

Ordinary Council Meeting: 12/2/2015

West Australian Planning Commission Approval:
15/4/2015

Structure Plan Expires: 19/10/2027
(Doc Set ID: 12158034)

File No.: 110/117 & 110/246

**CITY OF COCKBURN
STRUCTURE PLAN**

This Structure Plan was adopted by Council on 12/2/15

Signed _____

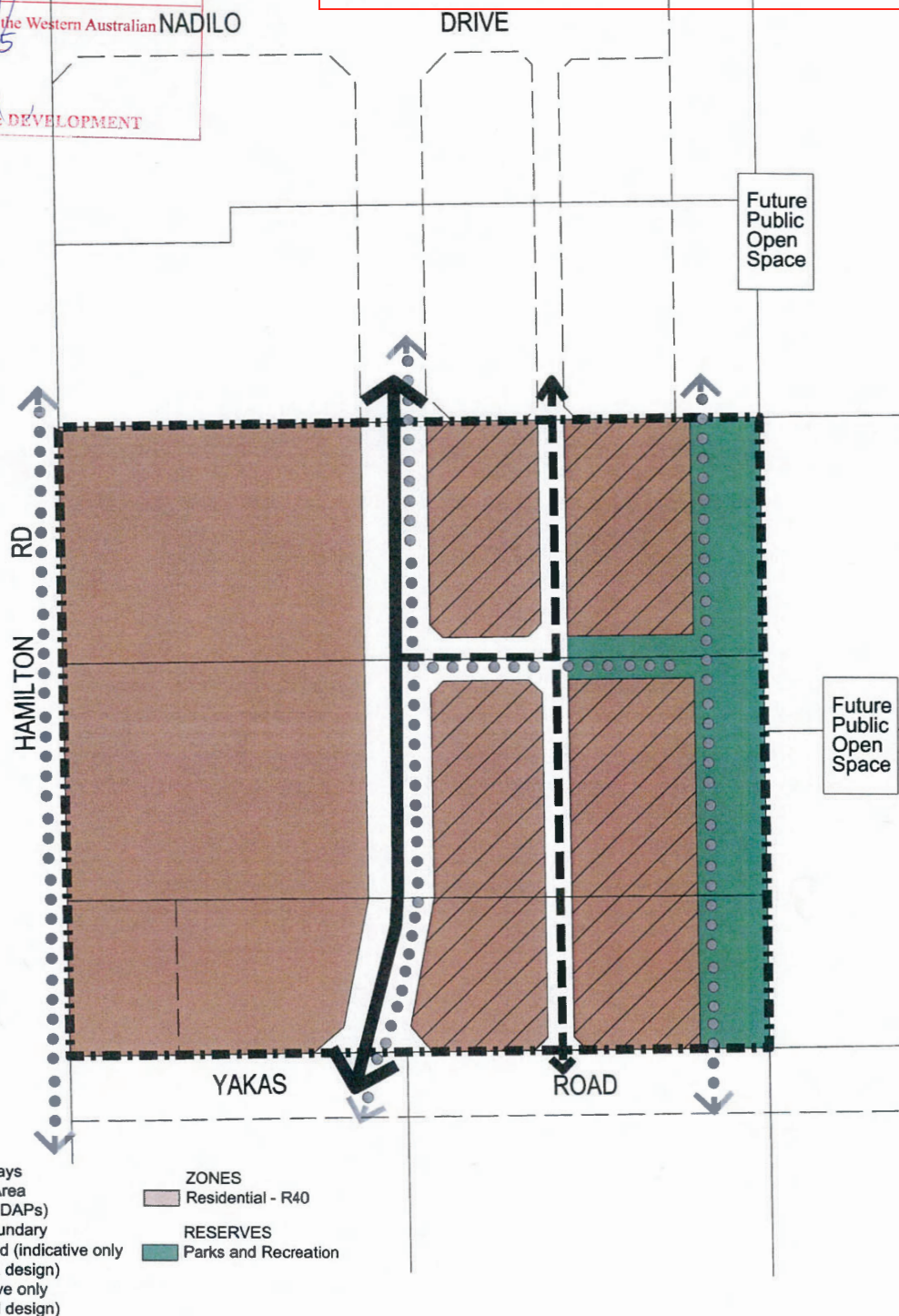
DIRECTOR OF PLANNING & DEVELOPMENT

File No: _____

This Structure Plan was endorsed by the Western Australian
Planning Commission on 15/4/15

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DIRECTOR OF PLANNING & DEVELOPMENT



Plan No. : 20370-2

Revision : REV.3

Scale : 1:1500@A4

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Member Profile

Suite 4 First Floor 40 Hasler Road Osborne Park WA 6017 www.whelans.com.au

**LOCAL STRUCTURE PLAN
LOTS 1, 9 & 10 HAMILTON ROAD
SPEARWOOD**

PLAN 1

DATE DRAWN: 21/04/2015 FILE: 14/029 Subdivision Concept Plan.dgn
DRAWN BY: CdeL V DATUM: AHD
CHECKED BY: MM H DATUM: MGASH (50)



LOTS 1, 9 & 10 HAMILTON ROAD, SPEARWOOD LOCAL STRUCTURE PLAN

DEPARTMENT OF PLANNING

22 APR 2015

FILE SPN/0709

LOCAL STRUCTURE PLAN

LOTS 1, 9 & 10 HAMILTON ROAD, SPEARWOOD

CITY OF COCKBURN

PREPARED FOR

M & M YEOMANS,
K. DONJERKOVICH
& S. RADICH

REVISION 4.0

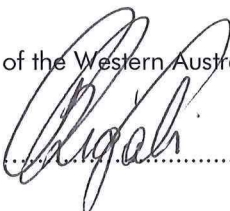
(Final modified for WAPC endorsement)

CERTIFICATION OF APPROVED STRUCTURE PLAN

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

15 April 2015.....Date

Signed for and on behalf of the Western Australian Planning Commission



An officer of the Commission duly authorised by the Commission pursuant to section 24 of the *Planning and Development Act 2005* for that purpose, in the presence of:

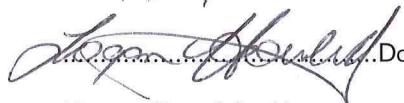
M. Weilan.....Witness

29 April 2015.....Date

AND ADOPTED BY
RESOLUTION OF THE COUNCIL OF THE CITY OF COCKBURN ON:

12 February 2015.....Date

AND PURSUANT TO THE COUNCIL'S RESOLUTION HEREUNTO AFFIXED IN THE PRESENCE OF:

24/2/2015
.....Date
Mayor, City of Cockburn



24/2/2015.....Date

A/ Chief Executive Officer, City of Cockburn



This Structure Plan is prepared under the provisions of the City of Cockburn Town Planning Scheme No. 3.

Date of Expiry: 19 October 2027

TABLE OF VARIATION(S) TO STRUCTURE PLAN

Variation No.	Description of Variation	Date Adopted by Council	Date Endorsed by the WAPC (if required)

EXECUTIVE SUMMARY

This Local Structure Plan (LSP) has been prepared for the various landholdings being Lots 1, 9 & 10 Hamilton Road, Spearwood. The land the subject of this LSP is located approximately 19 kilometres south-east of Perth Central Business District and approximately 0.5 kilometres to the east of the new Port Coogee marina development. The LSP area is within the Metropolitan South-West Corridor and is situated within the municipality of the City of Cockburn and the locality of Spearwood.

This LSP provides the planning framework to guide and facilitate the development of 2.34 hectares of land for urban purposes and has been prepared in accordance with the provisions of the City of Cockburn Town Planning Scheme No. 3.

The LSP forms part of the Packham North District Structure Plan and is adjacent to the Ocean Crest Estate Local Structure Plan. This structure plan has been adopted by the local authority and endorsed by the WAPC. The LSP design provides for integration with the approved Ocean Crest Estate Local Structure Plan.

Item	Data	Section number referenced within the Structure Plan Report
Gross Structure Plan Area	2.3411 hectares	2.2
Area of each land use proposed		5.2
Residential	1.7398 hectares (74% of site)	
Parks & Recreation	0.2617 hectares (11.2 % of site)	
Public Open Space (POS)	0.2617 hectares (11.2% POS)	8.1
Amount of restricted Public Open Space as per Liveable Neighbourhoods	Nil	
Composition of Public Open Space		
- District Parks	Nil	8.1
- Neighbourhood Parks	Nil	
- Local Park	0.2617 hectares (11.2 % of site)	
Estimated Lot Yield	44 lots	5.2
Estimated Number of Dwellings	56 dwellings	5.2

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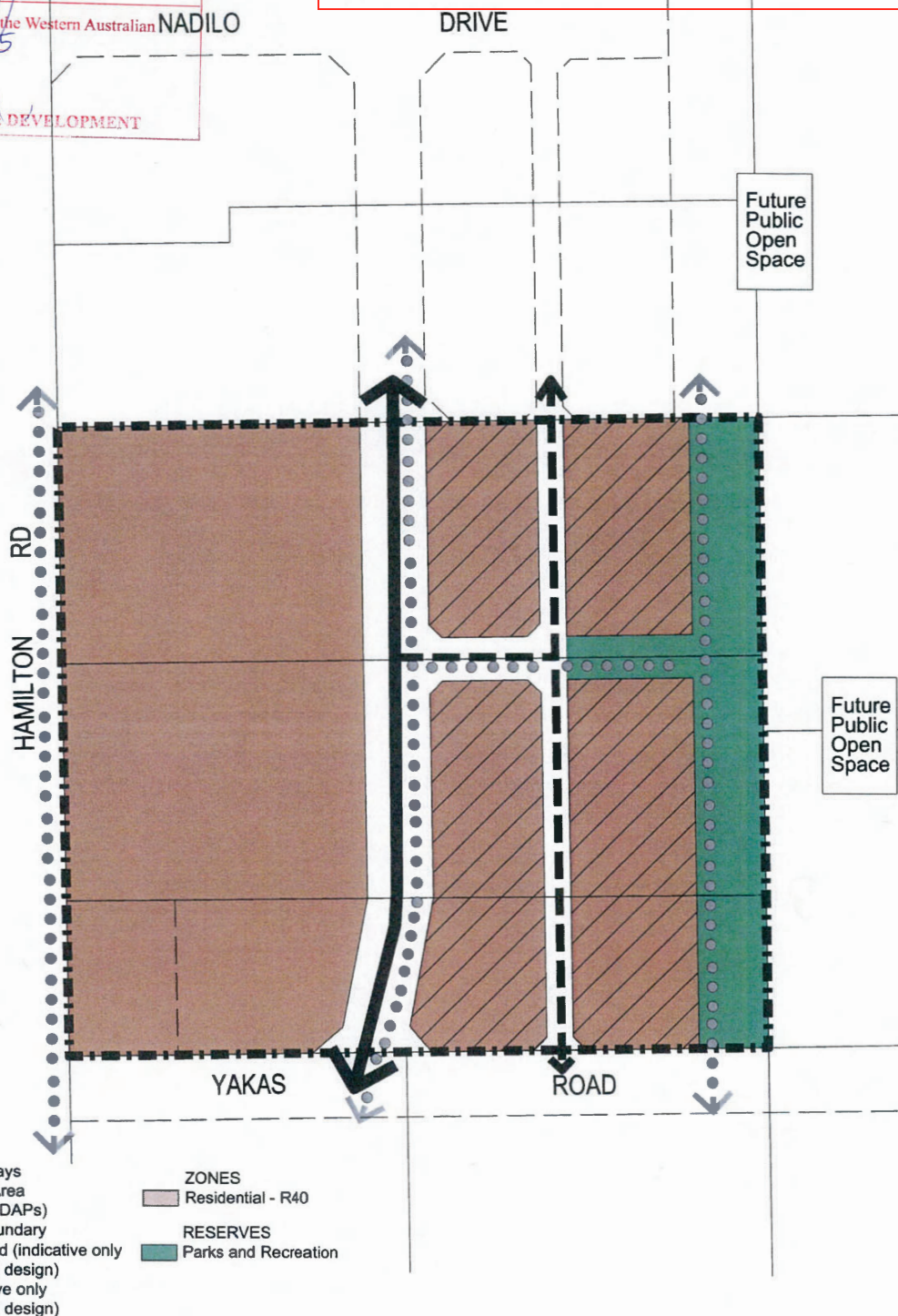
DIRECTOR OF PLANNING & DEVELOPMENT

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**LOCAL STRUCTURE PLAN
LOTS 1, 9 & 10 HAMILTON ROAD
SPEARWOOD**

PLAN 1

DATE DRAWN: 21/04/2015 FILE: 14/029 Subdivision Concept Plan.dgn
DRAWN BY: CdeL V DATUM: AHD
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Estimated Residential Density		5.2
- dwellings per gross hectare <i>As per Directions 2031</i>	24 dwellings per gross hectare	
- dwellings per site hectare <i>As per Liveable Neighbourhoods</i>	31 dwellings per site hectare	
Estimated Population	157 people @ 2.8 people/household	5.5
Number of Secondary Schools	Nil	
Number of Primary Schools	Nil	

PART ONE (STATUTORY SECTION)

1.0 STRUCTURE PLAN AREA

The Structure Plan is identified as *Lots 1, 9 & 10 Hamilton Road Local Structure Plan*.

This Structure Plan shall apply to the land contained within the inner edge of the line denoting the structure plan boundary on the Structure Plan Map (**Plan 1**).

2.0 STRUCTURE PLAN CONTENT

The Structure Plan comprises the following sections:

- (i) Part One – Statutory Section. This section includes the Structure Plan Map and any textual provisions, standards or requirements that require statutory effect.
- (ii) Part Two – Explanatory Section (Non-Statutory). This section provides the planning context and justification for the Structure Plan Map and the textual provisions contained in Part One of the Structure Plan. Part Two is to be used as a reference to guide interpretation and implementation of Part One.
- (iii) Appendices, includes all specialist consultant reports and documentation used in the preparation of and to support the land use outcomes of the Structure Plan.

3.0 INTERPRETATION AND RELATIONSHIP WITH CITY OF COCKBURN TOWN PLANNING SCHEME NO.3

3.1	Terms and Interpretations	As per Clause 6.2.6.3 of the City of Cockburn (City) Town Planning Scheme No.3 (TPS 3).
3.2	Relationship of the Structure Plan with City of Cockburn Town Planning Scheme No.3	This Structure Plan has been prepared under Clause 6.2.4 of the City of Cockburn Town Planning Scheme No. 3 as the subject land is zoned 'Development' and contained within Development Area No. 31 which is shown on the Scheme Map and contained within Schedule 11.
3.3	Provisions	Pursuant to Clause 6.2.6.3 and Clause 6.2.12.2 of the City's TPS 3.
3.4	Land Use Permissibility	As per Clause 4.3.2 of the City's TPS 3.

4.0 OPERATION

4.1	Operation Date	As per Clause 6.2.12 of the City's TPS 3.
4.2	Variation to Structure Plan	As per Clause 6.2.14.2 and Clause 6.2.14.4 of the City's TPS 3.

5.0 LAND USE

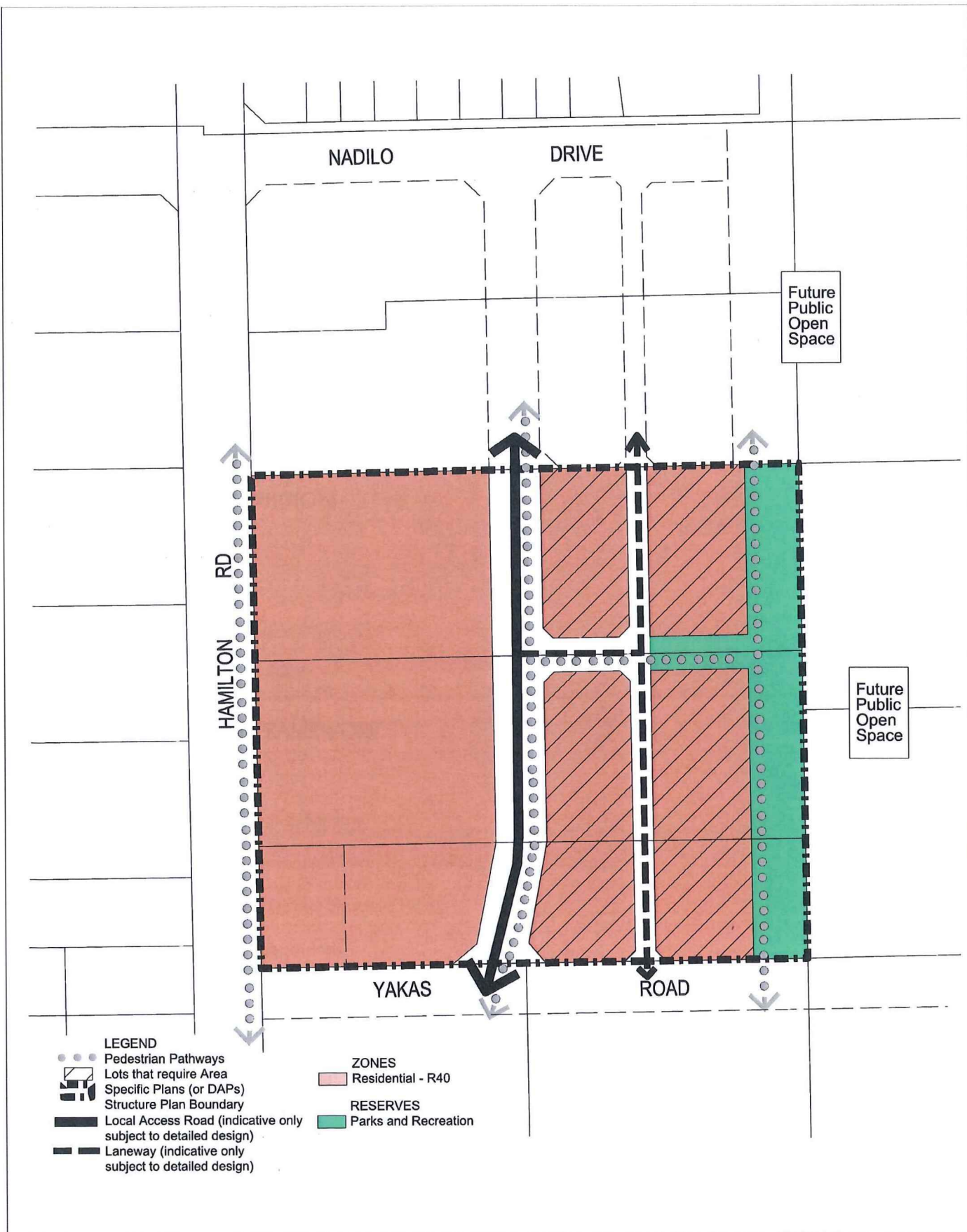
5.1	Residential Density	Residential densities applicable to the Structure Plan area shall be those residential densities shown on the Structure Plan Map.
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6.0 SUBDIVISION / DEVELOPMENT

6.1	Notifications on Title	<p>In respect of applications for the subdivision of land the Council shall recommend to the Western Australian Planning Commission that a condition be imposed on the grant of subdivision approval for a notification to be placed on the Certificate(s) of Title(s) to advise of the following: -</p> <ol style="list-style-type: none"> 1. This land may be affected by midge from nearby lakes and/or wetlands. Enquiries can be made with the City of Cockburn Environmental Services.
6.2	Detailed Area Plans (Local Development Plans)	<ol style="list-style-type: none"> 1. Detailed Area Plans (DAP's) are required to be prepared and implemented pursuant to Clause 6.2.15.1 of the City of Cockburn Town Planning Scheme No. 3 for lots comprising one or more of the following site attributes: <ol style="list-style-type: none"> (i) Lots with rear-loaded vehicle access; and (ii) Lots with direct boundary frontage (primary or secondary) to an area of Public Open Space.

7.0 OTHER REQUIREMENTS

7.1	Development Contribution Items and Arrangements	The Structure Plan Area is within Development Contribution Area 12 (DCA 12) and Development Contribution Area 13 (DCA 13) as identified in the City's TPS 3. Under the City's TPS 3 the landowners are to contribute towards key service and community infrastructure within the latest Development Contribution Plan (DCP) for DCA 12 and DCA 13. Each landowner will be required to make a cost contribution payment based on the area that they develop in accordance with the contribution rate in the DCP in both DCA 12 and DCA 13.
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LOCAL STRUCTURE PLAN LOTS 1, 9 & 10 HAMILTON ROAD SPEARWOOD

PLAN 1

DATE DRAWN: 21/04/2015 FILE: 140829 Subdivision Concept Plan.dgn
DRAWN BY: CdeL V DATUM: AHD
CHECKED BY: MM H DATUM: MGA84 (50)



PART TWO (EXPLANATORY SECTION)

TABLE OF CONTENTS

1.0	INTRODUCTION	14
1.1	Purpose	14
1.2	Background	14
2.0	LAND DESCRIPTION	15
2.1	Location	15
2.2	Landownership	15
2.3	Existing Land Use	15
2.4	Surrounding Context	16
3.0	PLANNING FRAMEWORK	17
3.1	Directions 2031	17
3.2	Metropolitan Region Scheme	17
3.3	Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy	17
3.4	Packham North District Structure Plan	18
3.5	Liveable Neighbourhoods	18
3.6	City of Cockburn Town Planning Scheme No. 3	20
3.7	City of Cockburn Local Planning Strategy	20
3.8	Ocean Road Estate Local Structure Plan	20

4.0	SITE CONDITIONS & ENVIRONMENT	21
4.1	Topography	21
4.2	Geology and Soils	21
4.3	Hydrology	21
4.4	Acid Sulfate Soils	22
4.5	Vegetation, Flora & Fauna	23
5.0	LOCAL STRUCTURE PLAN	24
5.1	LSP Community Design Rationale	24
5.2	Residential Densities and Yield	24
5.3	LSP Proposed Land Uses	25
5.4	Integration with Surrounding Land Uses	26
5.5	Population & Employment	266
5.6	Street Layout	27
5.7	Housing Typologies	27
5.8	Proximity to Market Garden Swamp - Midge Buffer	28
6.0	SUSTAINABLE DESIGN	29
6.1	Energy Conservation	29
6.2	Lot Design for Climate Responsive Dwellings	29
6.3	Surface and Ground Water Management	30

7.0	MOVEMENT NETWORK	31
7.1	Existing Movement Network	311
7.2	Proposed Movement Network - Roads	31
7.3	Proposed Movement Network – Pedestrian/Cyclists	32
7.4	Proposed Movement Network – Public Transport	32
7.5	Street Parking	32
8.0	PUBLIC OPEN SPACE	33
8.1	Public Open Space Provision	33
8.2	Public Open Space Typologies	33
8.3	Public Open Space Schedule	34
9.0	LOCAL WATER MANAGEMENT	35
9.1	Local Stormwater Drainage	35
9.2	1 year, 5 year and 100 year ARI events	35
9.3	Groundwater Management	35
10.0	LANDSCAPING	37
11.0	INFRASTRUCTURE & SERVICING	38
11.1	Wastewater	38
11.2	Water Supply	38
11.3	Power	38
11.4	Telecommunications	39
11.5	Gas	39
11.6	Earthworks	39
11.7	Roads & Drainage	39

12.0 STAGING	41
12.1 Staging and Anticipated Timeframes	41
12.2 Development Contributions	41
13.0 REFERENCES	42

APPENDICES

Appendix No.	Document Title	Approval Required or Supporting Document only	Approval Status	Approval Agency
1	Engineering Servicing Report (Pritchard Francis, October 2014)	Supporting Document	N/A	N/A
2	Pre-lodgement Consultation Table	Supporting Document	N/A	N/A

PART TWO (EXPLANATORY SECTION)

1.0 INTRODUCTION

1.1 Purpose

This report provides justification for the Local Structure Plan (LSP) prepared for Lots 1, 9 & 10 Hamilton Road, Spearwood (herein referred as the "LSP landholdings"). **Figure 1 – Location Plan** shows the location of the LSP landholdings in the context of the locality of Spearwood and the Port Coogee marina development to the west of Cockburn Road. An LSP is required to be prepared and approved prior to subdivision and development of the land in a 'Development' zone under the City's TPS 3 (unless Clause 6.2.4.2 applies).

The LSP has been prepared taking into consideration the planning framework of the City's Packham North District Structure Plan (DSP) and local structure planning that has occurred to the north, south, west and east of the LSP landholdings. The proposed LSP will integrate with the local structure planning that has already taken place within the DSP area. This will be discussed in further detail in the report.

1.2 Background

The area within the LSP was previously affected by the Watsons food processing plant odour buffer, which was one of the main reasons that the area could not be rezoned to 'Development' for urban land use under the City's TPS 3. With the closure of the food plant in April 2009, Council at its meeting held on 12 February 2009 resolved to initiate a Scheme Amendment (Amendment No. 70) to rezone the special use food plant site and surrounding rural zoned land (previously affected by the odour buffer), for residential development. The City's Amendment No. 70 was gazetted on 5 November 2010.

The approved City's DSP and District Water Management Strategy for Amendment No. 70 provides the foundational planning framework for consideration of this LSP. In addition, the City's Amendment No. 87 (gazette on 27 July 2012) includes the DSP area as being within DCA 12 – Packham North. This will provide a guide for development contributions from the respective landowners within the DSP.

Once approved, this LSP will provide guidance for development of the LSP landholdings and establish a context for the consideration and eventual approval of subdivision applications for each of the various lots.

2.0 LAND DESCRIPTION

2.1 Location

The land the subject of this Local Structure Plan (LSP) comprises 3 lots located approximately 19 kilometres south-east of Perth Central Business District and approximately 1 kilometre to the east of the new Port Coogee marina development. The LSP area is within the Metropolitan South-West Corridor and is situated within the municipality of the City and the locality of Coogee.

2.2 Land ownership

The LSP area contains 3 land parcels in various ownership as set out in Table 1 below.

Table 1. Land description and area of lots comprising subject site

Lot	Diagram	Volume	Folio
1	2562	1291	28
9	31602	1306	289
10	31602	1306	290

Figure 2 – Aerial/Cadastral View shows the boundaries of the lots that form the LSP area.

2.3 Existing Land Use

The LSP area has been previously cleared for residential development and small scale agriculture, including semi-rural and market gardens. Pastures of exotic grasses, weeds and remnants of existing crops, lupin and large spice plants have replaced the original vegetation. Existing development on the LSP landholdings comprise of dwellings with outbuildings on a large lot with the rear area cleared. Lot 10 contains 3 dwellings and Lots 9 & 1 each contain 1 dwelling. Refer to **Figure 3 – Subject Site**.

The existing dwellings vary with age and are all proposed to be retained by landowners as part of the subdivision and development of the land. The decision to retain or demolish buildings and improvements on the land can be made by the various individual landowners at any time in the future. The existing dwellings are proposed to be retained on larger superlots until such time as landowners may wish to demolish them to make way for further subdivision.

2.4 Surrounding Context

The LSP area is within the locality of Spearwood. **Figure 4 – Surrounding Land Use Context** provides an overview of the LSP in relation to surrounding land use and environment. The LSP area is immediately surrounded by land that is currently being developed for residential development in accordance with the corresponding approved local structure plans.

3.0 PLANNING FRAMEWORK

STATE & REGIONAL PLANNING

3.1 *Directions 2031*

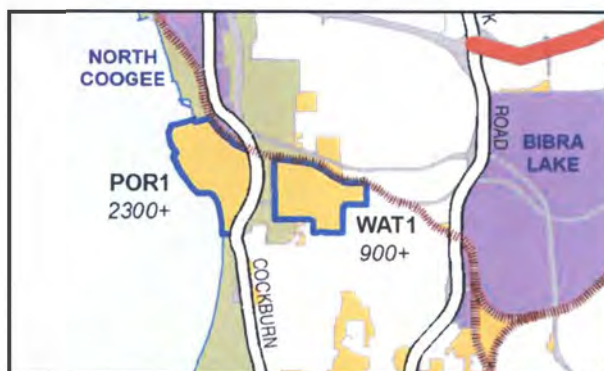
Directions 2031 establishes the vision for the future growth of Perth and Peel regions. It provides a framework in which population growth is to be accommodated. Directions 2031 seeks a 50% increase in the current average residential density of 10 dwellings per gross urban zoned hectare; and has set a target of 15 dwellings per gross urban zoned hectare of land in new development areas. This proposed local structure plan achieves the targets set by Directions 2031 and this will be discussed in further detail under 4.2 'Residential Densities and Yield'.

3.2 *Metropolitan Region Scheme*

The LSP area is zoned 'Urban' under the Metropolitan Region Scheme (MRS). Land surrounding the LSP to the north, south, west and east is also zoned 'Urban' under the MRS.

3.3 *Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy*

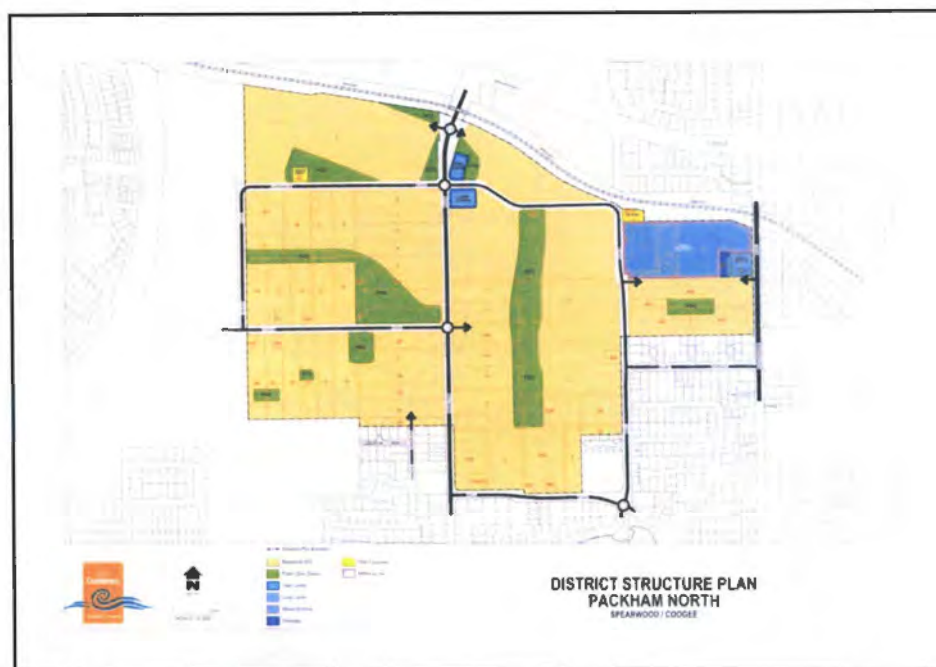
The Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy identifies the LSP development site as part of the "WAT1" precinct with an estimated potential for future 900+ lots (see below extract). It should be noted that this is an indicative estimate based on 75% of the land being able to be developed.



Extract from Draft Outer Metropolitan Perth and Peel Sub-Regional Strategy [p.93]

3.4 Packham North District Structure Plan

The LSP has been prepared within the framework of the City's DSP. The purpose of the DSP is to guide development of the former food processing plant and surrounding land that was included in the odour buffer for residential development. The structure plan sets out an overall strategic planning framework providing the direction for preparation of local structure plans and future applications for subdivision and development. The LSP has been prepared in accordance with the planning objectives set out in the structure plan, which includes allocation of public open space (POS), access, interfacing with adjoining land uses, movement linkages and areas for residential use.



Packham North District Structure Plan (Source: City of Cockburn, 2012)

3.5 Liveable Neighbourhoods

Liveable Neighbourhoods has been prepared to guide the sustainable development of communities. It addresses both strategic and operational aspects of structure planning and subdivision for both 'greenfield' and urban infill sites.

The LSP has been designed in accordance with the principles of Liveable Neighbourhoods, in particular, the layout of roads and POS. Consistent with Liveable Neighbourhoods, the LSP provides a high level of connectivity with good external linkages to cycle, pedestrian and public transport networks.

The road design in the LSP is legible and reduces car travel distances by creating alternative routes and minimising use of cul-de-sacs where possible. These aspects are further addressed in Section 7.0 'Movement Network'.

Liveable Neighbourhoods encourages walkable access to activity nodes and POS. Within the LSP, all lots are within 400 metres walking distance from POS areas. This provides residents in the LSP with opportunities for active lifestyle and recreation within 5 minutes walking distance from residences. This is further addressed in Section 8.0 'Public Open Space'.

According to Liveable Neighbourhoods it is important for the LSP design to respond to site characteristics and site context. The LSP design has taken into consideration the natural topography, vegetation, surrounding land uses, solar orientation and existing developments. The majority of the proposed lots have an E-W orientation, with five lots having an N-S orientation.

Consistent with Liveable Neighbourhoods, within the LSP, lots that face parkland increase opportunity for passive surveillance and interaction with public spaces. Roads have also been designed to provide opportunities to array lots to maximise building design potential for solar orientation (east-west axis lots) and energy efficiency.

Lot shape and proportion of width to depth is considered important in Liveable Neighbourhoods. Lots in the LSP have been designed to be rectangular in shape with a greater depth than width. This ensures ability to develop the lots with high quality housing and builtform and conformity with the Residential Design Codes of Western Australia. Other aspects of Liveable Neighbourhoods principles, such as local water management and, diversity of lot sizes and target residential density are addressed further in the LSP report under Section 5.0.

LOCAL PLANNING

3.6 City of Cockburn Town Planning Scheme No. 3

The LSP area is zoned 'Development – DA31' under the City's TPS 3. The provisions of TPS 3 require preparation and approval of a local structure plan prior to any subdivision and development.

3.7 City of Cockburn Local Planning Strategy

The City of Cockburn Local Planning Strategy (LPS) promotes, amongst other things, urban development to include a range of housing densities and opportunities and strategies to reduce car use and encourage walking, cycling and public transport use. The proposed LSP is consistent with this philosophy in that it provides for a range of dwelling types, public open spaces that are within walking distance and a permeable road network.

3.8 Ocean Road Estate Local Structure Plan

A local structure plan has been prepared for the land surrounding the LSP landholdings. The road network for the LSP has been designed so it interfaces with the road network proposed in the Ocean Road Estate Local Structure Plan and the proposed LSP reflects a similar R-Code density (R40) as that endorsed in the Ocean Road Estate LSP (R20, R25 & R30). This provides the opportunity for a consistent streetscape.



Ocean Road Estate Local Structure Plan (formerly known as "Ocean Crest Estate")

4.0 SITE CONDITIONS & ENVIRONMENT

4.1 Topography

The LSP development site generally slopes downhill from west to east with the topography varying in the range of 5.0 AHD towards the western boundary of the LSP area sloping down to 1.0 AHD at the SE boundary of the LSP. (refer to the Subdivision Concept Plan (**Plan 2**))

4.2 Geology and Soils

The LSP development site is located on the Swan Coastal Plain within the Aeolian Deposits of the Cottesloe Dune System. This System is generally described as low hilly landscape with shallow brown sands over limestone with exposed limestone outcropping (Department of Agriculture, 2003).

Geomorphologic classification for the structure plan area reported in the *Perth Metropolitan Region 1:50,000 Environmental Geology Series, Rockingham (Part of Sheets 2033 I and 2033 IV)* (Gozzard 1983) indicates that the general geology of the area consists primarily of the following soil types:

- (i) Spearwood Sand formed during the Pleistocene era. This sand is described as a pale yellowish brown, medium to coarse-grained, sub-angular quartz, trace of feldspar, moderately sorted and of residual origin (Gozzard 1983). Tamala limestone (quartz) is the potential origin of the sand. The Spearwood Sand is considered to have high permeability, with a low to moderate load bearing capacity (Gozzard 1983); and
- (ii) Limestone soil types also formed during the Pleistocene era described as pale yellowish brown, fine to coarse grained, sub-angular to well rounded, quartz, trace of feldspar, shell debris, variably lithified, surface kankar and of aeolian origin (Gozzard 1983). The permeability of limestone generally found in the immediate area is described as high, with a variable load bearing capacity (Cardno BSD, 2009).

4.3 Hydrology

Groundwater

Based on the Department of Water *Perth Groundwater Atlas* (2003), the groundwater within the LSP development site is between approximately 2.5 and 0.5m below ground level. Subject to detailed engineering design, the required 1.2 metre minimum separation distance between the finished lot levels and the highest known groundwater table level can be met.

Surface Water

There are no permanent surface water bodies within the LSP area. Sheet drainage across the development site from west to east is limited due to the high permeability and infiltration at source which is characteristic of sandy Spearwood soils.

Wetlands

The LSP development site is affected by a Multiple Use Sumpland (**See Figure 5 – Geomorphic Wetlands of the Swan Coastal Plain**). The area has been cleared and historically used for a variety of purposes including semi-rural pursuits. As such, very few wetland attributes or functions remain. The DSP proposed that the MUS be contained within a large central spine of POS, incorporating grassed swale areas for drainage function.

4.4 Acid Sulfate Soils

The Perth Ground Water Atlas also indicates there is no known acid sulfate soils (ASS) located within the subject site area, however the Packham North DWMS/LWMS (Cardno, 2011) indicates that there is a strong possibility that ASS may be present onsite due to the wetland areas indicated on the site (**See Figure 6 – Acid Sulfate Soils**). It is projected that ASS may occur in these areas where:

- The elevation is less than 5.0mAHD;
- The groundwater level is close to the surface;
- There is evidence of soils being regularly water logged;
- Soils are highly organic, and/or;
- Wetland dependant vegetation is present.

Due to this it is recommended further soil sampling take place on site in order to confirm the presence of ASS.

4.5 Vegetation, Flora & Fauna

All lots within the LSP development site have been 'parkland cleared' to provide for residential development and semi-rural agricultural use. As a result, the vegetation condition of the pre-development vegetation community has been significantly disturbed by human activity.

Vegetation condition assessed to the following criteria (Keighery, 1993):

Classification	Vegetation Condition
Pristine	Pristine or nearly so, no obvious signs of disturbance
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species
Very Good	Vegetation structure altered, obvious signs of disturbance
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate to it
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as being 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs

Keighery, B (1994) *Bushland Plant Survey, Guide to Community Survey for Community, Wildflower Society WA*

In classifying the existing vegetation condition using Keighery (1993), the vegetation within the subject site is classified as being "Completely Degraded". A Flora & Fauna Survey is not considered necessary due to the land being 'Completely Degraded' as a result of extensive clearing for residential development and semi-agricultural use.



Easterly view of development site

5.0 LOCAL STRUCTURE PLAN

5.1 *LSP Community Design Rationale*

The LSP provides for a 'Residential' zone and a 'Parks and Recreation' reservation. The LSP has been prepared to provide a comprehensive strategic plan to guide the future subdivision and development of the fragmented landholdings. The LSP seeks to create an urban environment that is based on a logical and permeable movement network system that combines to create a pleasant walking/cycling environment. The LSP statutory plan is located in Part One as **Plan 1**.

Cohesion of the LSP with the Ocean Road Estate Local Structure Plan was considered important to enable linkages between the two developments. Another key element is the linear extension of the Ocean Road wetland POS system, which is consistent with the DSP. The corridor also enables landowners within the LSP landholdings to set aside the required 10% POS area at the rear of the lots. The design elements of the LSP will be discussed in more detail in this report.

5.2 *Residential Densities and Yield*

The LSP ultimately provides for approximately 56 dwellings with a density coding of R40. Refer to the **Subdivision Concept Plan**. Proposed development as provided by the LSP could accommodate up to approximately 157 people based on an average household of 2.8 persons.

The R40 residential density provides opportunity for a diversity of lot sizes and housing types, responsive to the site's location. Opportunities for medium density housing have been placed to take advantage of and overlook POS. Orientation of lots towards public open space increases passive surveillance of POS.

The lots fronting Ocean Road provides opportunity, in some instances, for retention of existing dwellings on larger lots, which could at some point in the future be further subdivided subject to dwelling demolition. Table 1 provides development statistics which can be used to measure the performance of the LSP and conceptual subdivision design against the key target outcomes of *Directions 2031* and *Liveable Neighbourhoods*.

Table 1. Development Statistics (based on Subdivision Concept Plan)

	Site Outcomes	Target Density
Total LSP Landholdings Area	23,411m ²	-
Area set aside for roads, drainage & POS	6,013m ² (25.7% total site area)	-
Balance area for residential development	17,398m ²	-
Estimate ultimate number of dwellings	56 dwellings	-
Estimated number dwellings per site hectare ¹	31 dwellings/ha	Liveable Neighbourhoods 12 – 20 dwellings per site hectare for lots not within 400m of commercial centre
LSP target density per gross urban hectare ²	24 dwellings/ha	Directions 2031 15 dwellings per gross urban hectare

¹ Liveable Neighbourhoods definition of *site hectare* is the area available for residential development excluding roads, non-residential uses, public open space and drainage areas.

² Directions 2031 definition of *gross urban hectare* is the gross area available for urban development

The LSP delivers approximately 31 dwellings per *site hectare*, which meets the Liveable Neighbourhoods minimum requirement of 12 - 20 dwellings per site hectare. Similarly, the LSP delivers approximately 24 dwellings per gross urban hectare, which meets the target density of 15 dwellings per gross urban hectare under Directions 2031.

5.3 LSP Proposed Land Uses

The proposed land uses are identified in the LSP Plan 1 under 'Zones' and 'Reserves' and will guide future subdivision and development of the land pursuant to the provisions of Clause 4.3.2 of the City's TPS 3.

Once the LSP is adopted the provisions of TPS 3 Clause 4.3.2 apply, which provides that where any reserves, zones and Residential Density Codes are imposed in the local structure plan, these shall have the same effect as if they were part of the Scheme. The general land uses proposed in the LSP are set out in Table 3.

Table 3. Proposed Land Uses in the LSP

Land Uses	Description
Residential	Land uses permitted as per TPS 3 for 'Residential' zone with an R-Code density of R40.
Parks and Recreation	Areas to be ceded as Crown Reserve for Local 'Parks and Recreation' reservation with a Management Order to the local authority

5.4 Integration with Surrounding Land Uses

The LSP has been designed to connect into existing and proposed development. A 15.0m wide access road and 6.0m wide laneway are proposed to connect into the road network proposed within the Ocean Road Estate Local Structure Plan (refer to Figure 8). The proposed road network and its rationale are further discussed under 5.7 'Street Layout'.

The linear POS 'parkway' connects to the proposed wetland POS area to the north and east and is consistent with the DSP. To the west and south the LSP adjoins the existing constructed roads of Hamilton Road and Yakas Chase respectively.

In the context of the surrounding existing and proposed development, the LSP provides for a sense of place through its legible and responsive design to the development site context and opportunities for views and interface with natural assets. The LSP landholdings can also be developed independently utilising the existing road infrastructure and without relying on access through other private lots.

5.5 Population & Employment

Based on an average household size of 2.8 persons per dwelling, the LSP would result in a residential population of approximately 157 people for the proposed 56 dwellings indicatively shown in the Subdivision Concept Plan.

The LSP is not in a new growth area and therefore the expectation for the LSP to provide for opportunities for significant local employment [promoting concepts of self-sufficiency as those stated in Liveable Neighbourhoods] is reduced. No commercial or mixed use land is proposed in the LSP as this has not been provided for in the DSP northern local neighbourhood centre and the nearby Coogee Plaza to the south.

In terms of local employment opportunities (i.e. within 400m – 800m walking distance) there are areas provided in the proposed DSP, such as the mixed business precinct to the east on Rockingham Road and the local neighbourhood centres to the north and south on Hamilton Road. Further out to within 2km to the east there is the Phoenix District Centre and nearby Spearwood Industrial Park. Approximately 4km to the north is the Fremantle business district and 7km to the south is the Henderson industrial and ship building precinct. Opportunities for home-based employment within the LSP would exist under the provisions of TPS 3 in the 'Residential' zone.

5.6 Street Layout

The LSP proposes a site responsive street network that provides access from existing road infrastructure to create good internal connectivity with external linkages for local vehicle, pedestrian and bicycle modes of transport.

Neighbourhood permeability is provided through the provision of a 15.0m wide local access road connection to the north and south. A 6m wide laneway is also proposed as a continuation of the 6m wide laneway to the north.

The internal local access road has been designed to enable development to front all streets, public open space and the wetland area to the east. This will promote surveillance, activity and visual interest which contribute towards making streets and public spaces a safe place for social interaction.

5.7 Housing Typologies

The LSP provides opportunity for a diverse mix of lot and housing typologies. For instance, this can be achieved through a combination of developer house & land packages and land sales. Level sites that are terraced reflect the ideal building site to reduce housing cost and create more affordable housing. For this reason, retaining walls will be used where necessary without significantly altering the natural topography and landform.



The use of retaining walls within development will allow for the general landform to be retained, whilst also providing quality homesites and lot sizes consistent with optimal and viable lot yield. Table 4 is a brief summary of the types of dwellings that could potentially be delivered in the LSP.

Table 4. Housing typologies for Local Structure Plan

Lots & Housing Types	Typical Width	Typical Depth	Typical Area	R-Code	Typical Built Form	Estimated Yield (Lots)
Residential 'Front Loaded' Lots	8.5m - 14m	22m - 38m	470m ²	R40	Single Dwellings	28
Residential 'Rear Loaded' Lots	8.5m - 10m	25m - 26m	217m ² to 255m ²	R40	Single Dwellings	28
ESTIMATED DWELLING YIELD						56

5.8 Proximity to Market Garden Swamp - Midge Buffer

City of Cockburn Policy APD6 – 'Residential Rezoning And Subdivision adjoining Midge Infested Lakes and Wetlands', at Clause (2), recommends notification on titles advising prospective purchasers living between 500m – 800m of a [specified] lake or wetland edge, of potential midge infestation. Notice of Notification, pursuant to Section 165 of the Planning and Development Act 2005 on titles of each new residential lot, is required to be included on the Deposited Plan and shall state the following:

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

Figure 7 shows a portion of the local structure plan area ("subject site") is within the 500 metre midge buffer. The requirement for notification on titles is considered at the subdivision stage, likely to be a condition of subdivision approval.

6.0 SUSTAINABLE DESIGN

6.1 Energy Conservation

For urban residential design, there are three main areas of sustainable and climate-sensitive design. In general, these are to reduce energy consumption, optimise on-site solar access and protect solar access for neighbouring properties. The LSP design assists in reducing energy consumption through orientating the neighbourhood blocks north to south to create lots that are orientated east-west. An east-west orientation of lots maximises solar access and cooling breezes. This will be discussed further in 6.2. The provision of street blocks to create regular shaped lots in the LSP is important for also providing micro-planning opportunities to design more energy efficient dwellings.

6.2 Lot Design for Climate Responsive Dwellings

Contemporary structure planning should provide greater site responsive lot design to allow opportunity for climate-responsive dwelling design. This can be achieved through orientation of roads and street blocks, which is advocated in Liveable Neighbourhoods.

The climate of Perth can be summarised as follows:

"Perth experiences a Mediterranean-type climate, characterised by hot, dry summers and mild, wet winters. Perth experiences seasonal extremes in weather, from hot summer days when southeasterly winds arrive, to cold wet, windy winter days as cold fronts from the Indian Ocean move insouth to southwesterly afternoon sea breezes are common in spring and summerRegular sea breezes moderate the climate in the warmer months. Hot days are usually followed by a cool change with fresh to strong southerly sea breezes." (Bureau of Meteorology, 2011)

Residents living in Perth experience the frequent afternoon sea breezes during the warmer and hot months of the year, which allow opportunity for the cooling of dwellings. The proposed LSP road and street block layout create opportunities for lot building design to maximise the micro-climate benefits of south westerly cooling breezes. All of the proposed lots in the Subdivision Concept Plan can achieve a true east-west orientation.

An east-west orientation also enables solar access opportunity for dwelling design to capture winter sun. The LSP allows lots to be designed to enable dwellings to have sunny outdoor space, to be energy efficient, to have the main living areas facing north and to have shade on the main living windows in summer. The majority of lots within the LSP will have a true east-west orientation, which provides opportunity for solar passive design.

6.3 *Surface and Ground Water Management*

As part of the DSP, a District Water Management Plan has been prepared to set the framework for urban water management. To ensure that the quantity and quality of surface and ground water is maintained, an Urban Water Management Plan (UWMP) will be prepared and implemented at the subdivision stage. This will include measures to address appropriate treatment and disposal of stormwater runoff and groundwater recharge.

7.0 MOVEMENT NETWORK

7.1 Existing Movement Network

Regional & District Road Network

The LSP development site is within 800m of Cockburn Road to the west, which is a north-south 'Primary Regional Road' under the Metropolitan Region Scheme. Cockburn Road is directly accessible via Ocean Road, which intersects at a "T" junction. To the east approximately 2kms, Stock Road is also classified as a north-south 'Primary Regional Road' and is accessible via Spearwood Avenue or the local road network. Spearwood Avenue, which runs east-west and is within 800m of the LSP landholdings, is identified as an 'Other Regional Road' under the MRS. There is good accessibility to the subject site via these regional and district level roads.

Local Road Network

In general, the LSP landholdings can be accessed via Hamilton Road, Yakas Road and the local roads that will be created as part of the Ocean Road Estate Structure Plan to the north.

Hamilton Road is a 'Neighbourhood Connector' road that runs north-south through the DSP. Hamilton Road is an important road route linking the localities of Spearwood and Coogee.

7.2 Proposed Movement Network - Roads

Liveable Neighbourhoods specifies 'Neighbourhood Connector' roads as having maximum traffic volumes of 7,000 vehicles per day. Hamilton Road already carries over 8,000 vehicles per day (MRWA 2007/08) and is expected to increase to between 11,000 – 13,000 vehicles per day in the future. As part of the Watson Local Structure Plan and Ocean Road Local Structure Plan, it is proposed that the Hamilton Road pavement be increased to provide for 4.5m traffic/cycle lanes on either side of a 2m painted medium. The increase in width to the pavement would only occur on the eastern side of Hamilton Road due to the existing power transmission line infrastructure.

Local Access Roads

There are two main internal roads proposed, one is 15m in width and the other is a 6m wide laneway. There is also a short (25m) 10m wide road which connects the two. Council's standard width for new local access roads is for a 15.0m wide road reserve to accommodate pavement, kerbing, servicing & drainage infrastructure, paths and landscaping. Over half of the lots within the LSP development site will utilise a laneway for vehicle access.

Intersection Treatments

No intersection treatments are proposed as the new subdivision roads will be a continuation of roads to the north and will intersect with Yakas Road. Yakas Road will be "T" junctions and Yakas Road is only a local access road which is not expected to carry significant volumes of traffic.

7.3 Proposed Movement Network – Pedestrian/Cyclists

Vehicle speeds on local access streets will be limited through detailed road design measures including reduced pavement width appropriate to traffic volume. Within the LSP there is no use of cul-de-sacs enabling more permeable and safe pedestrian and bicycle access.

Existing paths are located on Hamilton Road and paths are proposed along the local access roads and POS within the LSP development. The LSP map shows the conceptual location for proposed paths linking with the existing and proposed surrounding pathway network. The exact location of pathways will be determined in liaison with the local authority at the subdivision stage. Footpaths are to be provided on all streets in accordance with the requirements of Liveable Neighbourhoods.

7.4 Proposed Movement Network – Public Transport

Transperth has bus routes along Hamilton Road. The nearest bus stops are immediately north of Yakas Road or on either side of Ocean Road/Nadilo Road intersection approximately 200m north of the LSP landholdings.

Both Yakas Road and Nadilo Road provide a reasonable direct access route to these bus services, which are located on an 'Integrator B' road. Pathways will be provided along both pedestrian routes to these bus services. The LSP development site is within 400m (5 minute walking distance) of public transport bus services than operate along major transport routes.

7.5 Street Parking

On-street parking embayments are proposed on the local access roads within the LSP, however, the standard pavement width of local access roads could also allow for localised on-street parking, whereby vehicles must pass around parked vehicles. This has been found to assist in traffic calming of streets and is generally acceptable in most residential neighbourhoods where speed limits are between 40 – 50km/hr (refer to **Figures 8 & 9 for Indicative Cross Sections** of the proposed internal access roads).

8.0 PUBLIC OPEN SPACE

8.1 *Public Open Space Provision*

The LSP provides for 2,617m² or 11.2% of the development site as POS. Consistent with the DSP, the POS for the proposed LSP has been provided as a linear parkway which will connect with proposed POS to the north and east and will form part of the larger POS area in the DSP.

The advantage of each landholding in the LSP providing POS at the rear of the lot is that at the time of subdivision, each landowner can respectively cede POS as part of subdivision. It is envisaged that as and when each landowner subdivides, the respective portion of POS will be set aside as a Crown Reserve for public recreation. This will be further discussed under section 12.0 'Staging'.

8.2 *Public Open Space Typologies*

The LSP provides for a 2,617m² area (11.2% POS) to be set aside for a neighbourhood park utilised for active and passive recreation. Some of this land is proposed to be developed for parkland in combination with 1:1 yr average recurrence interval (ARI) drainage infrastructure (i.e. linear swale). The POS area is proposed to be accessed via a Public Access Way (PAW) and is not proposed to be fenced with restricted public access. Rather it will be developed as open parkland with the final design to be determined in liaison with the local authority at subdivision stage.

The POS is proposed with a north-south orientation as per the DSP. The parkway concept is effective in providing a linear 'greenbelt' through the development site, which will contribute towards pedestrian/cyclist movement, visual amenity and *place making*. In addition, the parkways will also assist in urban water management.

The parkway will not specifically serve as an ecological corridor for native fauna movement, due to it being narrow and "parkland cleared". However, it may serve this function in a minor capacity.

Typically, the parkway may contain a shared use path, seated resting furniture, appropriate species of tree plantings and mulched dry landscaping using native and drought tolerant shrub species that are adapted to the local environment.

8.3 Public Open Space Schedule

Table 5 comprises the POS Schedule for the LSP as follows:

LSP Site Area			2.3411 ha
Less			
Foreshore Reserve	Nil		
Environmental protection policy areas Wetlands to be ceded	Nil		
Protected bushland site	Nil		
Unrestricted POS sites not included in POS contribution	Nil		
Total Net site area			2.3411 ha
Deductions (LN Element 4 – R43)			
Primary School	Nil		
Town centres and commercial	Nil		
Dedicated drainage reserve	Nil		
Transmission corridors	Nil		
Other approved contingencies	Nil		0 ha
Gross Subdivisible area (GSA)			2.3411 ha
Public open space @ 10 per cent required			0.2341 ha
Public open space contribution			
May comprise:			
- minimum 80 per cent unrestricted POS	0.1873 ha		
- Maximum 20 per cent restricted use POS	0.0468 ha		0.2341 ha
Unrestricted POS area (Non-Drainage Areas > 5yr ARI)			
Local Park (Forms part of central POS under Packham North District Structure Plan)		0.2617 ha	0.2617 ha
Restricted use POS area (1:5 yr ARI)	Nil	Nil	0.0 ha
Public open space provision provided			0.2617 ha (11.2%)

Notes

- (1) 1:1 yr drainage infrastructure will be contained within the Linear Parkway POS as drainage swales
- (2) Final POS calculations will be subject to detailed survey and approval of an urban water management plan. A minimum 10% POS land contribution will be provided at subdivision stage, with there being no cash in lieu contribution so as to provide for the central POS under the DSP.

9.0 LOCAL WATER MANAGEMENT

9.1 Local Stormwater Drainage

The LSP development site has highly permeable sandy soils and adequate separation to ground water. In this instance, the development site is highly suitable for urban development and on-site infiltration to maximise groundwater recharge.

The proposed development will have the potential to increase the proportion of impervious areas across the site. This in turn will lead to an increase in the volume of stormwater runoff during rainfall events, thereby altering the natural hydrological behaviour of the site. Urban development of the site will also have the potential to cause nutrients and pollutants (i.e. hydrocarbons and metals) being discharged via runoff to infiltrate into the soil profile and groundwater. If unmanaged, urban stormwater runoff can impact groundwater quality and groundwater levels. Urban stormwater will therefore need to be managed through carefully designed and appropriate treatment measures.

A District/Local Water Management Plan has been prepared by Cardno for the DSP. The proposed LSP development site forms part of the DWMP catchment area and the proposed road layout and configuration of POS is consistent with the principles of the DWMS. At subdivision stage an Urban Water Management Plan will be prepared as part of subdivision approval.

For more information on stormwater drainage please refer to Section 11.7 and the **Servicing Report** located at **Appendix 3**.

9.2 1 year, 5 year and 100 year ARI events

Table 6 outlines the specific local water management principles for the 1 year, 5 year and 100 year Average Recurrence Interval (ARI) events.

9.3 Groundwater Management

Given the characteristics of the development site (i.e. soil type, hydrology, depth to groundwater etc) the proposed development will not result in any specific requirement for groundwater level controls, such as sub surface drainage and/or fill to be imported, to achieve minimum separation distances to groundwater levels where reticulated sewerage is provided. The relatively deep groundwater level below the natural sandy surface of the land provides for direct infiltration of stormwater, as close as possible to source. Notwithstanding, as part of the Urban Water Management Plan, adequate pretreatment measures prior to infiltration to groundwater will be provided to protect groundwater quality.

Table 6 1yr, 5yr & 100yr ARI stormwater management

ARI Event	Local Water Management Principles
1 Year	<p>Retention and treatment onsite of 1 hour duration 1 year ARI event with grooves connected to soak wells;</p> <p>Stormwater contained within each lot prior to discharge/infiltration to groundwater;</p> <p>Road runoff infiltration as close to source as possible using water sensitive urban design measures (i.e. roadside swales)</p>
5 Year	<p>Bioretention structures (i.e. soakwells within the road reserve) to treat and infiltrate stormwater to groundwater;</p>

10.0 LANDSCAPING

The underlining concepts guiding future landscape design within the proposed LSP roads and POS areas of the LSP are:

- Provision of public facilities which cater primarily for recreational activities to suit the predicted demographic for the locality, including but not limited to active uses and passive uses such as picnics, nature observation, passive contemplation, walking exercise etc;
- Bio retention swales to collect stormwater runoff, planted with fringing vegetation to provide a nutrient stripping function;
- Integrated path systems to link and create areas suitable for walking, dog walking, cycling, skating and similar;
- Planting in POS and street verges and swales will consist of a mixture of turf, native and exotic species, with an emphasis wherever possible on using indigenous plantings; and
- Diversity of street tree plantings to form strong avenue and high amenity streetscapes.



A more detailed landscaping design and management plan will be provided as a condition of subdivision approval. Landscape design will minimise water use, with shrub planting to be native or similar (*above left*). Water harvesting from direct urban stormwater runoff or other sources (i.e. swales, weirs and drainage channels) will be used where possible for passive irrigation purposes. The use of organic mulches and 'amended earth' techniques will assist in water conservation and reduced irrigation dependency. Landscaping of POS may also consider 'edible landscaping' such as use of fruit trees (*above right*).

11.0 INFRASTRUCTURE & SERVICING

The *Lots 1, 9 and 10 Hamilton Road, Spearwood Servicing Report 2014* has been prepared following preliminary investigation and planning for infrastructure and servicing of the LSP. The following is a general summary of the report. For further details refer to the full **Servicing Report (Appendix 1)**.

11.1 Wastewater

Servicing investigations have revealed that none of the lots comprising the subject site are serviced by Water Corporation Sewer. It is assumed that all residents are currently utilising septic systems for disposal of domestic effluent.

The Water Corporation have also confirmed that as there is a new Wastewater Pump Station currently under construction to the North West, and therefore there will be enough capacity to service the proposed development.

11.2 Water Supply

Preliminary investigations indicate that the LSP area is located within the boundary of the Water Corporation's Water Supply Scheme. To the north of the subject site there are two existing 100mm diameter PVC mains, one located on the western side of Nadilo Drive and the other located on the eastern side of Buran Way. There is also an existing 150mm diameter PVC main on the east side of Korbuni Parade to the east, a 150mm diameter PVC main located on the southern side of Yakas Road to the south, and 150mm diameter reinforced concrete main on the western side of the subject site.

The Water Corporation has also confirmed that there is sufficient capacity to service the proposed development.

11.3 Power

Western Power has indicated that there is sufficient capacity in the grid for the residential development as part of the proposed LSP. There is an existing 132KV overhead transmission line running along the western side of Hamilton Road, along with high and low voltage overhead power lines on the western side of Hamilton Road.

11.4 Telecommunications

The LSP area can be serviced by the existing telecommunications infrastructure within Hamilton Road. This infrastructure will need to be extended to service the proposed development, with some upgrading likely to be required. The developer will also likely be required to install National Broadband Network (NBN) 'pipe and pit' to allow for future installation of cables for the NBN. This can be accommodated within common telecommunications trenching.

11.5 Gas

Alinta Gas indicates that the DSP area can be supplied with reticulated gas via extensions from existing reticulated gas mains in Hamilton Road. To service the proposed LSP area, the developer will need to extend the existing gas mains infrastructure on the eastern side of Hamilton Road.

11.6 Earthworks

Earthworking of the site will be required in areas to create level lots for dwelling construction and provision of roads and services. Siteworks will generally comprise of clearing the land, removal of unwanted materials and localised cut to fill.

Level sites that are terraced reflect the ideal building site to reduce housing cost and create more affordable housing. Retaining walls will be used to provide terraced lots and absorb level differences. Wherever possible, the height of retaining walls will be kept to a minimum and may vary due to natural ground level differences. Wherever possible, the natural topography will remain, though benched.

11.7 Roads & Drainage

In accordance with City of Cockburn engineering standards, the roadways will generally be constructed in the conventional manner, with asphalt wearing coarse on a granular base coarse and cast-in-situ concrete kerbing with piped drainage and provision of footpaths. Roads will not exceed a 10% gradient (1:10) and will generally consist of two way single carriageways, with widths of 3.2m. Further geotechnical investigations can confirm the exact design of the roads and drainage infrastructure.

A District Water Management Plan (DWMP) for the DSP was prepared by Cardno for the City. The DWMP aims to put in place strategies for water management that will protect water resources and minimise environmental impacts. The DWMP covers the LSP area and has provided sufficient information to determine the location of drainage infrastructure (i.e. swales) within POS.

The LSP has been prepared consistent with the DWMP and DSP and reflects the areas required for POS, which can also accommodate drainage infrastructure.

The proposed development scenario indicates POS is to be constructed on the eastern boundary of the subject site. Road drainage for the 1:5 year storm event is to be conveyed via pit and pipe network to the existing drainage basin located to the south east of the subject site. The overland flow path for the 1:100 year ARI event is proposed to be through the east/west road and Public Access Way located in the middle of Whelan's proposed development layout via the allocated road reserves.

At an individual lot level, the City requires that all stormwater be retained and disposed of within the lot boundaries. However, lot connection pits will have been allowed for all lots less than 300m² in size for which on site drainage is typically impractical.

12.0 STAGING

12.1 Staging and Anticipated Timeframes

Subdivision and development is likely to be influenced by market demand. However, it is envisaged that subdivision is likely to occur as soon as practicable once the local structure plan has been approved. Conditional subdivision approval for a single subdivision application lodged to cover the LSP could be obtained as early as October 2015. Construction of lots could commence with some lots being constructed by the end of 2015.

Notwithstanding the fragmented landholdings, it is anticipated that the development will be undertaken in a single stage as agreed by the landowners. Due to the requirement for each landowner to provide land for the construction of the internal roads, landowners in the LSP have indicated a willingness to construct the roads immediately upon LSP and subdivision conditional approval.

12.2 Development Contributions

Local Scheme Amendment No. 87 has provided for DCA 12 for the multiple landholdings within the Packham North District Structure Plan area. DCA 12 costs include, but not limited to drainage, servicing, engineering and environmental studies prefunded by Council and other common costs that arise through the structure plan process.

Local Scheme Amendment No. 103 (gazette on 30 August 2011) provides for DCA 13 and the mechanism for developers to make contributions under an approved DCP for key community infrastructure proposed to service the City.

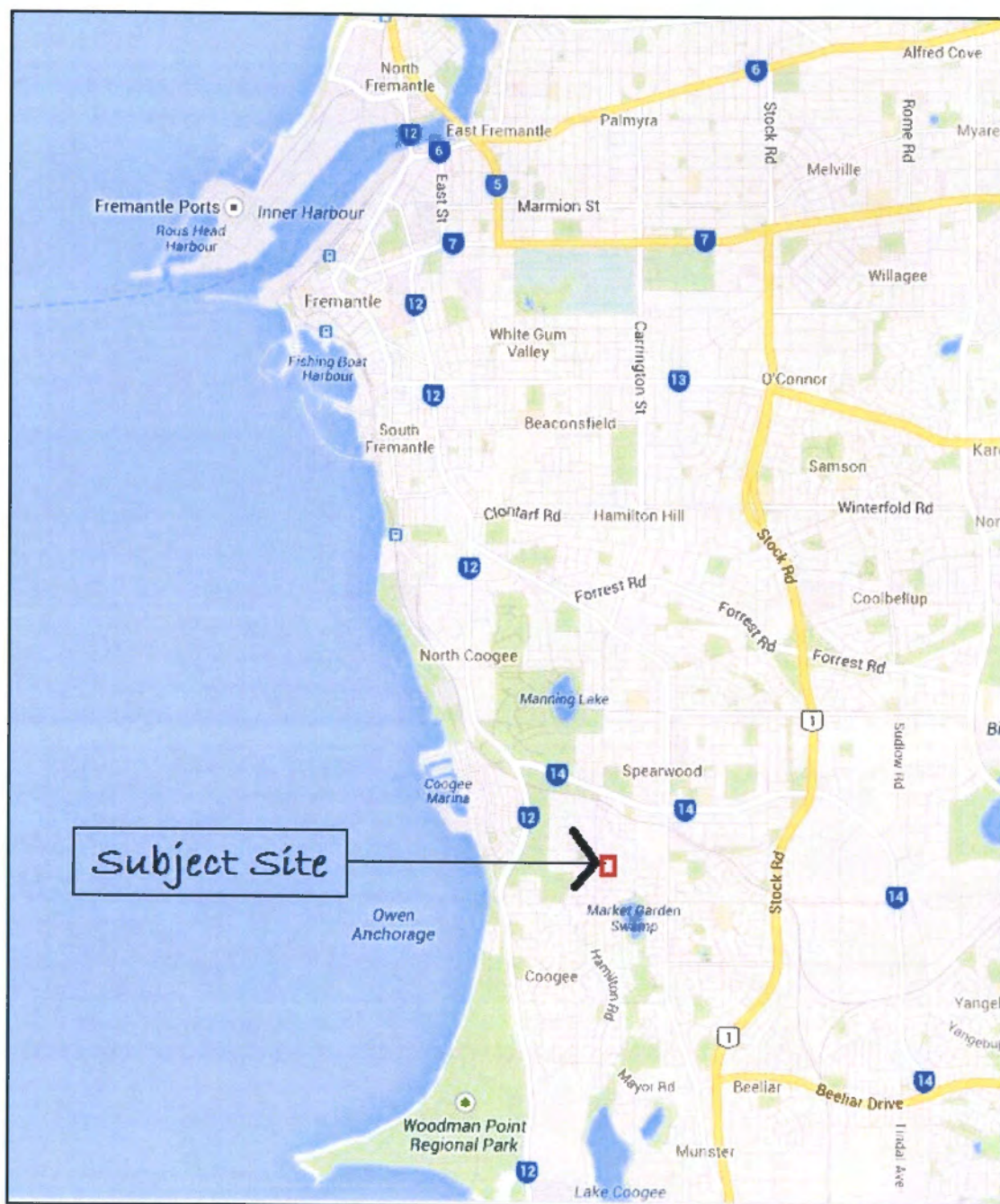
13.0 REFERENCES

Soils and Landforms of the Perth Area, Department of Agriculture, 2003

Perth Metropolitan Region 1:50,000 Environmental Geology Series, Rockingham (Part of Sheets 2033 I and 2033 IV, Geological Survey of Western Australia) (Gozzard J.R 1983)

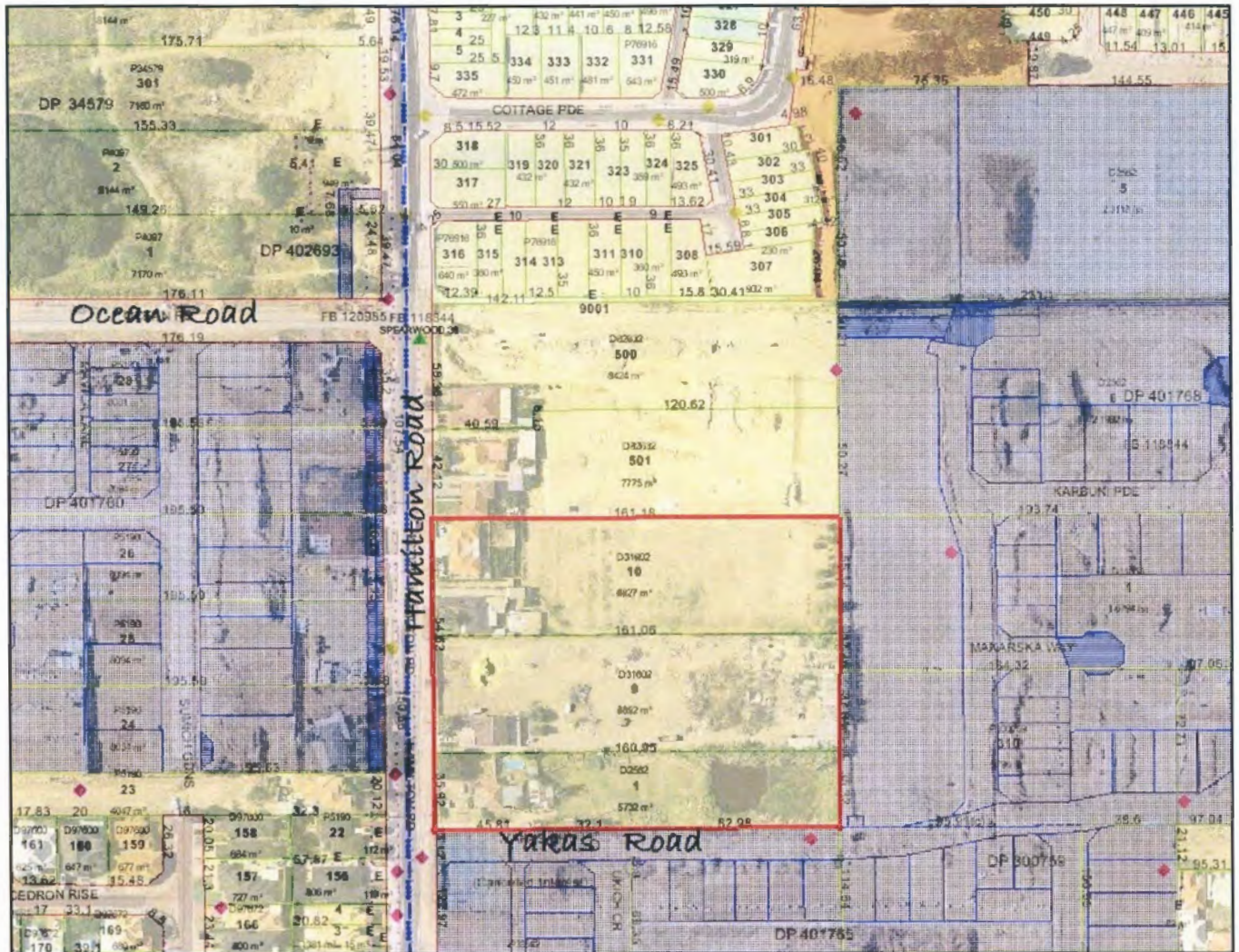
Perth Groundwater Atlas, Department of Water, 2003

FIGURES



(Source: Google Maps, 2014 – modified)

LOCATION PLAN
FIGURE 1



(Source: Landgate, 2014 - modified)

CADASTRAL/AERIAL PLAN
FIGURE 2



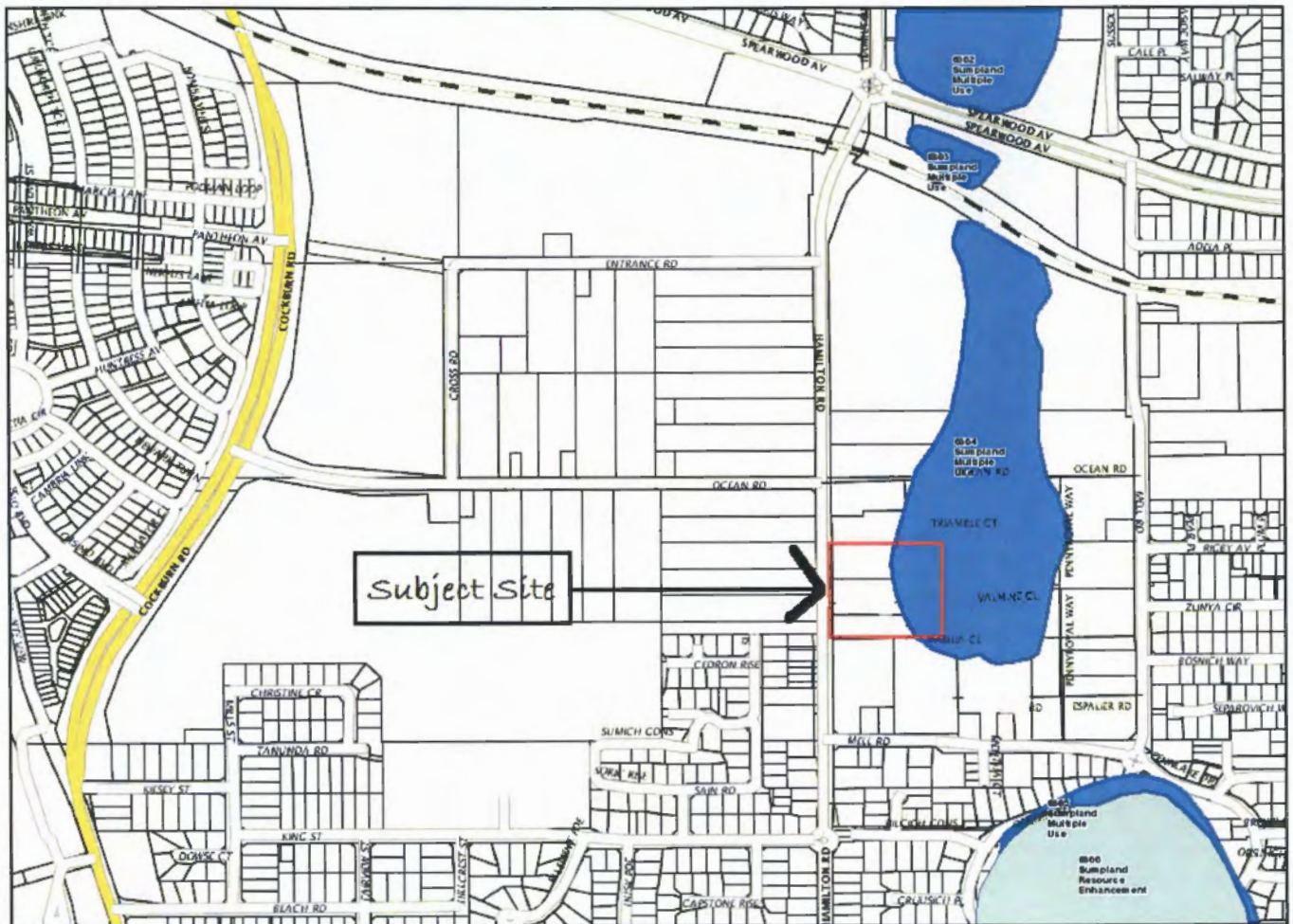
(Source: Nearmaps, 2014 - modified)

SUBJECT SITE
FIGURE 3



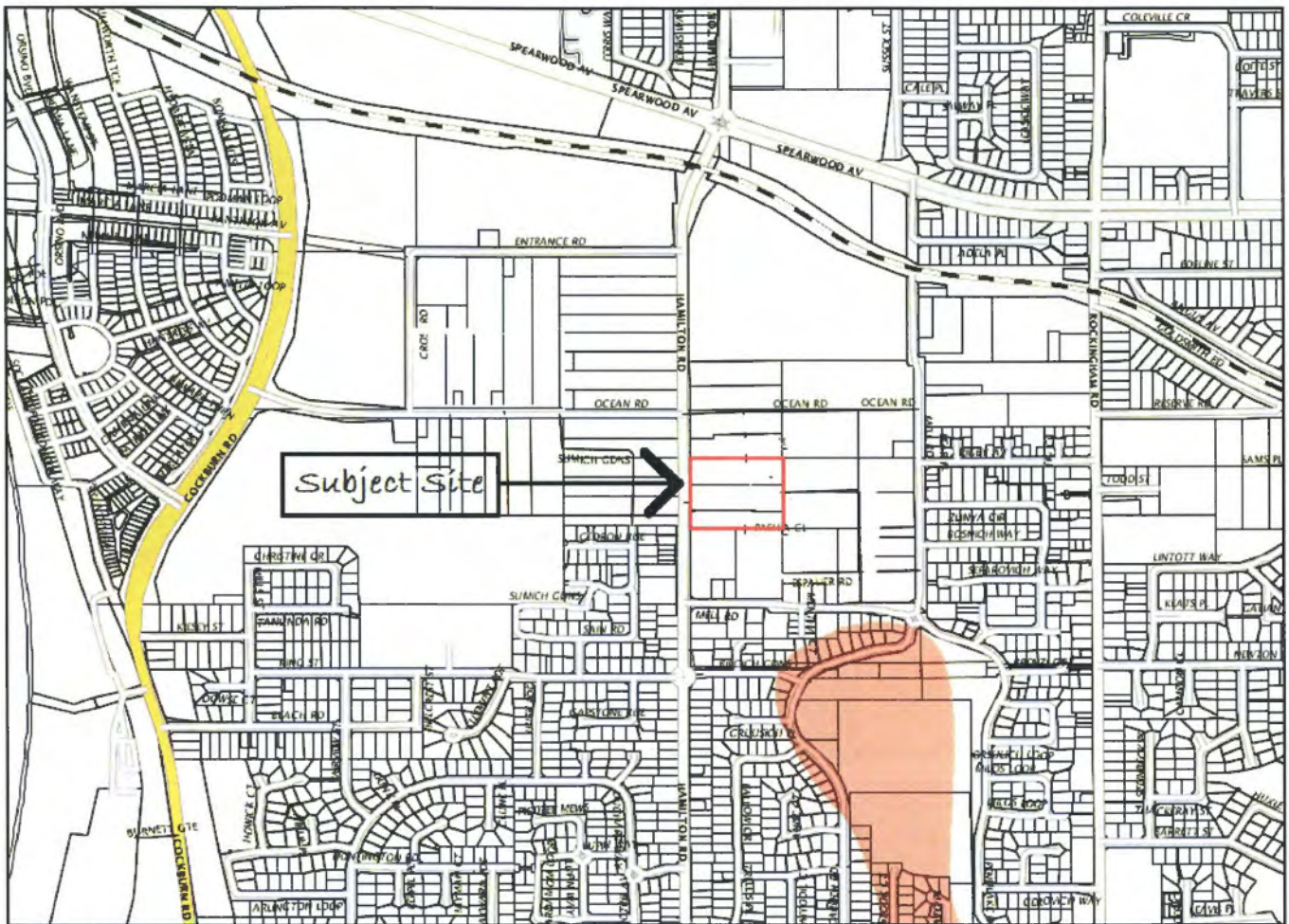
(Source: Landgate, 2014 - modified)

SURROUNDING CONTEXT PLAN
FIGURE 4



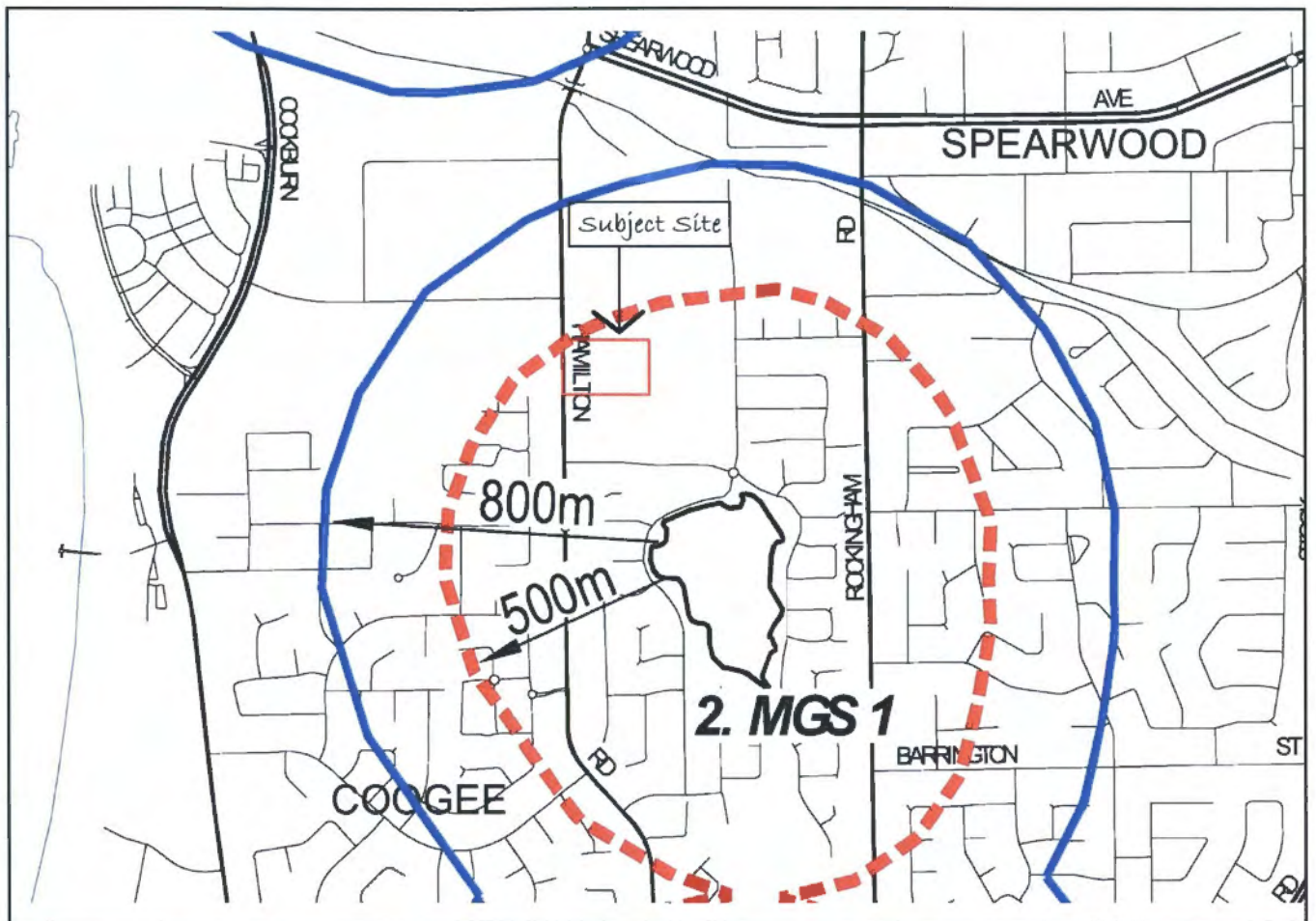
(Source: WA Atlas, 2014 - modified)

DER WETLANDS MAPPING
FIGURE 5



(Source: WA Atlas, 2014 - modified)

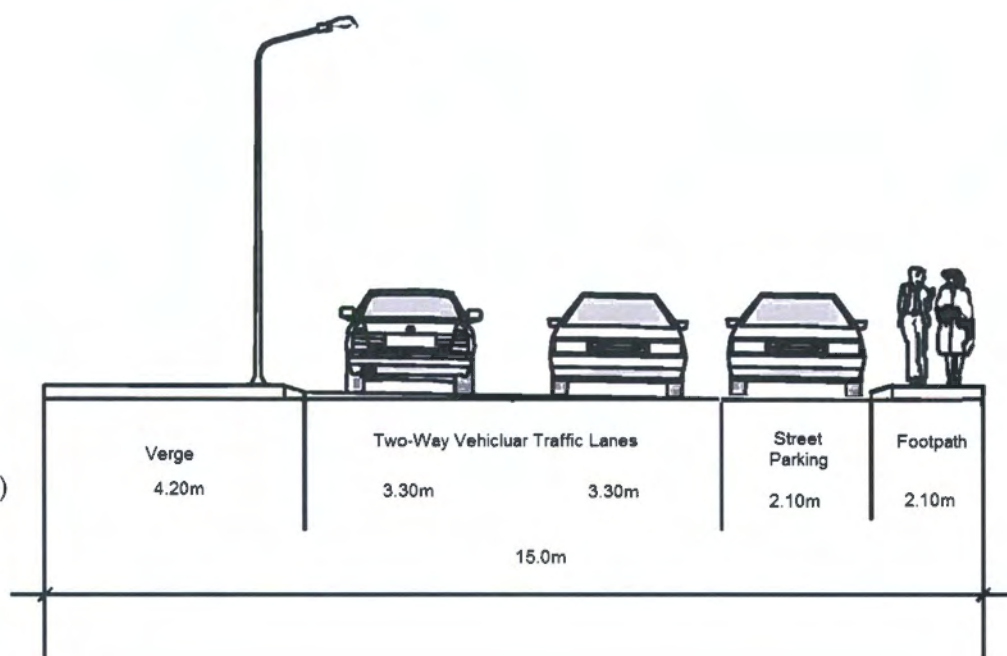
ACID SULFATE SOILS MAPPING
FIGURE 6



(Source: City of Cockburn Policy APD6, 2013 - modified)

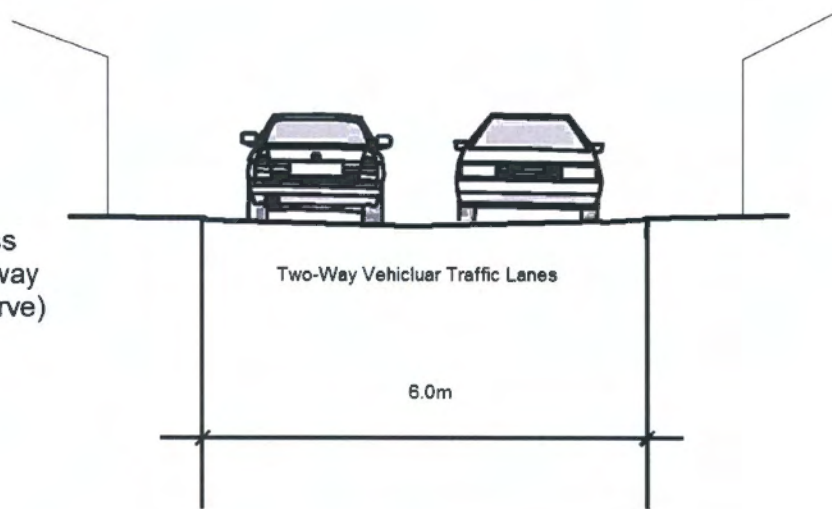
POLICY APD6 MIDGE MAPPING
FIGURE 7

Conceptual cross
section for local access
road (15m reserve width)



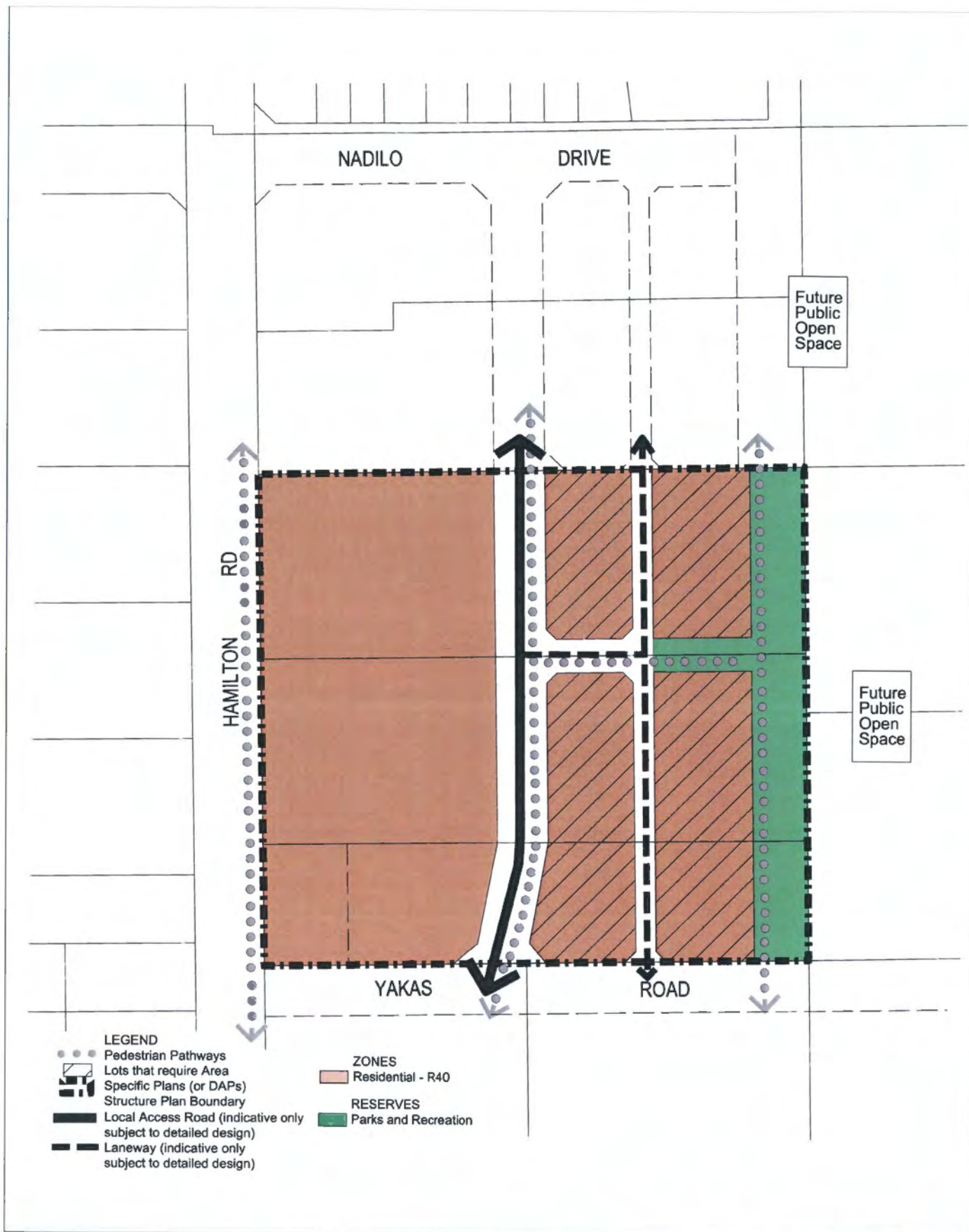
INDICATIVE CROSS SECTION (15.0m) ACCESS ROAD
FIGURE 8

Conceptual cross
section for laneway
(6.0m road reserve)



INDICATIVE CROSS SECTION (6.0m) LANEWAY
FIGURE 9

PLANS



Plan No. : 20370-2

Revision : REV.3

Scale : 1:1500@A4

0 15 30 45

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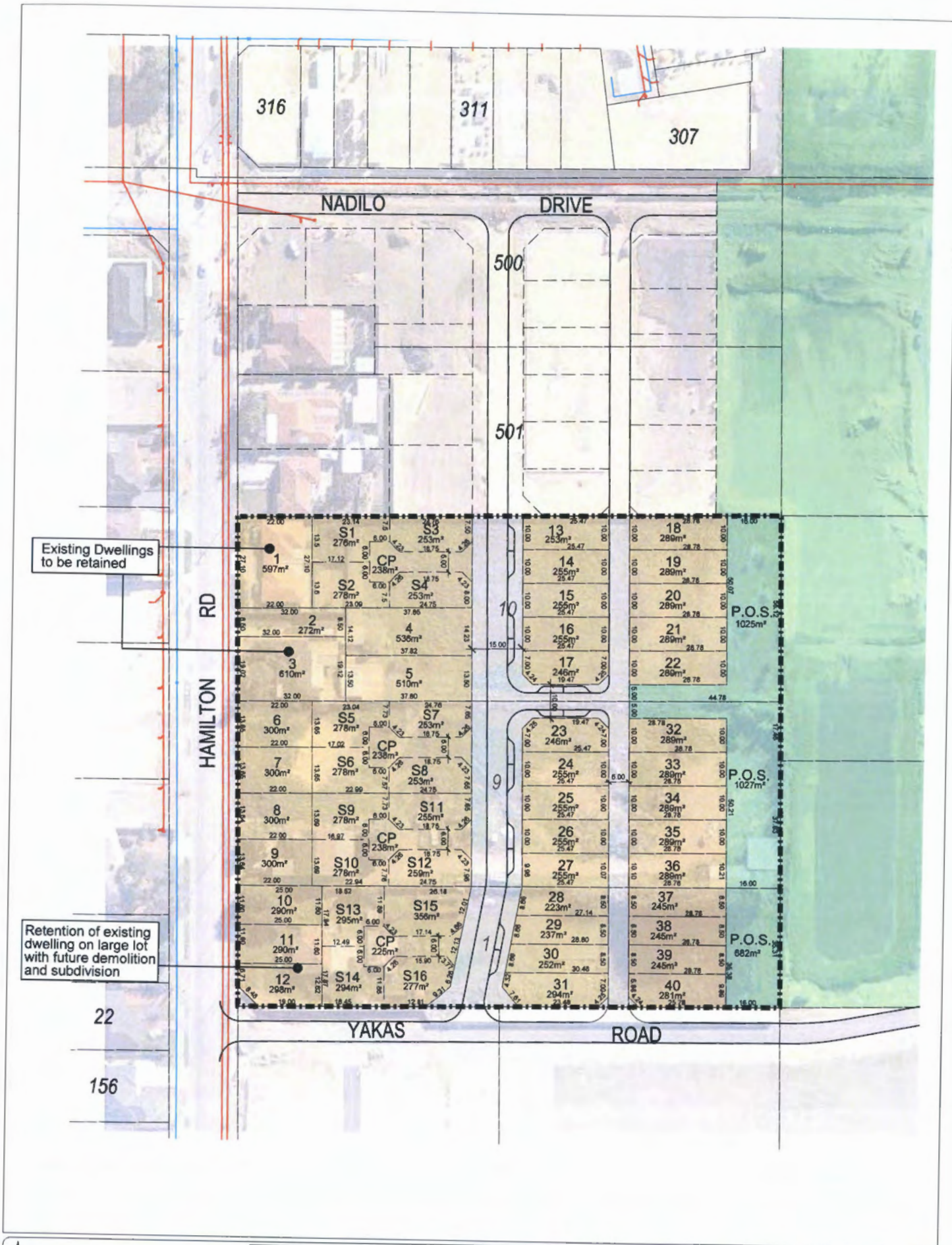
Whelans Pty Ltd Suite 4 First Floor 40 Hasler Road Osborne Park WA 6017 www.whehans.com.au

LOCAL STRUCTURE PLAN LOTS 1,9 & 10 HAMILTON ROAD SPEARWOOD

PLAN 1

DATE DRAWN: 21/04/2015 FILE: 140829 Subdivision Concept Plan.dgn
DRAWN BY: CdeL V DATUM: AHD
CHECKED BY: MM H DATUM: MGA84 (50)





APPENDIX 1

SERVICING REPORT

APPENDIX 2 PRE-LODGEEMENT CONSULTATION

TABLE 7. PRE-LODGEMENT CONSULTATION

AGENCY	DATE OF CONSULTATION	METHOD OF CONSULTATION	SUMMARY OF OUTCOME
City of Cockburn	Circa 07-08/2014	Meetings/Telephone	Preparation of LSP for Lots 1, 9 & 10 required prior to subdivision approval. LSP to interface with Ocean Road Estate development to the north and should be in WAPC format for LSPs.
Western Power	Circa 10/2014	Email/telephone discussion	LSP development area can be connected to reticulated power supply.
Water Corporation	Circa 10/2014	Email/telephone discussion	LSP development area can be connected to reticulated water and sewer.