POS. Assuming that the transformer and switchgear are co-located the total road reserve widening will be approximately 4 m long by 6.2 m wide and must be provided by the Developer free of charge.

The HV connection for distribution equipment is assumed to be from the existing 22 kV overhead cable within Mayor Road. In this case, two (2) proposed 400 mm<sup>2</sup> HV feeders will extend from the proposed switchgear and terminate into the poles along Mayor Road, however this must also be confirmed during detailed design. LV cables will extend from the transformer to pillars located within lots.

Based on Western Power's Network Mapping tool, it appears that the existing HV network has the capacity to supply the proposed development load, however this must be confirmed by Western Power via a future feasibility study or Design Information Package application.

Streetlighting will be required to the internal road network to achieve a Category P level of lighting for compliance to Australian Standards (AS 1158).

### 3.9.7 COMMUNICATIONS

While provision of communications infrastructure will not be a requirement of the future WAPC Subdivision Approval, the Developer will almost certainly desire communications infrastructure to service the proposed lots.

As-constructed infrastructure is summarised below:

- ▲ Type 3 pit in the southern verge of Mayor Road that services the western existing Mayor Road residence. The pit is connected to pit and pipe infrastructure in the northern verge of Mayor Road;
- ▲ Pit and pipe in Erie Lane which connects to infrastructure extending towards Yindi Way; and
- ▲ Pit and pipe infrastructure in both verges of Rockingham Road.

NBN have indicated that they will service the development. It is therefore likely that the Developer will wish to proceed with NBN servicing of the subdivision.

The Developer will be required to fund and arrange installation of a pit and pipe system to NBN requirements. Upon completion, ownership of the infrastructure will transfer to NBN via the execution of a Master Developer's Agreement in exchange for the provision of data infrastructure within the pit and pipe.

The Developer must engage a consultant to design NBN pit and pipe infrastructure to NBN standard, and a contractor to install it. Typically, installation is concurrent with overall civil works. NBN have an agreement with Telstra to utilise Telstra's pit and pipe network where required. As such, it is likely that connection to the proposed development will originate from the existing Telstra network in Mayor Road.

An interconnection to the Telstra existing network in Erie Lane may also be required. Interconnection to proposed adjacent developments may also be required pending construction timing. A pit and pipe system will be extended within the communications corridor inside the

development area. The system can be designed and installed at the same time as other Authority services to NBN specifications and handed over to NBN to reticulate their cabling as required.

In addition to the data cabling deployment, NBN may install equipment in a separate small roadside cabinet located within the estate. If required, the cabinet will be located in the road reserve areas at a mutually agreed location.

### 3.9.8 GAS RETICULATION

ATCO Gas have confirmed that the proposed subdivision is capable of being serviced via the extension of existing infrastructure in Erie Lane to the south of the subject site. Connection to proposed infrastructure within adjoining landholdings can also be undertaken should the installation of infrastructure within the adjoining landholdings precede development of the subject land.

ATCO Gas have also confirmed that connection to existing medium pressure infrastructure in Mayor Road and/or Rockingham Road is not necessarily required for the proposed subdivision.

## 3.10 DEVELOPER CONTRIBUTION ARRANGEMENTS

Under the City of Cockburn Town Planning Scheme No. 3 (TPS3), the subject site is subject to both Development Control Area 6 (DCA6), which establishes a developer contribution arrangement specifically for the Lake Coogee locality and Development Contribution Area 13 (DCA 13), which establishes a developer contribution arrangement for the upgrade of local and regional recreational and landscape facilities within the whole of the City of Cockburn.

No additional developer contribution arrangements are proposed as part of this Structure Plan.

## 3.11 ACOUSTIC CONSIDERATIONS

A Noise Management Plan prepared in accordance with State Planning Policy 5.4 - Road and Rail Noise (SPP5.4) and the City of Cockburn Local Planning Policy 1.12 Noise Attenuation, will be required as a condition of subdivision approval to identify those lots requiring Noise Insulation Packages to be applied, as well as any other noise attenuation requirements for the subject site.

## 4. TECHNICAL STUDIES APPENDICES INDEX

APPENDIX NUMBER	DOCUMENT TITLE	NATURE OF DOCUMENT	REFERRAL/APPROVAL AGENCY	APPROVAL STATUS AND MODIFICATIONS
1	Local Water Management Strategy	Approval Required	Department of Water and Environmental Regulation, City of Cockburn	Already Approved
2	Traffic Impact of Additional Lots	Supporting Document	N/A	N/A