

LOCAL STRUCTURE PLAN

for

Anthea St through to Whitehall Rd / Hazelmere Circus, Hazelmere

**Prepared by
STATEWEST PLANNING
August 2014**

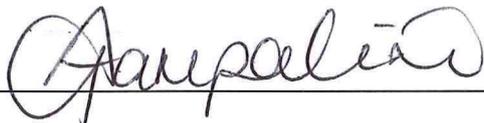
This structure plan is prepared under the provisions of the City of Swan Local Planning Scheme No.17

IT IS CERTIFIED THAT THIS STRUCTURE PLAN WAS APPROVED BY RESOLUTION OF THE WESTERN AUSTRALIAN PLANNING COMMISSION ON: 14 December 2016

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

20 December 2016

Date

Date of Expiry: 14 December 2026

EXECUTIVE SUMMARY

The Anthea St Structure Plan comprises 32 residential properties and an existing local park located adjacent to the Forrestfield freight railway line in the south-western corner of the Hazelmere residential townsite. The site is approximately 2km south-west of the Midland city centre, 2.5km west of the Roe Hwy and midway between Midland and the Perth airport.

The site is zoned for Residential Development and Residential Redevelopment under the City of Swan Local Planning Scheme No 17. This Local Structure Plan (LSP) has been prepared to enable residential development.

ITEM	DATA	SECTION NUMBER WITHIN LSP REPORT
Total area covered by LSP	12.6584ha	1.2.2 & 3.1
Area of each land use proposed:		
- Residential	12.6584ha	3.1
Estimated lot yield	134	3.3
Estimated no. of dwellings	138	3.3
Estimated population	317	3.3
Area of public open space	1.6554ha	3.2

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PART ONE – STATUTORY

1 LSP AREA

The subject area comprises 32 residential properties ranging in size from 1,646m² to 1.8328ha. It is located adjacent to the Forrestfield freight railway line in the south-western corner of the Hazelmere residential townsite. The majority of the lots front Anthea St, which is the only existing internal road. Perimeter roads are West Parade, Hazelmere Circus and Whitehall Rd.

2 LSP CONTENT

Part one of this report contains the statutory section. It contains only the LSP map and statutory planning provisions and requirements.

Part two contains the explanatory information to support the statutory component. It is to be used as a reference guide to interpret and justify the implementation of Part One.

3 INTERPRETATION AND SCHEME RELATIONSHIP

3.1 Interpretation

All terms used in this document shall have the same meaning as given to them in the City of Swan Local Planning Scheme No 17 (LPS 17).

3.2 Scheme Relationship

This LSP provides for the subdivision and development of the subject land. Its adoption fulfils the intent of Part 5A of LPS 17, which establishes the requirement for orderly planning and development of specified areas.

In the event of any inconsistency between LPS 17 and this LSP, LPS 17 shall prevail.

4 OPERATION

This LSP becomes effective as at the date of its endorsement by the WAPC. After this date, the LSP can be used by the City of Swan, and all other Government Agencies involved in the assessment of subdivision applications, to support individual subdivision applications, be they for the whole of the subject area or only a portion of it. It can also be used by the WAPC as a basis of granting subdivision approval.

Nothing within this subdivision shall preclude the WAPC from making a decision, or imposing conditions, at variance with this LSP should that decision be made on the basis of variations to the LSP agreed between the affected landowners and the City of Swan (or other responsible authority) or any other policy adopted after the endorsement of this LSP by the WAPC, providing that policy is reasonably able to be applied consistent with the intent of this LSP.

Any modifications to this Plan are to be made in accordance with the procedures set out in Part 5A of LPS 17, depending on the nature of the modification.

5 LAND USE AND SUBDIVISION REQUIREMENTS

Subdivision of the land shall be carried out in accordance with this LSP. Lot sizes and residential development are to be consistent with the requirements of the Residential

Design Codes for the codings identified on the LSP plan. This will result in the following lot and dwelling yields.

Lot/Dwelling Yield

Total Existing Lots	Estimated Potential Lots	Estimated Dwellings
32	134	138

Use class permissibility is to be the same as the Residential zone (for that area zoned Residential Development) and the Residential Redevelopment zone (for that area zoned Residential Redevelopment) contained in the Zoning Table of LPS 17. This LSP has no special requirements in terms of land use, other than specific controls on the extent of uses prescribed within this document.

There are no Regional or Foreshore open spaces proposed within this site. Public Open Spaces is provided at 10% of the gross land area consistent with WAPC policies DC 2.3 and Liveable Neighbourhoods.

Public Open Space Schedule

Site Area	12.6584ha
- Less deductions	0ha
Net Site Area	12.6584
Gross Subdivisible Area	12.6584ha
- Less deductions for dedicated drainage reserves	0.3578ha
Net Subdivisible Area	12.3006ha
Public Open Space @ 10%	1.2301ha
Public Open Space contribution	
- Existing POS Reserve 38585	0.3319ha
- Existing POS Reserve 38612	1.0157ha
Total Existing POS	1.3476ha
Restricted existing POS area (lake in Reserve 38612)	0.2360ha
Unrestricted additional POS	
- Lot 59	0.1135ha
- Lot 64	0.1043ha
Public Open Space provision	1.6554ha

6 DEVELOPMENT REQUIREMENTS

The Residential Design Codes shall apply as notated on the Structure Plan that forms part of this document (Plan 1). This incorporates Dual Residential Coding (DRC). The lower density code shall apply to development unless the following development criteria are met in addition to the dual coding requirements of Local Planning Scheme No 17.

a. Development Form

The R20 coding shall only apply where the subject land is to be subdivided in freehold and where the new lots created will have access to the new subdivision road.

b. Noise Barrier

The subdivision of the existing Lot 30 West Parade, Lot 65 Anthea St, Lot 64 Anthea St and Lot 47 Whitehall Road will require the provision of a noise barrier not less than 2.2 metres in height at the western edge of their boundaries with the abutting Public Open Space area which abuts the (freight) Railway Reserve.

c. Building Standards

Development of the first row of residential dwellings abutting the Public Open Space area which abuts the (freight) Railway Reserve shall comply with the following requirements:

- (a) For single storey dwellings and where the abutting noise barrier is 4 metres in height – no requirements
- (b) For single storey dwellings and where the abutting noise barrier is 3.2 metres in height – the incorporation of “Quiet House” design Package A measures as set out in the Implementation Guidelines of SPP 5.4
- (c) For single storey dwellings and where the abutting noise barrier is 2.2 metres in height – the incorporation of “Quiet House” design Package B measures as set out in the Implementation Guidelines of SPP 5.4
- (d) For double storey dwellings and where the abutting noise barrier is 3.8 metres in height – the incorporation of “Quiet House” design Package B measures as set out in the Implementation Guidelines of SPP 5.4
- (e) For double storey dwellings and where the abutting noise barrier is 3.7 metres or lower in height – the incorporation of “Quiet House” design Package B measures as set out in the Implementation Guidelines of SPP 5.4 with the following additional measures:
 - a. Bedrooms not to be located on the façade facing the railway line
 - b. Windows to living spaces on the façade facing the railway line to be 10.5mm thick with laminated glass in casement or awning windows
 - c. Any doors to balconies to be hinged with acoustic seals

d. Noise Attenuation

All residential dwellings developed within the Structure Plan area are to incorporate noise attenuation measures in accordance with the provisions of AS2021.

7 OTHER REQUIREMENTS**7.1 Public Open Space**

Each Lot shall provide a minimum 10% public open space contribution upon subdivision.

7.2 Bushfire

Those lots depicted with hatching on the Structure Plan map have been declared bushfire prone. Further subdivision or development of these lots will require a Bushfire Hazard Assessment to be undertaken that establishes Bushfire Attack Level (BAL) ratings. Any Class 1, 2 or 3 buildings or a Class 10a building or deck associated with a Class 1, 2 or 3 building to be erected on any of these bush fire prone lots, shall, notwithstanding any statement to the contrary within AS3959-2009 comply with the requirements of AS3959, or equivalent Australian Standard.



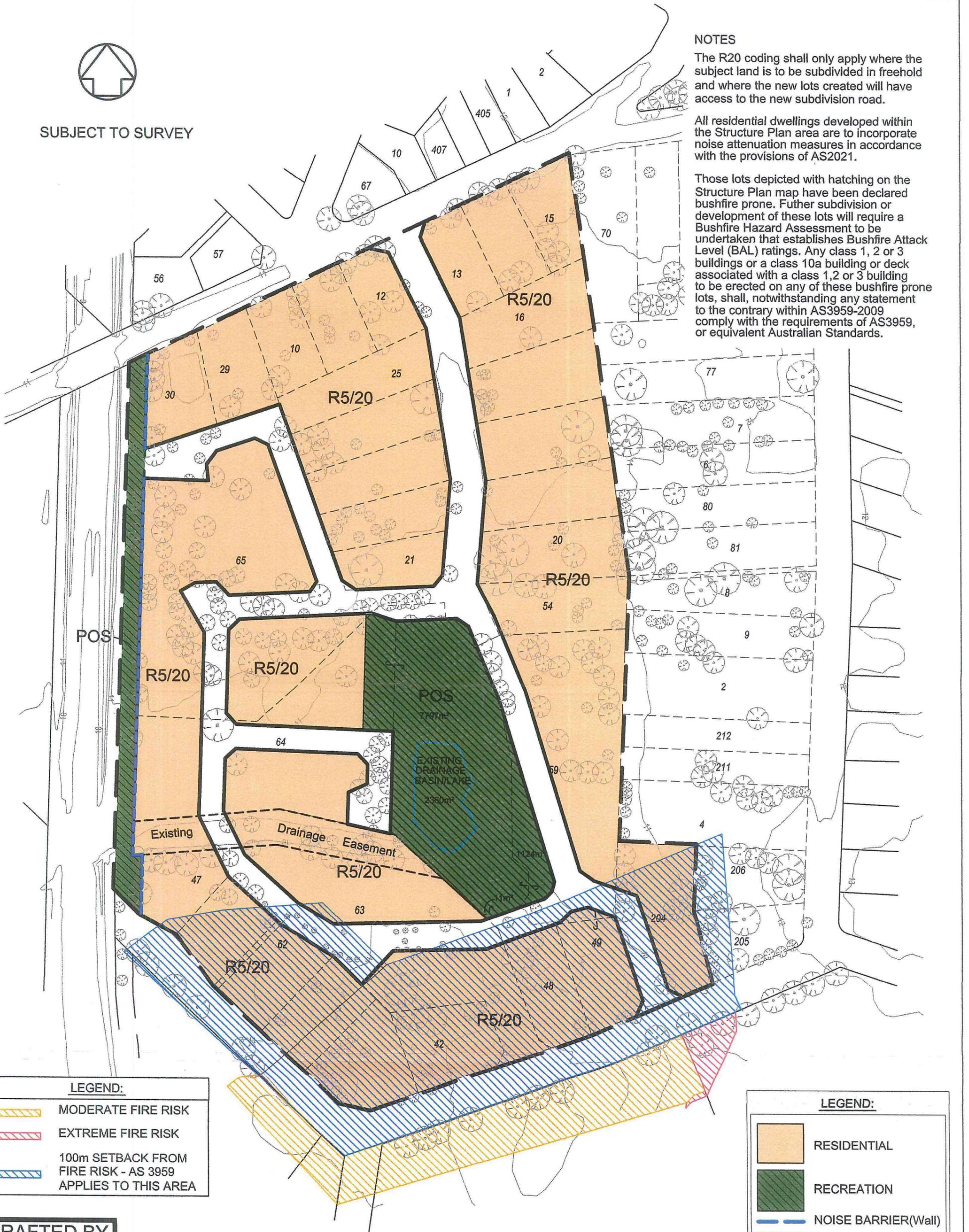
SUBJECT TO SURVEY

NOTES

The R20 coding shall only apply where the subject land is to be subdivided in freehold and where the new lots created will have access to the new subdivision road.

All residential dwellings developed within the Structure Plan area are to incorporate noise attenuation measures in accordance with the provisions of AS2021.

Those lots depicted with hatching on the Structure Plan map have been declared bushfire prone. Further subdivision or development of these lots will require a Bushfire Hazard Assessment to be undertaken that establishes Bushfire Attack Level (BAL) ratings. Any class 1, 2 or 3 buildings or a class 10a building or deck associated with a class 1,2 or 3 building to be erected on any of these bushfire prone lots, shall, notwithstanding any statement to the contrary within AS3959-2009, comply with the requirements of AS3959, or equivalent Australian Standards.



LEGEND:

- MODERATE FIRE RISK
- EXTREME FIRE RISK
- 100m SETBACK FROM FIRE RISK - AS 3959 APPLIES TO THIS AREA
-

LEGEND:

- RESIDENTIAL
- RECREATION
- NOISE BARRIER(Wall)

DRAFTED BY

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STRUCTURE PLAN
LOT 65 ANTHEA STREET
HAZELMERE

SCALE	DATE	DRAWN	CHECKED	REF.	SHEET
1:2000 @A3	31-07-14	PI		14298	1

Statewest Surveys logo 12-01-12(1)_Page_1.jpg

PART TWO – EXPLANATORY

1 PLANNING BACKGROUND

1.1 Introduction & Purpose

This LSP has been prepared to identify the specific zonings and land uses across the subject site. It has been prepared to address the requirements of the City of Swan Local Planning Scheme N^o 17, specifically Part 5A.

1.2 Land Description

1.2.1 Location

The subject area comprises 32 residential properties ranging in size from 1,646m² to 1.8328ha. It is located adjacent to the Forrestfield freight railway line in the south-western corner of the Hazelmere residential townsite. The majority of the lots front Anthea St, which is the only existing internal road. Perimeter roads are West Parade, Hazelmere Circus and Whitehall Rd. (Refer Location Plan)

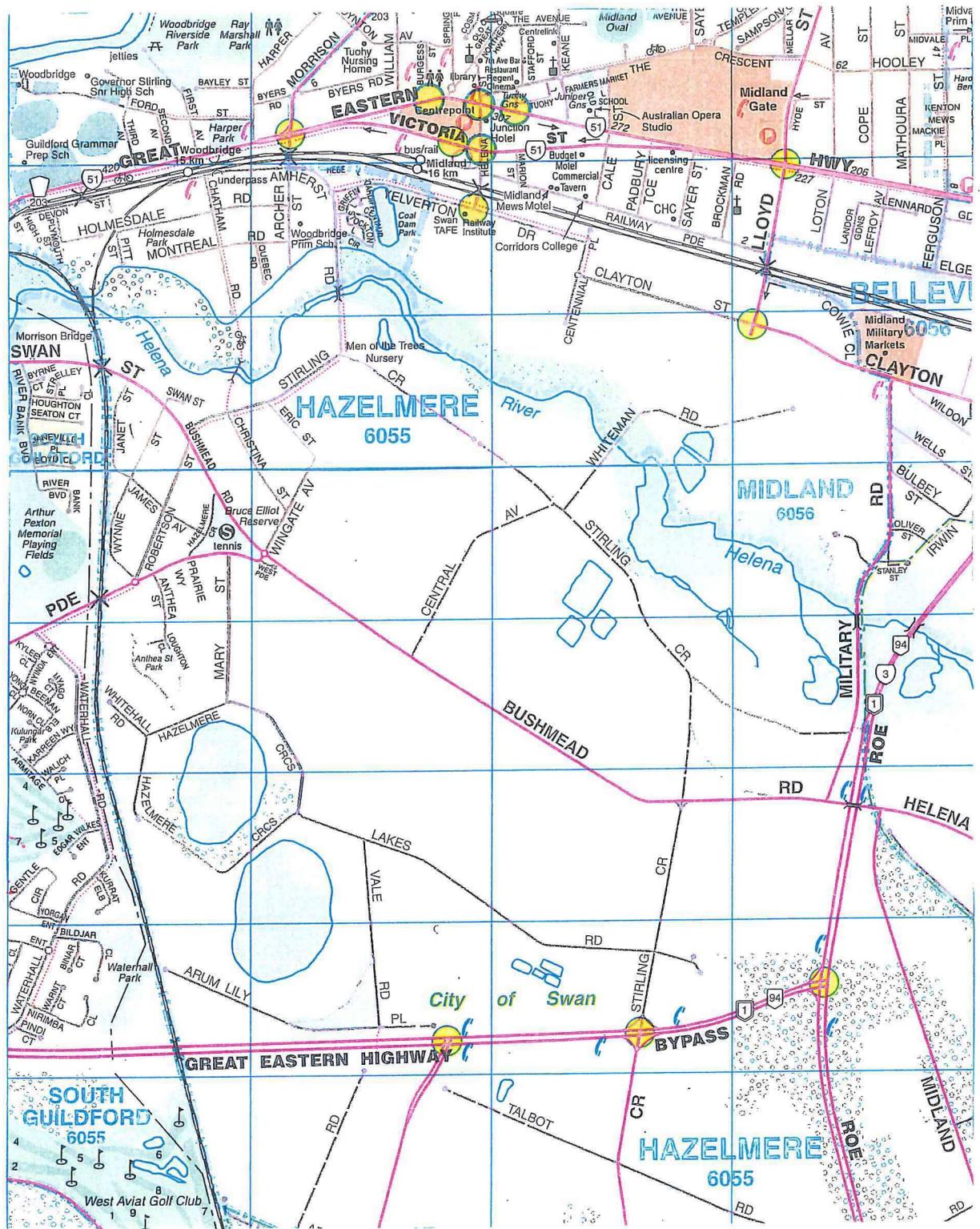
1.2.2 Area and Land Use

The 32 lots total 12.6584ha in area. There are residences and outbuildings on each lot except for Lots 64 & 65 Anthea St.

1.2.3 Legal Description and Ownership

The subject site comprises the following properties:

Lot No.	House	Address	Volume	Folio	Survey
30	37	West Parade	1648	453	14193
29	35	West Parade	1648	452	14193
10	33	West Parade	1550	179	13015
11	31	West Parade	1550	180	13015
12	29	West Parade	1550	181	13015
13	27	West Parade	1550	182	13015
14	25	West Parade	1550	183	13015
15	23	West Parade	1550	184	13015
16	3	Anthea Street	1550	185	13015
25	4	Anthea Street	1550	194	13015
17	5	Anthea Street	1550	186	13015
24	6	Anthea Street	1550	193	13015
18	7	Anthea Street	1550	187	13015
23	8	Anthea Street	1550	192	13015
19	9	Anthea street	1550	188	13015
22	10	Anthea Street	1550	191	13015
20	11	Anthea Street	1550	189	13015
21	12	Anthea Street	1550	190	13015
54	13	Anthea Street	1648	462	14193
65	14	Anthea Street	1678	668	65400
59	15	Anthea Street	1648	463	14193
64	16	Anthea Street	1678	669	65400
49	10	Hazelmere Circus	1648	461	14193

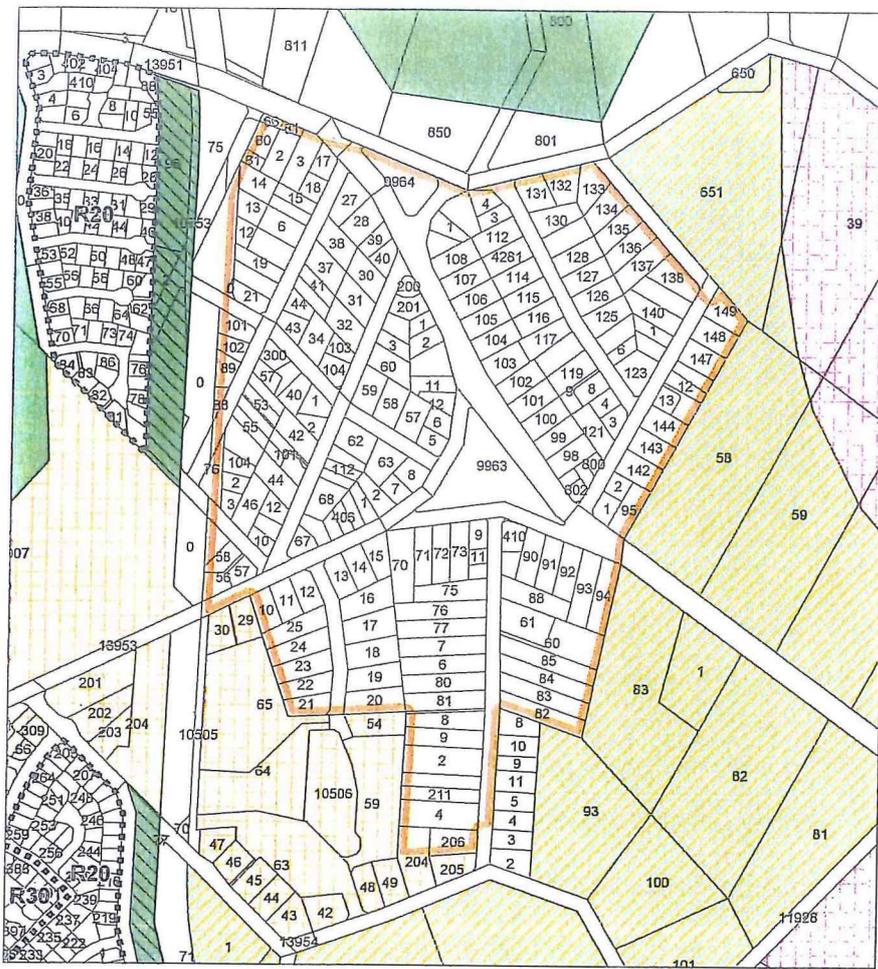


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Reference Number		Revision		Client	
14298				ERCKMAN PARK	
Scale	Drawn	Checked	Date	Project	
NTS	SOH	SOH	12/0/13	LOCATION PLAN	2

LOCAL PLANNING SCHEME No 17 AMENDMENT No 93



LEGEND

-  Regional Reserves - Parks and Recreation
-  Regional Reserve - Railways
-  Local Reserve - Local Roads
-  Local Reserve - Recreation
-  Rural Residential
-  Industrial Development
-  Residential Redevelopment
-  Residential Development
-  Residential
-  R Code & Boundary

EXISTING ZONING



LEGEND

-  Local Reserve - Recreation
-  Local Reserve - Local Roads
-  Residential Development
-  Residential
-  R Code & Boundary

PROPOSED ZONING



September 2012

Scale 1: 1200

48	8	Hazelmere Circus	1648	460	14193
63	6	Hazelmere Circus	1653	511	65400
42	4	Hazelmere Circus	1648	454	14193
43	2	Hazelmere Circus	1648	455	14193
204	22	Hazelmere Circus	1991	199	75667
44	4	Whitehall Road	1648	456	14193
45	6	Whitehall Road	1648	457	14193
46	8	Whitehall Road	1648	458	14193
47	10	Whitehall Road	1648	459	14193

All lots are privately owned.

1.3 Planning Framework

1.3.1 Zoning and Reservations

The site is zoned 'Urban' under the MRS.

The site is affected by two zones under Councils LPS 17. These are Residential Development and Residential Redevelopment. On 26 September 2012 the City of Swan resolved to initiate Amendment 93 to LPS 17 to rationalize the zoning of the area the subject of this LSP and other portions of the Hazelmere village. This Amendment is part of the broader implementation of the Councils Local Housing Strategy and hasn't proceeded beyond that resolution at this stage. A copy of the existing and proposed zonings is provided at Plan 3.

1.3.2 Regional and Sub-Regional Structure Plans

Kewdale Hazelmere Industrial Masterplan (KHIM)

The KHIM identifies the LSP area as Urban, and provides no direct recommendation in respect of the existing and future land uses capabilities of the area.

Hazelmere Enterprise Area Structure Plan

The City of Swan has adopted a Structure Plan for the Hazelmere locality. Whilst it includes within its boundaries the subject site, its main area of work revolves around the industrial component of Hazelmere. As a result the subject site is not included in the document as a 'Precinct Area' and as a result there are no specific development standards or guidance. It is simply identified as a 'residential' area. Some of the broader issues affect the site, eg, aircraft noise from the Perth Airport. These are addressed under the appropriate headings below.

1.3.3 Planning Strategies

Directions 2031

Directions 2031 aims, inter alia, to improve efficiency in the use of infrastructure by increasing residential densities in existing under developed residential areas. The Hazelmere village is a classic example of an under developed area with its large (generally 2,000m² but up to over 1ha) residential lots which are serviced by reticulated sewerage. Encouraging re-development of this area is entirely consistent with this statewide strategy.

City of Swan Local Planning Strategy

The City of Swans Local Planning Strategy accompanies its LPS 17. Whilst necessarily broad in nature, in terms of residential development it sets out the following Aim:

“To provide for a range of compatible housing and associated development, in neighbourhoods with a distinctive community identity and high levels of safety and amenity.”

It also identifies a number of Strategies to achieve this that relate to the Hazelmere residential area, including:

- Providing a range of residential densities
- Promoting consolidation of residential areas with a view to reducing the direct costs of development

Hazelmere, due to its geographical location, history, and separation from other residential localities, could arguably have the most distinctive individual character of all residential localities within the City of Swan. Its value as an affordable housing option in a village setting in such close proximity to the Midland city centre deserves recognition and support to enable the creation of new housing options.

City of Swan Urban Housing Strategy

In 2012 the City of Swan adopted its Urban Housing Strategy, which seeks to:

- Encourage a range of housing options
- Facilitate walkable communities
- Provide for increased densities in selected existing residential areas
- Control built form to protect amenity

In terms of Hazelmere it recognizes the opportunities that exist for increased densities (since the extension of reticulated sewer in 1999/2000). It also identifies a need for co-ordinated development for the subject area due to a range of factors including the larger lot sizes, awkward lot configurations and infrastructure issues, particularly drainage and Public Open Space. For these reasons a Structure Plan is required.

1.3.4 Policies

There are several policies that may have the potential to affect the proposed LSP. These are listed below, with comments on how the LSP complies.

WAPC DCP 2.2 – Residential Subdivision

The purpose of this policy is to facilitate the creation of a range of appropriately serviced residential lots in a consistent and co-ordinated manner. With the provision of R20 density lots and opportunities for group housing, all with access to underground power, reticulated water and sewer, dual use and pedestrian pathways, public transport and Public Open Space, this LSP conforms with this policy.

WAPC DCP 2.3 – Public Open Space in Residential Areas

This policy sets out to facilitate the provision of public open space areas to meet the needs of the local resident population and, where appropriate, to protect wetlands and their margins. This LSP provides for 10% of the site to be set aside as Public Open Space reserve consistent with this policy.

WAPC DCP 2.6 – Residential Road Planning

The purpose of this policy is to encourage safe road design that accommodates motor vehicle, cycle and pedestrian traffic whilst maintaining a high level of residential amenity. This LSP has been designed to accommodate permeable traffic movement.

Better Urban Water Management guidelines (WAPC)

These Guidelines have been established to achieve better water management in urban subdivisions. A Local Water Management Strategy (LWMS) has been prepared in accordance with these guidelines and is appended to this LSP.

Guidelines for the Preparation of Structure Plans (WAPC)

This LSIP has been prepared in accordance with these guidelines.

Designing Out Crime Planning Guidelines (WAPC)

These guidelines provide a 'toolbox' for various design levels from Structure Planning through subdivision and down to building design. As a result some components relate to the macro level and some to the micro level. In terms of this LSP, the road and lot layout has been designed to provide for an open area that provides opportunities for natural surveillance of public spaces with good accessibility.

SPP 3.1 Residential Design Codes

The Structure Plan provides for two different lot densities – R20 & R35. The lot design responds to the requirements under SPP 3.1

SPP 5.1 Land Use Planning in the Vicinity of Perth Airport

This Policy provides a framework for land use planning in areas that may be affected by aircraft noise associated with Perth Airport. It identifies areas where different forms of land use may be acceptable, conditionally acceptable or not acceptable. These are related to Australian Noise Exposure Forecasts (ANEFs). The subject site is affected by these with the 20 ANEF currently traversing the site and the new Perth Airport 2014 Master Plan modifying the noise contour such that the whole of the Structure Plan will be contained within the 20-25ANEF. Residential development in this category is considered conditionally acceptable with a maximum development density of R20. Accordingly this LSP provides for development to this density.

SPP 5.4 Road and Rail Transport Noise and Freight Considerations in Land Use Planning

This policy establishes a standard set of criteria for assessment of noise levels emanating from major road and rail corridors in order to protect people from unreasonable noise levels. The LSP includes an assessment of these and incorporates the outcomes into the design.

Liveable Neighbourhoods

Liveable Neighbourhoods is a detailed guide to designing sustainable communities. Its various elements are incorporated in to the design of this LSP and are discussed in more detail under section 3 of this part of the LSP.

1.3.5 Other Approvals

As mentioned at 1.3.1 above, the site is contained within proposed Amendment 93 to the City of Swan LPS 17. This Amendment is complementary to this LSP.

2 SITE CONDITIONS AND CONSTRAINTS

2.1 Biodiversity and Natural Area Assets

The site has been historically cleared to accommodate farming, originally, and then residential subdivision. There are no remaining areas of natural assets.

2.2 Landform and Soils

The land is very flat at 11-12m AHD across the entire site apart from the lake in the Anthea St park and the shallow drainage channel the exits that lake in a westerly direction. (Refer Plan 4)

The Local Water Management Strategy prepared by Bayley Environmental Services (Appendix 1) states that the site is underlain by soils of the Guildford formation, consisting of alluvial silts and clays. Plan 6 is taken from the Bayley report and shows the soil types, which comprise Mgs1 (pebbly silt), S10 (Bassendean sand) and Cps (peaty clay).

Acid Sulphate Soils (ASS) mapping identifies the site as being mainly low risk of acid sulphate soils, with an area of moderate risk for lots fronting Hazelmere Circus and high risk over the existing park and the land just to the east of that. (Refer Plan 6) The Bayley report concludes that the only activity likely to be affected by this is potentially the installation of stormwater pipes in the immediate area of the park. This would be short term (for the construction period) and manageable.

2.3 Groundwater and Surface Water

The LWMS prepared by Bayley Environmental Services (Appendix 1) addresses the existing hydrological situation in the area. Groundwater is mapped at around 8m AHD (natural ground is 11-12m AHD. (Refer Plan 5) Site testing on Lot 65 Anthea St in March 2012 shows the depth to groundwater on that site to be 6.5m or more below natural ground. Allowing for annual fluctuations of 1m, the depth would be assessed as 5.5m. This natural ground level to be at 11m AHD, this equates to an actual groundwater level of 5.5m AHD – well below the mapped 8m AHD.

Bayley notes in the LWMS that other work done by ENV on behalf of the City of Swan as part of the Hazelmere Enterprise Area Structure Plan indicate that the lots at the southern edge of this LSP area (along Hazelmere Circus) are likely to have a higher groundwater level. Specific testing of those lots has not been carried out as the owners are not part of the proponent group. Bayley concludes, however, that development of these sites would be possible, potentially with some fill required. These would need to be tested on an individual basis as and when the owners chose to develop.



SUBJECT TO SURVEY



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TOPOGRAPHY PLAN
ANTHEA STREET
HAZELMERE

SCALE

1:2000
@A3

DATE

07-08-13

DRAWN

F.T.

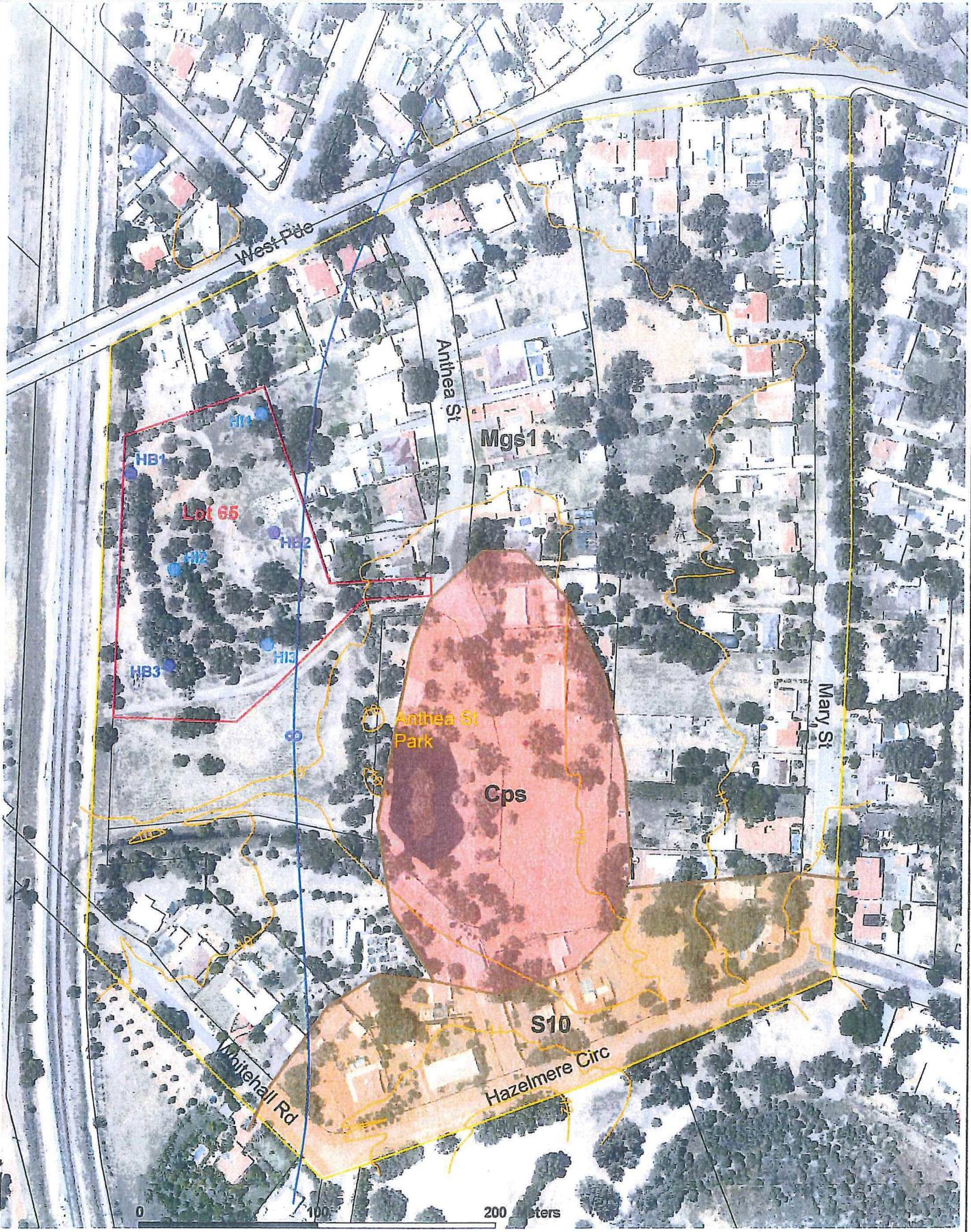
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14298

SHEET

4



- Study area boundary
- Lot 65 Boundary
- Geological unit boundary
- Cps** Geological unit
- Topographic contour (BSD, 2000)
- Groundwater contour (Rockwater, 1992)
- High ASS Risk (DEC)
- Moderate ASS Risk (DEC)

- Borehole
- Permeability test

Figure 2

ENVIRONMENTAL FEATURES

PLAN 5



In terms of surface water the LSP area contains a lake in the Anthea St park which serves a drainage function. Water enters the lake from the south-east and exits to the west via a shallow channel on Lot 63 before ultimately entering the Helena River to the north along the railway reserve. This system would form part of the drainage system in the LSP. This is addressed in both the Bayley LWMS and a drainage assessment prepared by Parker Consulting Civil Engineers (included as an Appendix to the LWMS). It is discussed further under section 3.5 of this report.

2.4 Bushfire Hazard

Due to its historic and current land use, the subject area has a low bush fire hazard risk. Property on the south side of portion of Whitehall Rd and Hazelmere Circus, however, has a moderate fire rating (City of Swan advice 15/7/13) and therefore properties within 100m of that will be required to prepare fire hazard assessments prior to gaining subdivision approval. Future buildings will be required to comply with the applicable BAL rating in accordance with AS 3959. The affected area is shown on the Structure Plan (Plan 1).

2.5 Heritage

The Hazelmere area, as it adjoins the Helena River and contains the Hazelmere lakes, is known to have been used by indigenous people for food and water. A review of the Department of Indigenous Affairs heritage register revealed that the LSP area is contained within site S02148 (Helena River), which covers a vast region along the length of the Helena River. No other sites were identified in this review.

A review of the City of Swan Heritage List reveals there are no sites of significance in the Structure Plan area.

2.6 Context and Other Land Use Constraints

The property is in an area of residential growth. All standard services are available.

It is separated from the Forrestfield freight rail line by a 10m wide POS strip. The freight rail line will impact upon the amenity of future residents and actions are required to ameliorate this impact. These are discussed in more detail at section 3.10 below. It is also noted that the KHIM report (included in 1.3.2 above) supports the realignment of this rail line such that it would no longer run alongside the subject site. This is, however, a long term strategy.

As mentioned at 1.3.4 above, the site is affected by aircraft noise. Residential densities across the subject area reflect this constraint.

3 LAND USE AND SUBDIVISION REQUIREMENTS

Due to the multiplicity of landowners, development will be incremental. The design has been prepared to take into account the willingness of landowners to develop and provides for progressive provision of infrastructure on a lot by lot basis, when each landowner chooses to subdivide their own property, without the need for any additional formal developer contribution scheme. This includes the provision of:

- Drainage
- Roads
- Power
- Sewer

- Water
- Public Open Space

The methods by which this infrastructure will be provided are discussed below. It is noted, however, that the key infrastructure areas of roads, Public Open Space (POS) and drainage have more direct impacts on some landowners. The schedule at section 3.9 identifies the obligations of all landowners within the LSP when they elect to develop their properties.

3.1 Land Use

Land use will be residential to a maximum density of R20. The LSP provides sufficient flexibility to enable the creation of group dwelling sites as well as single residential lots. To ensure all developments contribute towards necessary infrastructure, development to the higher (R20) code will be required to involve either Freehold (green title) or Survey Strata subdivision. This will be dictated by the availability of road frontages. All of the site except the POS and the drainage facilities will be used for this residential purpose, totalling 12.6584ha. (Refer summary table in Executive Summary.)

3.2 Open Space

An area of 1.6554ha will be set aside as POS across the site. A POS schedule is provided in Part 1 of this document. This will comprise existing and additional POS. It is also 0.4253ha in excess of the 10% POS requirement for the LSP area. The site already has 1.3476ha of POS located in two positions. One is the Anthea St Park (Reserve 38612), which is 1.1057ha in area, and the other runs alongside the railway reserve (Reserve 38585), which is 0.3319ha in area. A Landgate search of the purpose of these reserves is provided at Appendix 2. This LSP recognizes that Reserve 38585 has limited functionality as an active POS reserve. The additional 0.4253ha provided more than makes up for Reserve 38585.

The additional POS will be located adjoining the existing Anthea St Park thereby providing a consolidated area. It will be highly accessible with road frontage on all but one short side.

Each property within the LSP will have a POS responsibility either by way of a land contribution or a cash-in-lieu contribution consistent with WAPC DC Policy 2.3 and section 153 of the Planning & Development Act 2005. In regard to this, each lot within the LSP area is to provide a 10% cash-in-lieu contribution as a condition of subdivision approval except for Lots 59 and 64 Anthea St, who are to provide a 10% land contribution. Lots 59 and 64 shall have no further POS responsibility as the cash-in-lieu contributions from other developers will be used for the development of the POS by the Local Government.

3.3 Residential

The site will be developed to a residential density of R20.

The proposal takes into account the lot sizes proposed in the Council's Urban Housing Strategy and the WAPC's position on lot sizes within the 20-25 ANEF. It also provides for housing choice by including group dwelling opportunities. It will result in a lot yield in the order of 132 x R20 single residential lots and 2 x R20 group housing lots (yielding 6 dwellings). This includes retaining existing dwellings. Higher yields are likely if existing dwellings are removed.

Based on the 2011 Australian Bureau of Statistics Occupancy Rate for Hazelmere (2.3 persons per dwelling) the existing population of the LSP area is 69. The additional lots

ultimately created (based on retaining existing dwellings) would result in a total of 317 residents. (Refer summary table in Executive Summary.)

3.4 Movement Network

A Traffic Impact Assessment has been prepared by DVC and is contained in Appendix 3. It was based on a broader area including Mary St frontage lots. Since that time the LSP are has been reduced in size. Road reserves have also been reduced from 18m to 16m. They still fall within the 14.2m-24m range referenced in the TIA and Liveable Neighbourhoods.

The principle of a through road between West Pde and Hazelmere Circus has also been retained.

The subject site has good access to public transport with bus route 304 running along West Pde and connecting Hazelmere to the Midland bus and train station.

West Pde has a 2m wide dual use path on its south side west of Robertson Rd. A 1.2m wide path is located on the northern side of that road east of Robertson Rd. Mary St has a 1.2m wide path.

New footpaths and road construction will be created as follows:

Anthea St

It is proposed to extend the 1.2m wide footpath along the existing length of Anthea St by means of a road upgrading condition imposed on the owners of the lots fronting that street as and when they develop their properties through subdivision or as a condition of group dwelling approvals. The contribution will be calculated in accordance with standard Council practice for road upgrading for subdivisions.

The balance of the length of Anthea St will be created and constructed as Lots 54, 59 and 204 subdivide. Construction of the footpath will be a condition of subdivision approval.

Hazelmere Circus / Whitehall St

A road upgrading condition will be imposed as a condition of subdivision or development approval (once only) on each lot fronting Hazelmere Circus and Whitehall St as and when they develop. The contribution will be calculated in accordance with standard Council practice for road upgrading for subdivisions. The funds generated will be used to upgrade the subject roads including the construction of a 1.2m wide footpath.

Internal subdivision through road

A 1.2m wide footpath will be required to be constructed on the through road section of the internal subdivision road that will be created through subdivision of Lots 65, 64, 63, 59 and 204 . Responsibility for the design and construction of the road and footpath will rest with the developers of those lots and will be imposed as a condition of subdivision. Where the road straddles the boundary of Lots 65 & 64 it will be the responsibility of the two owners to reach an agreement for the creation of the full width of the road reserve for that section.

The construction of the cul-de-sac on Lot 64 will be the responsibility of the developer of that property.

Miscellaneous

Nothing within this LSP shall prevent an original subdivider from recovering costs from a later subdivider in accordance with section 159 of the Planning & Development Act 2005.

3.5 Water Management

A LWMS has been prepared for this site and is provided at Appendix 1. The LWMS:

- Documents the existing soils, drainage, erosion, watercourses, groundwater and water dependent ecosystems
- Describes the proposed development in terms of water management
- Addresses regulatory requirements
- Describes strategies for implementation of water conservation, watercourse protection, groundwater management and stormwater drainage
- Outlines the proposed monitoring programme
- Provides direction for a future Urban Water Management Plan

The subdivision concept conforms with the recommendations of the LWMS, which in turn takes into account drainage findings and recommendations from previous broader studies over the Hazelmere area. Within the LSP area stormwater drainage makes its way into the lake in the Anthea St Park. This currently has sufficient capacity to accommodate all existing drainage requirements. It has an estimated capacity of 2,950m³.

The LWMS identifies that when the LSP area, plus the properties fronting Mary St, is fully developed, the internal detention system will need to accommodate 8,569m³. It is proposed to accommodate this within the existing lake and the current outflow channel located on Lot 63 and already protected by an easement.

Detailed calculations and designs would need to be carried out as part of the Urban Water Management Plan for each subdivision.

3.6 Education Facilities

Due to the small scale of this structure plan and the availability of education facilities elsewhere in the district, there are no such facilities proposed in this location.

3.7 Activity Centres and Employment

Due to the small scale of this structure plan and the availability of identified activity centres and employment in the district, there are no such facilities proposed in this location.

3.8 Infrastructure Coordination, Servicing and Staging

The subject is serviced with reticulated water, sewer and power. Enquiries with Alinta Gas reveal that reticulated gas is also available.

It is noted that some of the sewer infrastructure is located on private property. Enquiries with the Planning Branch of the Water Corporation (Mr B Coombs) reveal that this is acceptable and may remain so though subdivision. New sewerage infrastructure can be installed as needed through the usual subdivision process.

A very small length of water main is also located on private property (Lot 63). This will need to be removed when that lot is subdivided.

The Water Corporation also advise they will require an upgrade to the existing water main in Anthea St. This will need to be done when the first subdivision takes place.

Drainage infrastructure is discussed at 3.5 above and in more detail in the LWMS at Appendix 2.

Staging of the subdivision has not been determined at this point due to the fragmentation of land ownerships. However, the owners of Lot 65 are likely to be the first to subdivide.

3.9 Developer Contribution Arrangements

Developer contributions will be required in accordance with the City of Swan Hazelmere (Residential Areas) Drainage Improvement Reserve Fund (Policy POL-C-062). No additional developer contributions scheme exists or will be required as the provision of infrastructure will be managed through the subdivision process.

Property Address	Roads	POS	Drainage
37 West Pde	S.159	10% cash-in-lieu (201m ²)	To be connected into system in Lot 65 when subdivided
35 West Pde	S.159	10% cash-in-lieu (197m ²)	To be connected into system in Lot 65 when subdivided
33 West Pde	Std contrib. to West Pde upgrade	10% cash-in-lieu (170m ²)	Std subdivision req'ts
31 West Pde	Std contrib. to West Pde upgrade	10% cash-in-lieu (170m ²)	Std subdivision req'ts
29 West Pde	Std contrib. to Anthea St upgrade	10% cash-in-lieu (165m ²)	Std subdivision req'ts
27 West Pde	Std contrib. to Anthea St upgrade	10% cash-in-lieu (168m ²)	Std subdivision req'ts
25 West Pde	Std contrib. to West Pde upgrade	10% cash-in-lieu (174m ²)	Std subdivision req'ts
23 West Pde	Std contrib. to West Pde upgrade	10% cash-in-lieu (176m ²)	Std subdivision req'ts
3 Anthea St	Std contrib. to Anthea St upgrade	10% cash-in-lieu (272m ²)	Std subdivision req'ts
4 Anthea St	S.159	10% cash-in-lieu (238m ²)	To be connected into system in Lot 65 when subdivided
5 Anthea St	Std contrib. to Anthea St upgrade	10% cash-in-lieu (270m ²)	Std subdivision req'ts
6 Anthea St	S.159	10% cash-in-lieu (236m ²)	To be connected into system in Lot 65 when subdivided
7 Anthea St	Std contrib. to Anthea St upgrade	10% cash-in-lieu (259m ²)	Std subdivision req'ts
8 Anthea St	S.159	10% cash-in-lieu (226m ²)	To be connected into system in Lot 65 when subdivided

9 Anthea St	Std contrib. to Anthea St upgrade	10% cash-in-lieu (251m ²)	Std subdivision req'ts
10 Anthea St	S.159	10% cash-in-lieu (188m ²)	To be connected into system in Lot 65 when subdivided
11 Anthea St	Std contrib. to Anthea St upgrade	10% cash-in-lieu (268m ²)	Std subdivision req'ts
12 Anthea St	S.159 + standard truncation (17m ²)	10% cash-in-lieu (167m ²)	To be connected into system in Lot 65 when subdivided
13 Anthea St	Std contrib. to Anthea St upgrade	10% cash-in-lieu (245m ²)	Std subdivision req'ts
14 Anthea St	Subdivision road construct within lot (6,082m ²)	10% cash-in-lieu (1,833m ²)	Install new drainage within subdivision road reserve to accommodate all lots fronting road & upgrade drainage infrastructure connecting into existing POS basin
15 Anthea St	Subdivision road construct within lot (3,627m ²)	10% land (1,135m ²)	Install new drainage within subdivision road reserve to accommodate volumes from lots 204, 49 & 48 & Hazelmere Circus
16 Anthea St	Subdivision road construct within lot (3,461m ²)	10% land (1,029m ² *)	Provide & construct drain basins on lot (1,591m ²)
10 Hazelmere Circus	S.159 + standard truncation (18m ²)	10% cash-in-lieu (216m ²)	To be connected into system in Lot 59 when subdivided
8 Hazelmere Circus	S.159	10% cash-in-lieu (204m ²)	To be connected into system in Lot 59 when subdivided
6 Hazelmere Circus	Subdivision road construct within lot (3,315m ²)	10% cash-in-lieu (1,153m ² *)	Provide & construct drain basins on lot (1,987m ²). Install new drainage within road reserve to accommodate all lots fronting road
4 Hazelmere Circus	Std upgrade contrib. to Hazelmere Circus	10% cash-in-lieu (240m ²)	Std subdivision req'ts
2 Hazelmere Circus	Std upgrade contrib. to Hazelmere Circus	10% cash-in-lieu (242m ²)	Std subdivision req'ts
22 Hazelmere Circus	Subdivision road construct within lot	10% cash-in-lieu (430m ²)	Install new drainage within subdivision

	(1,089m ²)		road reserve to connect into Lot 59 when subdivided
4 Whitehall Rd	S.159	10% cash-in-lieu (200m ²)	To be connected into system in Lot 63 when subdivided
6 Whitehall Rd	Road widening (139m ²) & S.159	10% cash-in-lieu (200m ²)	To be connected into system in Lot 63 when subdivided
8 Whitehall Rd	S.159	10% cash-in-lieu (178m ²)	To be connected into system in Lot 63 when subdivided
10 Whitehall Rd	Rd widening (47m ²) & S.159	10% cash-in-lieu (181m ²)	To be connected into system in Lot 63 when subdivided

Notes

*Calculation excludes area required to be set aside as public utility (Drainage Reserve) consistent with WAPC DC 2.3

S.159 – Section 159 of the Planning and Development Act which provides for an original subdivider recovering a share of the cost of road construction from a later subdivider who benefits from the original subdividers road.

Standard drainage subdivision requirements include contribution to Hazelmere (Residential Areas) Drainage Improvement Reserve Fund.

The LWMS identifies that the existing drainage detention and storage for this area can accommodate the additional loads generated by all of the subdivision and development.

3.10 Other Requirements

Acoustic Assessment

Due to the proximity of the freight railway line on the western side of the site an acoustic assessment was carried out by Herring Storer Acoustics (Appendix 4). That assessment determined that the site would be affected by noise from the railway activity and, in order to achieve compliance with SPP 5.4, an acoustic wall will need to be constructed along the western perimeter of the LSP. Three height options are offered:

1. 4m high
2. 3.2m high with the homes backing onto the wall being constructed to “Quiet House” design package A
3. 2.2m high with the homes backing onto the wall being constructed to “Quiet House” design package B

Details of the design packages are provided in the Herring Storer report. The application of the selected option is proposed to be made at subdivision stage to enable the most effective solution available at the time to be applied.