



Shire of Mundaring Foothills Growth Strategy

Close to town, near to nature



Updates

Update No.	Purpose	Approved by	Date
1	Endorsement of Shire of Mundaring Foothills Growth Strategy by Council	Council	July 2017

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Glossary

Term/Expression	Definition
Draft Strategy	Draft Helena Valley Urban Expansion Strategy
Greenfield	Rezoning rural land to urban to facilitate residential/commercial development
High Density Residential Development	>R60
Low Density Residential Development	<R30
Medium Density Residential Development	R30-R60
Strategy	Shire of Mundaring Foothills Growth Strategy
Urban infill	Increasing the residential densities of existing Residential zoned lots

Acronym	Definition
ANEF	Australian Noise Exposure Forecast
DCP	Development Contribution Plan
DPaW	Department of Parks and Wildlife
LNA	Local Natural Area
LPS4	Shire of Mundaring's Local Planning Scheme No. 4
MRS	Metropolitan Region Scheme
POS	Public Open Space
WAPC	Western Australian Planning Commission

Sections

This **Strategy** contains the following sections:

Section	Purpose
Strategy Summary	Summarises what the Strategy intends to do, its status and implementation.
Vision	Explains driving ambition behind the Strategy .
Strategy Area	Description of the location to which the Strategy relates.
Strategy Area Map	Depiction of the Strategy area.
Context	Description of development occurring outside of the Strategy area.
Context Map	Depiction of development occurring outside of the Strategy area.
Background	Description of the technical planning history of the Strategy generally and Helena Valley specifically. Explores the related issues of development, amenity, bushfire risk and the environment and summarises the changes incorporated into the Strategy as a result of consultation.
What You Said & What We Did	Statistics on the feedback received during public consultation, including a series of tables summarising each submission and how the comments have been incorporated into the Strategy .
Shire of Mundaring Foothills Growth Strategy	A spatial plan summarising the precinct Strategies.

Section	Purpose
Shire of Mundaring Foothills Growth Strategy – Precinct Plans	The core component of the Strategy . A series of 11 maps identifying an individual precinct and the planning strategies related to it.
Implementation Milestones	A table explaining various tasks which need to be completed before development can occur.
Technical Appendices	Studies/reports which provide the technical basis for the Strategy .
References	Other documentation relevant to the Strategy .

Strategy Summary

Directions 2031, Draft Perth and Peel @ 3.5 Million and the Draft North-East Sub-Regional Planning Framework make provision for increasing residential densities in proximity to activity centres, public transport nodes and places of employment. Strategically, Bellevue and Helena Valley are ideally located to accommodate sustainable residential infill due to their proximity to Midland. The Draft North-East Sub-Regional Planning Framework also sets out the urban infill dwelling targets for Mundaring:

Local government	Dwelling target	Estimated population
Swan	25,687	56,511
Kalamunda	11,452	25,194
Mundaring	2,765	6,083
Total	39,904	87,788

The purpose of this **Strategy** is to achieve the dwelling infill targets set by the state planning framework and coordinate growth by balancing land capability and planning requirements with the interests, aspirations and requirements of various stakeholders.

The **Strategy** will inform the Shire when considering rezoning under the MRS and local planning scheme, structure plans, subdivision, development applications and operational works.

Actions are required to be undertaken prior to urban expansion occurring which have been set out in the section 'Implementation Milestones.' Once these have been completed, the Shire may then seriously consider rezoning, subdivision and development of properties within the **Strategy** area.

Vision

A strong, unifying vision for future growth is important to articulate the driving ambition of the **Strategy**.

One of the common themes that surfaced during the community engagement process was a strong desire to retain the natural environment and rural 'feel'. There was also a desire to optimise the location's proximity to Midland/Perth city. Most importantly, the community expects that when development does occur, it will not be a generic Perth suburb but one that 'fits into' and responds to the unique characteristics of the area - both in terms of design and impacts.

The following vision statement encapsulates these community aspirations:

“Close to town, near to nature”

Strategy Area

The **Strategy** area comprises approximately 300 hectares of land in Helena Valley and Bellevue bound by Katharine Street and Clayton Road to the north, the Shire of Kalamunda's municipal boundaries to the east, City of Swan's municipal boundaries to the south, Roe Highway to the west and excludes the majority of land already zoned Urban under the **MRS** - with the exception of the land around the Scott Street shops and the existing Park Home Park at 2340 (Lot 104) Helena Valley Road.

A map of the **Strategy** area is provided on page 10.

Predominant land uses include:

- rural lifestyle lots;
- vacant land;
- orchards;
- Park Home Parks; and
- residential properties

Large portions of the study area have been cleared as a result of historical farming. The key remaining environmental feature is the Helena River and associated floodplain/riparian area which bisects the study area into northern and southern halves.

There is a significant amount of **LNA** on the rural properties around Ridge Hill Road and two recognised Bush Forever sites – Helena River (Site No. 215) and Adelaide Crescent Bushland

(Site No. 216). Beelu National Park, Greenmount National Park and reserve are located to the east and serve environmental, geo-heritage and recreational functions.

Bushfire hazard levels are moderate around the Helena River and east of Scott Street, extreme where the land rises to form the Darling Ranges and low over the cleared lots backing onto the Helena River.

Major transport routes and corresponding Main Roads hierarchy include:

- Roe Highway (Primary Distributor);
- Helena Valley Road (Local Distributor);
- Scott Street/Ridge Hill Road (Regional Distributor); and
- Clayton Road (Distributor B).

Flight paths from Perth Airport's domestic terminal cover properties around the western end of Helena Valley Road and Bellevue. Restrictions are associated with the types of development which can occur within the **ANEF**.

Current and future residents in the location will benefit from the area's close proximity to Midland Strategic Metropolitan Centre / Hazelmere located approximately 1.5 kilometres to the west which offers a wide variety of educational and medical facilities, retail, entertainment and commercial outlets, public transport services, housing options and factories.



Strategy Area Map

Foothills Structure Plan Study Area



12/07/2017
Scale 1:20000



Context

The **Strategy** area sits within a rapidly changing urban context (refer to Context Map on page 13).

Residential development at the former Bushmead Rifle Range (City of Swan's Structure Plan SP17-039) will create approximately 522 residential lots when completed with primary access via Ridge Hill Road and Midland Road, ranging from **Low to Medium Density Residential Development**.

The City of Swan's Urban Housing Strategy (and associated Scheme Amendment 92) essentially doubles the subdivision potential of properties in Bellevue and Koongamia.

To the north-west, the Metropolitan Redevelopment Authority intends to progressively implement the Midland Master Plan through the statutory planning framework and similarly, the City of Swan with its Midland Activity Centre Masterplan. Provision is made in these documents for high density, mixed use development and the repositioning of Midland Station and its extension to Bellevue.

Closer to the study area, the **WAPC** resolved to approve Structure Plan 71 for the creation of approximately 60 residential lots and is yet to determine Amendment No. 6 to Local Planning Scheme No. 4 and Structure Plan 74 which, if approved, could result in the creation of approximately 350 residential lots. A section of Bellevue has been identified in the **LPS** for investigation into urban infill in the longer term.

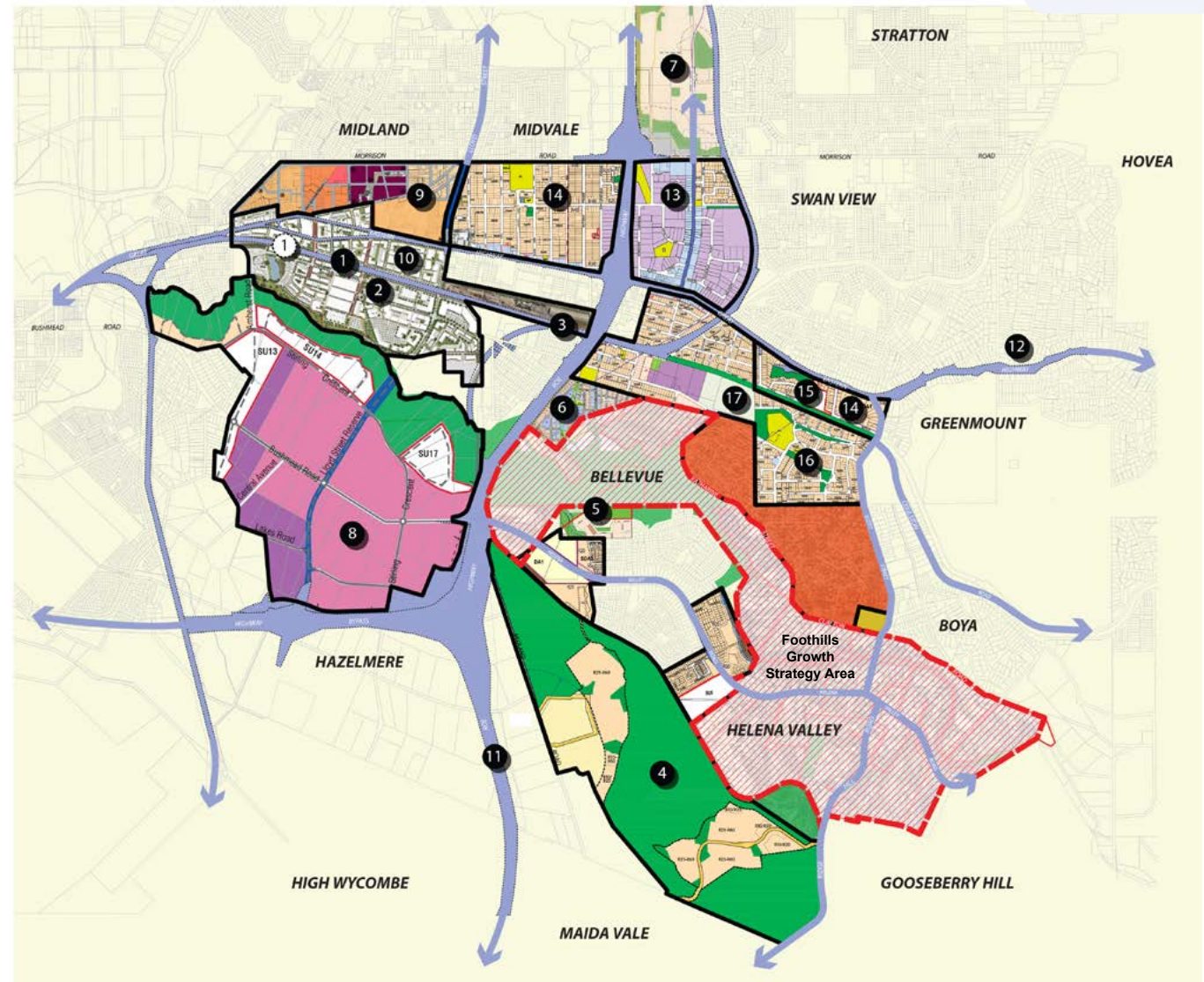
This **Strategy** intends to influence growth pressures experienced by both Helena Valley and Bellevue in a way which is coordinated, representative of the community and sustainable.

Conext Plan



Scale 1:7500

- Foothills Growth Strategy Area
- Major transport corridors
- Future residential infill investigation
- Boya Hub development
- Existing Parks and Recreation Reserve
- 1 Midland Train Station relocation (moving from 1)
- 2 St John of God Midland Public and Private Hospitals
- 3 Future Bellevue Train Station (indicative)
- 4 Structure Plan SP17-039 - Medium density residential (City of Swan)
- 5 Structure Plan 71 - Medium density residential
- 6 Structure Plan 74 - Medium density residential
- 7 Structure Plan SP17-042 - Medium / high density residential (City of Swan)
- 8 Hazelmere Enterprise Area District Structure Plan (City of Swan)
- 9 Midland Activity Centre Structure Plan (City of Swan)
 - Up to 12 Storeys
 - Up to 10 Storeys
 - Up to 6 Storeys
 - Up to 4 Storeys
- 10 Midland Master Plan - High density residential (Metropolitan Redevelopment Authority)
- 11 Roe Highway to be upgraded to a freeway standard
- 12 Great Eastern Highway to be upgraded to High Priority Public Transport Corridor
- 13 Midvale industrial area
- 14 Medium density residential
- 15 Regis Cypress Gardens Hospital upgrade
- 16 Urban Housing Strategy - Medium density residential (City of Swan)
- 17 147 unit development (City of Swan)



Scale 1 : 7500 @ A3

Background

Helena Valley

There is archaeological record of Aboriginal habitation around the Helena River some 29,000 years before the present (reference: Department of Aboriginal Affairs).

European exploration and settlement of Helena Valley commenced circa 1829 with commercial brickmaking and subdivision flourishing around the 1920s.

In 1963, based on the earlier Stephenson-Hepburn Plan (1955) for the Metropolitan Region, the **WAPC** released the first gazetted version of the **MRS** which identified the **Strategy** area as a Rural zone (refer to Figure 1).

In the 1970s, the **WAPC's** Corridor Plan was released which did not identify urban growth within the **Strategy** area.

When Council adopted Town Planning Scheme No. 1 in 1973, residential/educational zones of Helena Valley were confined to two cells – what is now the area bound by:

- Ridge Hill Road, Maguire Road and Helena Valley Road; and
- Helena Valley Road, the Crescent and Scott Street.

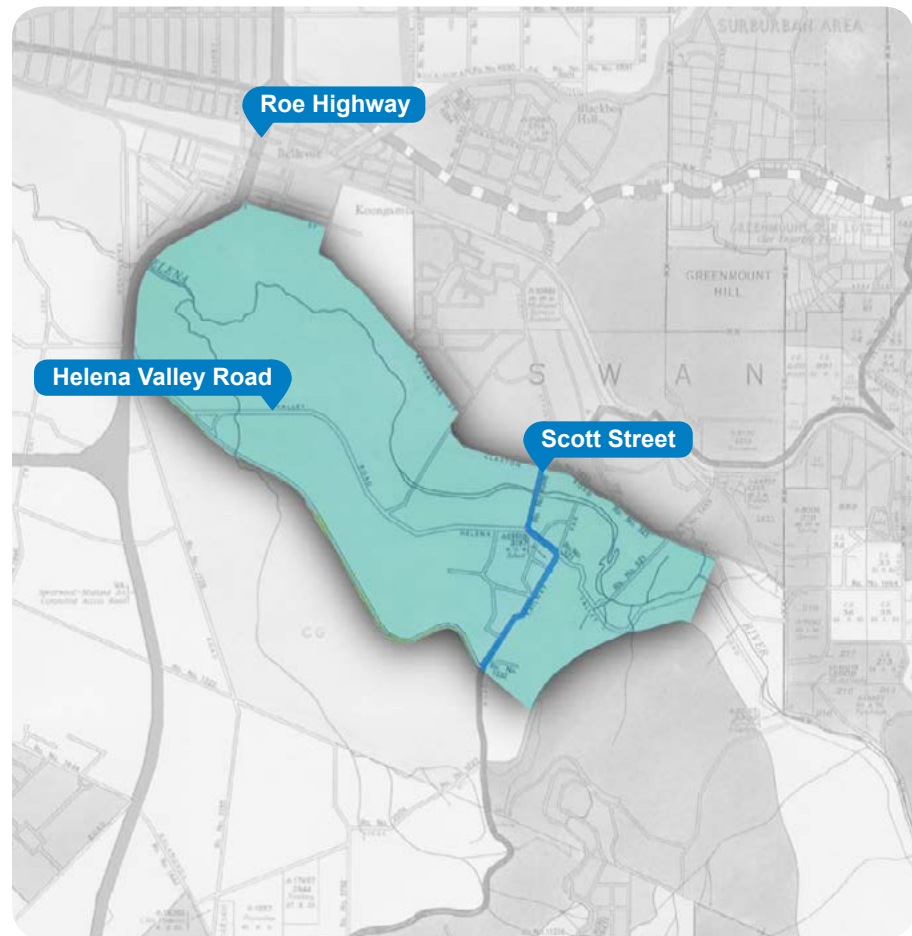


Figure 1 – 1963 **MRS**
(Approximate **Strategy** area shaded blue)

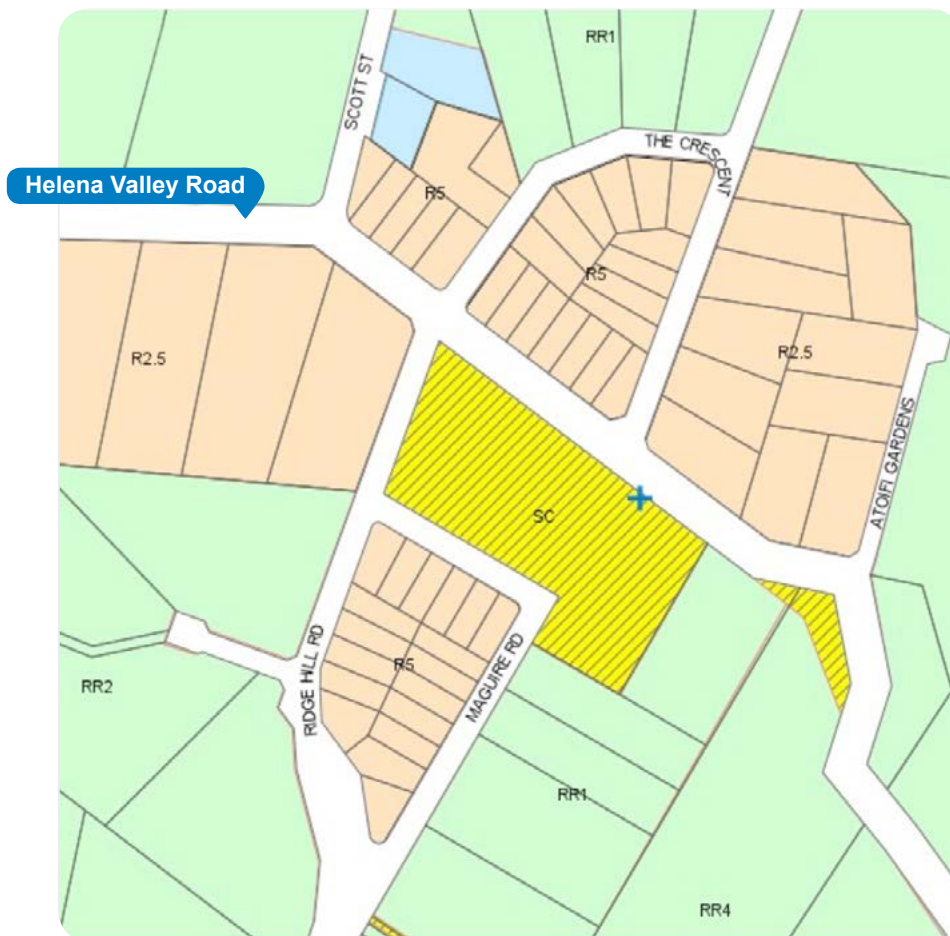


Figure 2 – location of Ridge Hill Road, Maguire Road, The Crescent, Scott Street and Helena Valley Road.

In 1978, the **WAPC** (then Metropolitan Region Planning Authority) prepared a regional study titled ‘Perth’s Eastern Corridor’ which was the basis of the Helena Valley / Boya Structure Plan prepared in 1982.

This study subsequently informed the 1984 “MRPA (**WAPC**) Policy 7: Eastern Corridor” and set out a Preferred Strategy for growth in the Eastern Corridor.

After the release of the Eastern Corridor Major Roads Study in 1988, a review of the Corridor Plan and **MRS** was undertaken which incorporated strategies for urban expansion, locations of employment and activity centres, a metropolitan park system and a strategy for rural non-urban areas.

The only part of the Shire designated “proposed Future Urban” was a small section of Helena Valley now forming the residential areas around Lakeside Drive and Riverdale Road/ Torquata Boulevard (orange section in Figure 3).

The **WAPC’s** Foothills Structure Plan (1992) made provision for future urban growth in Helena Valley between the existing Urban zones under the **MRS** and “Landscape Protection” areas – refer to Figure 3.

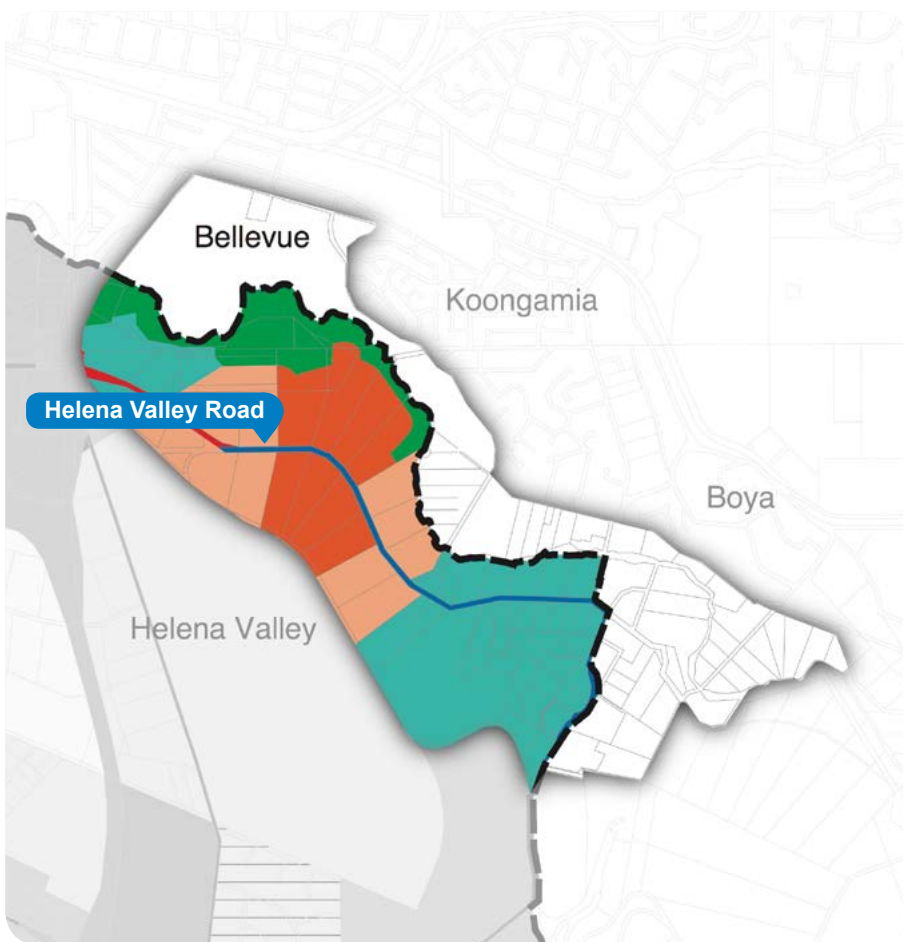


Figure 3 – 1992 Foothills Structure Plan (Urban zone coloured orange, Future Urban location coloured beige, Landscape Protection location coloured blue and approximate **Strategy** area outlined above).

This was followed by the 1994 North-East Corridor Structure Plan which did not identify any Future Urban locations with the majority being identified for “Escarpment Landscape Protection” – as per Figure 4.

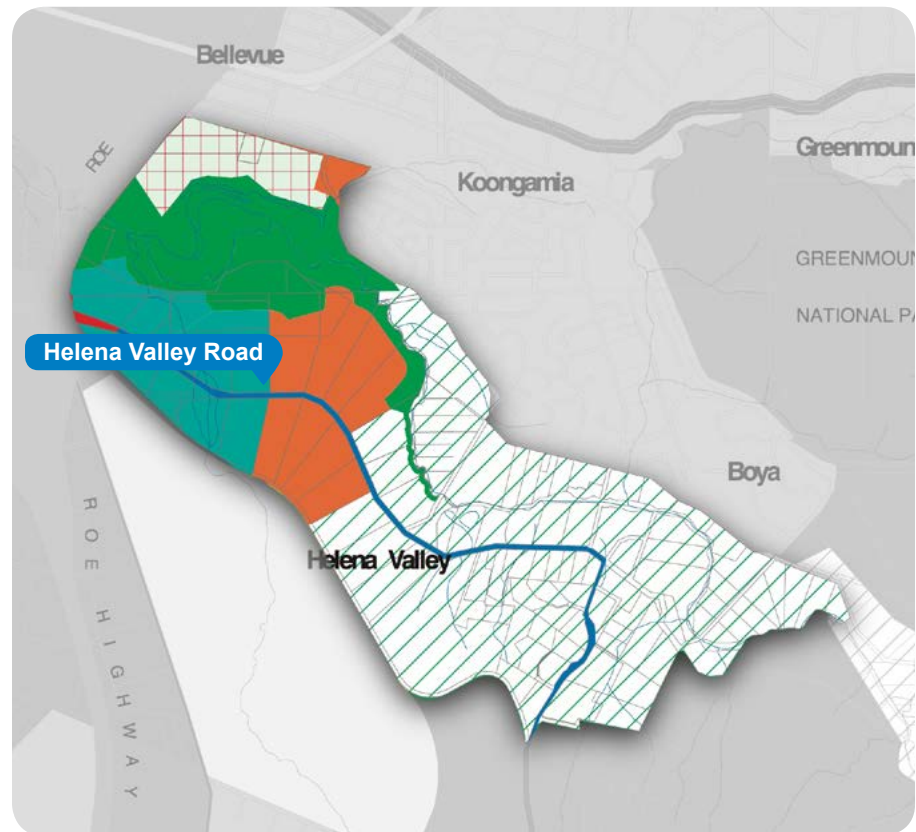


Figure 4 – 1994 North-East Corridor Structure Plan. Approximate Strategy area outlined above.

In 1994, the Shire’s Town Planning Scheme No. 3 was gazetted which showed zones conforming to the 1994 North-East Corridor Structure Plan. Since gazettal, the **MRS** has progressively been amended to align more to the 1992 Foothills Structure Plan, as shown in Figure 5.

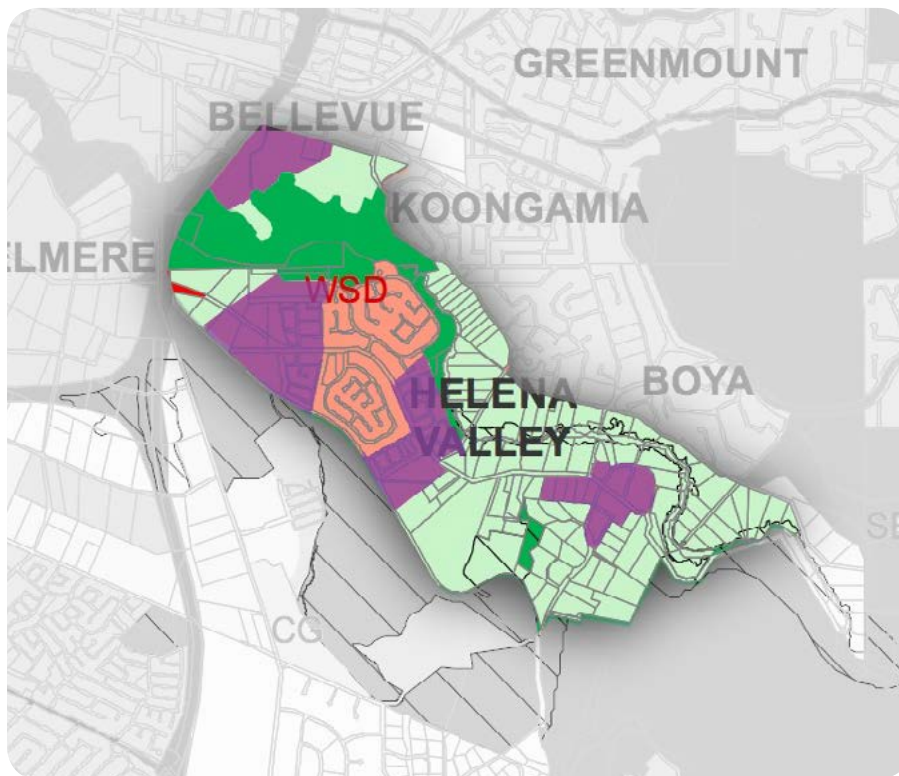


Figure 5 – Current **MRS**. Approximate **Strategy** area outlined in colour. **MRS** Urban zones expanded subsequent to 1994 North-East Corridor Structure Plan shown in purple.

The MRS amendments shown darkened in **Figure 4** are:

MRS Amendment Number	Title	Gazettal date
924/33A	(No title)	8 December 1993
1044/33	Addition to Urban Zoning in Helena Valley	4 March 2004
1053/33A	Eastern Districts Omnibus No. 6	8 June 2004
1160/41	Helena Valley Precinct	17 November 2009
1228/41	Bellevue Urban Precinct	15 May 2015

Historical development in Helena Valley has been incremental and guided by a series of state and local strategies which identify the unique landscape and environment as a defining feature. The **Strategy** maintains the central importance of the environment and links a comprehensive plan of urban growth to the protection and improvement of the natural environment.

Local Planning Strategy

In 2013, the **WAPC** adopted the Shire's Local Planning Strategy. The Local Planning Strategy was prepared to provide the rationale for **LPS4** (gazetted in 2014) which replaces Town Planning Scheme No. 3.

The purpose of the Local Planning Strategy is to:

...set out the long term planning directions for the Shire and to guide land use planning within the Shire over the next ten to fifteen years. (p.1)

In specific reference to Helena Valley, the Local Planning Strategy states:

Investigate the potential for closer subdivision, either residential or special residential (which would also require amendment of the MRS) or smaller- lot rural residential for land north and south of Helena Valley Road, between the two existing areas of MRS Urban zoned land, but having strong regard for landscape protection, floodplain management and protection of watercourses traversing the area. (p. 421)

And

Land between the area rezoned to Urban in MRS Amendment 1160/41 and the smaller residential area to the east, around the intersection of Helena Valley and Ridge Hills Roads, is identified in the Foothills Structure Plan as Landscape Protection, effectively a rural buffer which may include rural residential subdivision and use... However, it is now appropriate to review this position, in light of the now recognised need to promote a more compact form of urban development at the metropolitan level. Parts of this landscape buffer may be able to accommodate more development (residential or rural residential), while still retaining some buffer to protect landscape and environmental values.

The **Strategy** has been prepared pursuant to this objective.

Bellevue

There is a strategy within the Local Planning Strategy related specifically to urban infill in Bellevue:

In the longer term, consider the possibility of increasing residential densities throughout the area of Helena Valley north of Clayton Road and Katharine Street, subject to the extension of infill sewerage and addressing environmental constraints

This area has been excluded from the **Strategy** for the following reasons:

1. It is identified as a longer term strategy by the Local Planning Strategy; and
2. Urban infill is a far more complex and detailed than greenfield development, primarily due to:
 - Increasing the capacity of existing utilities;
 - Sequencing of development where there are multiple landowners; and
 - The preparation of a plan which equitably distributes costs and development potential.

An area of Bellevue/Helena Valley not identified in the Local Planning Strategy (Precinct 11) has been included in the **Strategy** area. Development in this location was formerly

constrained by the **ANEF** which has since contracted, enabling development to be considered (see Figure 6).



Figure 6 – Precinct 11 highlighted

Draft North-East Sub-Regional Planning Framework

In 2015, the **WAPC** released the Draft North-East Sub-Regional Planning Framework for public comment.

The purpose of the Draft North-East Sub-Regional Planning Framework is to:

...be used by local governments to inform local planning strategies and schemes governing land uses and by the State Government and service providers to assist in the timely and efficient provision of infrastructure and services.

The main challenge being addressed by the Draft North-East Sub-Regional Planning Frameworks is put in the following terms:

The frameworks build upon the principles of Directions 2031 and Beyond: Metropolitan Planning Beyond the Horizon and are key instruments for achieving a more consolidated urban form that will reduce dependence on new urban greenfield developments to accommodate the anticipated population growth by increasing residential density and urban infill development targets.

The frameworks have been prepared utilising economic modelling based on the overall urban growth scenario for a city of 3.5 million. The frameworks will be finalised as sub-regional structure plans...

For background, the Stephenson-Hepburn Plan 1955 and the Corridor Plan were precursors to Directions 2031 with effectively the same intent of providing a strategic growth plan for Perth.

The “consolidated urban form” is based on a general benchmark of all new residential developments achieving a density of Residential R30 (average of 300m² per lot).

Importantly, the plan forming the basis of the Draft North-East Sub-Regional Planning Framework does not identify the **Strategy** area for urban expansion/investigation i.e. it is inconsistent with the Local Planning Strategy.

The Shire made a submission to the **WAPC** to amend the Draft North-East Sub-Regional Planning Framework to include the **Strategy** study area for urban expansion/investigation, consistent with the Local Planning Strategy.

The Draft North-East Sub-Regional Planning Frameworks have not, at the time of writing, been finalised by the **WAPC** as structure plans.

Therefore, the Shire has taken a precautionary approach in preparing this **Strategy** by recognising that there are dual risks associated with over-planning for growth where growth is not a certainty and being under-prepared for growth should it be allowed.

The **Strategy** is considered a prudent, precautionary step forward within the uncertainties of the broader planning context.

Transport @ 3.5 Million

Transport @ 3.5 Million is the State Government's long-term plan for transport infrastructure prepared by an inter-government Steering Committee comprising senior executives from:

- Department of Transport;
- **WAPC**;
- Department of Planning;
- Main Roads WA;
- Public Transport Authority; and
- Department of Premier and Cabinet.

Of relevance to the **Strategy** area is a plan to extend the Midland passenger rail line to Bellevue when Perth's population reaches 2.7 million and upgrading the Roe Highway to a freeway standard.

Both of these changes have implications for land use, design and density in the **Strategy** area. Higher residential densities with a mixture of commercial and retail development are encouraged around train stations. Since the **Strategy** area is located approximately 500 metres to the south-east of the future Bellevue train station, this area has been identified as one where higher density development should be considered.

Current situation

This history of piecemeal rezoning and subsequent subdivision/development has created issues in the locality, including: disconnected urban cells, inconsistent decision-making regarding urban design and environmental protection, traffic congestion and lack of community engagement.

However, there are also elements in the locality which are highly desirable: proximity to Perth and Midland, availability of services and infrastructure, natural bushland and trees, and the bucolic scenery and lifestyle.

The **Strategy** directly addresses negative legacy issues and builds upon positive aspects to ensure that growth is consistent, co-ordinated, representative of the public's common interests and is commensurate with local identity.

The Shire's current view with regards to development is consistent with that set out in the Town Planning Scheme No. 3 Scheme Report:

The foothills component in the Shire is in a strategic location and provides a central focus to both the coastal plain and the hills. In view of this, the interface between development in these two areas should be complementary and sensitive to the local environment.

Investigations

Planning for district-level growth is highly complex as there are many interrelated questions and factors to consider, for example:

Should development be allowed?

If land is capable of being developed, at what residential density should this be? What will be the resulting pressure put on road networks, public facilities, utilities and shops if growth occurs?

What technical studies are needed to test assumptions, demonstrate impacts and justify suitable management methods?

Will residential densities be suitable to extend basic utilities from current locations and what is the relationship between density and environmental sustainability in the long-term?

What environmental protection measures exist and when and how are these best implemented?

*How can the diverse views of the community (specific and general) be balanced with each other, with technical land development requirements and then meaningfully used to inform and refine the **Strategy**?*

*What changes are proposed to local/metropolitan planning and other government requirements, when will these occur, how are they likely to affect the **Strategy** and how can these be incorporated?*

Below is a timeline of investigations undertaken to inform the **Strategy**. The Implementation Milestones of the **Strategy** recommend that some of these studies be updated and others prepared prior to rezoning/development.

Year	Study
2012	Preliminary issues scoping
2013	Land Use Study commissioned – refer to Appendix 3
2014	Studies deferred as part of local government reform
2015	Traffic and Land Use Study commissioned – refer to Appendix 4 Landowner workshops held for each Precinct
2016	Council resolves to adopt Draft Strategy – refer to Appendix 5
2016/2017	Draft Strategy advertised for public comment
2017	Foreshore Vision Plan prepared - refer to Appendix 2



Figure 7 – Summary of work used to inform the **Strategy**

Precincts

The **Strategy** area has been divided into 11 separate precinct areas, each with their own set of strategies.

The precinct areas were selected based on common factors affecting the properties. A brief description of each precinct and the common factors is provided in the table below:

Precinct	Factors
1	A significant proportion of the properties are affected by the floodplain of the Helena River
2	The properties have frontage to Samson Street and Samson Place. The rear of the properties are affected by the floodplain of the Helena River and some are used for agricultural/rural pursuits. Lots tend to be long and narrow which require coordination should development occur.
3	Properties have frontage to Clayton Road and back steeply onto the Helena River. Lots tend to be long and narrow which require coordination as development occurs. Clayton Farm is incorporated into the precinct to ensure that heritage places are recognised, protected and improved as development occurs.
4	Properties have frontage to Helena Valley Road and back onto the Helena River. There is a desire to ensure that the form of development in this location is to a high standard and appropriately interfaces with Helena Valley Road.
5	Location identified as an appropriate and logical expansion of an existing Park Home Park.

6	A single, large property for which the Local Planning Strategy makes specific provision. The site contains two watercourses, a Bush Forever site and cleared land in the south-west of the lot with close proximity and opportunity to integrate with residential development on Lot 911 Midland Road, Hazelmere.
7	A grouping of properties of diverse sizes and configurations, without significant vegetation cover, which front Helena Valley Road and abut Bush Forever sites. A Western Power easement also transects the properties. Scope exists for a coordinated design response to these factors.
8	Rural properties, a large proportion of which are covered by Protection category Local Natural Area, associated 'Extreme' Bushfire Hazard level on moderate to steeply sloping topography.
9	A precinct with an existing residential/commercial 'core' with fringing rural properties largely cleared of vegetation and abutting the Helena River. Being at the junction of Helena Valley Road, Scott Street and Clayton Road (all Important Local Roads) and containing existing residential properties/civic/educational uses lends the location to more detailed precinct planning with the possibility of creating a village.
10	A collection of rural zoned properties abutting the Helena River, some being used for orchards. A large proportion of properties in the western section of the precinct are covered by floodplain with Protection category Local Natural Area affecting the eastern section of the precinct.
11	<p>A rural zoned area of the Shire formerly entirely covered by the 25-30 ANEF. The Local Planning Strategy makes specific provision for this location:</p> <p><i>Investigate potential rezoning of land north and south of Helena Valley Road and within the ANEF 25 contour from Rural to Urban under the MRS, to accommodate service commercial and light industry uses suitable for a mixed business precinct that are consistent with State Planning Policy 5.1 Land Use Planning in the Vicinity of Perth Airport and to provide development which is of a high quality design to provide an attractive entrance to Helena Valley</i></p> <p>Interface with Helena Valley Road and the Parks and Recreation Reserve around the Helena River and integration with planned residential development are common factors.</p>

Each precinct strategy includes:

- A map of the precinct in relation to the wider Bellevue/ Helena Valley area;
- A list of known factors affecting the land. Investigations undertaken at more detailed levels of planning are likely to uncover factors not listed;
- A description of the **MRS** and **LPS4** zones and approximate area of the precinct;
- The strategies related to the precinct include matters such as: design objectives, study requirements and protection of certain environmental features, land uses and heritage elements. These have been drawn from and intend to reinforce and reflect planning objectives and stakeholder aspirations, a summary of which is provided in Appendix 1.

Workshops

In August and September 2015, workshops were held with landowners within the **Strategy** area. The purpose of these focus group sessions was to more deeply understand the aspirations of different property owners within the **Strategy** area and, what they liked about Helena Valley and what could be improved.

Feedback from the workshops was important for a number of reasons. It allowed the Shire to understand what aspects of amenity are important to people living in Helena Valley, what appetite there is for landowners to develop their properties and where gaps exist in terms of shops, facilities, services, urban design, infrastructure networks, environmental assets and its management.



Common interests included the protection of significant environmental features, management of traffic, protection of rural lifestyle and ensuring that urban design and development is of a high quality and fits within the current setting. There were different development intentions with some landowners keen to develop their properties and others passionate that no further development should occur.

Matters raised helped define the scope of the **Strategy** and, in some cases, were directly implemented as precinct strategies. As with most planning strategies, landowner aspirations were reconciled with planning requirements in the **Draft Strategy** before it was publicly advertised.

Information and invitations to comment on the **Draft Strategy** was also made available in the Shire's kiosk at the Darlington Arts Festival.



Main Changes

The following changes have been incorporated into the **Strategy** following public consultation:

1. Compilation of the **Strategy** into a stand-alone document.
2. Inclusion of a vision statement: “Close to town, near to nature.”
3. Inclusion of Implementation Milestones to identify steps involved prior to considering **MRS**/local planning scheme amendment requests.
4. Replacement of specific R-Codes in strategies with density ‘bands’ to provide for greater flexibility and responsiveness in design – expressed in the following terms:
 - **Low Density Residential Development**
 - **Medium Density Residential Development**
 - **High Density Residential Development**
5. Minor reconfiguration of some of the Precincts shown in the **Draft Strategy**
6. Inclusion of a Helena Valley Foreshore Vision Plan (refer to Appendix 2) to better illustrate the possibilities for public open space, including the recognition for ongoing development of this concept with the community.
7. The expectation that a Helena River Reserve Development and Management Strategy be prepared for the collaborative management of the Helena River foreshore reserve.
8. Requirement to discuss water management at different planning stages.
9. Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.
10. Development contributions position paper to be prepared.
11. Additional strategies have been included to better protect and enhance the landscape and vegetation characteristics along Helena Valley Road

What You Said & What We Did

69

submissions were made on the **Draft Strategy**.

Appendix 1 demonstrates how feedback received during the advertising period has meaningfully shaped the contents of the **Strategy**. In this way the public and Council may be assured that future decision-making, in accordance with the **Strategy**, will represent a cross-section of views. The feedback also brings a level of community ownership to the **Strategy**, its implementation and outcomes.

In most instances, recommendations were able to be accommodated. There were some recommendations which could not be supported as they would serve to undermine the wider public interest and/or the tenet of 'orderly and proper planning'.

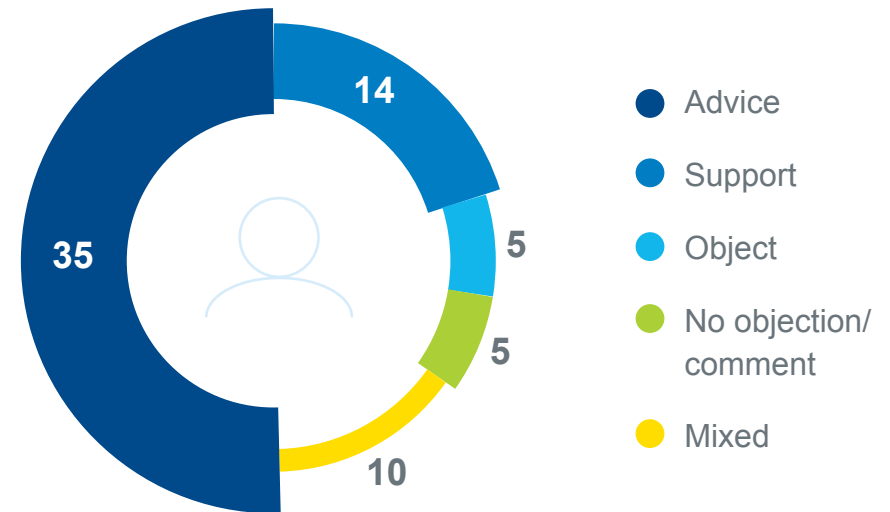
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submissions contained advice which indicates community engagement and participation was successful.

Of the **5** submissions which objected to the **Strategy**,

4

resulted in refinements being made to the **Strategy**, the other objection was responded to with advice.



Total 69

Helena Valley Estate Ratepayers' Association meeting

Shire officers met with Councillors and residents at the Helena Valley Estate Ratepayers' Association meeting on 6 February 2017.

Opposition was expressed regarding:

- Lack of recreation spaces;
- Lack of schools; and
- Loss of amenity and vegetation brought about by road upgrades, a growing population and residential development.

Officers conveyed that it was the explicit intention of the **Draft Strategy** and the final **Strategy** to deliver a vision for the locality which includes:

- Public parkland around the Helena River for environmental protection and passive recreation (e.g. walking and cycling);
- Active recreation space (e.g. for organised sports such as football and cricket) in proximity to 500 (Lot 799) Katharine Street, Bellevue;
- Appropriately located and designed residential development at a density suitable to accommodate a growing population;

- A requirement for a school/s depending on advice from the Department of Education;
- A high quality of urban design which incorporates tree protection, verge trees amongst medium/high density development;
- Land which is not proposed for further rezoning/minimal subdivision potential to preserve existing amenity and respond to environmental factors; and
- Infrastructure upgrades and the provision of facilities eg shops, district recreation grounds

It was also expressed that the impacts of a growing population (e.g. more traffic) would be felt whether or not urban development occurred in Helena Valley as a result of development outside of the district e.g. Koongamia, Hazelmere, Midland and parts of Bellevue. Additionally, that the **Strategy** is intended as a proactive step required to respond to this change in a coordinated, representative and sustainable way.

The sentiment at the conclusion of the meeting differed somewhat from that at the beginning. In particular, the general view was that:

- Population growth is inevitable and should be managed;
- The **Draft Strategy/Strategy** is a useful management tool;

-
- There is a strong desire to keep Helena Valley ‘green’ ie trees retained and plenty of street trees in new subdivisions;
 - There is a strong desire to avoid the mistakes of the past e.g. small lots in disconnected urban cells with no trees retained/planted;
 - There is uncertainty about what constitutes ‘high’, ‘medium’ and ‘low’ density development;
 - There is recognition that density development is not necessarily opposed if it is done well eg Park Home Park on southern side of Helena Valley Road; and
 - There are potential benefits if development does occur eg recreation spaces, environmental protection, emergency accesses, footpaths, cycle paths and so on.

There was still an amount of unease about the idea of urban growth in Helena Valley and the impacts it may have, but also recognition that the **Strategy’s** intention is a positive one – to harness and direct growth rather than to avoid it and be subject to the effects of externally-generated growth pressures.

The challenge

Development, amenity (local identity), bushfire risk and the environment are interrelated issues, with often opposing objectives, which intersect in Helena Valley/Bellevue.

Historically, development involved wholesale destruction of the natural environment and with it, biodiversity and a sense of place. Modern planning practise, however, recognises that development can and should enhance the environment and deliver forms of development which are visually interesting and suit the environment in which it sits.

It is this latter perspective that the **Strategy** embraces.

The **Strategy** recognises that development adjoining the Helena River could deliver ongoing protection and management of the foreshore in perpetuity which is important for environmental, social and economic health.

The **Strategy** also recognises that Perth’s population is growing and this growth needs to be managed proactively rather than reacted to on an ad hoc basis. The **Strategy** recommends appropriate zoning and precinct planning to deliver urban forms – both residential and commercial - which are unique and interesting rather than generic.

The **Strategy** recognises the environment and its natural processes are to be respected. Bushfire risk is a well-known factor of the Australian environment.

By directing growth to areas that are less bushfire prone and making provision for the further study of this factor in planning and development, it simultaneously protects the environment, mitigates bushfire risk (ie bushfire prone areas contain dense vegetation and generally high biodiversity) and aims to improve current bushfire safety levels.

The **Strategy** aims to deliver a framework which results in environmentally responsive development, high quality urban design, appropriate spaces for conservation and recreation and ongoing management of traffic, development sequencing and public places.

The Foreshore Vision Plan in Appendix 2 demonstrates how urban expansion could lead to the creation of reserve around the Helena River and be developed to simultaneously cater for recreational needs and deliver environmental benefits.

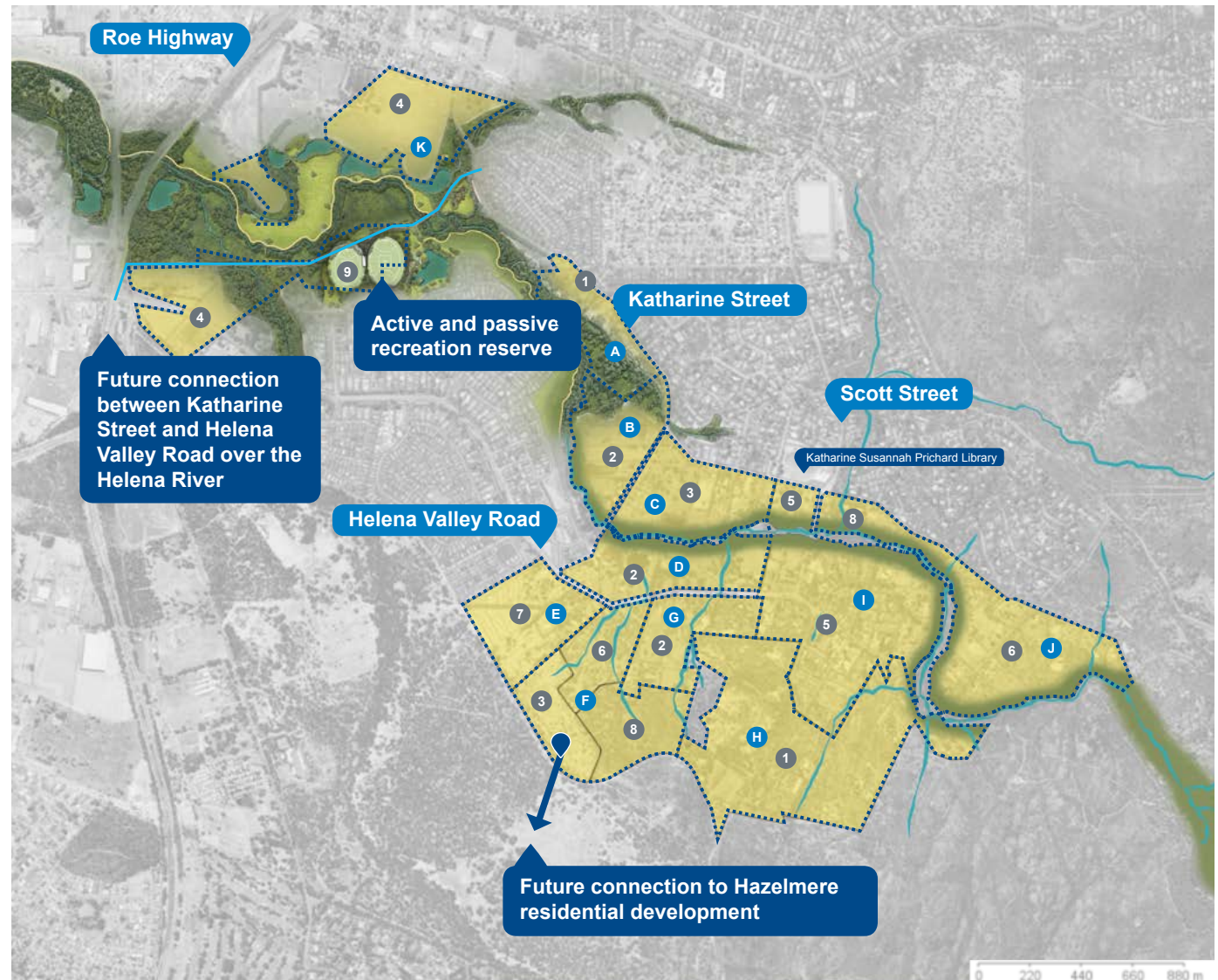
Also acknowledged is that the effects of growth will be felt whether or not urban expansion occurs as a result of development outside of the district. It is therefore imperative that this growth is proactively managed.

Shire of Mundaring Foothills Growth Strategy

Strategy Summary

- 1 Retain rural lifestyle lots
- 2 Low to Medium Density Residential Development
- 3 Medium Density Residential Development
- 4 Medium Density Residential Development and commercial mix
- 5 Medium to High Residential Density and commercial mix detailed precinct plan required
- 6 Limited rural subdivision
- 7 Park Home Park extension
- 8 New regional reservation
- 9 District recreation grounds

- A Precinct 1
- B Precinct 2
- C Precinct 3
- D Precinct 4
- E Precinct 5
- F Precinct 6
- G Precinct 7
- H Precinct 8
- I Precinct 9
- J Precinct 10
- K Precinct 11



Shire of Mundaring Foothills Growth Strategy - Precinct Strategies

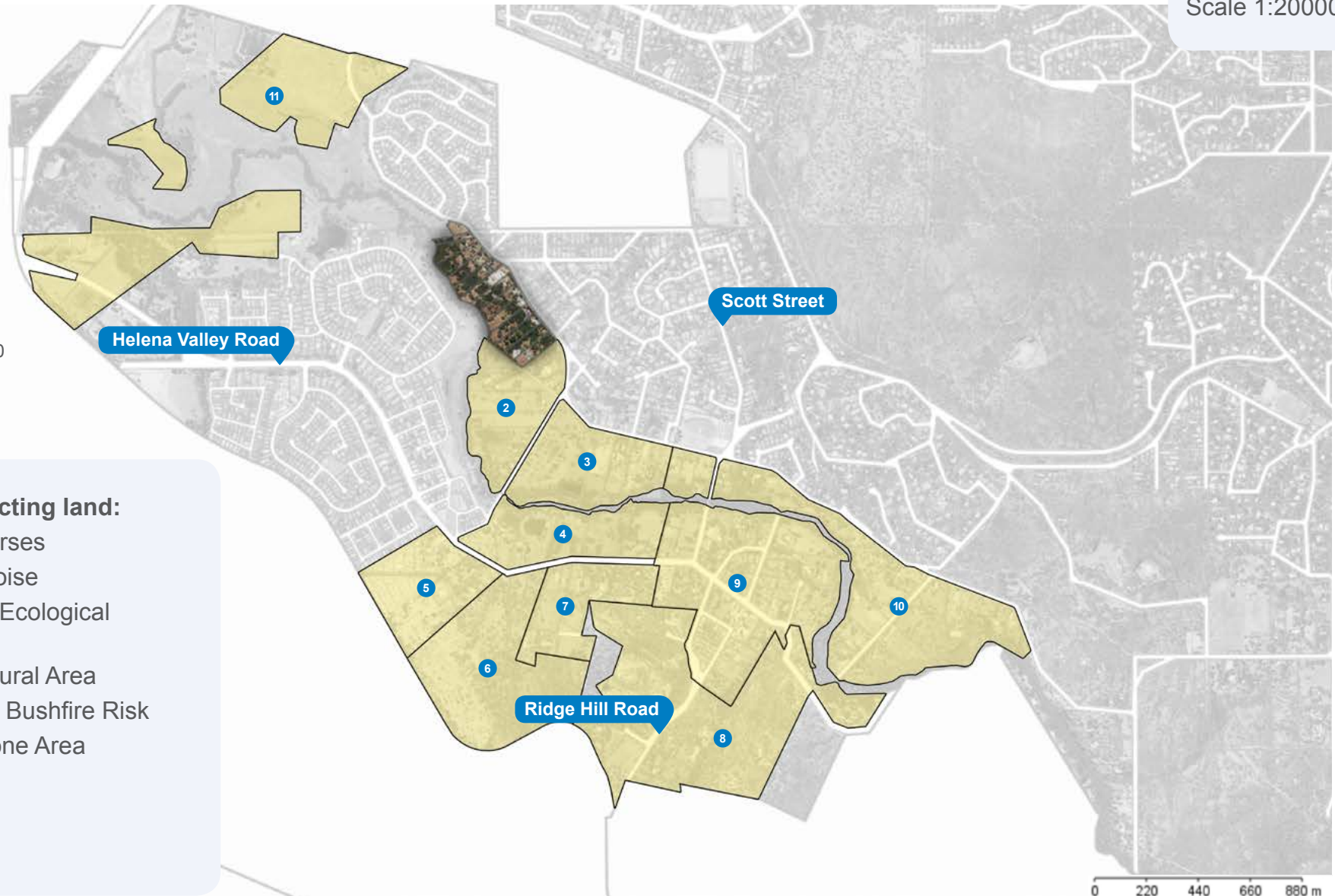
Precinct 1

Precinct 1 - Location



12/07/2017
Scale 1:20000

- 2 Precinct 2
- 3 Precinct 3
- 4 Precinct 4
- 5 Precinct 5
- 6 Precinct 6
- 7 Precinct 7
- 8 Precinct 8
- 9 Precinct 9
- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Watercourses
- Aircraft noise
- Regional Ecological Linkage
- Local Natural Area
- Moderate Bushfire Risk
- Flood Prone Area
- Heritage

Precinct 1 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 2

Approximate area: 14 hectares

Strategy:

To protect rural amenity, the environment and in response to the presence of Flood Prone Area, retain Rural zone under the **MRS** and do not support rezoning for closer subdivision under **LPS4**.

Precinct 1 – Strategies



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Scale 1:4000





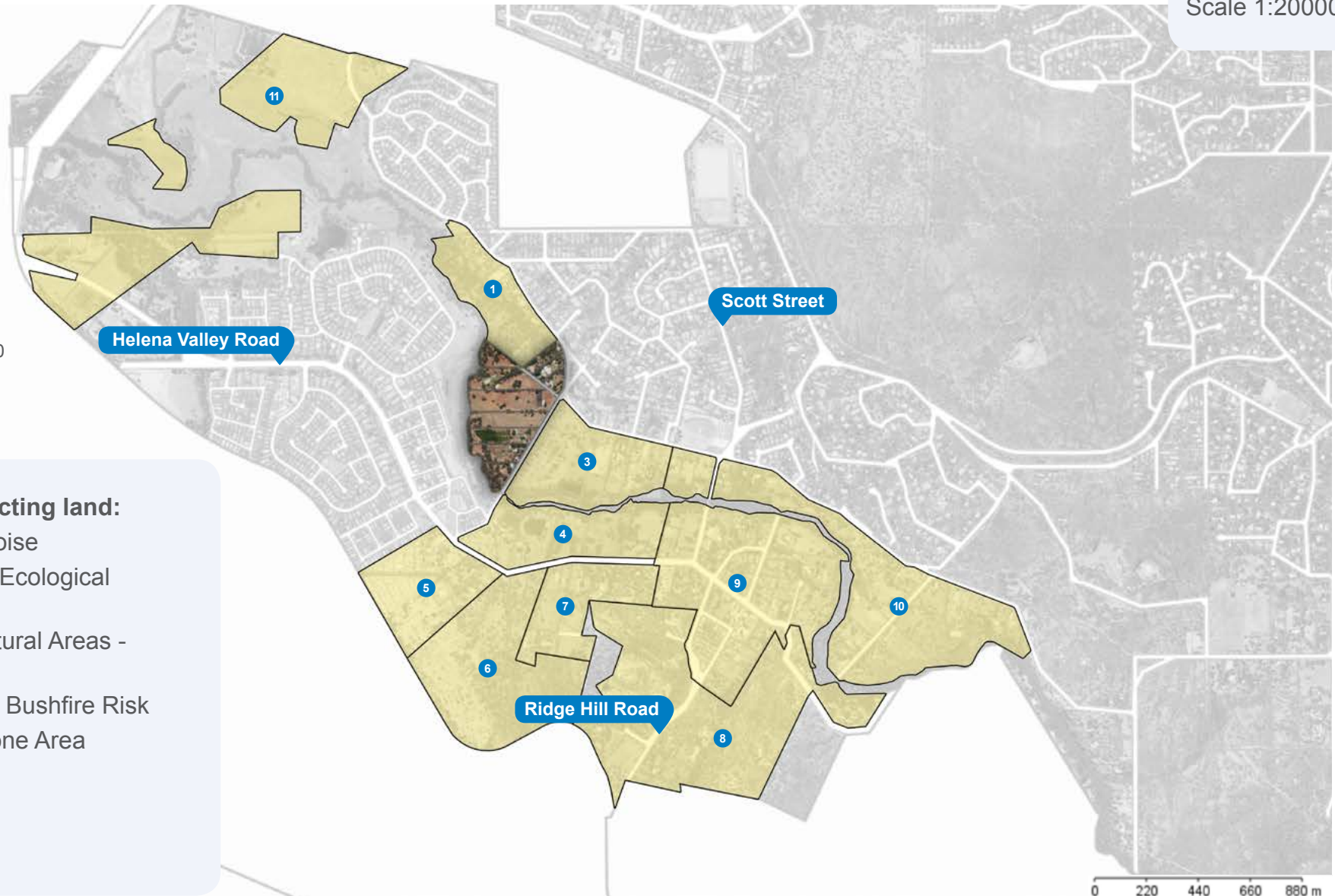
Precinct 2

Precinct 2 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
- 3 Precinct 3
- 4 Precinct 4
- 5 Precinct 5
- 6 Precinct 6
- 7 Precinct 7
- 8 Precinct 8
- 9 Precinct 9
- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Aircraft noise
- Regional Ecological Linkage
- Other Natural Areas - Protected
- Moderate Bushfire Risk
- Flood Prone Area
- Heritage

Precinct 2 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 2

Approximate area: 17 hectares

Strategy:

Investigate rezoning to Urban under the **MRS** and **Low to Medium Density Residential Development** under **LPS4** subject to the following – demonstration:

- of the extent of the flood prone area through appropriate environmental investigation and a commitment being made to cede this land as Parks and Recreation Reserve;
- that bushfire risk can be suitably addressed;
- that heritage features can be suitably protected; and
- that existing agricultural land uses will not be detrimentally affected by subdivision/development.

Subdivision design and development should:

- Result in the ceding of land along the Helena River as reserve;
- Integrate with existing/proposed development and maintain view corridors/facilitate access to the Helena River;
- Retain existing trees and incorporate verge trees;
- Consider on-street parking;
- Limit alteration to the natural topography;
- In relation to residences, front Samson Street and Samson

Place;

- Protect existing agricultural land uses from detrimental impacts;
- Provide passive surveillance onto streets and reserves;
- Consider augmenting **POS** with foreshore reserve;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan;
- Comply with an adopted Helena River Reserve Development and Management Strategy;
- Demonstrate that installation of utilities does not prejudice future development.

Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Precinct 2 – Strategies



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Scale 1:4000





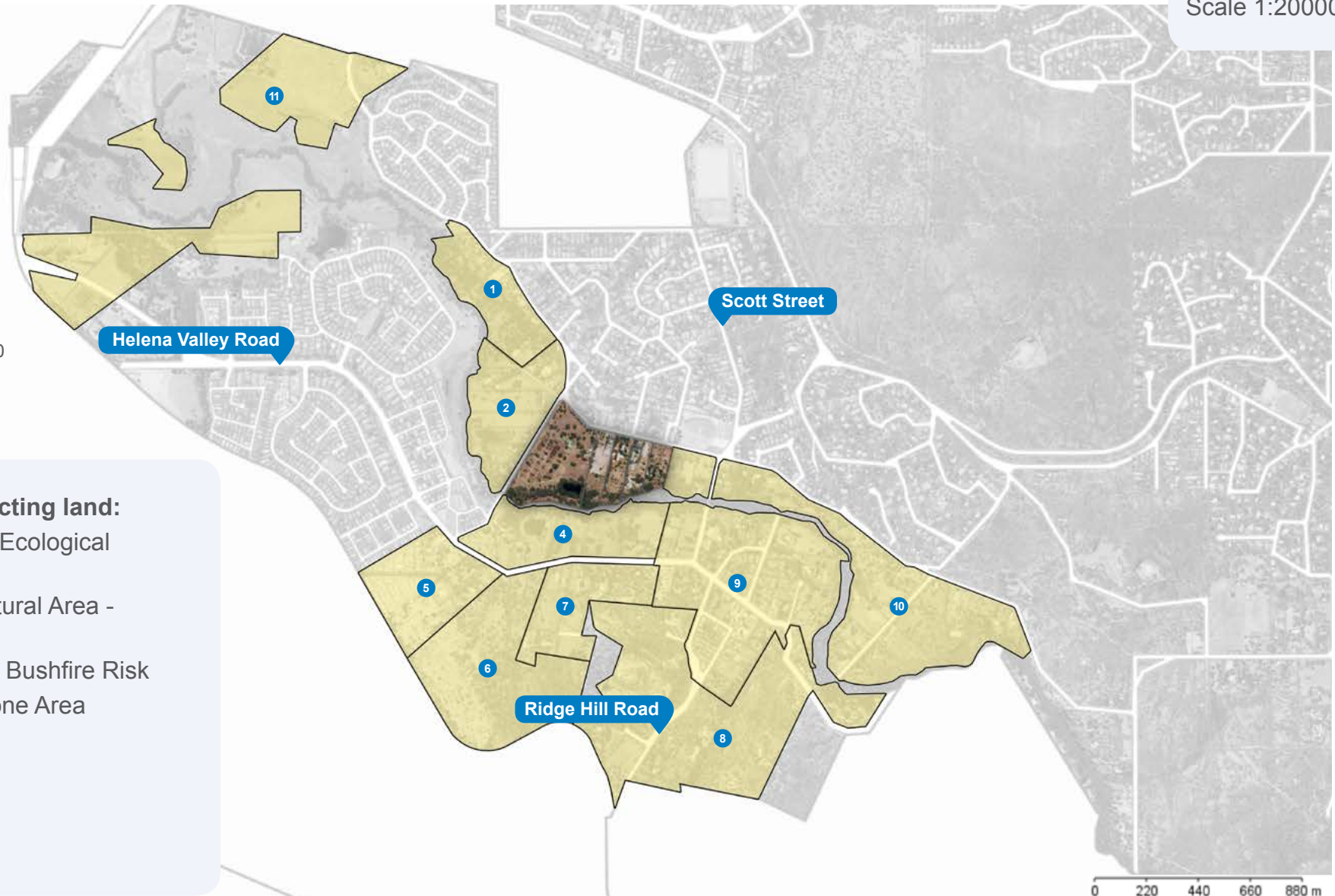
Precinct 3

Precinct 3 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
- 2 Precinct 2
- 4 Precinct 4
- 5 Precinct 5
- 6 Precinct 6
- 7 Precinct 7
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- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Regional Ecological Linkage
- Other Natural Area - Protected
- Moderate Bushfire Risk
- Flood Prone Area
- Heritage

Precinct 3 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 2
Rural Smallholdings 10

Approximate area: 19.5 hectares

Strategy:

Investigate rezoning to Urban under the **MRS** and **Medium Density Residential Development** under **LPS4** subject to the following – demonstration:

- Of the extent of the flood prone area through appropriate environmental investigation and a commitment being made to cede this land as Parks and Recreation Reserve;
- That bushfire risk can be suitably addressed; and
- That heritage features can be suitably protected.

Subdivision design and development should:

- Result in the ceding of land along the Helena River as reserve;
- Integrate with existing/proposed development and maintain view corridors/facilitate access to the Helena River;
- Ensure that Clayton Farm (heritage place) is suitably protected;
- Consider on-street parking;
- Retain existing trees and incorporate verge trees;
- Limit alteration to the natural topography;

- In relation to residences, front Samson Street and Clayton Road;
- Provide passive surveillance onto streets and reserves;
- Consider augmenting **POS** with foreshore reserve;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan;
- Comply with an adopted Helena River Reserve Development and Management Strategy; and
- Demonstrate that installation of utilities does not prejudice future development.

Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Precinct 3 – Strategies



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Scale 1:4000





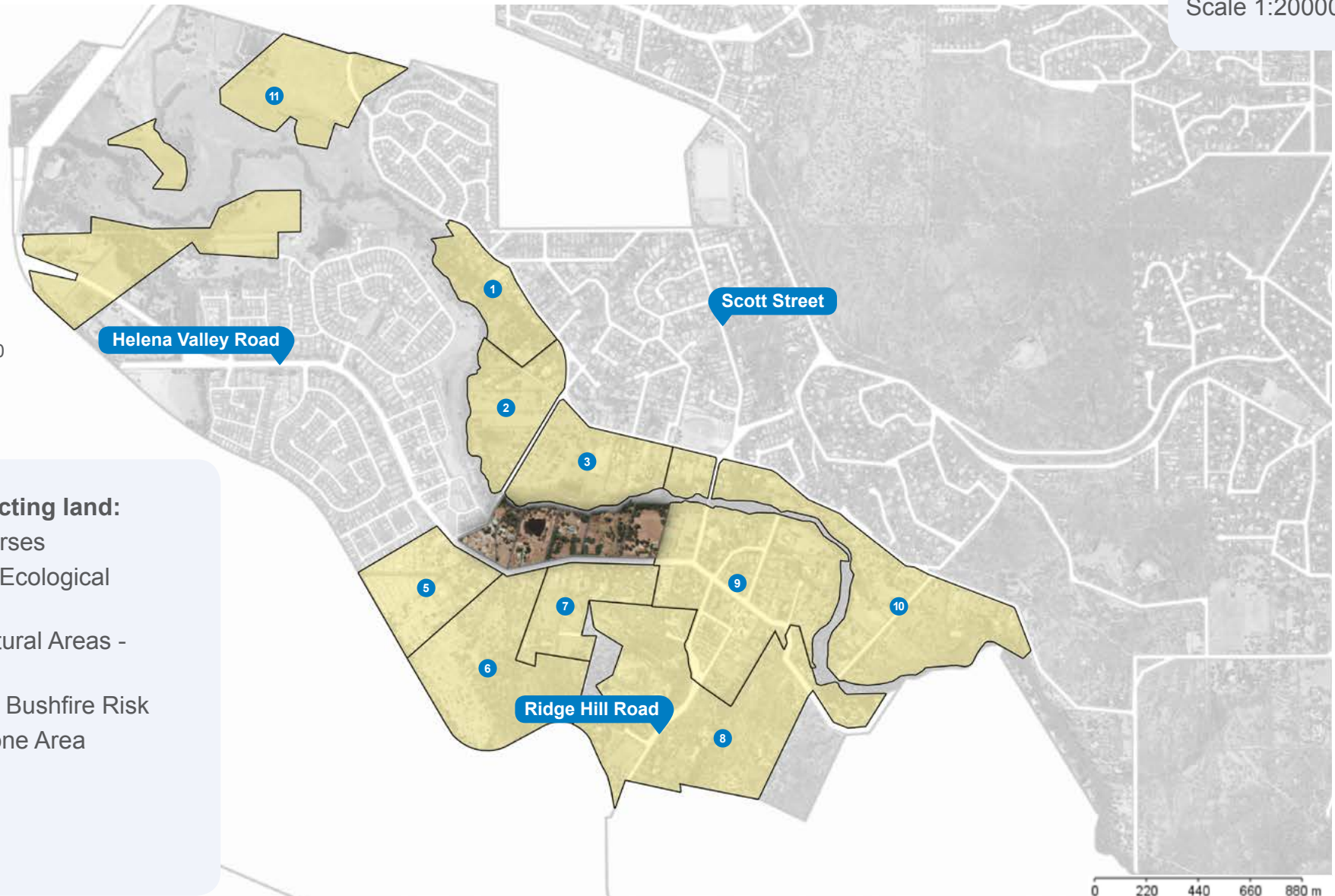
Precinct 4

Precinct 4 - Location



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Scale 1:20000

- 1 Precinct 1
- 2 Precinct 2
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- 7 Precinct 7
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- 11 Precinct 11



Factors affecting land:

- Watercourses
- Regional Ecological Linkage
- Other Natural Areas - Protected
- Moderate Bushfire Risk
- Flood Prone Area
- Heritage

Precinct 4 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 4

Approximate area: 17.5 hectares

Strategy:

Investigate rezoning to Urban under the **MRS** and **Low to Medium Density Residential Development** under **LPS4** subject to the following – demonstration:

- Of the extent of the flood prone area through appropriate environmental investigation and a commitment being made to cede this land as Parks and Recreation Reserve;
- That bushfire risk can be suitably addressed; and
- That heritage features can be suitably protected.

Subdivision design and development should:

- Result in the ceding of land along the Helena River as reserve;
- Integrate with existing/proposed development and maintain view corridors/facilitate access to the Helena River;
- Consider on-street parking;
- Retain existing trees and incorporate verge trees;
- Limit alteration to the natural topography;
- Ensure appropriate interface with Helena Valley Road;

- In relation to residences, front Samson Street and Helena

Valley Road but restrict direct access from Helena Valley Road;

- Consider augmenting **POS** with foreshore reserve;
- Provide passive surveillance onto streets and reserves;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan;
- Comply with an adopted Helena River Reserve Development and Management Strategy;
- Demonstrate that installation of utilities does not prejudice future development.

Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Precinct 4 – Strategies



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Scale 1:4000





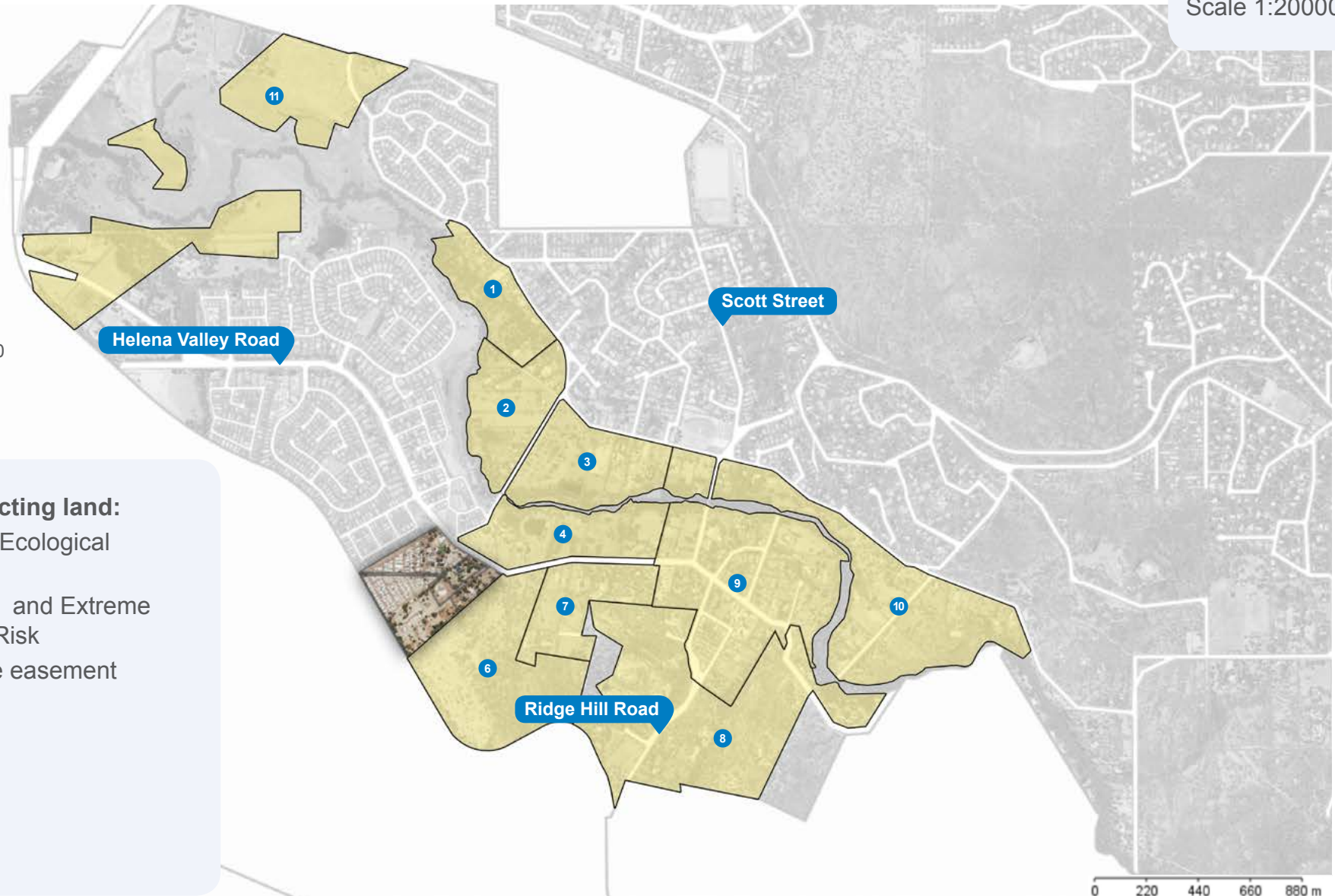
Precinct 5

Precinct 5 - Location



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Scale 1:20000

- 1 Precinct 1
- 2 Precinct 2
- 3 Precinct 3
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- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Regional Ecological Linkage
- Moderate and Extreme Bushfire Risk
- Powerline easement

Precinct 5 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 1
Special Use (Park Home Park)

Approximate area: 16.5 hectares

Strategy:

To accommodate the ageing population, investigate rezoning to Urban under the **MRS** and **Medium Density Residential Development**/Special Use (Park Home Park) under **LPS4** subject to the following – demonstration:

- That bushfire risk can be suitably addressed.

Subdivision design and development should:

- Integrate with existing/proposed development;
- Retain existing trees and incorporate verge trees;
- Limit alteration to the natural topography;
- Ensure appropriate interface with Helena Valley Road;
- In relation to residences, front Helena Valley Road but limit direct access from Helena Valley Road;
- Provide passive surveillance onto streets and reserves;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan; and
- Demonstrate that installation of utilities does not prejudice future development.

Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Precinct 5 – Strategies



12/07/2017
Scale 1:4000





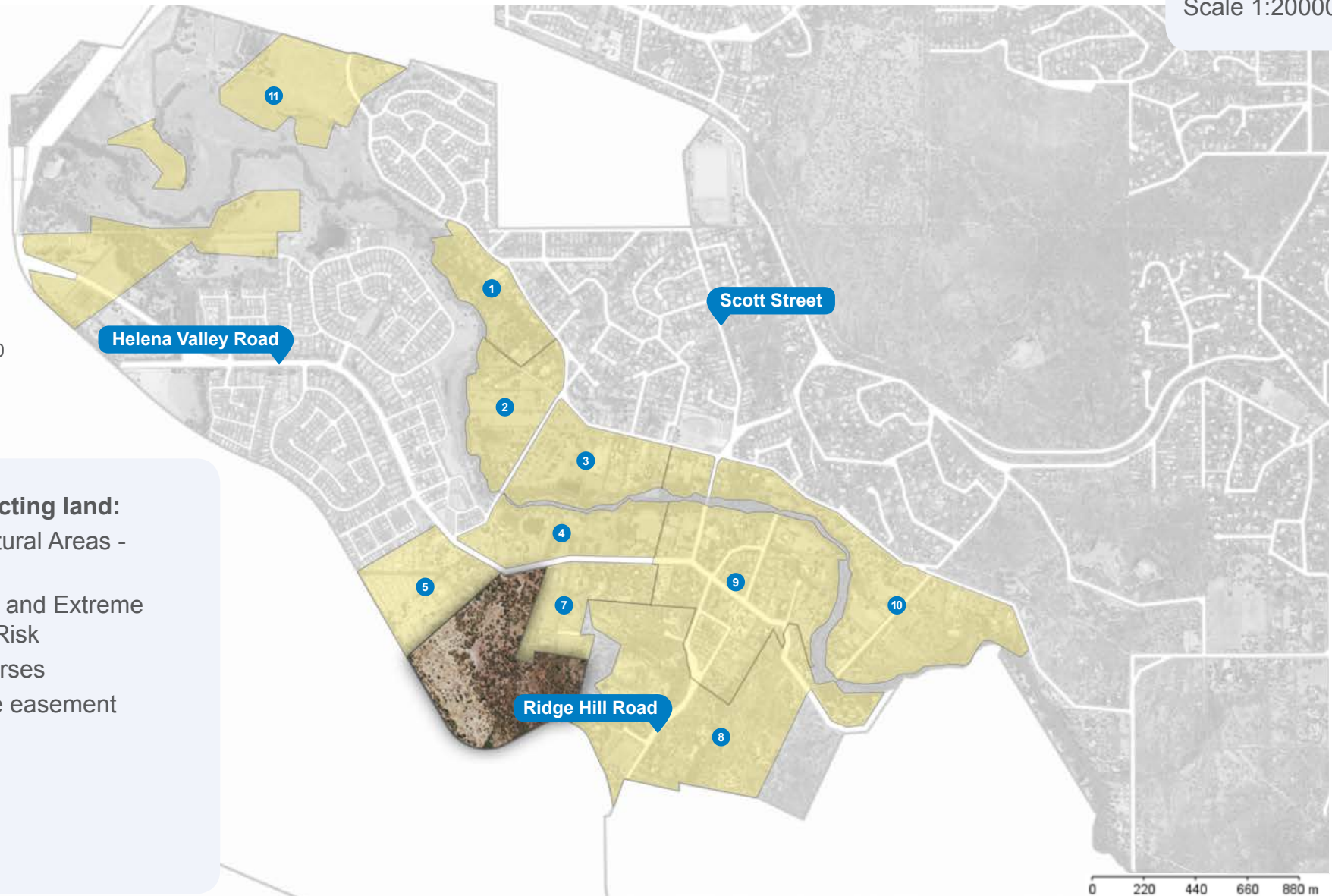
Precinct 6

Precinct 6 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
- 2 Precinct 2
- 3 Precinct 3
- 4 Precinct 4
- 5 Precinct 5
- 7 Precinct 7
- 8 Precinct 8
- 9 Precinct 9
- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Other Natural Areas - Protected
- Moderate and Extreme Bushfire Risk
- Watercourses
- Powerline easement

Precinct 6 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 2

Approximate area: 33.5 hectares

Strategy:

Investigate rezoning that portion in the Moderate Bushfire Risk area to Urban under the **MRS** and **Medium Density Residential Development** under **LPS4** subject to the following – demonstration:

- That bushfire risk can be suitably addressed;
- Commitment being made to cede land identified as ‘Other Natural Areas – Protected’ as Parks and Recreation Reserve, subject to detailed environmental investigation;
- That a future road connection could be made between Helena Valley Road to Midland Road via a southward connection through development on Lot 911 Midland Road, Hazelmere.

Subdivision design and development should:

- Integrate with existing/proposed development;
- Consider on-street parking;
- Retain existing trees and incorporate verge trees;
- Limit alteration to the natural topography;

- In relation to residences, front Helena Valley Road but limit direct access from Helena Valley Road;
- Provide passive surveillance onto streets and reserves;
- Consider augmenting **POS** with Bush Forever site;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan; and
- Demonstrate that installation of utilities does not prejudice future development.

Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Precinct 6 – Strategies



12/07/2017
Scale 1:4000





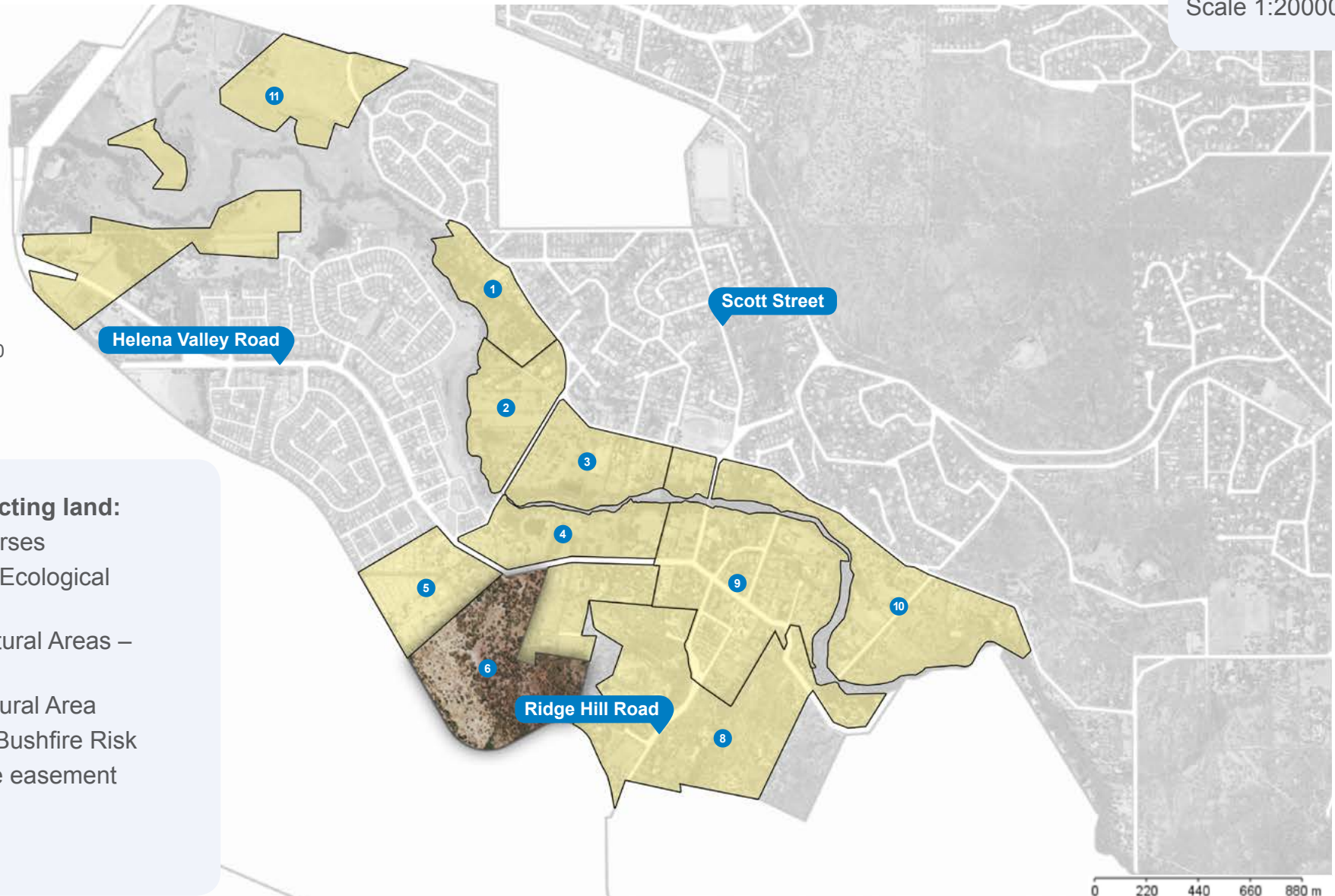
Precinct 7

Precinct 7 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
- 2 Precinct 2
- 3 Precinct 3
- 4 Precinct 4
- 5 Precinct 5
- 6 Precinct 6
- 8 Precinct 8
- 9 Precinct 9
- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Watercourses
- Regional Ecological Linkage
- Other Natural Areas – Protected
- Local Natural Area
- Extreme Bushfire Risk
- Powerline easement

Precinct 7 – Strategies

Metropolitan Region Scheme zone: Rural
Urban

Local Planning Scheme No. 4 zone: Rural Residential 2
Residential R2.5

Approximate area: 14.5 hectares

Strategy:

Investigate rezoning to Urban under the **MRS** those properties currently zoned Rural and **Low to Medium Density Residential Development** under **LPS4** subject to the following – demonstration:

- That bushfire risk can be suitably addressed;
- Commitment being made to cede land identified as ‘Other Natural Areas – Protected’ as Parks and Recreation Reserve;

Subdivision design and development should:

- Be subject to a comprehensive structure plan;
- Integrate with existing/proposed development by transitioning from lower residential densities in the west, gradually increasing to the east;
- Consider on-street parking;
- Retain existing trees and incorporate verge trees;
- Limit alteration to the natural topography;

- In relation to residences, front Helena Valley Road but limit direct access from Helena Valley Road;
- Ensure appropriate interface with Helena Valley Road;
- Consider augmenting Public Open Space with Parks and Recreation Reserve;
- Provide passive surveillance onto streets and reserves;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan; and
- Demonstrate that installation of utilities does not prejudice future development.

Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Precinct 7 – Strategies



12/07/2017
Scale 1:4000





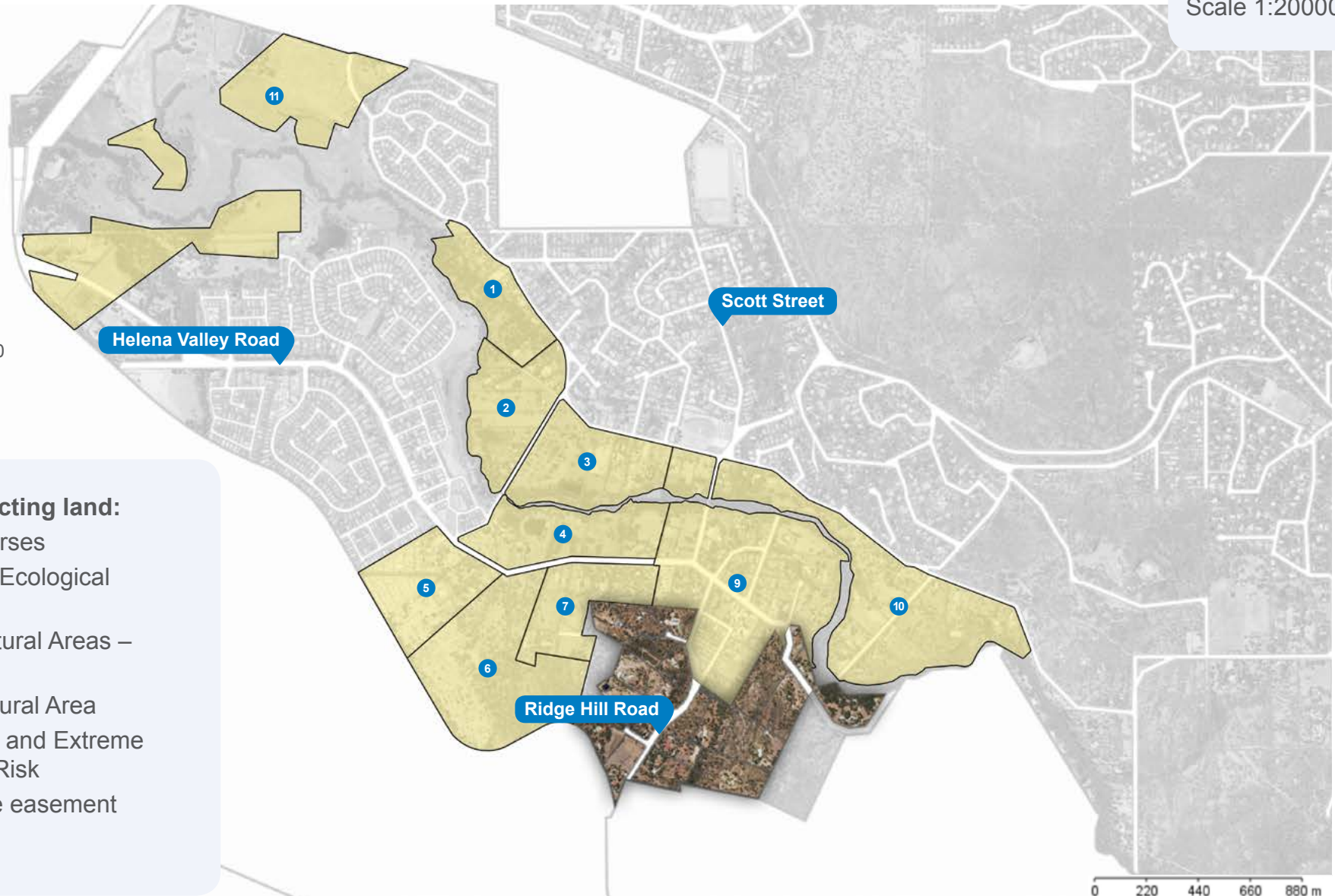
Precinct 8

Precinct 8 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
- 2 Precinct 2
- 3 Precinct 3
- 4 Precinct 4
- 5 Precinct 5
- 6 Precinct 6
- 7 Precinct 7
- 9 Precinct 9
- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Watercourses
- Regional Ecological Linkage
- Other Natural Areas – Protected
- Local Natural Area
- Moderate and Extreme Bushfire Risk
- Powerline easement

Precinct 8 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 4

Approximate area: 56.5 hectares

Strategy:

To protect rural amenity and the environment, retain Rural zone under the **MRS** and do not support rezoning for closer subdivision under **LPS4**.

Precinct 8 – Strategies



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Scale 1:4500





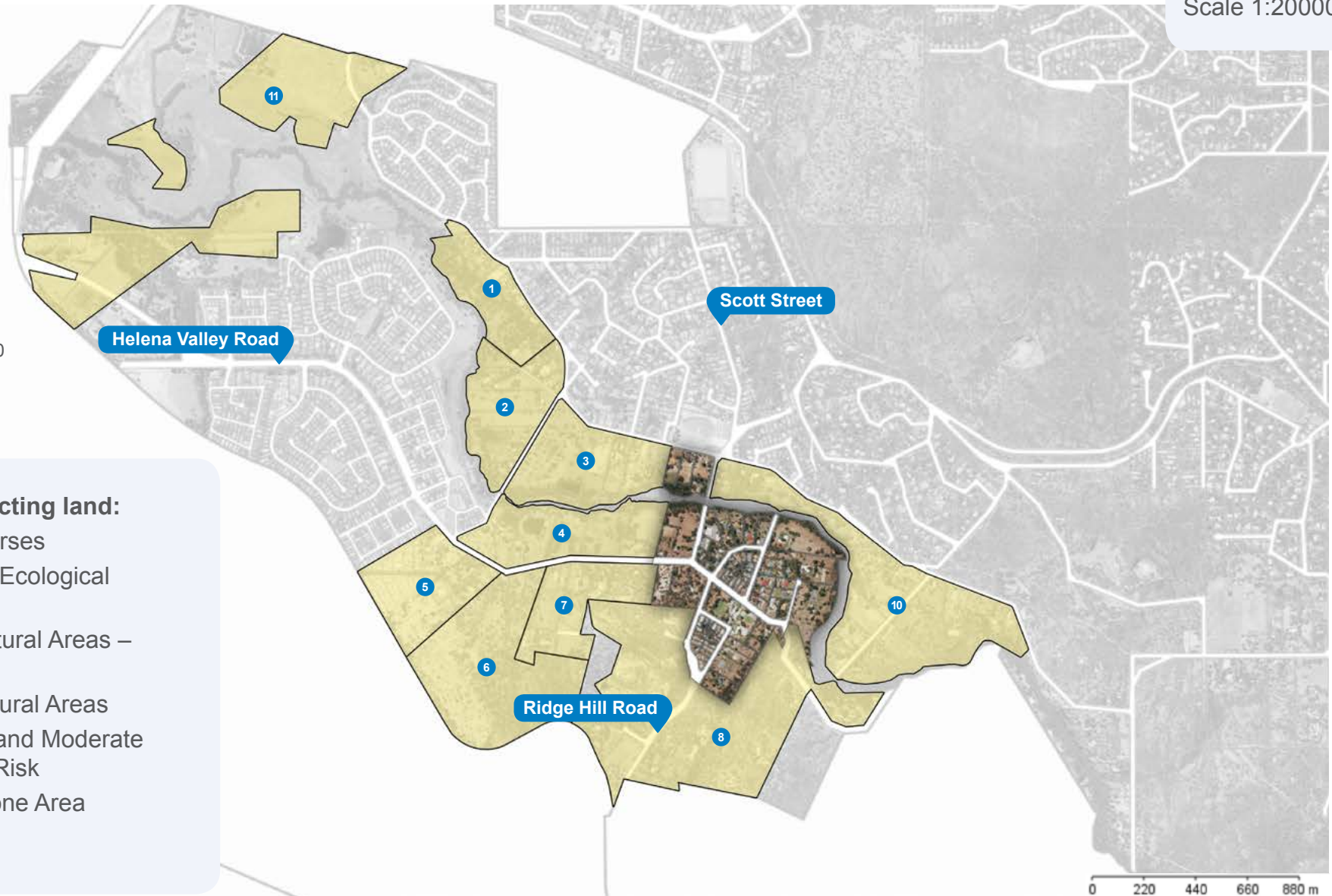
Precinct 9

Precinct 9 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
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- 6 Precinct 6
- 7 Precinct 7
- 8 Precinct 8
- 10 Precinct 10
- 11 Precinct 11



Factors affecting land:

- Watercourses
- Regional Ecological Linkage
- Other Natural Areas – Protected
- Local Natural Areas
- Extreme and Moderate Bushfire Risk
- Flood Prone Area
- Heritage

Precinct 9 – Strategies

Metropolitan Region Scheme zone: Rural
Urban

Local Planning Scheme No. 4 zone: Rural Residential 1, Rural Residential 2, Rural Residential 4, Residential R5, Residential R2.5, Local Centre, Public Purposes (School)

Approximate area: 37 hectares

Strategy:

Investigate rezoning to Urban under the **MRS** those properties currently zoned Rural subject to the following:

- Of the extent of the flood prone area through appropriate environmental investigation and a commitment being made to cede this land as Parks and Recreation Reserve; and
- Demonstration that bushfire risk can be suitably addressed.

The rationale for this strategy is to contain higher density development around civic/commercial areas at a low-point in the valley to retain views of the hills, create walkable catchments, respond to demand for commercial land in response to the growing population, offset lower densities elsewhere in the Strategy area and to build on the existing village atmosphere around the Scott Street shops.

Rezoning to Development under **LPS4** should only occur subsequent to:

- Comprehensive precinct planning (including a 'safe' assessment); and

- Demonstration that bushfire risk can be suitably addressed.

Subdivision design and development should:

- Result in the ceding of land along the Helena River as reserve;
- Make provision for **Medium to High Density Residential Development** and commercial mix informed by a local commercial strategy;
- Make provision for expansion of educational facilities;
- Be subject to comprehensive precinct planning;
- Integrate with existing/proposed development and maintain view corridors/facilitate access to the Helena River;
- Consider on-street parking;
- Retain existing trees and incorporate verge trees;
- Limit alteration to the natural topography;
- Ensure appropriate interface with Helena Valley Road;
- Consider augmenting **POS** with foreshore reserve;
- Provide passive surveillance onto streets and reserves;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan;
- Comply with an adopted Helena River Reserve Development and Management Strategy; and
- Demonstrate that installation of utilities does not prejudice future development.

Precinct 9 – Strategies



12/07/2017
Scale 1:5000



Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.



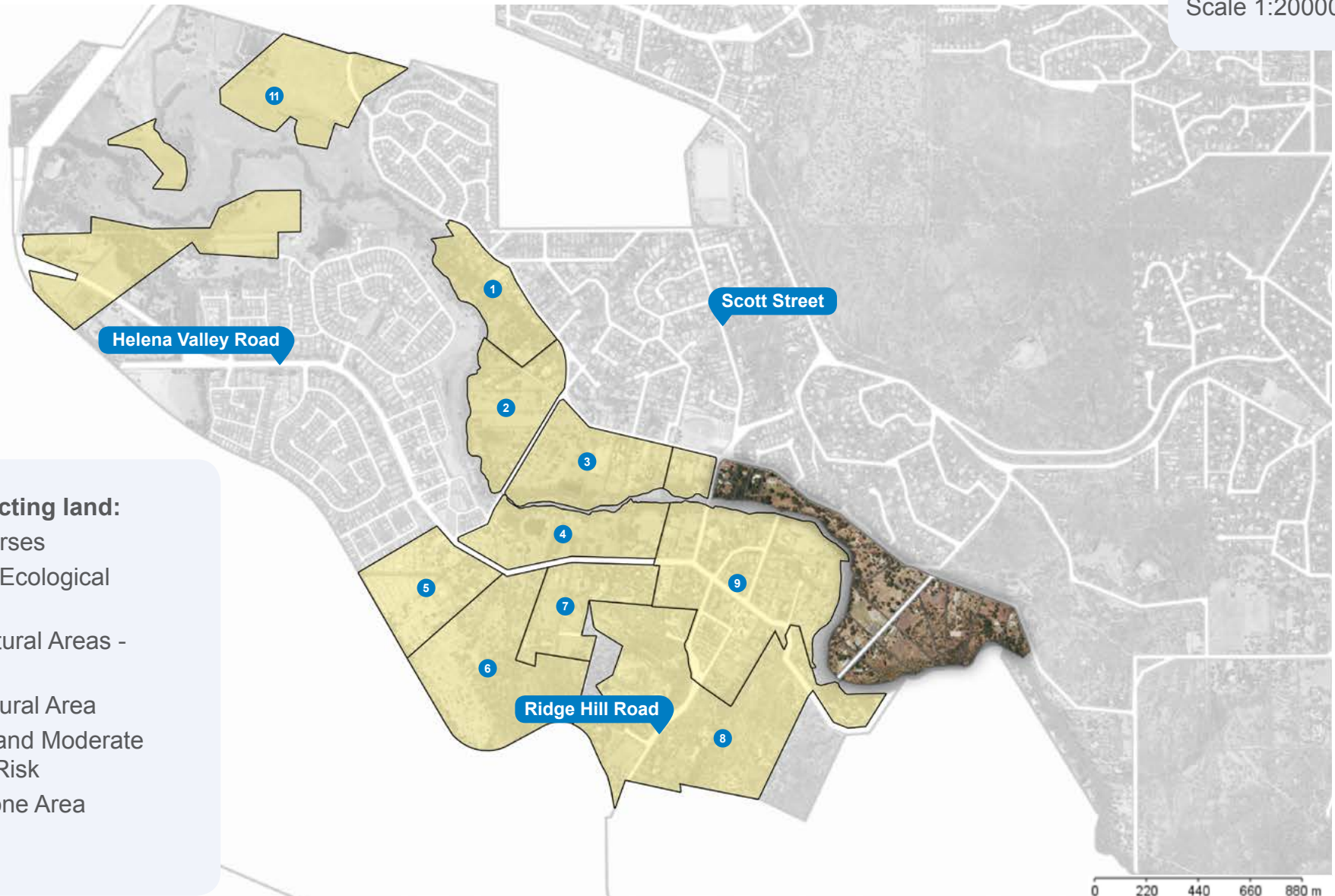
Precinct 10

Precinct 10 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
- 2 Precinct 2
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- 4 Precinct 4
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- 6 Precinct 6
- 7 Precinct 7
- 8 Precinct 8
- 9 Precinct 9
- 11 Precinct 11



Factors affecting land:

- Watercourses
- Regional Ecological Linkage
- Other Natural Areas - Protected
- Local Natural Area
- Extreme and Moderate Bushfire Risk
- Flood Prone Area
- Heritage

Precinct 10 – Strategies

Metropolitan Region Scheme zone: Rural

Local Planning Scheme No. 4 zone: Rural Residential 1
Rural Residential 2

Approximate area: 37 hectares

Strategy:

To protect rural amenity, the environment and in response to the extent of Flood Prone Area, retain Rural zone under the **MRS**.

Investigate rezoning to Rural Residential 1 under **LPS4**, subject to the following – demonstration:

- Of the extent of the flood prone area through appropriate environmental investigation and a commitment being made to cede this land as Parks and Recreation Reserve;
- That bushfire risk can be suitably addressed

Investigate rezoning 1710 (Lot 96) Helena Valley Road to either an Additional Use or Special Use for reuse of the former CSIRO building and possibly the curtilage for an accommodation purpose.

Subdivision design and development should:

- Result in the ceding of land along the Helena River as foreshore reserve;
- Integrate with existing/proposed development and maintain view corridors/facilitate access to the Helena River;
- Retain existing trees and incorporate verge trees;

- Protect existing agricultural land uses from detrimental impacts;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan;
- Comply with an adopted Helena River Reserve Development and Management Strategy; and
- Demonstrate that installation of utilities does not prejudice future development.

Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Precinct 10 – Strategies



12/07/2017
Scale 1:5000





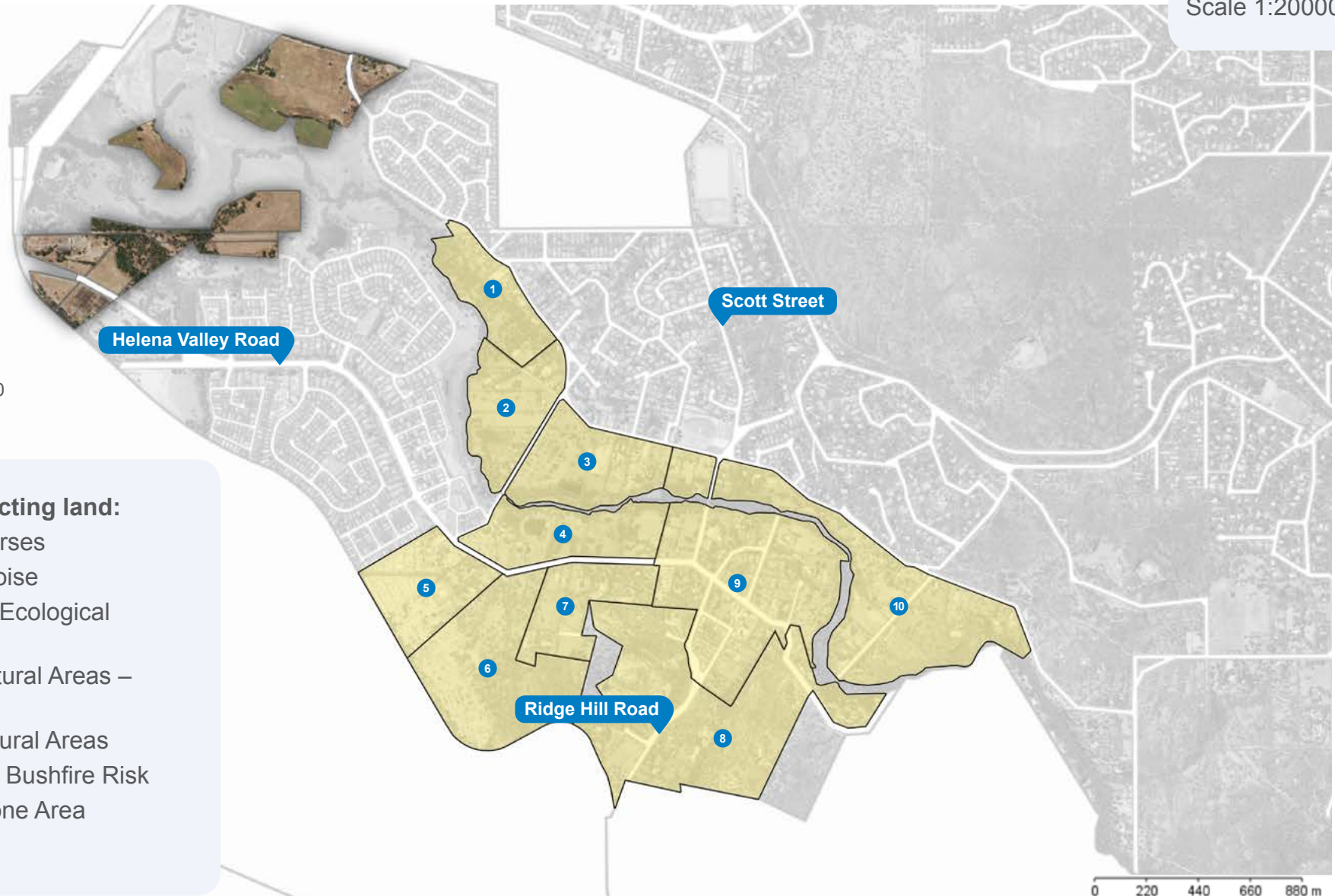
Precinct 11

Precinct 11 - Location



12/07/2017
Scale 1:20000

- 1 Precinct 1
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- 6 Precinct 6
- 7 Precinct 7
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- 9 Precinct 9
- 10 Precinct 10



Factors affecting land:

- Watercourses
- Aircraft noise
- Regional Ecological Linkage
- Other Natural Areas – Protected
- Local Natural Areas
- Moderate Bushfire Risk
- Flood Prone Area
- Heritage

Precinct 11 – Strategies

Metropolitan Region Scheme zone: Rural
Parks and Recreation

Local Planning Scheme No. 4 zone: Rural Residential 1
Rural Residential 4
Rural Smallholdings 40

Approximate area: 48.5 hectares

Strategy:

Investigate rezoning to Urban under the **MRS** those properties currently zoned Rural, and to Development under **LPS4** subject to the following – demonstration that:

- Of the extent of the flood prone area through appropriate environmental investigation and a commitment being made to cede this land as Parks and Recreation Reserve;
- Bushfire risk can be suitably addressed; and
- Heritage features can be suitably protected

Investigate rezoning 1710 (Lot 96) Helena Valley Road to either an Additional Use or Special Use for reuse of the former CSIRO building and possibly the curtilage for an accommodation purpose.

Subdivision design and development should:

- Result in the ceding of land along the Helena River as foreshore reserve;
- Make provision for **Medium Density Residential**

Development and commercial mix informed by a local commercial strategy and State Planning Policy 5.1;

- Possibly make provision for expansion of educational facilities;
- Integrate with existing/proposed development and maintain view corridors/facilitate access to the Helena River;
- Ensure appropriate interface with Helena Valley Road;
- In relation to residences and commercial properties, front Helena Valley Road but limit direct access from Helena Valley Road;
- Retain existing trees and incorporate verge trees;
- Consider on-street parking;
- Limit alteration to the natural topography;
- Provide passive surveillance onto streets and reserves;
- Consider augmenting **POS** with foreshore reserve;
- Comply with an adopted development contribution position;
- Comply with an adopted Infrastructure Plan;
- Establish a road connection between Helena Valley Road and Katharine Street;
- Establish district recreation grounds;
- Comply with an adopted Helena River Reserve Development and Management Strategy; and
- Demonstrate that installation of utilities does not prejudice future development.

Precinct 11 – Strategies



12/07/2017
Scale 1:10000



Important Notes:

- A. These strategies apply in addition to standard planning requirements.
- B. Implementation Milestones identifies a list of actions the Shire requires to be undertaken before an amendment to the Metropolitan Region Scheme can be considered.

Implementation Milestones

The **Strategy** is intended to guide decision-making for **MRS** and Local Planning Scheme Amendments, structure plans, subdivision and development.

Before these can be seriously considered, it is necessary for work to be completed to ensure that development, when it does occur, is coordinated and sustainable.

Implementation Milestones identifies these tasks. A summary explanation of each is provided below.

Decision made on North-East Sub-Regional Structure Plan

The **WAPC** is required to determine whether Helena Valley/Bellevue will be identified for Urban Infill/Investigation in the North-East Sub-Regional Structure Plan (or otherwise permit infill/investigation) prior to **MRS** amendments being seriously considered.

Local Commercial Strategy

The Shire's current Local Commercial Strategy (1992) is being updated and will provide guidance on the desirable spatial requirements and commercial mix in the Shire generally and Helena Valley/Bellevue specifically. Its recommendations are to be incorporated into the **Strategy**.

Traffic and Land Use Study

The Strategy was informed by a Traffic and Land Use Study which examined likely population growth and associated demands for infrastructure improvements. Some of the assumptions underpinning this study have changed. Therefore, this study is to be updated and the findings incorporated into the **Strategy**.

Recreation Plan

A plan identified for preparation in the 2018/19 financial year to examine recreation needs and maintenance requirements in the Shire.

Helena River Reserve Development and Management Strategy

The Helena River and its foreshore is the centrepiece of growth in the **Strategy** area. However, the ceding of land for Parks and Recreation Reserve will under-deliver on recreational and environmental benefits unless there is a plan in place for its coordinated development and ongoing management.

The Helena River Reserve Development and Management Strategy is to provide clarity around the development standards eg trail linkages, weed removal, foreshore management etc to be met as subdivision occurs and how responsibility for environmental and fire risk management will be shared.

Infrastructure Plan

A number of submissions highlighted a need for a coordinated infrastructure plan in the study area to integrate water management and discuss and examine environmental offsets road upgrades, new roads, recreational facilities, cycle and footpaths, bus stops, emergency accesses and so on.

The comprehensive infrastructure plan is to be prepared and then used to inform the Development Contribution Position Paper after appropriate consultation.

Development Contribution Position Paper

Urban growth requires transport and other infrastructure improvements (refer to Infrastructure Plan) to be provided in-line with demand.

Normally this is achieved by developers supplying the infrastructure necessary to support individual developments. However, when growth is proposed at a larger scale eg district level, it is inequitable for a single developer to provide infrastructure from which the wider public will benefit. At the same time, it is important that large-scale growth avoids piecemeal development and provides for the needs of the district.

As recognised by the **WAPC's** Draft State Planning Policy 3.6 – Development Contributions for Infrastructure:

The capacity of a local government to provide the additional infrastructure and facilities necessary to accommodate future growth and change is limited by the available financial resources. As a result, local government is increasingly seeking to apply development contributions for the construction of infrastructure and facilities beyond the standard requirements such as community centres, recreation centres, sporting facilities, libraries, child care centres and other such facilities.

Under the current policy, this is normally applied through a **DCP**. The draft policy considers implementation of **DCPs** via Deemed Provisions under the Planning and Development (Local Planning Schemes) Regulations 2015. At the time of writing, it is not clear on whether this will be the preferred method of implementation.

There are also options outside of a **DCP** for applying development contributions eg voluntary agreements which can include, but are not limited to, legal agreements and Specialised Area Rates.

The Development Contribution Position Paper is to explore the Shire’s various options and relative merits of delivering this infrastructure eg via a Development Contribution Plan, Specified Area Rate and so on.

Subsequently, the preferred method is to be implemented.

Amendment to LPS4 to reflect SPP 5.1

The **ANEF** contours in **LPS4** and the latest version of SPP 5.1 are inconsistent. An amendment to **LPS4** is needed to reconcile these. The **WAPC** has advised that this is likely to be a basic amendment.

Stage	Task	Agencies to be involved	Date Completed	Cost (indicative)
1	Decision made on North-East Sub- Regional Structure Plan	WAPC	To be announced	To be announced
2	Local Commercial Strategy	Shire of Mundaring	June/July 2017	\$50,000
3	Traffic and Land Use Study	Main Roads City of Swan Shire of Mundaring	June/July 2017	\$70,000
4	Recreation plan	Shire of Mundaring	Shire of Mundaring	\$40,000

5	Helena River Reserve Development and Management Strategy	Department of Aboriginal Affairs WAPC DPaW (Swan River Trust) Department of Water Shire of Mundaring Community groups	TBA	\$50,000
6	Infrastructure Plan	Department of Transport Main Roads Department of Water City of Swan Shire of Mundaring Developer	TBA	N/A
7	Development Contribution Position Paper & Implementation	WAPC City of Swan Shire of Mundaring	TBA	\$60,000
8	Amendment to LPS4 to reflect State Planning Policy 5.1 (likely basic amendment)	WAPC Shire of Mundaring Proponent	TBA	Nil

The Shire has made commitments to work in collaboration with other agencies to investigate the requirements for additional public education facilities and investigate recreational uses for land adjoining the **Strategy** area.

These commitments are intended to inform but not preclude serious consideration of the stages following the Implementation Milestones.

No.	Commitments	Agencies to be involved
1	Recreation plans for Parks and Recreation Reserve in Hazelmere (Bushmead) to be discussed.	WAPC Department of Parks and Wildlife Environmental Protection Authority City of Swan Shire of Mundaring
2	Provide updated population forecasts to Department of Education to assist with school planning	WAPC Department of Education Shire of Mundaring

Technical Appendices

References

Appendix Contains

- | | |
|---|--------------------------------|
| 1 | Summary of submissions |
| 2 | Foreshore Vision Plan |
| 3 | Helena Valley Land Use Study |
| 4 | Traffic and Land Use Study |
| 5 | Council Report – 9 August 2016 |
| 6 | Council Report – July 2017 |

Government Sewerage Policy - Perth Metropolitan Region.

'Evidence supporting the creation of environments that encourage healthy active living'

'Guidance for the Assessment of Environmental Factors No. 3 - Separation Distances between Industrial and Sensitive Land Uses'

Guidelines for the Separation of Agricultural and Residential Land Use



Appendix 1

Appendix 1

Suggestion incorporated into/already identified by the **Strategy**

Noted/operational and design matter referred to relevant Shire service

Suggestion not incorporated into the **Strategy**

No.	Agency / Person / Organisation	What You Said	What We Did
1	Shire of Toodyay	No comment.	Noted submission.
2	ATCO Gas	Developers required to install infrastructure.	Noted submission.
3	Resident	Support high density residential development.	High Density Residential Development identified in Precinct 9.
4	Resident	Shops and open spaces required.	Development zones identified in Precincts 9 and 11. POS proposed around Helena River and in Precinct 11.
		Speed zones need to be made more consistent, path maintenance and traffic calming required.	Comment referred to Shire's Infrastructure Services as advice.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
5	Department of Mines and Petroleum	No issues.	Noted submission.
6	Public Transport Authority	The Strategy is conducive to the operation and growth of the transport network which will be extended to accommodate future residents.	Noted submission.
7	Resident	Improvements to existing footpaths required.	Comment referred to Shire's Infrastructure Services for investigation.
8	Burgess Design Group on behalf of Resident	Support the Strategy and extension of urban investigation area after environmental investigations undertaken.	Strategy modified to emphasise that the extent of the urban zone should be defined by technical environmental studies.
9	Resident	Support limited rural subdivision.	Precinct 10 makes provision for investigating limited rural subdivision.
10	Department of Education	Request further discussions regarding future primary school site with Shire.	Discussions with Department of Education undertaken. Strategy makes provision for ongoing dialogue with Department of Education.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
11	Department of Transport	<p>Future structure planning to include:</p> <ul style="list-style-type: none"> figures 1-18 from land use report; existing and proposed pedestrian/cycle routes, public transport routes and road networks; traffic and land use study to be reviewed; dual use paths to be shown as 4 metres wide; safe assessment should be conducted around Helena Valley Primary School; and transport Plan to be prepared prior to implementation of the Strategy. 	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Strategy added to Precinct 9 to specifically require safe assessment to be conducted as part of detailed precinct planning.</p> <p>Other advice is a standard requirement of structure planning and has been referred to the Shire's Infrastructure Services as advice.</p>
12	Department of Environmental Regulation	No comment.	Noted submission.
13	Department of Aboriginal Affairs	Works required to comply with the <i>Aboriginal Heritage Act 1972</i> .	Strategy to be prepared for the development and management of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
14	Public Transport Authority	Transperth supportive of increased residential development within 500 metres of Helena Valley Road.	Noted submission.
15	Resident	<p>Bridge across Fyfe Street supported, but not for free vehicle access – pedestrians, horse and bicycle riders to be permitted access.</p> <p>Increasing housing density on lots abutting Helena River not supported but consider development on a house-by-house basis.</p>	<p>Connections over Fyfe Street identified by Draft Strategy.</p> <p>Implementation Milestones requires Development Contribution Position Paper/ implementation to make specific provision for community engagement for proposed Helena River crossings.</p> <p>The subdivision of properties adjacent to the Helena River under the Strategy would trigger the requirement to cede land to the Crown free of cost for foreshore reserve - in time, creating a continuous recreational and ecological link.</p> <p>Consideration of subdivision on a house by house basis would constitute ad hoc development and is a method of development not supported by the Strategy.</p>

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No.	Agency / Person / Organisation	What You Said	What We Did
16	Helena River Catchment Group	<p>Management of a Helena River foreshore reserve would be difficult.</p> <p>A bridge over the Helena River at the end of Fyfe and Samson Street would be useful but use should be restricted to emergency vehicles, pedestrians, cyclists and horse riders.</p> <p>Increasing housing density adjacent to the Helena River not supported.</p>	<p>Strategy to be prepared for the development of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p> <p>Implementation Milestones requires Development Contribution Position Paper/ implementation.</p> <p>The subdivision of properties adjacent to the Helena River under the Strategy would trigger the requirement to cede land to the Crown free of cost for foreshore reserve - in time, creating a continuous recreational and ecological link.</p>
17	Resident	In favour of amendment to MRS to allow for closer subdivision in the areas identified by the Strategy .	Strategy identifies some areas identified for rezoning under the MRS to facilitate closer subdivision.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
18	Department of Water	Water resource constraints required to be investigated.	The Helena Valley Land Use Study (refer to Appendix 3) and LPS4 have investigated water resource constraints and were used to inform the Strategy .
		A District Water Management Strategy is required. Extent of floodways to be investigated.	The Helena Valley Land Use Study states that a District Water Management Strategy may be inappropriate. The Implementation Milestones incorporates a provision to investigate this requirement further with the relevant agencies.
		Bushfire risk in and around the Helena River foreshore reserve to be considered.	
		If water for irrigation of District Open Space is required, a licence will need to be traded or an alternative source investigated.	Noted submission.
19	Resident	Wider development setbacks from Helena Valley Road recommended.	Strategies for precincts adjoining Helena Valley Road refined to include a requirement to establish a suitable interface with Helena Valley Road.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
		Do not support high density housing in Precinct 11 but would like to be able to subdivide into two lots.	<p>Precinct 11 of the Draft Strategy (Precinct 9 in the Strategy) has been identified for a mixture of commercial and residential land uses, with medium-high residential densities, subject to comprehensive precinct planning and further consultation.</p> <p>The strategies for Precinct 9 have been modified to provide further rationale for this objective.</p>
20	Perth Airport Pty Ltd	Objection to land identified for residential development in Precinct 12 and northern part of Precinct 1.	Precincts 1 and 12 of the Draft Strategy (Precinct 1 and 11 of the Strategy) amended to highlight requirement for development to comply with State Planning Policy 5.1.
21	State Heritage Office	Future development to consider impacts on Clayton Farm and Belle View.	Strategies for Precincts 1 and 3 and Structure Plan 74 make specific provision for the protection of these heritage places.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
22	Resident	<p>Ensure that any estates developed along Helena Valley Road and Scott Street are mindful of street scapes and setbacks.</p> <p>Upgrades to Helena Valley Road to include footpaths, bike paths and tree planting.</p>	<p>Strategies for precinct adjoining Helena Valley Road and Scott Street refined to include a requirement to establish a suitable interface.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Comment referred to Shire's Infrastructure Services as advice.</p>
23	Resident	<p>Include properties in the eastern part of Precinct 1 for urban investigation.</p>	<p>The strategy for Precinct 1 has been amended to include these properties for urban investigation, subject to an appropriate interface with adjoining properties.</p>
24	Department of Fire and Emergency Services	<p>Bushfire Hazard Level assessment should be undertaken to inform the Strategy.</p>	<p>The Shire's Bushfire Hazard Special Control Area has been used to inform the Strategy.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
25	Resident	<p>The Strategy does not make provision for POS and playing fields. The Helena River should be protected.</p> <p>Provision should be made for:</p> <ul style="list-style-type: none"> • bike paths; • reconsideration of widening Helena Valley Road; • on-street parking; • multi-storey residential development; • commercial uses; • protection of heritage features; and • aircraft noise mitigation. 	<p>Precinct 11 makes provision for district recreation grounds and the Helena River foreshore is identified for POS.</p> <p>Precinct 9 has been identified for a mixture of commercial and residential land uses, with Medium to High Residential Development, subject to comprehensive precinct planning and further consultation.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Precinct 1 and 11 strategies amended to highlight requirement for development to comply with State Planning Policy 5.1.</p>
26	Resident	<p>Support further subdivision potential in Precinct 8.</p>	<p>Consideration of Precinct 8 for urban growth is not supported due to fire risk, vegetation classified as Local Natural Area, erosion of desirable amenity aspects and topography.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
27	Resident	<p>A number of objections were made and covered such topics as:</p> <ul style="list-style-type: none"> • reserving the Helena River foreshore as Crown land; • ongoing land management; • amenity; • contradictions in Council reports; • questions about wording in Council reports; • traffic; • undesirability of growth; and • desirability of undertaking a District Structure Plan. 	<p>The schedule of submissions in the Council report adopting the Strategy provides detailed responses to the various matters raised (refer to Appendix 6).</p>
28	Resident	<p>Support further subdivision potential in Precinct 8.</p>	<p>Consideration of Precinct 8 for urban growth is not supported due to fire risk, vegetation classified as Local Natural Area, erosion of desirable amenity aspects and topography.</p>
29	Resident	<p>Support further subdivision potential in Precinct 8.</p>	<p>Consideration of Precinct 8 for urban growth is not supported due to fire risk, vegetation classified as Local Natural Area, erosion of desirable amenity aspects and topography.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
30	Resident	Various recommendations regarding transport infrastructure upgrades.	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Information provided regarding the requirement for planning proposals to be assessed against State Planning Policy 5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning.</p>
31	Friends of Pioneer Park	<p>Supports the strategy and recommends:</p> <ul style="list-style-type: none"> • Disconnected reserves be connected; • Planning be undertaken for flooding; • Undertake a vegetation regeneration plan; • Public access to waterways should incorporate boardwalk use. Roads to incorporate bike/walking lanes; • Provide high density housing; • Trees be protected; and • Aged care facilities be provided. 	<p>Strategy to be prepared for the development of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p> <p>The Helena Valley Land Use Study (refer to Appendix 3) and LPS4 have investigated water resource constraints and were used to inform the Strategy.</p> <p>The Helena Valley Land Use Study states that a District Water Management Strategy may be inappropriate. The Implementation Milestones incorporates a requirement to investigate this requirement further with the relevant agencies.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
			<p>High density residential development identified in Precinct 9.</p> <p>The Strategy makes specific provision for the protection and planting of trees.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>
32	Resident	Supports the Strategy	Noted submission.
33	City of Swan	Identify that the bridge crossing Roe Highway should be identified as requiring widened to four lanes.	Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
34	Resident	Retain trees and wetlands.	The Strategy makes specific provision for the protection and planting of trees.
		Roads should be wider and more provision made for walking and cycling. Parking should be managed so that street parking does not occur. Proper management of infrastructure is required.	Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.
		More provision should be made for facilities on POS .	Provision for larger lots is made in Precincts 1, 2, 4, 6, 7, 8 and 10.
		Larger lot sizes and provision being made for schools is desirable.	Discussions undertaken. Shire agreed to provide ongoing dialogue with Department of Education as Strategy progresses.
			Recommendation relating to facilities referred to the Shire's Infrastructure Services as advice.
35	Resident	Supports the Strategy.	Noted submission.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
36	Resident	<p>Trees should screen development from Helena Valley Road.</p> <p>Large shopping centre is not supported.</p> <p>Scott Street/Clayton Road intersection to be upgraded. Other options for crossing the Helena River should be investigated.</p> <p>Management issues regarding reserves around the Helena River.</p>	<p>The Strategy makes specific provision for the protection and planting of trees.</p> <p>Implementation Milestones to be modified requiring finalisation of the Local Commercial Strategy update.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Strategy to be prepared for the development and management of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p>
		<p>Precinct 9 should maintain a minimum lot size of 1.25 hectares.</p>	<p>Retaining 1.25 hectare lot sizes in Precinct 9 would undermine the growth strategies in this and surrounding precincts and is not supported.</p>
37	Shire of Kalamunda	<p>Makes recommendations regarding:</p> <ul style="list-style-type: none"> • traffic management and public transport; • impacts on existing infrastructure; • ongoing dialogue with Department of Education; • maintaining character and amenity; • aged care facilities. 	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Implementation Milestones requires Development Contribution Position Paper/ implementation.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
38	Resident	Concerns raised about emergency accesses across Fyfe Street and the impact it may have on amenity.	Implementation Milestones requires Development Contribution Plan to make specific provision for community engagement for proposed Helena River crossings.
39	Darlington Ratepayers and Residents Association	<p>Provision of POS and recreation grounds will be an important consideration.</p> <p>Cyclist safety and road upgrades should be considered and provided.</p>	<p>Precinct 11 makes provision for district recreation grounds.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>
40	Resident	<p>Disagree that Helena Valley Road requires widening to four lanes. Concerns expressed about tree removal and noise as a result of road widening.</p> <p>Identifies that traffic data may need to be updated. Suggests that heavy vehicles should be encouraged to use major highways rather than Scott Street and Helena Valley Road.</p> <p>Alternative links between Katharine Street and Helena Valley Road Midland Road.</p>	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Strategies for precinct adjoining Helena Valley Road and Scott Street refined to include a requirement to establish a suitable development setback.</p> <p>The Strategy makes specific provision for the protection and planting of trees.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
			<p>Ridge Hill Road connects to Maida Vale. However, a strategy for Precinct 6 is to provide a road through to Bushmead/ Hazelmere which connects with Midland Road.</p> <p>The Shire has limited capacity to manage road users.</p>
41	Resident	<p>In favour of limited rural subdivision in Precinct 10.</p> <p>Management plan along the Helena River required.</p> <p>Is it intended for the foreshore reserve to extend east of Fyfe Street? If so, the precinct plan should be modified accordingly.</p> <p>Opposition to bridge at the end of Fyfe Street. Public transport services required to be extended.</p>	<p>Implementation Milestones modified requiring finalisation of the Local Commercial Strategy update.</p> <p>Strategy to be prepared for the development and management of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p> <p>Strategy plan modified to show extension of the Parks and Recreation Reserve east of Fyfe Street.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
		<p>Opposed to urban expansion.</p> <p>Opposed to commercial development in Precinct 9.</p>	<p>Implementation Milestones requires Development Contribution Plan to make specific provision for community engagement for proposed Helena River crossings.</p> <p>Some urban expansion and commercial development is required to accommodate the growing population.</p>
42	Resident	<p>Objects to a number of elements of the Strategy:</p> <ul style="list-style-type: none"> • Housing density; • Loss of large lots; • Loss of nature; • Infrastructure requirements; and • Helena River foreshore being ceded as a reserve. <p>Recommends improving public transport/ cycling and making provision for expanded education establishments.</p>	<p>Provision for larger lots is made in Precincts 1, 2, 4, 7, 8 and 10.</p> <p>The reservation of the Helena River foreshore as Crown land is considered an appropriate method to protect significant environments, cultural features and space for recreation for future generations which is commensurate with enhancing a sense of space and place in the Shire.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
43	Resident	Supports the plan but has concerns about the proposed river crossing at Samson Street.	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Implementation Milestones requires Infrastructure Plan to make specific provision for community engagement for proposed Helena River crossings.</p>
44	Resident	Supports the Strategy.	Noted submission.
45	Resident	Concerns regarding bridge over Fyfe Street.	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Implementation Milestones requires Infrastructure Plan to make specific provision for community engagement for proposed Helena River crossings.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
46	Resident	Concerns regarding upgrade to Helena Valley Road and crossing of Fyfe Street.	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Implementation Milestones requires Infrastructure Plan to make specific provision for community engagement for proposed Helena River crossings.</p>
47	Allerding & Associates on behalf of landowner	Supports the Strategy but recommends that Precinct 6 wording be amended to allow for consideration of a Park Home Park.	<p>The designation of specific R-Codes within the strategies is considered overly prescriptive which can lead to poor urban design outcomes. Specific R-Code designations have been removed from the Strategy and replaced with more flexible density bands:</p> <ul style="list-style-type: none"> • “Low Density Residential Development”; • “Medium Density Residential Development”; and • “High Density Residential Development”. <p>Relative to Precinct 6, the wording has been amended to allow for consideration of a Park Home Park.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
48	Resident	Requests Helena Valley Road to be tree-lined.	<p>Strategies for precinct adjoining Helena Valley Road refined to include a requirement to establish a suitable interface with Helena Valley Road.</p> <p>The Strategy makes specific provision for the protection and planting of trees.</p>
49	Resident	<p>Supports the intent of the Strategy and provides the following comments:</p> <ul style="list-style-type: none"> • Small lot development should retain trees and not modify the topography; • Restaurant/bistro would be supported; • Need for sewerage; • Precinct 11 should be carefully planned; • Traffic issues – particularly regarding Fyfe Street extension – need to be carefully planned; • Apparently no need for Samson Street extension; • Foreshore trails and upgrades supported. 	<p>The Strategy makes specific provision for the protection and planting of trees.</p> <p>Precinct 11 of the Draft Strategy (Precinct 9 of the Strategy) has been identified for a mixture of commercial and residential land uses, with medium-high residential development densities, subject to comprehensive precinct planning and further consultation and finalisation of the Local Commercial Strategy.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Strategy to be prepared for the development of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p>

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No.	Agency / Person / Organisation	What You Said	What We Did
50	Resident	<p>Expresses the following concerns about the Strategy:</p> <ul style="list-style-type: none"> • Timing of public comment; • Difficult to comprehend; • Development example photos are misleading; • Densities are inappropriate; • It's about getting more rates; • Management of foreshore reserve; and • Crossing over Fyfe Street impractical. <p>Support for some of the precinct strategies provided.</p> <p>Having recreational facilities closer to the Scott Street shops would be preferable.</p> <p>There are several complexities in developing Precinct 11 and 9.</p>	<p>The Draft Strategy was advertised for 109 days which was considered sufficient for making comment.</p> <p>The Strategy has been combined into a separate document for ease of comprehension.</p> <p>The density examples were selected to demonstrate that residential development does not necessitate wholesale destruction of the environment. Given that Helena Valley foreshore is intended to be a central element of development, it was considered appropriate to include photos next to vegetation and water bodies. However, exact representations of housing typologies intended for Helena Valley are not common in Perth. Therefore, close examples were used.</p> <p>The WAPC set R30 as an approximate density benchmark for new residential development.</p> <p>Rates increases are not a planning consideration.</p>

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No.	Agency / Person / Organisation	What You Said	What We Did
			<p>The district recreation grounds identified in Precinct 11 are for land already zoned Parks and Recreation Reserve (and would therefore not require purchase) and would avoid district traffic being drawn into the heart of Helena Valley near to the Scott Street shops.</p> <p>Precinct 9 has been identified for a mixture of commercial and residential land uses subject to more comprehensive planning in recognition of development complexities.</p> <p>The strategies for Precinct 9 have been modified to provide further rationale for this objective.</p> <p>Strategy to be prepared for the development and management of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p> <p>Implementation Milestones requires Development Contribution Position Paper to make specific provision for community engagement for proposed Helena River crossings.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
51	Resident	Supports the Strategy .	Noted submission.
52	BH Planning on behalf of resident	Supports the Strategy and recommends Precinct 7 be considered for Medium Density Residential Development.	The Strategy has been modified to allow for consideration of Low and Medium Residential Development subject to a structure plan being prepared.
53	Helena Valley Estate Residents Association	<p>Not opposed to urban development provided it enhances beauty, amenity and is well coordinated.</p> <p>Upgrade of Helena Valley Road to four lanes is supported. Reservations exist about a river crossing from Katharine Street to Helena Valley Road.</p> <p>Supports:</p> <ul style="list-style-type: none"> • establishing district recreation grounds supported; • retention of rural lots in Precinct 1; • protection of Clayton Farm; • upgrade of Scott Street; • strategies for Precincts 5, 6 and 7. 	Any river crossings will require the necessary environmental approvals.

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No.	Agency / Person / Organisation	What You Said	What We Did
54	Resident	Supports the Strategy .	Noted submission.
55	Resident	Supports the Strategy . Recommends Precinct 7 allow for consideration of Medium Density Residential Development .	The Strategy has been modified to allow for consideration of Low and Medium Residential Development subject to a structure plan being prepared.
		Recommends Precinct 7 allow for consideration of High Density Residential Development .	High Density Residential Development not supported as these are planned for Precinct 9, being in closer proximity to existing/proposed commercial land and public facilities.
56	Resident	Supports sensible residential development incorporating a landscape zone. Widening of Helena Valley Road to four lanes is not necessary, supports improvements to the Scott Street/Great Eastern Highway – but not in the manner set out in the Traffic and Land Use Plan. Samson Street upgrade and cycle paths supported.	Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
57	Department of Health	Recommends that the Strategy emphasise public health and makes reference to various guidelines.	Guidelines included in the References section of the Strategy . Application of the guidelines occurs at subsequent planning stages.
58	Resident	Objects to the Strategy on the basis that it will erode the country feel and the widening of Helena Valley Road to four lanes is not required.	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>The Strategy aims to reconcile accommodating a growing population with preservation and enhancement of desirable amenity aspects.</p>
59	Resident	<p>Understands some need for urban infill, but objects to the Strategy on the basis that it:</p> <ul style="list-style-type: none"> • will ruin amenity; • will worsen traffic problems; • under-provides for schools; and • should have lower densities. 	<p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Shire agreed to provide ongoing dialogue with Department of Education as Strategy progresses.</p> <p>Provision for larger lots is made in Precincts 1, 2, 4, 6, 7, 8 and 10.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
60	Resident	<p>Concern expressed about the apparent inconsistency between the RPS Land Use Study and the Draft Strategy.</p> <p>Higher density residential development not supported due to unappealing appearance and community opposition.</p>	<p>Precinct 5 in the RPS Land Use Study relates to Rural Residential land around Ridge Hill Road and Fyfe Street. Precinct 11 in the Draft Strategy (Precinct 9 in the Strategy) relates primarily to existing Residential zoned land.</p> <p>The Strategy recommends that Precinct 9 be subject to comprehensive precinct planning and consultation to ensure that any development which occurs has been informed by the community's interests and architectural expertise.</p>
61	Formscope on behalf of resident	Requests the inclusion of a property into the Strategy area.	<p>The request is not supported as the applicant, acting on behalf of the owner, is not a bushfire planning and design accredited practitioner and is therefore not considered qualified to make an assessment regarding access.</p> <p>There is a strategic benefit to properties adjoining the Helena River being investigated. The property referred to in the submission exists outside of this area.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
62	Resident	<p>No unifying vision.</p> <p>Objection to the creation of a 'generic' suburb, road widening, commercial traffic from outside of the district using Helena Valley Road.</p> <p>Supports beautification of Helena Valley Road, investigation of improvement of recreational area adjoining Helena Valley to the south in Bushmead.</p> <p>Does not object to higher residential densities in some locations.</p> <p>Various suggestions made regarding road design.</p>	<p>Strategy modified to provide for a stronger vision statement.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Strategies for precinct adjoining Helena Valley Road refined to include a requirement to establish a suitable interface with Helena Valley Road.</p> <p>Implementation Milestones modified to investigate recreational use of Parks and Recreation Reserve in Bushmead.</p> <p>Comment referred to Shire's Infrastructure Services as advice.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
63	Save the Wildlife Lake and Wetlands Committee	<p>Several residents discontent with previous estate development.</p> <p>Natural environments e.g. trees and wetlands should be retained and improved through the development process. The Helena River Foreshore should be placed in reserve. LNAs should be protected.</p> <p>Unique locations should be protected Resident opinions should be listened to. Larger lots and better roads should be provided. Provisions should be made for accesses into and out of the locality in the event of a fire.</p>	<p>Strategy to be prepared for the development of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p> <p>The reservation of the Helena River foreshore as Crown land is considered an appropriate method to protect significant environments, cultural features and space for recreation for future generations which is commensurate with enhancing a sense of space and place in the Shire. The Strategy makes specific provision for the protection and planting of trees.</p> <p>Specific provision is made for the protection of heritage places.</p> <p>Precinct 11 makes provision for district recreation grounds and the Helena River foreshore is identified for POS.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
			<p>The Helena Valley Land Use Study states that a District Water Management Strategy may be inappropriate. The Implementation Milestones incorporates a requirement to investigate this requirement further with the relevant agencies.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>
		<p>Playground equipment and facilities should be provided.</p>	<p>Comment referred to Shire's Infrastructure Services as advice.</p>
64	Main Roads WA	<p>Does not support the Strategy due to:</p> <ul style="list-style-type: none"> • Concerns raised regarding estimates in the traffic study; • Alternative options for local streets should be explored; • The concept sketch for the Scott Street / Great Eastern Highway intersection is not supported. 	<p>Concerns regarding district and local traffic impacts have been expressed by a number of submissions.</p> <p>It is therefore considered prudent for the Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
65	Metropolitan Redevelopment Authority	No objection.	Noted submission
66	Landowner	<p>Support the extension of the Midland transport passenger rail line to Bellevue.</p> <p>Support for higher residential densities where allowed under State Planning Policy 5.1. Flood prone areas to reflect their true extent. Support the establishment of Parks and Recreation Reserve under the Metropolitan Region Scheme but does not consider exhaustive environmental studies as necessary.</p> <p>Supports the establishment of pedestrian and cyclist infrastructure.</p> <p>Further consideration to be given to road connection to Katharine Street.</p> <p>Development contributions towards infrastructure not supported.</p>	<p>Strategy modified to emphasise that the extent of the urban zone should be defined by technical environmental studies.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Implementation Milestones requires Development Contribution Position Paper to make specific provision for community engagement for proposed Helena River crossings.</p>

Appendix 1

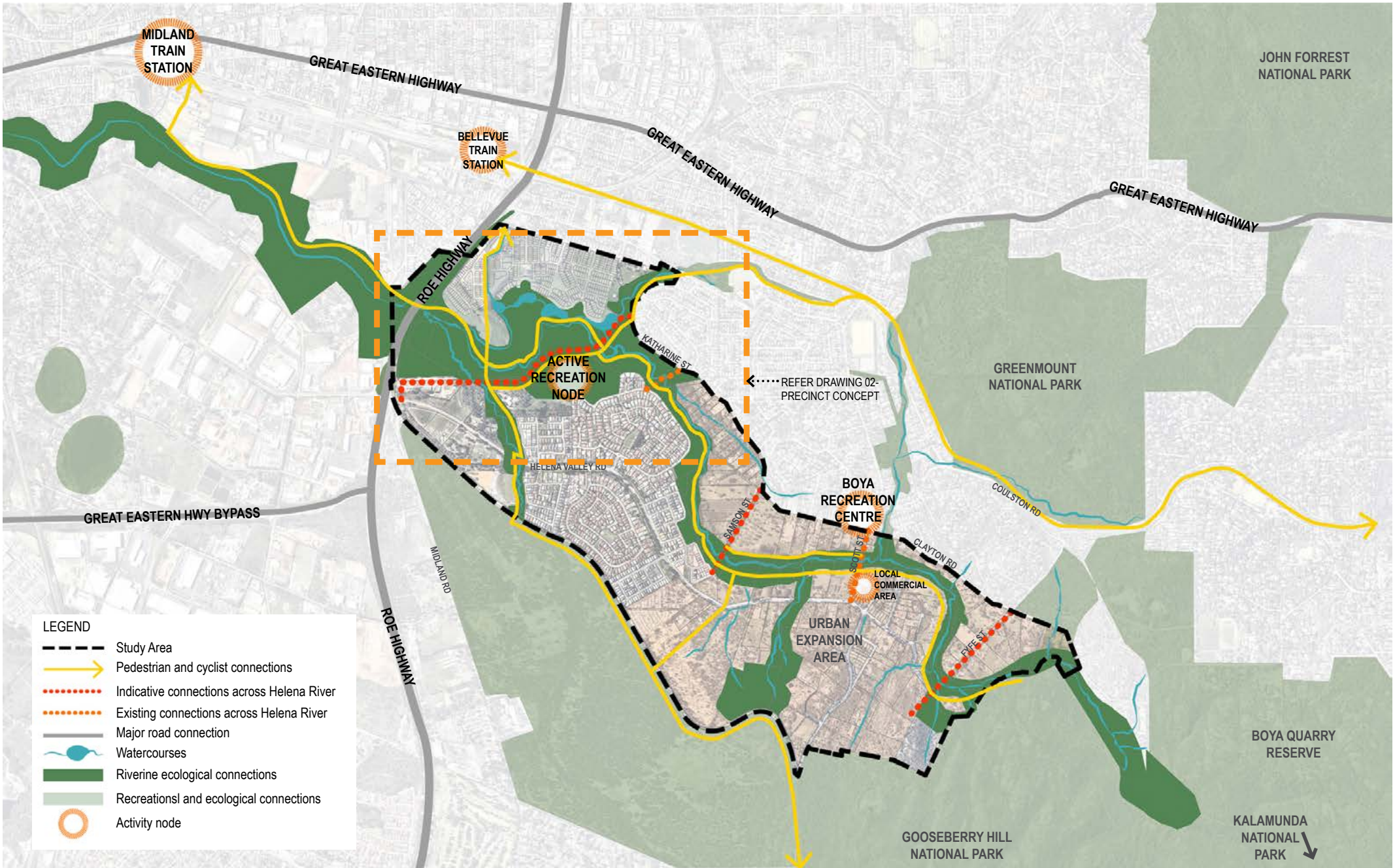
No.	Agency / Person / Organisation	What You Said	What We Did
67	Office of the Environmental Protection Authority	Environmental assessments required to determine extent of Bush Forever sites.	Strategy modified to emphasise that technical environmental studies required.
68	Resident	<p>Shire has neglected to maintain parks, the environment and infrastructure.</p> <p>Opposed to the construction of a large shopping centre and commercial development in Precinct 9.</p> <p>Increase in volumes of traffic would put further pressure on road network.</p> <p>Generally support limited rural subdivision in Precinct 10.</p> <p>Support the principle of ceding land around the Helena River, but management is required.</p> <p>Other options for crossings over the Helena River should be explored.</p>	<p>Strategy to be prepared for the development of the Helena River as a Parks and Recreation Reserve protecting and enhancing cultural features.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p> <p>Structure planning in the development zone and finalisation of the Local Commercial Strategy will determine the suitability, or otherwise, of particular retail format.</p>

Appendix 1

No.	Agency / Person / Organisation	What You Said	What We Did
69	Department of Parks and Wildlife	<p>Supports the underpinning principles of the Strategy.</p> <p>Makes a number of recommendations and changes for incorporation into the Strategy, Precinct Plan and Context Plan.</p> <p>Notes opportunity to improve the environmental integrity of the Helena River.</p>	<p>Context Plan will be refined to differentiate the Helena River from the foreshore reserve.</p> <p>A requirement to consider offsets for clearing associated with infrastructure upgrades has been included in the requirement for an Infrastructure Plan.</p> <p>Implementation Milestones modified to require the Traffic and Land Use Plan to be reviewed and Infrastructure Plan to be prepared.</p>



Appendix 2



LEGEND

- Study Area
- ➔ Pedestrian and cyclist connections
- ⋯ Indicative connections across Helena River
- ⋯ Existing connections across Helena River
- Major road connection
- ~ Watercourses
- Riverine ecological connections
- Recreational and ecological connections
- Activity node

**HELENA VALLEY
RECREATION PRECINCT
VISIONING STUDY**

FORESHORE VISION PLAN // CONTEXTUAL CONNECTIONS

DRAWING NO: 01 ISSUE: D SCALE 1:20 000 at A3














LEGEND

- | | |
|---|---|
|  Helena Valley Active Path |  Proposed vegetation |
|  Secondary Path |  Meadow parkland |
|  Tertiary Path |  Turf |
| |  Watercourse |

KEY - refer to precedent images

- | | |
|--|---|
|  1 Playground |  4 Creek crossings |
|  2 Parkland |  5 Informal/overflow parking |
|  3 Picnic areas |  6 Mountain bike pump track |
|  3a Picnic areas with lookout |  7 Sports club rooms and grounds |
| |  8 Exercise node |

HELENA VALLEY RECREATION PRECINCT VISIONING STUDY

FORESHORE VISION PLAN // PRECINCT CONCEPT

DRAWING NO: 02 ISSUE: C SCALE 1:7500 at A3



FORESHORE VISION PLAN

The Foreshore Vision Plan represents the potential for the Helena River and its foreshore as a continuous, recreational public open space, and ecological corridor with well-connected nodes of activity.

Should urban expansion occur, opportunities to enhance public open space will arise. At this stage, the vision plan is designed to provide low maintenance, passive recreational spaces, with concentrated areas of active recreational uses. Active recreation possibilities include sporting fields,

outdoor exercise equipment and a mountain bike track. Passive recreation is in the form of open 'meadow' like spaces with a network of paths connecting to picnic and viewing areas. These areas could include shade shelters, seating and barbeques and are spread throughout the site, some at high points which include lookouts across the valley. A new play space is proposed to replace the existing playground on the south side of the river, adjacent the sporting fields.

The Helena Valley Active Path forms the spine of the transport corridor for pedestrians and cyclists from the south east to north west. Secondary and tertiary paths from surrounding residential areas will connect into the spine allowing for a pleasant and safe riding and walking experience to Midland town centre. The Helena Valley Active Path follows the Helena river, forming an edge between the meadow and vegetated areas, comprising a combination of remnant vegetation and revegetation. Improved access to the recreational attractions from residential

areas to the north and the south is proposed through a roadway and river crossing connecting Helena Valley Road with Katherine Street.

The restoration of the riverine environment provides the opportunity to create an ecological corridor following the Helena River and connecting to other remnant vegetation in the area and national parks, including Greenmount National Park, Kalamunda National Park and John Forrest National Park.

As a vision plan, it is expected that this will be refined through further community and inter-agency consultation to ensure the on-ground outcomes respond to community needs and budget/resource requirements.

PLAY

The playground location is proposed to be within the sporting recreation area. The design of the playground should be integrated with the landscape and reflect the character of the Helena Valley through incorporating natural materials and vegetation into play elements. There is also opportunity for the inclusion of heritage interpretation.

1



Lizard Log, Sydney



Kings Park, Perth



Lizard Log Parkland, Sydney

PARKLAND

Meadow-like open areas with some more formalised pockets for passive recreation.

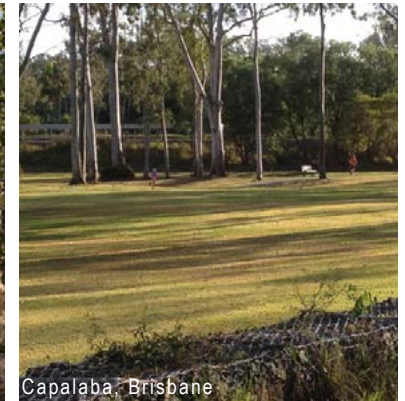
2



Tempelhof Park, Berlin



Lizard Log Parkland, Sydney

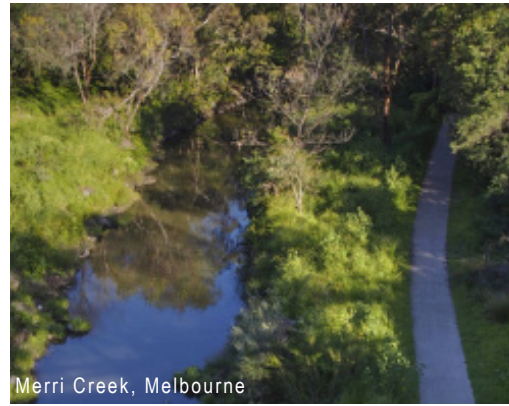


Capalaba, Brisbane



PATHS

The Helena Valley Active Path dissects the site and is located along the river bank. The HVAP should be at a minimum 2.5m wide to allow use by both pedestrians and cyclists. Secondary and tertiary paths may be less wide.



PICNIC AREAS

Including shade, seating and barbeques, scattered throughout the 'meadow'.

3



PICNIC AREAS WITH LOOKOUTS

As well as amenity such as seating and shade, picnic areas on high points may incorporate lookouts to take advantage of views across the valley.

3a



INTERPRETATION

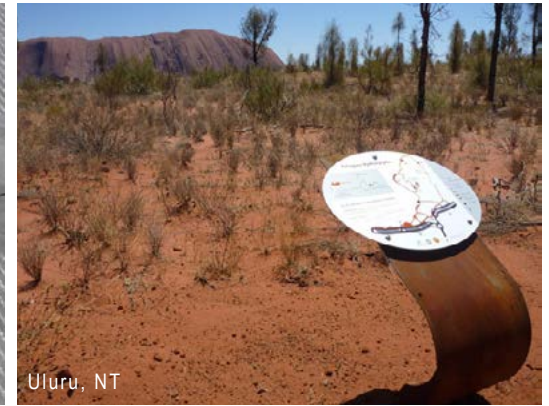
Heritage and environmental interpretative signage can be located along paths and trails. These could be stand alone signs or markers, or text and images incorporated into path surfaces.



Calais Muir Woodland, Scotland



The Gap, Albany



Uluru, NT

CREEK CROSSINGS

4

Low key creek crossings for pedestrians and cyclists.



Whiteman Park, Perth



Wylde Mountain Bike Trail, Sydney



Merri Creek, Melbourne

ACTIVE RECREATION

6

Active recreation may include sporting fields, exercise nodes along pathways and a mountain bike pump track which connects up with existing trails in the area.

7

9



Wylde Mountain Bike Trail, Sydney



Centennial Parklands, Sydney



Yokine Reserve, Perth

HELENA VALLEY
RECREATION PRECINCT
VISIONING STUDY

FORESHORE VISION PLAN // PRECEDENT IMAGES

DRAWING NO: 05

ISSUE: B





Appendix 3



Helena Valley Land Use Study

October 2013

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Approval for Issue

Name	Signature	Date

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1.0 INTRODUCTION

1.1 Background and study purpose

The locality of Helena Valley in the Shire of Mundaring includes land north and south of the Helena River, and comprises predominantly rural, rural-residential and residential land uses. Incremental development over time has seen the development of three distinct urban residential areas in the locality, now housing approximately 86% of the area's 3,000 residents. This historic pattern of development, coupled with the area's identification as a key residential growth area of the Shire (given its location on the Swan Coastal Plain and proximity to Midland as a key activity centre), has led to a number of land use planning and infrastructure issues, including:

- Identification of additional land suitable for additional urban development and future residential subdivision;
- Provision of appropriately located recreational and community facilities to cater for current and future residents;
- Adequacy of existing movement networks in facilitating the efficient and convenient movement of road traffic, cyclists and pedestrians within and throughout the area;
- Adequacy of existing commercial centres in meeting the needs of local residents;
- Identification of the highest and best use of land for areas constrained by aircraft noise restrictions.

The Helena Valley Land Use Study (HVLUS) has investigated these issues at a district wide level to identify key opportunities, issues and constraints for future land use and development in the area. It is intended to guide and inform future proponents in the initiation of requests for amendments to the Metropolitan Region Scheme (MRS) and the preparation of more detailed local structure plans. In recognition of the complexities of future land use planning in the Study Area, the report focuses on providing clarity as to which areas are not considered suitable for urban development, various matters requiring further investigation and the identification of elements necessary to support urbanisation of other areas.

The HVLUS has been prepared by RPS on behalf of the Shire of Mundaring based on available information and discussion with relevant Government Agencies and local stakeholders. No public/community consultation has been carried out to date, however, the HVLUS does provide a basis for further community dialogue and engagement beyond that recently carried out as part of the Shire's Draft Local Planning Scheme No.4 and Local Planning Strategy preparation.

1.2 The study area

The HVLUS Area comprises the entire suburb / locality of Helena Valley - approximately 638 hectares of land located fifteen kilometres east of the Perth CBD and three kilometres south east of Midland Regional Centre (**refer Figure 1 - Location Plan and Figure 2 - Study Area**), The study area extends from Helena River and Frederic Street in the north, to the Shire of Mundaring municipal boundary in the south, and from the Roe Highway in the west to the locality of Boya in the east. It is served by Helena Valley Road, Scott Street, Katharine/Clayton Streets and Ridge Hill road, which provide key north-south and east west linkages into neighbouring areas of Koongamia, Bellevue, Boya and Hazelmere. Due to its history of intermittent rural and residential development, along with the presence of significant physical constraints (including the Helena River, wetlands and steep topography), the existing pattern of development and movement networks is somewhat disconnected, with little interrelationship between the main residential communities.

The Helena Valley study area is predominantly residential and rural-residential in land use and character, with urban residential development contained to three distinct areas (**refer Figure 3 – Local Context**), described as:

- **Residential Cell A** - A large and expanding residential area in the west of the locality and south of the Helena River. This area is sewerred, catering for single residential dwellings on lots generally between 600m² and 2,500m².
- **Residential Cell B** - An established residential area north of the river, bounded by Scott, Frederic and Katharine Streets and Clayton Road. This area is mostly unsewered, with the exception of a small area along Frederic and Noel Streets. Lot sizes typically range between 1000m² (in the sewerred area) and 2,500m².
- **Residential Cell C** - A small, unsewered residential area near the intersection of Helena Valley Road and Ridge Hill Road, with lot sizes generally between 1000m² and 10,000m².

Outside of these established residential areas, land use is predominantly rural-residential in character, with some large landholdings of up to 33ha in area. Other notable land uses in the study area include:

- A local centre (local commercial centre) at the corner of Helena Valley Road and Torquata Boulevard (within Residential Cell A);
- A local centre on Scott Street (south of the Helena River, within Residential Cell C);
- A primary school at the intersection of Helena Valley Road and Ridge Hill Road (within Residential Cell C);
- A variety of local public open space and recreation sites scattered throughout Residential Cells 1 and 2, including Helena Valley/Boya Oval and Boya Hall (at the corner of Clayton Road and Scott Street).

A plan illustrating the land tenure/ownership characteristics (e.g. freehold title, crown reserve etc) of the Helena Valley locality is provided at **Figure 4**.

Surrounding land uses outside of the study area can be summarised as:

- Regional open space reserve to the north-northwest of Residential Cell A;
- Residential suburb of Koongamia immediately north of Residential Cell B;
- Residential suburb of Boya immediately east of Residential Cell B;
- National parks to the east and south east (extending along the Helena River valley);
- Ex-Department of Defence rifle range and training area to the south west (currently being planned for bushland retention and limited residential development); and
- Industrial development west of Roe Highway.

2.0 PLANNING CONTEXT

The following section describes the documents, plans and strategies that set the wider planning context and strategic intent for the Helena Valley. It is not an exhaustive list of all documents relating to the locality, rather, a short summary of the key strategies and statutory mechanisms most relevant and applicable to the study area.

2.1 State Planning Strategy

The State Planning Strategy was published by the Western Australian Planning Commission (WAPC) in 1997, comprising a comprehensive list of strategies, actions, policies and plans to guide the planning and development of regional and metropolitan areas in Western Australia. It is the key strategic planning document coordinating the State Government's response to the major planning challenges and opportunities facing state and local authorities.

The State Planning Strategy sets the following five key principles intended to guide and coordinate action at all levels of government and across all agencies:

- **The Environment** - To protect and enhance the key natural and cultural assets of the State and deliver to all Western Australians a high quality of life which is based on sound environmentally sustainable principles.
- **The Community** - To respond to social changes and facilitate the creation of vibrant, accessible, safe and self-reliant communities.
- **The Economy** - To actively assist in the creation of regional wealth, support the development of new industries and encourage economic activity in accordance with sustainable development principles.
- **Infrastructure** - To facilitate strategic development by ensuring land use, transport and public utilities are mutually supportive.
- **Regional Development** - To assist the development of regional Western Australia by taking account of the region's special assets and accommodating the individual requirements of each region.

2.2 State Planning Framework

The State Planning Framework unites State and regional policies, strategies and guidelines within a central framework to provide context for decision making on land use and development. State government agencies and local governments must have due regard to the framework when preparing and amending structure plans, the Metropolitan Region Scheme or local planning schemes.

Adopted as an overarching Statement of Planning Policy (SPP No.1) under Section 5AA of the Town Planning and Development Act (1928), the State Planning Framework Policy sets out key principles relating to environment, economy, community, infrastructure and regional development and describes the range of strategies and actions which support these principles generally and spatially. Other key statements of planning policy of particular relevance to the future urban planning and development of Helena Valley include:

- **SPP2: Environment and Natural Resources** – Defines the principles and considerations that represent good and responsible planning in terms of environment and natural resources, and is supplemented by more detailed, issue-specific policies providing additional information and guidance.
- **SPP2.8: Bushland Policy for the Perth Metropolitan Region** – Provides an implementation framework to ensure bushland protection and management issues are appropriately addressed and integrated with broader land use planning and decision making. Establishes a conservation system at the regional level

through Bush Forever areas (further discussed in Section 2.4 of this report).

- **SPP2.9: Water Resources** – Provides additional guidance for the conservation of water resources in land use planning strategy. Seeks to protect, conserve and enhance water resources identified as having economic, social, cultural and/or environmental values, and promote the sustainable management and use of resources.
- **SPP2.10 – Swan Canning River System** – Provides a vision statement for the future of the Swan-Canning river system, policies for future land use and development in the precincts along the river system and performance criteria and objectives for specific precincts. Identifies Helena Valley as a specific precinct, and encourages planning decisions that:
 - » enhance the natural riparian vegetation, especially in the lower reaches of the river;
 - » enhance the potential for water flows to be returned to the river;
 - » ensure that development complements the historic landscape qualities of the river near its junction with the Swan River at Guildford;
 - » improve public access to the river and extend contiguous foreshore reserves;
 - » ensure that earthworks associated with subdivision and development complement landscape values, particularly in the upper reaches of the valley;
 - » protect places of cultural significance, in particular places on the State heritage register and the Department of Indigenous Affairs register of significant places;
 - » maintain and enhance views from public places;
 - » protect the landscape and heritage values of the Mundaring Weir; and restrict construction of dams and prominent earthworks.
- **SPP3 – Urban Growth and Settlement** – Seeks to promote sustainable and well planned pattern of settlement across WA, with sufficient and suitable land to provide for a wide variety of housing, employment, recreation facilities and open space. Provides an overarching policy framework for urban growth policies such as the R-Codes, along with WAPC operational policy such as Liveable Neighbourhoods.
- **SPP3.5 – Historic Heritage Conservation** – Sets out principles of sound and responsible planning for the conservation and protection of WA's historic heritage. Seeks to conserve places of heritage significance, ensure appropriate development and provide improved certainty to landowners and the community about the planning process for heritage identification, conservation and protection.
- **SPP5.1 – Land Use Planning in the Vicinity of Perth Airport** – Applies to land in the vicinity of Perth Airport which is, or may be in the future, affected by aircraft noise. Seeks to protect Perth airport from unreasonable encroachment by incompatible (noise sensitive) development, and minimise the impact of airport operations on existing and future communities with reference to aircraft noise.

2.3 Directions 2031 and Beyond

Directions 2031 and Beyond was published by the Western Australian Planning Commission (WAPC) in August 2010, superseding the draft Network City policy as the primary spatial development framework and strategic plan for metropolitan Perth and Peel. It covers issues such as metropolitan structure and activity centres, population growth, housing and job targets, providing direction to State and local governments on:

- how we provide for a growing population whilst ensuring that we live within available land, water and energy resources;
- where development should be focused and what patterns of land use and transport will best support this development pattern;
- what areas we need to protect so that we retain high quality natural environments and resources; and

- what infrastructure we need to support our growth.

A key challenge identified by Directions 2031 is the need to cater for significant population growth over the next 20 years. This needs to be done in such a way that delivers a critical threshold of activities in highly accessible locations, and protects those areas that are valued and give our city its distinctive character. With respect to the Helena Valley project area and surrounds, Directions 2031 offers the following strategic planning guidance:

- Designates a series of 'sub-regions', with Helena Valley and wider Shire of Mundaring falling within the 'North-east sub-region'. The sub-region is forecast to grow to an estimated population of 258,000 by 2031 (a 37% increase on current levels), requiring some additional 40,000 dwellings. The sub-region currently has an employment self-sufficiency rate of approximately 63%, with Directions 2031 setting a target of 75% or an additional 42,000 local jobs.
- Identifies two urban development areas within the Helena Valley locality, immediately east (HE1) and west (HE2) of the existing urban community in the western portion of the study area (Residential Cell A), within the existing 'Urban' zone of the Metropolitan Region Scheme (MRS). These growth areas are identified as being capable of accommodating more than 300 dwellings each under the preferred growth scenario.
- Identifies Midland as the 'Strategic Metropolitan Centre' servicing the north-east sub-region, providing a well serviced and accessible mix of retail, office, community, entertainment, residential and employment activities. Strategic Metropolitan Centres are intended to provide a range of services, facilities and activities necessary to support the communities within their population catchments, thereby reducing the requirement for travel outside the catchment.
- Identifies Hazelmere as an existing 'Industrial Centre' catering for a broad range of manufacturing, fabrication, processing, warehousing, bulk goods handling and domestic services.
- Nominates the Perth Hills as a 'Metropolitan Attractor', being highly valued and visited by local and regional residents alike for its unique environmental qualities and activity offerings.

Table 1: Directions 2031 – North-east sub-region characteristics¹

Indicator	2008	2031	Change
Urban and urban deferred area	13,600 ha	-	-
Urban area already developed	10,900 ha	-	-
Population	189,000	258,000	69,000
Dwellings	73,000	113,000	40,000
Resident labour force	89,000	131,000	42,000
Jobs in the area	56,000	98,000	42,000
Employment self-sufficiency	63%	75%	12%

¹ WAPC (2010), *Directions 2031 and Beyond*, Western Australian Planning Commission, Perth

2.4 Metropolitan Region Scheme

The Metropolitan Region Scheme (MRS) is the statutory land use planning scheme for the Perth Metropolitan Region. The MRS controls land use at a regional scale through the reservation and zoning of land into broad land use categories. A number of MRS reservations and zones apply to the Helena Valley study area, as illustrated at **Figure 5**. These are generally described as follows:

Table 2: Metropolitan Region Scheme Zones and Reserves

Zone	Location	Description/Status
Urban	North and south of Helena Valley Road in western portion of study area (Residential Cell A)	Comprises existing urban developed areas, along with areas that are not yet subdivided and developed for residential use. These undeveloped areas are located to the immediate west of the developed area (extending as far as the Aircraft Noise Exposure Forecast restricted area), and the south east of the developed area.
	North of Clayton Road (Residential Cell B)	Comprises an established urban developed area of predominantly single residential dwellings and some parks/recreational land uses.
	Around Ridge Hill Road, Helena Road, Scott Street Intersections (Residential Cell C)	A small cluster of established residential dwellings focused around on a primary school. Also includes five (5) larger rural style properties south of Helena Valley Road which remain undeveloped for residential use.
Rural	Balance remaining zoned land	Rural properties of varying lot sizes, a number of which are affected by Bush Forever sites.
Reserve	Location	
Parks and Recreation	Along Helena River in North Western portion of study area	Majority remains private reserved land, and is associated with protection of Helena River Floodway and environs.
	West of Ridge Hill Road (Portion of Bush Forever site No. 216)	Small reserve area associated with vegetation protection and part of larger Bush Forever Site (ultimately tying into wider Gooseberry Hill National Park)
	East of Ridge Hill Road (Portion of Bush Forever site no. 215)	Associated with vegetation retention and Helena River environs. Part of wider reserve extending south and east.
Public Purposes (Water Authority of WA)	North of Parkview Garden (west of Lakeside Drive)	Associated with sewer pump station.
Primary Regional Roads	Westernmost portion of study area	Associated with Roe Highway.

Further urbanisation within the study area beyond those areas currently zoned 'Urban' will necessitate an amendment(s) to rezone the land under the MRS. In this regard, the following amendments to the MRS are currently being pursued within the study area:

- **Lots 55 (No.2460), 100 (No.2500) and 101 (No.2540) Helena Valley Road** – To rezone the properties from the Rural zone to the Urban zone. Only recently lodged with the WAPC, the proposed amendment is not substantially progressed to date.
- **Lot 2 (No.2670) Helena Valley Road** – To remove the Rural zone and apply both an Urban zone (over the western portion) and Parks and Recreation reserve over Bush Forever Area No.216. Only recently lodged with the WAPC, the proposed amendment is not substantially progressed to date.

Outside of the study area, other notable MRS zonings/reservations and amendments include:

- A long narrow strip of 'Rural' zoned land immediately adjacent to the southern/western study area boundary, following the alignment of the old Bushmead Railway reserve.

- A large area of land immediately south/west of the old Bushmead Railway reserve, reserved for 'Public Purposes – Commonwealth Government' under the MRS. This reserve was previously used by the Department of Defence for rifle range and other training purposes, but was sold to a private developer in 2010. An amendment to the MRS is currently being pursued to transfer a portion of the reservation to the 'Urban' and 'Urban Deferred' zones to facilitate further structure planning and urban development. Negotiations are continuing between the proponent, WAPC, local authorities and other agencies with regard to proposed future urban areas and their interface/relationship with adjacent developed areas in the Helena Valley. (Further detail provided at Section 2.10.6).
- Rural zoned land in Bellevue, south of Wilkins Street and north of the MRS Parks and Recreation Reserve. The western portion of this land outside of the ANEF 25 noise contour is being planned for residential development, with an MRS amendment currently being pursued to facilitate these plans. (Further detail provided at Section 2.10.7).
- Extensive Parks and Recreation reserves to the east, including Beelu National Park.
- Urban zoned land to the north (Koongamia, Boya) and further southwest (High Wycombe).
- Industrial zoned land further northwest in Hazelmere, Bellevue and Midvale.

In addition to regional reservations and zonings, the MRS also includes a policy overlay identifying the location of 'Bush Forever Areas' (BFAs). Bush Forever is a whole-of-government policy for the conservation of regionally significant bushland on the Swan Coastal Plain portion of the Perth Metropolitan Region. There are two BFAs (215 and 216) located within the study area, and one BFA (213) located immediately adjacent to the subject site. These are described in the following table:

Table 3: Bush Forever Areas

Site No.	Location Name	Part	Area (ha)	Category	MRS Zoning / Reservation	Within Study Area (Y/N)
213	Bushmead Bushland, Swan	A	24.99	Bush Forever reserves (existing or proposed)	Parks and Recreation Reserve	N
		B	101.4	Government lands or public infrastructure	Public Purpose – Commonwealth Government Reserve	N
215	Helena River, Helena Valley	A	44.41	Bush Forever reserves (existing or proposed)	Parks and Recreation Reserve	Y
		B	33.27	Regional Creeklines (with mapped vegetation)	Rural Zone	Y
216	Adelaide Crescent Bushland, Helena Valley	A	3.74	Bush Forever reserves (existing or proposed)	Parks and Recreation Reserve	Y
		B	10.92	Rural Lands	Rural	Y

Statement of Planning Policy 2.8 (SPP2.8), Bushland Policy for the Perth Metropolitan Region, seeks to ensure bushland protection and management issues in the Perth Metropolitan Region are appropriately addressed and integrated with broader land use planning and decision-making. The policy recognises the protection and management of significant bushland areas as a fundamental consideration in the planning process, while also seeking to integrate and balance wider environmental, social and economic considerations. Future planning and development decision making within the Helena Valley will need to have regard to the provisions of SPP2.8 with regard to the protection and management of significant bushland areas.

2.5 Foothills Structure Plan

The Foothills Structure Plan was released by the WAPC in 1992 to provide a framework for the development of the foothills area (generally between the Helena River and the Tonkin/Albany Highway interchange) to the year 2021. Although now somewhat dated and superseded by other strategic planning documents such as Directions 2031, some of the Structure Plan's key principles remain relevant as they apply to the subject land.

The Foothills Structure Plan covers that portion of the Helena Valley as far north as the Helena River, and east to Ridge Hill Road. It identifies land north and south of Helena Valley Road as largely suitable for urban uses, reflecting both the existing MRS urban zone of the time along with areas considered appropriate for 'future urban'. The northernmost area along the Helena River is identified for 'Regional Open Space', whilst balance areas are nominated as being suitable for 'Landscape Protection' (reflecting existing land use/development constraints including aircraft noise contours in the west and vegetation/topography in the east). Roe Highway and a portion of Helena Valley Road are identified as 'Primary Distributor Roads', whilst Ridge Hill Road, Midland Road and the remainder of Helena Valley Road are identified as 'District Distributor Roads'.

The general pattern and distribution of land uses shown over the Helena Valley area remain broadly appropriate in responding to key land use constraints, although the following matters should be noted:

- The Bushmead area immediately south of the study area is no longer identified as appropriate for wholly urban land use. The site will be largely retained as a regional reserve for bushland retention, with some limited areas identified for potential urban development.
- The exact alignment and extent of potential urban land use in the Helena Valley is subject to further investigation as part of this study and other more detailed investigations.

2.6 Shire of Mundaring Draft Local Planning Strategy

The Shire of Mundaring's Draft Local Planning Strategy has been prepared (concurrent with draft Local Planning Scheme No.4) to set the long term planning direction for the Shire over the next 10 to 15 years. The Strategy provides a strategic link between existing state, regional and local planning frameworks, along with a clear rationale for statutory land use and development controls set by the Local Planning Scheme.

The draft Strategy is comprised of two documents, a Strategies Document and a Background Document. The Background Document provides comprehensive qualitative analysis of the municipality, from which a series of recommendations and actions are identified and presented in the Strategies Document.

For those parts of the Shire located on the Swan Coastal Plain, the Strategy recommends increasing residential densities (subject to provision of reticulated sewerage) in close proximity to public transport, shops, schools, employment and other facilities. In this regard, the Helena Valley presents potential opportunities for future residential development, with the Strategy recommending that further investigations be carried out to identify appropriate expansion areas.

Specific strategies identified for the Helena Valley locality include (but are not limited to):

- The removal of subdivision potential from that portion of Bush Forever Site 216 within Lot 2 Helena Valley Road, whilst providing for appropriate subdivision and development over the balance portion of the lot.
- Review levels of service provision over time to accommodate changing community needs.
- Investigate opportunities to secure a site for the provision of active open space/recreational facilities south of Helena River.
- Consider opportunities for co-operation between the City of Swan and Shire of Mundaring in providing

recreational facilities for Helena Valley and future Bushmead residents.

- Pursue opportunities for improved access and connectivity between Helena Valley and future Bushmead development areas, and improved pedestrian/cycle links along/across the Helena River.
- Seek to achieve net residential densities of around 15 dwellings per hectare in identified 'Development' zone areas.
- Consider and determine desirable land uses for that area within the ANEF 25 contour.
- Investigate the potential for further subdivision (potentially necessitating an amendment to the MRS) for land north and south of Helena Valley Road between the two existing urban areas, having strong regard for landscape protection, floodplain management and watercourse protection.

2.7 Shire of Mundaring Draft Local Planning Scheme No.4

Draft Local Planning Scheme No. 4 (LPS4) has been prepared by the Shire of Mundaring (concurrently with a draft Local Planning Strategy) to replace the current Town Planning Scheme No.3 (TPS3). Following an advertising period for public comment, draft LPS4 was adopted by the Shire of Mundaring (subject to modifications) in late July 2012. LPS4 will retain its draft status until ultimately endorsed by the WAPC and Minister for Planning.

Figure 6 illustrates draft LPS4 zones and reservations as applicable to the study area.

Draft LPS4 is generally consistent with existing TPS3 in terms of broad land use distribution in the Helena Valley, although the following variations are noted:

- Nomination of a number of 'Development' zones for land adjacent to existing developed residential zoned areas in the north west of the study area (within that area zoned 'Urban' under the MRS). This will ultimately provide for residential development in accordance with an adopted Structure Plan.
- A new 'Rural Residential' zone replacing the 'Rural Landscape Living' zone of TPS3, and a new 'Rural Small Holdings' zone, applied to two individual landholdings – Lot 27 (No.110) Clayton Road and Lot 2 (No.2670) Helena Valley Road.
- A new 'Conservation' reserve, generally applied along the Helena River alignment.
- Replacement of TPS3 'Public Open Space' reserves with 'Conservation' and 'Recreation' reserves. The 'Recreation' reserve has also been applied to local parks not previously reserved in TPS3.
- Nomination of Helena Valley Road as an 'Important Local Road' (with a linear area of 'Recreation' reserve on either side of the road reserve, where adjacent to the existing westernmost urban area).
- Increased residential densities in the established northern urban area (along Noel Street) responding to infill sewerage provision and increased land capability.

In addition to proposed zonings and reservations, draft LPS4 also introduces the following Special Control Area (SCA) designations to the study area:

- **Aircraft Noise Exposure Forecast (ANEF)** – This SCA applies to all land within the ANEF 20, 25 and 30 contours, which includes the north western portion of the study area near Roe Highway. The draft SCA provisions place further planning controls on land use and development within the area, to ensure implementation of State Planning Policy No.5.1 *Land Use Planning in the Vicinity of Perth Airport*. Generally, residential land uses are not permitted within the ANEF 25 contour, whilst specific development requirements will apply to any proposed residential development within the ANEF 20 contour (and outside the 25 contour).
- **Bush Fire Prone Areas** – Identifies those areas considered to have a 'Moderate' or 'Extreme' bushfire hazard level, as determined in accordance with Bush Fire Hazard Assessment Procedures set out by

Planning for Bush Fire Protection (2001), published by the WAPC and the Fire and Emergency Services Authority (FESA). This SCA applies to large portions of the study area, particularly in the south east where there is steep topography and remnant vegetation, and seeks to implement the requirements State Planning Policy 3.4 *Natural Hazards and Disasters* and the WAPC's *Planning for Bush Fire Protection Guidelines* (2010).

- **Flood Prone Areas** – Identifies the known Helena River floodway and flood fringe areas, in accordance with 1 in 100 year flood level levels and associated mapping produced by the Department of Water. This SCA highlights the potential for flooding within the area and provides a mechanism to avoid or minimise flood damage associated with any development in the area.
- **Special Design Area No.2** – Applies to Lot 206 Helena Valley Road, and sets specific development criteria for the acceptability of higher density R30 residential development (as opposed to R20).

Figure 7 illustrates draft LPS4 Special Control Areas as applicable to the study area.

Once endorsed and gazetted, LPS4 will form the primary local planning mechanism regulating land use and development within the Shire of Mundaring. The key changes proposed by draft LPS4 reflect current thinking with regard to land use permissibility in the Helena Valley study area, providing for limited controlled residential subdivision within a more clearly defined framework of environmental conservation and risk/hazard management.

2.8 Shire of Mundaring Town Planning Scheme No.3

Shire of Mundaring Town Planning Scheme No. 3 (TPS3) is the operative town planning scheme currently applicable to the subject land area. Originally gazetted in 1994 (and since amended), TPS3 applies the following local zones, reservations (in addition to any regional reservations) and special use permissions within the study area:

- Residential zone (of various residential densities, ranging from R2.5 to R30);
- Rural Landscape Living zone (either prohibiting further subdivision or applying minimum lot sizes of 2ha or 4ha);
- Local Centre zone LC1 (Convenience Store);
- Local Centre zone LC2 (Local Commercial Centre);
- Public Open Space reserve;
- Public Purposes reserve; and
- An additional permitted use (A6) to Lots 237 (No.2340) and Lot 11 Helena Valley Road, for the purposes of a 'Park Home Park'.

Figure 8 illustrates TPS3 zones and reservations as currently applicable to the study area.

2.9 City of Swan Local Planning Scheme No.17

City of Swan Local Planning Scheme No. 3 is the operative town planning scheme currently applicable for adjacent land areas in Hazelmere, Bushmead, Koongamia and Bellevue. Gazetted in 2008 (since amended), the scheme applies the following local zones and reservations (in addition to any regional reservations) adjacent land areas north, west and south of Helena Valley:

- Residential zone (with densities generally between R20 to R30 in Bellevue and Koongamia);
- Light Industrial zone (north of Clayton Street in Bellevue);
- Rural Zone (North of Clayton Street in Bellevue);

- Industrial Development Zone (west of Roe Highway); and
- Local road reserve (along old Bushmead Railway alignment).

In considering the proposed MRS amendment for the old Bushmead Rifle Range site (Ordinary Meeting of Council, 23 May 2012), the City of Swan gave in-principle support for both the MRS amendment and a consequential amendment to Local Planning Scheme No.17 (assessed in parallel with the MRS amendment) that will result in:

- Portions of the subject lot being zoned 'Special Use' with a requirement for a structure plan to be endorsed under Part 5A of Local Planning Scheme No.17 prior to any further subdivision and development;
- Declaration of the subject lot as a 'Bushfire Prone Area'; and
- Identification of required buffer distances and development restrictions with regard to the existing poultry farm on Lot 15 (No.255) and Lot 200 (No.251) Midland Road, Hazelmere.

2.10 Other approvals, studies and planning activity

2.10.1 Shire of Mundaring Local Subdivision and Infrastructure Plans

Local Subdivision and Infrastructure Plans (LSIPs) are planning mechanisms required under Shire of Mundaring TPS3 to guide and coordinate subdivision and development and ensure a high standard of design, environmental sensitivity and adequate provision of services. They are generally required to be prepared and adopted prior to the Shire of Mundaring supporting subdivision of land within the Residential and Rural Landscape Living zones, or in other zones where proposed subdivision is of a sufficient scale and character to warrant it.

To ensure consistency with contemporary local planning procedures and terminology, draft LPS4 seeks to replace LSIPs with 'Structure Plans' as the key mechanism to coordinate residential and rural-residential style subdivision within the Shire. Existing LSIPs approved under TPS3, however, will continue to have statutory force under LPS4 as 'Structure Plans'.

A number of LSIPs have been prepared and adopted within the study area, facilitating subdivision over a number of years and effectively resulting in the pattern of land ownership and development seen today. These LSIPs are summarised below, with their locations illustrated in **Figure 9**.

Table 4: Approved LSIPs

LSIP No.	Affected Lots	Location	Zoning/Development Type	Lots / Dwelling Units Proposed	Current Lots / Dwelling Units
66	1 - 4, 6 - 9 and 15.	1, 5, 9, 13 and 17 Bulkirra Place, and 9, 13, 17 and 19 Adelaide Crescent.	Rural Landscape Living	9	9
144	2, 11, 55, 100, 101, 237.	2340, 2460, 2500 2540 and 2670 Helena Valley Road	Rural Landscape Living	17	6
177	1-13	25, 27, 29, 31, 33 and 35 The Crescent, 3775 Helena Valley Road, and 1, 3, 5 and 9 Atoifi Gardens	Rural Landscape Living	13	13

LSIP No.	Affected Lots	Location	Zoning/Development Type	Lots / Dwelling Units Proposed	Current Lots / Dwelling Units
196	1, 91-92, 250-251, 600-602,	305, 315 and 335 Ridge Hill Road, 40 and 46 Maguire Road, and 4010 and 4130 Helena Valley Road	Rural Landscape Living	8	8
222	23-24	1260 and 1370 Victor Road	Rural Landscape Living	2	2
285	3, 34, 38-39, 94-96,	900, 1170, 1350, 1530 and 1710 Clayton Road, and 330 and 460 Fyfe Street	Rural Landscape Living	7	7
296	1-76, 301-304, 306-314, 600-649, 9500	Helena Valley Road, Kemp Court, Barnden Road, Drummond Gardens, Allamanda Gate, Tuckeroo Parade, Steelwood Way, Carabeen Avenue.	Residential (R5-R15)	192	136
298	101-129	Allamanda Gate, Melita Drive and Delbi Way.	Residential (R20-R30)	29 Lots 53 Dwelling Units	29 Lots (construction works underway)
364	236	2160 Helena Valley Road	Residential (R20)	85 Lots 91 Dwelling Units	1
365	212-214	1805, 2005 and 2215 Helena Valley Road	Residential (R20-R30)	129	3
Total				491 Lots 521 Dwelling Units	214 Lots / Dwelling units

2.10.2 Planning Approval for Park Home Park (Lot 237 and Lot 11 Helena Valley Road)

On 8th February 2011, the Shire of Mundaring Council considered and approved (subject to conditions) the development of a proposed Park Home Park at Lot 237 (No.2340) and Lot 11 Helena Valley Road. The proposed development, also referred to as 'Helena Valley Residential Resort', is to comprise approximately 240 individual dwelling units, club house and other associated private recreational activities (e.g. bowling green, tennis court etc). At present, construction of the development is yet to commence, although the proponent has expressed clear intentions to do so in the near future. The proponent is also seeking to expand future Park Home activities further south onto neighbouring Lots 100 (No.2500) and 101 (No.2540), and has been pursuing an amendment to Town Planning Scheme No.3 (Amendment No.83) to designate these properties as having an additional use permission under Schedule 2 of the Scheme.

2.10.3 Hazelmere Enterprise Area Structure Plan

The Hazelmere Enterprise Area Structure Plan was jointly produced by the Department of Planning and City of Swan in 2011, providing a framework for coordinated land use planning and providing greater certainty with regard to infrastructure provision, traffic management and environmental protection. The Structure Plan area extends as far east as Bushmead (immediately adjacent to the Helena Valley study area), as well as covering key industrial areas west of the Roe Highway including Hazelmere.

The following Structure Plan elements are considered directly relevant to the Helena Valley study:

- A number of ecological corridors are identified, linking the Helena River with other key natural areas (e.g. wetlands, bushland). One such corridor is shown as linking the Bushmead precinct (including Bush Forever Area No. 213) with the Helena River environs in the northwest of the study area.
- Potential residential land use contemplated within the Bushmead precinct (as currently being progressed via an amendment to the MRS and associated structure planning).
- Potential light industrial or residential land uses contemplated for that area west of Midland Road and East of Roe Highway (subject to environmental considerations).
- General industrial uses west of Roe Highway.

2.10.4 Bellevue East Land Use Study

In 2012 the City of Swan appointed consultants to conduct a land use study for Bellevue East, being that area immediately south east of the Roe Highway and Great Eastern Highway interchange, extending as far south as Wilkins Street. The Bellevue East Land Use Study (BELUS) was intended to set a direction for development and revitalisation of the area, identifying critical short to medium term interventions and actions to facilitate desired land use outcomes. This was largely in response to public concerns associated with the encroachment and expansion of industrial/commercial developments, and the operation of existing businesses within the existing predominantly residential neighbourhood.

A series of government agency and community workshops were held in undertaking the Bellevue East Land Use study, with formal advertising subsequently taking place between March and May 2013. The City of Swan adopted the BELUS in August 2013, with the following study findings and recommendations being of relevance to the Helena Valley area:

- Identifies a potential future road link across the railway line, effectively connecting Katharine Street northwards to Horace Street. Also identifies a potential pedestrian link over the railway in the proximity of Bellevue Road. Both potential links present opportunities to improve north-south movement linkages and ties to the Midland/Midvale area.
- Recommends that the City request the Passenger Transport Authority (PTA) reinvestigate the possibility for a rail station 'within or near' the study area in light of the proposed increase in residential development and general increase in activity.
- Recommends the City request the PTA investigate the potential for Clayton Street to accommodate improved east-west bus services, connecting Koongamia with Bellevue and ultimately the future Midland Health Campus and train station further west.

2.10.5 Midland Revitalisation Charrette

In 1997, the Midland Charrette was held by the then Ministry for Planning and the City of Swan to generate ideas for revitalisation in the Midland area and surrounds. The Charrette recommended the establishment of a redevelopment authority, with the Midland Redevelopment Authority subsequently established in 2000. During the Charrette, Main Roads WA identified the lack of an alternative north-south distributor road parallel to (east of) the Roe Highway as a challenge for non-strategic traffic movements in the locality. The extension of Katharine Street north of Clayton Street, over the railway and linking into Horace Street (and then Great Eastern Highway) was contemplated as a potential solution to this issue, however, has not been implemented to date. This option is again being considered as part of the Bellevue East Land Use Study, and has the potential to facilitate improved district traffic movements between Helena Valley and key employment/activity areas via Katharine Street.

2.10.6 Bushmead MRS Amendment

Located immediately south west of the study area (and within the City of Swan), the 'Bushmead Rifle Range' site was previously owned and operated by the Commonwealth Government Department of Defence until its sale to Dunland Property Pty Ltd in 2010. No longer used for defence activities, the opportunity now exists to develop those cleared portions of the site with reduced environmental significance for residential purposes.

An amendment to the MRS (MRS Amendment No. 1242/41) is currently being pursued to facilitate this outcome, seeking to transfer portions of land from the 'Public Purpose – Commonwealth Government' and 'Parks and Recreation' reservation to the 'Urban' and 'Urban Deferred' zone to facilitate further structure planning and subdivision of the land. A concurrent amendment to the City of Swan Local Planning Scheme No.17 is also being sought (as previously described in Section 2.9 of this report). An extract of the proposed MRS amendment map is provided at **Figure 10**.

Preliminary Structure Planning for the area suggests the subdivision and development of two urban cells, one in the north western portion of the site, accessed from Midland Road, and another in the eastern portion of the site, accessed by Sadler Drive and Ridge Hill Road. Residential densities ranging between R5-R15 and R30-R60 are contemplated, with open space and recreation needs met through a network of local and neighbourhood parks. Discussions with the proponent have revealed that the Bushmead site is likely to yield in the order of 600 dwellings, although 200-300 of these may only be deliverable in the medium to longer term.

Of particular relevance to the Helena Valley study is the western development cell of Bushmead, and its future interface with the adjacent residential area of Helena Valley. This is noted as a key recommendation/action in the Shire of Mundaring draft Local Planning Strategy:

"Pursue opportunities for improved access and connectivity between Helena Valley and future Bushmead development areas, and improved pedestrian/cycle links along/across the Helena River."

The opportunity exists, via negotiations as part of the proposed MRS amendment and structure planning process, to further consider the provision of a new road link between Helena Valley Road and the future Bushmead development area (potentially along the western edge of Kadina Brook). The provision of a short access leg (to be removed of its current Bush Forever site status) in this location is provided for via the proposed MRS amendment, however, the ultimate form/function of this link is not clearly defined at this stage. The formalisation of this link as a functional access road, rather than an informal track or fire access/egress point, should be further advocated and secured via detailed structure planning for the site

2.10.7 Bellevue MRS Amendment

Located to the north of the study area and south of Wilkins Street in the locality of Bellevue, approximately 33.85ha of land is proposed to be transferred from the 'Rural' zone and 'Parks and Recreation' reservation to the 'Urban' and 'Rural' zones. The proposed 'Urban' zoning will allow for residential subdivision of the land following a local scheme amendment, detailed structure planning and subdivision approval. The proposed 'Rural' zone will provide for less intense private land use within an area affected by the ANEF 25 noise contour (and hence not permitted for residential use). The proposal seeks to facilitate subdivision and development of approximately 350 new dwellings, within close proximity to (effectively bordering) the HVLUS area.

The amendment also defines the boundary between the 'Urban' zone and 'Parks and Recreation' reservation for the Helena River, and is the subject of a Deed of Agreement between the landowner and WAPC with respect to the reserve's rehabilitation, management and transfer of ownership. Specifically, the owner of Lot

800 (No.1100 Katharine Street) has agreed to transfer the modified 'Parks and Recreation' reserve for the sum of \$1.00, and to carry out agreed restoration works and maintain them for a period of 25 years following completion.

MRS Amendment 1228/41 commenced advertising for public comment on 13 August 2013, with submissions due by the 15th November 2013. An extract of the proposed MRS amendment map is provided at **Figure 11**.

3.0 OVERVIEW OF STUDY AREA

3.1 Environment and heritage

The following provides a summary of environmental and heritage considerations for the Helena Valley study area, with further environmental advice from RPS Environment provided **Appendix 1**.

3.1.1 Topography

The topography of the project area undulates gently from an elevation of approximately 65m Australian Height Datum (AHD) in the east, where the laterised foothills begin to transition to the Darling Scarp, to an elevation of approximately 11m AHD in the west, where the relatively flat landscape of the Swan Coastal Plain commences (Western Australian Atlas: Shared Land Information Platform, 2012).

3.1.2 Geology and soils

The landform unit which underlies the project area is the Forrestfield soil association. This soil association is comprised of predominantly light grey colluvial quartz sands, clays and silts with intrusions of gravel, which may be at the surface or at depth. Creeklines are characterised by clays and sandy clays (Swan Catchment Council, 2004).

The Darling Range Rural Land Capability Study² identifies the following soil types/land units within the Helena Valley study area:

- Guildford (Gf5) and Swan (Sw3) soil types typically found in the western low lying portions of the site and along the Helena River alignment. These soils are typified as being poor draining, and as such, generally unsuitable for residential or rural residential land use/development unless sufficiently planned and constructed to ensure adequate sewerage (no septic) and management/stripping of nutrients from overland water flows (to maintain river water quality).
- Forrestfield (F2) soils found in the central and southern portions of the study area, typically characterised as well drained gravelly yellow or brown duplex soils with sandy topsoil. Being better draining, these soils are more capable of supporting residential and rural/residential land uses.
- Pockets of Dwellingup (D3), Yalanbee (Y1) and Mambup (Mm1) land units are present in the eastern portions of the study area, and are typically well draining given their gravelly soils and therefore considered capable of supporting a range of residential/rural-residential land uses.

3.1.3 Acid Sulfate Soils

WAPC Planning Bulletin No. 64 has mapped the risk of Acid Sulfate Soils (ASS) occurring for the Helena Valley area. Mapping provided at **Figure 12** illustrates extent of the project area identified as having a “High to Moderate” risk and “Moderate to Low” risk of ASS occurring within 3 metres of the natural soil surface. Preliminary ASS investigations are required for any proposed development in areas mapped within these risk categories, to confirm the presence or absence of ASS prior to any site earth works being undertaken.

² PD King and MR Wells (2012), *Darling Range Rural Land Capability Study*, Department of Agriculture, Perth.

3.1.4 Hydrology

3.1.4.1 Groundwater

Groundwater depth is generally between 15m and 7m in the north western portion of the study area, which is the only area with available data via the Department of Water's (DoW) *Perth Groundwater Atlas*.

Groundwater flow appears to be in a north-westerly direction across the site towards confluence of the Helena River with the Swan River. Groundwater quality in the area is generally described by the DoW as 'unsuitable' for use for domestic irrigation in preference to scheme water, although there is no information available for that area east of Maguire Road/Ridge Hill Road/Scott Street.

3.1.4.2 Helena River

The Helena River flows from east to west through the Helena Valley study area, and provides the function of a natural drainage channel, transporting overland flows from the surrounding catchment during high intensity rainfall events. The lower reaches of the Helena River can be subject to substantial flooding and the sandy fluvial deposits of its river bed can be subject to erosion, particularly in areas where the fringing vegetation has been degraded or removed.

Discussions with the Department of Water has confirmed that 1 in 100 year flood risk mapping was carried out in 1987, identifying areas of floodway and flood fringe for the lower reaches of the Helena River. This flood mapping considered the Lower Helena Pipehead Dam as being in place (reducing flooding frequency/volume further downstream), and identified a clearly defined channel to accommodate water flows during flood events. Importantly, the modelling underpinning the mapping also included allowances for a number of bridge crossings, including the existing bridge at Scott Street along with a crossing at Samson Street (which remains unconstructed). The DoW confirmed that opportunities exist to further review and/or amend the defined floodway to accommodate certain development/land use types (e.g. community facilities, playing fields etc), however such reviews would need to demonstrate that downstream flood levels are not further impacted.

To protect the integrity of the Helena River's water quality, associated riparian vegetation communities, the banks of the watercourse and to mitigate potential flooding, development controls are required to ensure the floodway/flood fringe is protected (and ultimately restored). The Shire of Mundaring intend to introduce such controls through the implementation of a Special Control Area (SCA) under draft Local Planning Scheme No.4 (as discussed in Section 2.7).

3.1.4.3 Wetlands

There are three distinct management categories for geomorphic wetlands in Western Australia, described as:

- Conservation (C) - Wetlands supporting a high level of ecological attributes and functions;
- Resource Enhancement (RE) - Wetlands which may have been partially modified but still support substantial ecological attributes and functions; and
- Multiple Use (MU) - Wetlands with few important ecological attributes and functions remaining.

Figure 12 identifies the location of wetlands within the study area, by management category. It confirms the presence of Conservation, Resource Enhancement and Multiple Use category wetlands in the western portion of the site associated with the Helena River floodplain and Kadina Brook. It also identifies a small Conservation category wetland centrally in the study area, affecting 'Rural Landscape Living' zoned properties southeast of Katharine Street.

In accordance with the Environmental Protection Authority's (EPA) Environmental Guidance for Planning and Development (EPA, 2008), it is recommended that development not be proposed within C and RE wetlands or their buffers (50 metres for C and 30 metres for RE).

3.1.5 Vegetation and Flora

Figure 13 illustrates that the known locations of Threatened and Priority flora species within the project area are within identified Conservation Priority Areas (as identified in the Shire of Mundaring draft Local Planning Strategy). Threatened Flora are protected under the *Wildlife Conservation Act 1950*, whilst Priority Flora, are not specifically covered under the *Wildlife Conservation Act 1950*, however their conservation status warrants some protection.

A search of the Environment Protection and Biodiversity Act 1999 (EPBC Act) Protected Matters Search Tool identified 15 threatened flora species and three threatened ecological communities (TECs) that may be present within the project area, with three TECs known to occur within the area:

- *Corymbia calophylla* – *Kingia australis* woodlands on heavy soils of the Swan Coastal Plain
- *Corymbia calophylla* – *Xanthorrhoea preissii* woodlands and shrublands of the Swan Coastal Plain
- Shrublands and woodlands of the eastern Swan Coastal Plain.

Appropriate flora and vegetation surveys are required to be undertaken on a site specific basis to identify and assess the values of the existing flora and vegetation upon extents of land proposed to be developed.

3.1.6 Fauna

The EPBC Act Protected Matters Search Tool identified six threatened fauna species that may be present within the project area (and a radius of five kilometres surrounding the site):

- Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*)
- Forrest red-tailed black cockatoo (*Calyptorhynchus banksia naso*)
- Baudin's black cockatoo (*Calyptorhynchus baudinii*)
- Malleefowl (*Leipoa ocellata*)
- Australian painted snipe (*Rostratula australis*)
- Chuditch (*Dasyurus geoffroii*).

As part of future development proposals in the area, appropriate fauna assessments / surveys will be required on a site specific basis to identify and assess the values of the existing habitat for species of conservation significant fauna.

3.1.7 Contamination

A search of the Department of Environment and Conservation's (DEC) Contaminated Sites Database was conducted on 31 July 2012, which indicated that one site was recorded within the project area. The landholding at 164 Scott Street (Lot 47 on diagram 46741), Helena Valley has been classified by the DEC as "Remediated for Restricted Use", and is restricted to commercial / industrial use due to the presence of hydrocarbons in the soil. The location of this contaminated site is illustrated at **Figure 14**.

In order to identify if any additional potential contamination constraints are likely to impact potential development within the project area, a regional Preliminary Site Investigation should be undertaken to detect if any additional potential constraints are present within the project area and where further assessment may be required.

3.1.8 Land use constraints

WAPC Statement of Planning Policy 5.1 *Land Use Planning in Vicinity of Perth Airport*, gives force to Australian Noise Exposure Forecast (ANEF) contours for Perth Airport. These measure the anticipated cumulative noise impacts over a year for future flight movements. ANEF 20, 25 and 30 contours have been identified in draft LPS4, and designated as a Special Control Area (as noted in Section 2.7 of this report). This SCA applies to the western portion of the Helena Valley study area adjacent to the Roe Highway (that land currently zoned Rural under the MRS).

Generally, residential land uses are not permitted within the ANEF 25 contour, whilst specific residential development requirements will apply to any proposed residential development within the ANEF 20 contour (and outside the 25 contour). Inside of the ANEF 25 contour, certain non-residential land uses, including service commercial, may be permitted subject to necessary zonings and development controls.

3.1.9 Aboriginal heritage

Registered Aboriginal Heritage Sites and Other Heritage Places are protected under the *Aboriginal Heritage Act 1972*. According to the Department of Indigenous Affairs (DIA) Aboriginal Heritage Database, there are some 14 “Registered Aboriginal Heritage Sites” and 16 “Other Heritage Places” falling within the study area.

Should development be proposed in areas where Aboriginal sites have been identified, it is recommended that advice be sought from the DIA or a specialist Aboriginal Heritage Consultant to ensure compliance with the Aboriginal Heritage Act 1972. Additionally, should any Aboriginal objects be identified or unearthed during development activities then under the *Aboriginal Heritage Act 1972*, the findings must be reported to the DIA.

3.1.10 European heritage

A search of the State Heritage Office's database revealed that two places listed on the State Register of Heritage Places within the study area (refer **Figure 14**):

- **Belle View / Helena Farm (place number 3836)** – This place incorporates most of Lot 800 (No.1100) Katharine/Wilkins Streets, which falls mostly outside of the study area, but does extend into the north western portion of the study area. The place comprises single-storey, brick and iron, Victorian Regency style residence, together with stables and former barn.
- **Clayton Farm (place number 03839)** – This place comprises a portion of Lot 27 (No.110) Clayton Road, Helena Valley, and relates to a two storey brick and iron residence in the Victorian Georgian style (1861), a single storey brick and iron cottage in vernacular style (c.1850s), and a brick lined well, in a rural setting relating to the Helena River. The place is the oldest remaining farmhouse on the Helena River, retains a high degree of integrity and authenticity, and is an excellent example of its style. It is a rare, intact example of a two-storey colonial homestead that was built on a portion of a land grant made in the first three years of colonial settlement, as part of the system of land grants involving narrow land parcels with river frontage.³

Heritage Places are protected under the *Heritage of Western Australia Act 1990*. Should development be proposed upon any place listed on the Register of Heritage Places, it is recommended that advice be sought

³ SHO (2012), *State Heritage Register*, State Heritage Office, Perth.

from the State Heritage Office or a specialist European Heritage Consultant to ensure compliance with the *Heritage of Western Australia Act 1990*.

3.2 Population and demographics

The 2011 Census of Population and Housing⁴ recorded 3,017 persons living within the Helena Valley study area, with 2,869 of these being at home on Census Night. Comparing 2011 and 2006⁵ Census results reveals that Helena Valley's population grew by approximately 11% in that 5-year period (up from 2,726 persons in 2006). Looking forward, Shire of Mundaring population growth projections for the Helena Valley–Boya area suggest that the population will grow by approximately 33% over the next twenty years to 2031⁶. This would result in a Helena Valley population of approximately 4,000 people by 2031.

The current age profile of Helena Valley (illustrated at **Chart 1**) shows a clear prevalence of middle aged families living in the area, with the two largest age cohorts being in the 45–54 years and 5–14 years groups. At present, approximately 22% of the population is under 15 years of age, whilst 10% is aged over 65 years. Population projections for Helena Valley–Boya suggest that a significant ageing of the population is set to take place over the next 20 years, with the proportion of persons aged over 65 years increasing to 17% (refer **Chart 2**). This trend is consistent with many other localities in Metropolitan and Regional Western Australia, and poses significant challenges for government, service providers and local communities in meeting the future needs of this significant and growing group of people.

The following table offers a summary of key demographic characteristics of the Helena Valley in Census years 2006 and 2011:

Table 5: Helena Valley – Key Demographic Characteristics

Indicator	2006	2011
Median Age of persons	37 years old	39 years old
Median household income (\$/Weekly)	\$1,407	\$1,901
Average Household Size	3 persons	2.9 persons
Country of Birth	Australia – 73% United Kingdom – 12% New Zealand – 2%	Australia – 75% United Kingdom – 11% New Zealand – 2%
% Families with Children under 15 years old	45%	39%

⁴ ABS (2011), *2011 Census of Population and Housing, cat.no.2001.0*, Australian Bureau of Statistics, Canberra

⁵ ABS (2006), *2006 Census of Population and Housing, cat.no.2001.0*, Australian Bureau of Statistics, Canberra

⁶ .id (2012), *Helena Valley – Boya detailed population forecast data*, accessed online at <http://forecast2.id.com.au/Default.aspx?id=301&pg=5210>, Shire of Mundaring, Perth.

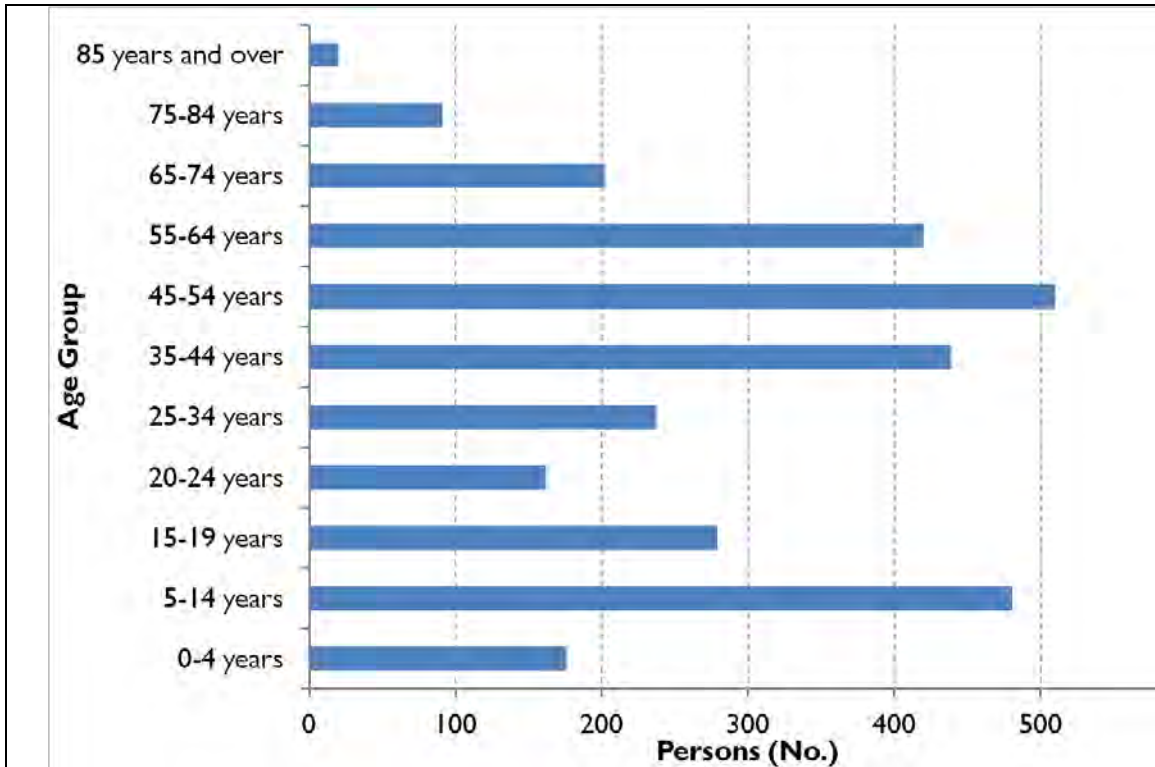


Chart 1: Helena Valley Age Profile, 2011

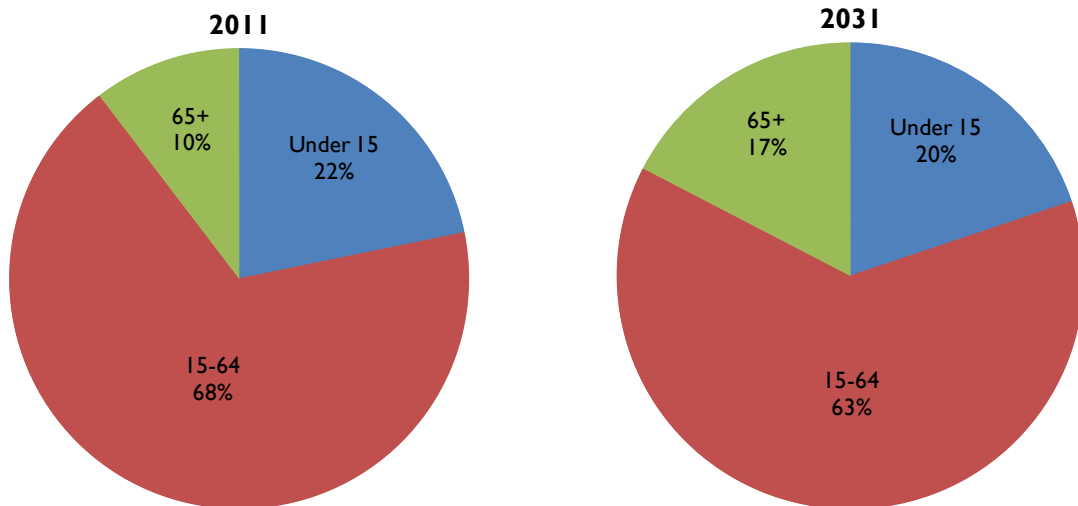


Chart 2: Helena Valley Age Cohorts, 2011 and 2031

3.3 Housing

2011 Census data confirmed the presence of 1,043 total dwellings within the Helena Valley study area, with approximately 986 of these dwellings being occupied (equating to a relatively high occupancy rate of approximately 94%). Further analysis has revealed that approximately 86% of total dwellings are located in existing urban/residential areas, with the remaining 14% on rural-residential landholdings. The general distribution of dwellings between urban areas is as follows:

- **Residential Cell A** – 55% of total dwellings.
- **Residential Cell B** – 25% of total dwellings.
- **Residential Cell C** – 6% of total dwellings.
- **Rural-residential (balance remaining)** – 14% of total dwellings.

Of the occupied housing stock in the area, approximately 94% is comprised of single residential houses, with the remaining 6% comprising either semi-detached (e.g. duplex) or attached (e.g. flat, unit) dwelling forms. The following table provides a breakdown of dwelling types and sizes within the study area:

Table 6: Helena Valley – No. of Occupied Dwellings by Type and Size, 2011

Type	One Bed	Two Bed	Three Bed	Four Bed	Five Bed	Six Bed or More	Not Stated	Total
Detached House	5	24	192	590	89	17	13	930
Semi-detached house	0	9	6	0	0	0	0	15
Flat, unit or apartment	14	27	0	0	0	0	0	41
Total	19	60	198	590	89	17	13	986

From the above table it can be seen that large detached houses with three or more bedrooms account for approximately 90% of the dwelling stock, with smaller one and two bedroom products only accounting for approximately 8% of stock. This dominance of large, traditional housing products is unsurprising given the area's established nature and rural-residential character, but it appears to be at odds with the current and future needs of residents. Only half of Helena Valley's households (52%) comprise three or more persons, with single and two-person households accounting for 15% and 33% respectively.

While many existing and future residents will continue to have a preference for larger house types in this area, there is a clear opportunity to provide increased diversity and choice through the delivery of new residential products. The recent approval of a park home park development on Helena Valley Road will provide much needed variety and choice in the Helena Valley housing stock by supplying approximately 240 new small dwellings (most of which being 1 and 2 bedroom) adjacent to an existing residential community. In identifying potential new residential development areas in Helena Valley, consideration should be given to the appropriate location of medium density products and/or aged care facilities in close proximity to local activity centres and community facilities.

3.4 Employment and services

The Helena Valley study area functions primarily as a residential/rural-residential community, with residents typically travelling outside of the area for employment. However, Helena Valley's close proximity to Midland

(identified as a Strategic Metropolitan Centre by Directions 2031), Hazelmere, Bellevue and Midvale (all identified as existing and future industrial areas by the WAPC's Economic and Employment Lands Strategy⁷) provides significant opportunities for local employment without having to provide additional employment generating land uses within the study area itself.

Within the Helena Valley two small 'local centres' have been developed, providing opportunities for limited retail/commercial local business activity. A summary of these two local centres is provided below:

Table 7: Local Centres Summary

Location	Approximate Zoned Site Area (m ²)	Approximate Floor Space (m ²)*	Services	Notes
Corner of Helena Valley Road and Torquata Boulevard	5,900m ²	1,800m ²	Supermarket Liquor Store Fast Food/Takeaway Hairdressers Real Estate Agent Bakery/Cafe Pharmacy & News	Fully developed site, co-located with a Child Care Centre and independent living/grouped development site. Provides a level of retail floor space consistent with the 'Local Commercial Centre' category described in the Shire of Mundaring's Local Commercial Strategy ⁸ .
Scott Street	5,800m ²	1,000m ²	Medical Centre and various associated medical practices Pharmacy	Partially developed site, located in relatively close proximity to Helena Valley Primary School and Helena Valley Recreational Ground. Provides a level of retail floor space consistent with the 'Convenience Store' category described in the Shire of Mundaring's Local Commercial Strategy ⁹ . Primarily medical in function, and lacking of retail activity consistent with the site's Local Commercial Strategy classification (e.g. no convenience stores etc).

* Note: Floor space amounts quoted are estimates only, based on aerial imagery.

3.5 Education

There is currently one public primary school and one child care centre located within the Helena Valley study area. The adjacent suburb of Koongamia also has one public primary school and one child care centre, whilst surrounding suburbs of Darlington, Greenmount, Swan View and Kalamunda also provide offer primary and high school services. This is summarised in the following table.

⁷ WAPC (2012), *Economic and Employment Lands Strategy: non-heavy industrial – Perth metropolitan and Peel regions*, Western Australian Planning Commission, Perth.

⁸ SoM (1992), *Shire of Mundaring Local Commercial Strategy*, Shire of Mundaring, Perth

⁹ SoM (1992), *Shire of Mundaring Local Commercial Strategy*, Shire of Mundaring, Perth

Table 8: Education and early learning services

Type	Name	Public / Private	Location	Current Students (No.) ¹⁰	Student No. Trend (last 5 years)
Early learning / child care	Ladybugs Child Care Centre	Private	Helena Valley	-	-
	Pegrum Family Day Care	Private	Koongamia	-	-
Primary School (not including pre-compulsory)	Helena Valley Primary School	Public	Helena Valley	293	Stable/slight decline
	Clayton View Primary School	Public	Koongamia	159	Slight decline
	Darlington Primary School	Public	Darlington	272	Slight increase
High School	Swan View Senior High School	Public	Swan View	399	Decline
	Kalamunda Senior High School	Public	Kalamunda	839	Decline

The Department of Education has advised that there are no current plans for major school capacity improvements or new school sites within the study area or immediate surrounds. However, the department did advise that any major increase in residential population as a result of urban expansion in either the Helena Valley and/or Bushmead area may necessitate the provision of an additional local primary school site, and therefore further liaison with the Department as an outcome of this study is advisable.

3.6 Open space and amenity

3.6.1 Regional Open Space

There are three distinct areas of Regional Open Space (identified as 'Parks and Recreation' by the MRS) within the study area, generally described as:

- **Helena River floodplain** – extending from the north western portion of the study area near Roe Highway, the MRS reserve extends along Helena River and along the northern and eastern extent of Residential Cell A. The wider reserve (including an area extending to Wilkins Street in Bellevue) has an area of approximately 123ha, and forms part of a larger regional reserve extending west into the City of Swan beyond the Roe Highway.

At present, Broz Park (5.7ha) and Riverside Park (6.7ha) constitute the extent of public land in public ownership (Crown Reserve and a management order with the Shire of Mundaring), although the State Government is understood to have recently acquired portions of the reserve area immediately east of Roe Highway. Broz Park has benefited from landscaping improvements and the provision of local recreational facilities including shade structures, barbeques, playground, and lake. Riverside park remains largely unimproved, aside from the provision of a dual use path extending to a steel bridge crossing at the Helena River (the path then continues unsealed as far as Katharine Street).

¹⁰ DoE (2012), *Schools Online*, accessed at <http://www.det.wa.edu.au/schoolsonline/home.do> on 26 July 2012, Department of Education, Perth.

- **East of Ridge Hill Road, including a portion of Bush Forever Area No.215** – With an area of approximately 9.6 ha, this reserve has significant remnant vegetation, some of which is identified as Bush Forever Area No.215, with the remainder having local bushland value.
- **Portion of Bush Forever Area No.216 west of Ridge Hill Road** – This reserve has an area of approximately 4ha and forms part of the larger Bush Forever Area No. 216. This site is currently without public access, resulting from a previous local road closure, although is currently under management of the Shire of Mundaring. This anomaly is likely to be rectified through the ultimate reservation of the remaining portion of Bush Forever Area No.216 which presently extends into Lot 2 (No.2670) Helena Valley Road.

In addition to these areas, small portions of Regional Open Space also extend into the subject land area from wider national park and reserve areas, notably in the south east of the study area forming part of Bush Forever Area No.215. On completion of the Bushmead Rifle Range MRS Amendment, 'Parks and Recreation' reserves will effectively continue along the entire southern extent of the Helena Valley project area.

Department of Planning officers have advised that there is a general intent to progressively acquire land along the Helena River as foreshore reserve, as part of any future urbanisation of the area (south and east of Riverside Park). This would present a significant opportunity not only to retain important riverine environments in public ownership and management, but also to provide bicycle/pedestrian paths that may ultimately link in with a regional path network following the alignment of the Helena and Swan Rivers.

3.6.2 District Open Space

District Open Space is generally defined as public open space areas of between 2.5ha and 7ha, serving more than one neighbourhood and having a walkable catchment of between 600m and 1km. They should be of adequate size and shape to accommodate both grassed areas for informal games and for organised sport, and may also include hard court surfaces for other games¹¹.

The only area of district open space currently provided within the Helena Valley is a 3.4ha site at the corner of Clayton Road and Scott Street. Known as 'Helena Valley Recreation Ground' or 'Helena Valley / Boya Oval', the site includes:

- full size cricket/football oval;
- flood lighting;
- change rooms;
- 70 person capacity community hall;
- tennis courts;
- basketball court;
- cricket nets; and
- car parking.

¹¹ WAPC (2012), *Liveable Neighbourhoods*, Western Australian Planning Commission, Perth.

The oval's location at the corner of Clayton Road and Scott Street means that it is highly accessible to residents in the older established residential neighbourhoods of Helena Valley (Residential Cells 2 and 3), as well as serving the residential population of the adjacent Boya neighbourhood. Residents of Helena Valley's western residential area, however, are not within a convenient walkable catchment of the recreation ground, and have few direct road or pedestrian access links across the Helena River aside from Scott Street (approximately 1.5km to the south east) and a pedestrian bridge crossing at the northern end of Riverside Park. The Shire of Mundaring is currently considering options for the relocation of the Greenmount Library to the Boya Oval site, which would potentially see a new library and community facilities constructed immediately east of the (reconfigured) oval and adjacent to the existing tennis courts.

A large reserve of approximately 2.7ha is identified in LSIP No.298 adopted for Lot 206 Helena Valley Road, however, the primary intent and function of the reserve is for wetland rehabilitation and drainage rather than active recreation purposes. In this regard, residents in the westernmost residential area of Helena Valley continue to rely on Helena Valley / Boya Oval as the primary district open space site in the locality. This issue has been identified in the Shire's draft Local Planning Scheme, which recommends investigation of opportunities to secure a site for the provision of active open space/recreational facilities south of Helena River.

3.6.3 Neighbourhood and Local Public Open Space

Liveable Neighbourhoods defines local and neighbourhood parks as having areas of up to 3000m² and 5000m² respectively, serving a more localised and providing a high standard of amenity for local Residents. Helena Valley is generally well served by a network of neighbourhood and local parks distributed throughout the two largest residential areas (Residential Cells 1 and 2). The following table provides a summary of existing neighbourhood and local public open space provision across the study area:

Table 9: Existing Neighbourhood and Local Public Open Space Provision

Area	Neighbourhood and Local Parks (ha)	Residential Land (ha)	Residential Dwellings (No.)	Estimated Population (persons)	Ratio of POS to Residential Land (%)	POS per Resident (m ²)
Residential Cell A	4.80	61.59	580	1676	8%	28.65
Residential Cell B	3.53	48.37	260	751	7%	46.97
Residential Cell C	0.06	17.85	58	168	0%	3.41
Total	8.39	127.80	898	2595	7%	32.32

In addition to the above table, the following observations can be made:

- Whilst Residential Cells 1 and 2 have similar ratios of POS to residential land area, the amount of local and neighbourhood parkland provided per head of population is significantly higher in Residential Cell B.
- In addition to the local and neighbourhood parkland provided in Residential Cell A, this area is abutted by significant Regional Parks and Recreation reserves, including Broz Park (5.69ha) and Riverside Park (6.7ha) providing further opportunities for active and passive recreation.
- Residential Cell B also contains Helena Valley Recreational Ground, which offers significant active recreation opportunities for local residents within its local catchment area (including Residential Cell C).

In addition to POS already provided, further provision of neighbourhood and local POS is also proposed for those areas with approved LSIPs. This will ensure future residents of these new urban areas will also have convenient access and exposure to the amenity provided by local and neighbourhood parks.

3.7 Movement networks

The Helena Valley study area is located to the south east of a major metropolitan intersection between two strategic highway routes (Roe Highway and Great Eastern Highway), on the periphery of Perth's urban suburbs and at the foothills of the Darling Scarp. Only 30 minutes drive from the Perth Central Area, the Helena Valley is benefited by its close proximity to key metropolitan activity centres and attractors (Perth, Midland) whilst also being on the doorstep to the Perth Hills and the associated lifestyle opportunities that it affords.

From Perth, the Helena Valley is most directly accessed via the Great Eastern Highway/Great Eastern Highway Bypass, with alternative routes available via Abernethy Road or Guildford Road. The Great Eastern Highway provides easy access to the Perth Hills and beyond.

Access to Helena Valley from the strategic road network is primarily via Scott Street (from Great Eastern Highway) or Clayton Street/Katharine Street (from Roe Highway). Alternative routes are also available via Bushmead Road/Helena Valley Road or Midland Road.

3.7.1 Roe Highway

Roe Highway generally forms the western extent of the Helena Valley Study area, and is a major strategic road asset both in a local and regional context. The highway is part of the AusLink national road network, forming a key component of the AusLink Perth Urban Road Corridor linking the Perth-Darwin, Perth-Adelaide and Perth-Bunbury corridors. Running past Helena Valley in a north-south alignment, it carries major traffic volumes between Midland and other key destinations in eastern and southern metropolitan Perth.

There is no direct road access to Roe Highway from Helena Valley. Access onto the highway is generally achieved by one of the following routes:

- Northwards along Katharine Street to Clayton Street, and then west to Roe Highway (only southbound entry onto the highway);
- Westwards along Helena Valley Road/Bushmead Road (over Roe Highway) to Stirling Crescent, south to Great Eastern Highway Bypass and then east to Roe Highway; or
- Southwards along either Midland Road or Ridge Hill Road to Kalamunda Road, then onto Roe Highway.

Liaison with Main Roads WA has confirmed that Roe Hwy (along with the Great Eastern Hwy Bypass) is planned as a freeway standard route with full control of access (i.e. no direct access to adjacent properties). Main Roads WA recently reviewed the Roe Highway Road Network from Clayton Street to Great Northern Hwy, which included consideration of Directions 2031 land use information in traffic modelling for the area. One of the options considered as part of the review was a possible southern extension of Farrall Road from Great Eastern Hwy southwards to Helena Valley road, however, an extension only as far as Clayton Street could be justified from a modelling perspective (and therefore be supported by Main Roads).

Main Roads also confirmed that:

- Recent modelling identified Clayton Street in the vicinity of the Roe Hwy interchange will likely require widening to a 4-Lane dual carriageway standard.
- The Department of Planning has been reviewing a realignment of the Freight Rail Line through Midland. The current preferred alignment is for the line to deviate southwards near Military Road (west of Roe

Highway) – this will have implications for the Bushmead Road / Helena Valley Road flyover Bridge at Roe Hwy, as it severs the only route for High Wide Loads to Roe Hwy. The Bushmead Road / Helena Valley Road flyover Bridge will therefore need to be raised significantly and reconstructed to accommodate High Wide Loads on Roe Hwy. This will likely have additional land requirement implications adjacent to Helena Valley Road.

- The tri-level semi-directional 'T' interchange previously planned for the Roe Highway / Great Eastern Highway Bypass will be reviewed by Main Roads shortly. Main Roads envisages that the interchange will be developed to a standard trumpet type interchange with no connection to the local (Helena Valley) road network to the east. This revised layout may have additional land requirement implications, east of the current Roe Hwy reservation boundary.

3.7.2 Important Local Roads

There are five key roads traversing the Helena Valley Study area that fulfil the role of 'District Distributor Roads' as defined by WAPC Development Control Policy 1.4 (Functional Road Classification Planning), and are proposed to be reserved as 'Important Local Roads' under draft Local Planning Scheme No.4.

- Helena Valley Road;
- Scott Street;
- Ridge Hill Road;
- Katharine Street; and
- Clayton Road.

Helena Valley Road forms the primary east-west link traversing the study area, extending from Roe Highway in the west, along the course of the Helena River to the eastern extent of the locality. Further east, the road continues unsealed before terminating near the Lower Helena Diversion Dam.

Helena Valley Road is categorised as a 'District Distributor A' road under Main Roads WA Road Hierarchy, with an indicative average traffic volume of 8,000 – 15,000 vehicles per day.. Traffic counts from 2008 measured approximately 7,000 vehicles per day, suggesting that further capacity remains to cater for additional development in the area.

Road improvement works currently committed for Helena Valley Road include:

- \$373,365 of federal 'Black Spot' funding via the Department of Infrastructure and Transport's Nation Building Program. Currently in the planning stages, these works will ultimately result in the provision of sealed shoulders, audible edge lines, guideposts and raised pavement centreline markers.
- Developer-funded construction of two new intersections (one channellised 3-way intersection, and one 4-way roundabout) to provide access into future residential development of Lots 212 (No.1805), 213 (No.2005), 214 (No.2215) and 236 (No.2160) Helena Valley Road.

Whilst the ultimate design standard and plan for Helena Valley Road is still in development, the Shire of Mundaring does have interim plans for further Helena Valley Road improvements to provide kerbed road edges and complete a dual use path link between Scott Street and the Roe Highway intersections. These upgrades would be required as a minimum standard of any future development, enforceable through the subdivision process.

Scott Street, Katharine Street, Clayton Road and Ridge Hill Road all typically fall under the 'District Distributor Category B' Main Roads WA classification, generally constructed as 2-way (single lane in each direction) roads capable of carrying traffic volumes of up to 6,000 to 8,000 vehicles per day. They provide

key links to other surrounding neighbourhoods such as Boya, Koongamia and Bellevue, as well as linking to major transport corridors such as Roe Highway and Great Eastern Highway.

As the Helena Valley locality continues to grow in population and activity, these roads will continue to fulfil a major role in the movement of traffic within, to and from the area. Beyond those planned and anticipated improvements described above, there will inevitably be further improvements needed to formalise the role and function of these roads (e.g. kerbing works, line marking improvements etc) as well as improve traffic movements and safety (e.g. intersection upgrades).

3.7.3 Other local road links

Samson Street is currently constructed on the northern side of the Helena River only, extending from Clayton Street and providing local access to a small number of rural-residential properties, terminating at edge of the vegetated river bank/floodway. The road reserve extends across the river as far as Helena Valley Road, with only an unsealed informal access route (from Helena Valley Road to existing properties south of the river) designating its alignment. There is no constructed river crossing at present.

Similarly, Fyfe Street (further east in the locality) also has a designated road reserve linking Clayton Road to Helena Valley Road, but is only constructed on the northern side of the Helena River. Again, there is no constructed river crossing at present.

With no other road crossings of the Helena River other than Scott Street, this presents significant challenges not only for day to day connectivity and movement (particularly in facilitating functional linkages between Residential Cells 1 and 2), but also in times of natural hazards such as bushfires, where only a single river crossing poses significant issues for both emergency access and egress.

3.7.4 Public transport

Two public bus services currently operate in the Helena Valley study area:

- **322** service from Midland Train Station to Glen Forest, via Bellevue, Koongamia, Helena Valley (Frederick Street and Scott Street), Boya and Darlington. This is a frequent daily service (at least once an hour) in each direction on weekdays, with an hourly service on Saturdays and two-hourly service on Sundays.
- **307** service from Midland Train Station to Helena Valley (terminating at Helena Valley Road near Lakeside Drive), via Bellevue/Hazelmere. This is an infrequent service with only three services in each direction on weekdays (aligning with peak travel periods to/from Midland train station) and no weekend services.

The Public Transport Authority (PTA) of Western Australia has confirmed that there are presently no plans to extend or improve the current level of service provision in the Helena Valley, although it will continue to monitor and review the adequacy of bus services in the area as further development occurs and demand increases..

The current pattern and frequency of bus service provision in the Helena Valley reinforces the apparent disconnect between the two major residential areas in the north and west of the locality. Whilst residents in the older and more established area north of Helena River enjoy a relatively good level of service linking to key destinations both west and east, residents in the newer area south of Helena River are restricted to morning and evening peak commute services to/from Midland with no connections further east. Furthermore, there are no bus services passing the urban area around Ridge Hill Road, with these residents having to walk approximately 600m to access the 322 service on Scott Street/Marriott Road.

Unsurprisingly, given the lack of public transport services in the locality, residents are more reliant on the private vehicle for transport. Helena Valley has very low proportion of 'no car households' and much higher proportions of two and three (or more) vehicle households compared to Greater Perth and WA averages (refer table below). However, with an ageing population and the challenges associated with peak oil consumption (higher car ownership and running costs etc), there will likely be significantly greater demand for public transport in the future.

Table 10: Motor Vehicles Per Household, 2011

Motor Vehicles Per Household	Proportion of Total Households		
	Helena Valley	Greater Perth	WA
No motor vehicles	2%	6%	6%
One motor vehicle	19%	33%	33%
Two motor vehicles	43%	39%	38%
Three motor vehicles	33%	19%	20%
Number of motor vehicles not stated	3%	3%	3%

3.7.5 Path networks

A network of pedestrian and dual use paths are currently provided in the Helena Valley study area, within and linking those key urban/residential areas north and south of the Helena River. Key dual use path routes currently exist along:

- Katharine Street and Clayton Road;
- Davis Road, Glynden Way, Orana Way and Glenwood Avenue;
- Scott Street;
- Helena Valley Road;
- Torquata Boulevard and Riverdale Road; and
- Lakeside Drive.

Whilst these path networks provide a high level of connectivity and circulation within each of the established residential areas, pedestrian connectivity between each of the areas is restricted by the physical barrier presented by Helena River. Good connectivity exists between the area north of Helena River and adjacent residential areas to the north (Koongamia), east (Boya) and south (around Ridge Hill Road), however, there are only two paths currently linking the western residential area to northern and eastern parts of the locality:

- A dual use path running along the northern side of Helena Valley Road, approximately 1.2 - 1.6 kilometres in length between the existing residential area and Scott Street.
- A partially constructed dual use path (the remainder being a dirt path) linking from Lakeside Drive to Katharine Street through the existing regional open space reserve (publicly vested south of the Helena River, but privately owned land north of the river).

Whilst the partially constructed dual use path is planned to be completed as part of wider redevelopment and improvement works on Lot 800 Katharine/Wilkins Streets, there remains an opportunity to provide an additional path crossing of the Helena River within the Samson Street road reserve, either as a full road bridge or through construction of a pedestrian bridge. While an allowance for a bridge in this location was

made by the Department of Water in its 1:100 year flood modelling and mapping for the Helena River, a number of other critical issues would need to be investigated and resolved to facilitate construction of such a bridge, including:

- Aboriginal heritage investigations and necessary clearances;
- Environmental investigations and clearances, including agreement of the Swan River Trust/Department of Parks and Wildlife.
- Detailed engineering feasibility investigations.

3.7.6 Emergency access/egress

Easternmost portions of the Helena Valley are classified as having an extreme risk of bushfire hazard, given their steep topography and levels of remnant vegetation. Accordingly, access to and from these areas is a major consideration in any land use and development planning in the locality. During emergencies, Ridge Hill Road, Helena Valley Road and Scott Street will most likely form the key routes for residents leaving the area or emergency services vehicles gaining access.

As previously noted, the lack of Helena River road crossings other than Scott Street this presents an issue in responding to natural hazards such as bushfires, where only a single river crossing poses significant issues for both emergency access and egress. Furthermore, the reliance of properties in 'moderate' and 'extreme' bushfire hazard areas on only one point of access in and out of the area (e.g. Fyfe Street, The Crescent, Helena Valley Road east of Ridge Hill Road) presents an ongoing challenge, potentially addressed through the extension of these roads through to other escape routes.

3.8 Services and utilities

3.8.1 Water

Scheme water is currently available throughout the study area via the Greenmount Gravity Water Supply Scheme. Water mains are provided throughout urban developed areas and along key local roads including Helena Valley Road, Katharine/Clayton Streets, and Scott Street.

Discussions with the Water Corporation (WaterCorp) have confirmed that the delivery of new water infrastructure to support development will be planned in response to new zonings and the identification of land in appropriate planning frameworks. In this regard, early and proactive liaison with the DoW during the preparation of further strategic plans and/or rezonings for the locality is recommended to ensure sufficient lead in times and maximise the coordination of water service planning across the area.

Refer **Figure 16** for a plan of existing utilities infrastructure in the area.

3.8.2 Wastewater

Only the westernmost urban area of Helena Valley (north and south of Helena Valley Road), along with a very small area in the older established area north of Helena River (around Frederick and Noel streets), is connected to the metropolitan sewerage system (refer **Figure 16**). The remainder of the locality, including older established urban areas north of the Helena River and around Ridge Hill Road, is reliant on on-site effluent disposal systems.

The minimum size for a residential lot without a sewerage connection is generally set at 2000m², or a maximum residential density of R5, with some exceptions (notably those existing older established areas with lots already smaller than 2000m²). The Shire of Mundaring is currently advocating review of Sewerage Policy to allow more flexibility and site specific considerations, acknowledging that in many instances site

characteristics would allow for on-site effluent disposal for a particular development without risk to the environment or public health.

Until recently, the reticulated sewer network in the western urban area was serviced by a temporary pump station near the intersection of Parkview Gardens and Lakeside Drive (with pressure mains traversing the Helena River at the point of the northern pedestrian bridge, then extending north into Koongamia). The temporary pump station is now running near capacity, necessitating construction of a new Type 40 permanent pump station near the intersection of Allamanda Gate and Carabeen Avenue (incorporating a 30m buffer to residential properties). This new pump station is to be constructed as part of civil works being carried out on Lot 206 Helena Valley Road, prefunded by the Water Corporation and allowing the temporary station to be decommissioned.

Liaison with the Water Corporation with regard to the provision of new sewerage infrastructure to the area has confirmed the following:

- In the long term, there are plans to extend the Maida Vale Sewer Main northwards (to the west of Roe Highway) to Hazelmere, which will convey waste water to the Woodman Point WWTP. This will ultimately provide for a significant increase in the wastewater capacity of the area, however, is a long term prospect with a significant cost. In the meantime, sewer planning will need to be based on engineering advice considering temporary (medium term) arrangements.
- The study area currently sits within two sewer districts – Midland and Helena Valley, with the Midland Flora Street pumping station currently overloaded.
- For new development areas, development sequencing will be largely determined by the provision of gravity / pressure mains to convey wastewater into the wider metro sewer network. Again, coordinated planning is required to ensure the optimal/efficient provision of sewer infrastructure, prefunded by private developers.
- Any proposed future urban zoning/development of land south of the Helena River and west of the Primary School will need to consider the requirement for a pump station(s) to convey wastewater further west.
- For that area of 'Rural Landscape Living' zoned land north of the Helena River, the provision of new sewer infrastructure may be cost prohibitive unless sufficient yields are achieved. Furthermore, the requirement for sewer mains to be brought down from the north west (potentially through highly constrained rural lots) may negatively impact on feasibility.
- Helena Valley is not currently on the list of planned sewerage infill areas. For existing urban (unsewered) areas to be included on the program, there would need a clear commitment to increasing density codings and incentivisation of further subdivision/development through local government planning frameworks. Although there are a number of existing urban lots/areas that could be reasonably subdivided in a logical pattern, much of the northern established area is highly constrained by the pattern of road/lot layouts and not easily converted to higher densities.

From the information provided above, it can be concluded that while the provision/extension of sewer infrastructure is not a fatal flaw or critical constraint for additional urban zoning/development within that area south of the Helena River, the provision of necessary pump station infrastructure will be a key requirement given the topography of the site. The remaining rural (MRS) zoned areas immediately north of the Helena River are, however, heavily constrained in their ability to extend sewerage infrastructure given land access requirements and the critical mass of development likely required to fund such a scheme. The extension of sewer to these areas as a by-product of any infill program being rolled out to the adjacent urban zoned area would appear unlikely or long term at best.

3.8.3 Stormwater

There is currently no district-wide approach to the management of stormwater in the Helena Valley study area, with new development areas considered on a case by case basis in accordance with contemporary water management principles (as defined by the WAPC's Better Urban Water Management guidelines¹²). Local Water Management Strategies have been prepared and adopted for recently approved LSIP areas either side of the established residential area in the west of the locality, with detailed urban water management strategies/plans required at subsequent subdivision and development stages.

Whilst best practice local water management principles and WAPC guidelines suggest that a District Water Management Strategy (DWMS) is required to inform and support any Metropolitan Region Scheme and/or Town Planning Scheme amendments, the existing developed nature of much of the study area and limited extent of future potential urban expansion areas suggests that a single DWMS for the locality may not be appropriate. However, a coordinated approach to the preparation of water management strategies (either district or local level) should be advocated where possible to deliver the most efficient and sustainable water management outcomes for Helena Valley.

3.8.4 Electricity

The study area is currently traversed by a 330kV power transmission line running in north-south alignment through the existing MRS Parks and Recreation reserve (Riverside Park), Lots 212-214 (No.1805, 2005 and 2215) Helena Valley Road, and then south east along Helena Valley Road and through rural-residential properties towards Beelu National Park (refer **Figure 17**). No development is permitted to occur within this 60m wide easement.

A 132kV High Voltage Overhead Transmission Line also traverses the site, in an east-west alignment generally along Helena Valley Road. This transmission line links to existing Western Power zone substations in Darlington (east), Hazelmere and Midland Junction. Underground power supply is provided to residential lots in the western urban area of Helena Valley, whilst the balance of locality is served by overhead lines.

Forecast remaining capacity for each of the substation zones over the next 20 years is summarised below¹³, with substation and zone locations identified in **Figure 17**.

Table 11: Remaining power capacity within substation zones, 2013 - 2031

Area	2013	2016	2021	2026	2031
Hazelmere	5-10 MVA	5-10 MVA	< 5 MVA	15-20 MVA	10-15 MVA
Darlington	20-25 MVA	15-20 MVA	10-15 MVA	5-10 MVA	< 5 MVA
Midland Junction	5-10 MVA	25-30 MVA	20-25 MVA	10-15 MVA	5-10 MVA

¹² WAPC (2008), *Better Urban Water Management*, Western Australian Planning Commission, Perth.

¹³ Western Power (2013), *Network Capacity Mapping Tool*, most recently accessed 25 October 2013 at ncmt.westernpower.com.au

From the above table it can be seen that capacity is forecast to remain in the network over the next 20 years, however this capacity would appear to be constrained in the Hazelmere zone (western portion of Helena Valley including existing Residential Cell A) until 2022/23, and in the Darlington Zone (eastern portion of Helena Valley) from around 2025 onwards. Whilst power capacity is not considered a critical constraint or fatal flaw to future urban development in the Helena Valley, proponents/landowners should proactively engage with Western Power to confirm appropriate power supply arrangements in advance of subdivision/development.

3.8.5 Gas

Reticulated gas supply is available within Helena Valley Residential Cell A via medium pressure (40kPA) gas mains extending south from Koongamia/Bellevue (crossing the Helena River at the existing pedestrian crossing point). Residential Cell B also has access to reticulated gas with medium-low pressure (6.5kPA) lines traversing the area. The remainder of the locality, including Residential Cell C does not currently have access to the reticulated gas network.

3.8.6 Telecommunications

All telecommunications services are readily available in the locality, with Broadband ADSL2+ services currently available via connection to one of three exchanges at Midland, Greenmount and Darlington.

In 2006, approximately 51% of households had broadband connection, 24% had dial-up connections, and 22% had no internet connection¹⁴. In 2011, 80% of households had a broadband connection, with only 2% remaining on dial-up and 12% still without a connection¹⁵. This increase in broadband access and usage within the Helena Valley demonstrates the availability and viability of gaining broadband services has significantly improved over the last five years. This provides significant benefits to residents of the Helena Valley in terms of social inclusion, lifestyle, education and flexible working arrangements.

Through implementation of the National Broadband Network (NBN), residents will gain further benefit from access to much higher broadband speeds than present. Whilst not within the NBN's current three-year rollout plan, fibre services are expected to be provided within the next ten years. Furthermore, any new developments for over 100 dwellings will be required to supply pit and pipe infrastructure (at developer's cost), ready for installation of new fibre networks (by NBN Co.) within three years of civil works¹⁶.

¹⁴ ABS (2006), *2006 Census of Population and Housing, cat.no.2001.0*, Australian Bureau of Statistics, Canberra

¹⁵ ABS (2011), *2011 Census of Population and Housing, cat.no.2001.0*, Australian Bureau of Statistics, Canberra

¹⁶ NBNC Co (2011), *Fact Sheet: New Developments*, NBNC Co, Sydney.

4.0 FUTURE LAND USE PLAN

4.1 Residential development

Helena Valley is characterised by predominantly larger home sites, though existing and expected future demand for smaller land holdings and dwelling sizes as the local population continues to age will be increasingly evident.

Planned residential expansion is expected to introduce on average smaller single residential home sites reflective of that offered in most new land estates. There is, however, still a clear need to facilitate areas of medium density and/or opportunities for aged housing as the suburb moves through its lifecycle. Areas considered well suited to controlled medium density and/or the provision of aged or Over 55's type accommodation are discussed further within the precinct specific commentary.

The majority of Residential growth in Helena Valley will be delivered primarily through implementation of known approved expansion areas (e.g. where LSIPs have been endorsed or subdivision/planning approval granted), or through the development of new investigation areas not currently zoned urban. Some capacity may also exist for residential infill development within the established residential area north of Helena River, however this would be subject to the provision of infill sewerage infrastructure (not currently committed). While land in proximity to Frederic Street and Noel Street is sewered, land to the immediate south remains unsewered. This study acknowledges the merit in providing reticulated sewer where viable to the established residential area, and ultimately investigating opportunities for redevelopment. At this time, however, no assumptions are made regarding that sewer extension viability and dwelling numbers within this particular precinct are assumed to remain broadly at current levels until the extent of, if any, further sewer infill program is known.

Figure 18 provides a conceptual future land use plan for the Helena Valley. Existing and future residential land use within the study area is identified on the plan as having three categories:

- **Existing Residential:** reflecting the established areas previously identified in this report as Residential Cells A, B and C. These areas are identified as established and generally not subject to consideration for further development, unless further infill sewerage programming dictates otherwise. The study assumes that growth in local population and dwelling numbers will result from development outside of these areas.
- **Residential Expansion:** reflecting areas that have been planned and approved (e.g. LSIPs, planning approvals) for urban development, but as yet remain undeveloped. These areas are located along Helena Valley Road, and represent an extension to existing residential areas (previously identified as Residential Cell A). The anticipated dwelling numbers and resultant population growth occurring from these areas is taken as approved for the purpose of quantifying growth.
- **Residential Investigation:** applies to three locations considered to have further urban development potential, subject to the resolution of identified environmental and servicing constraints. These areas are identified for investigation only and, unlike the stated expansion areas, have no approved status. This study applies a conservative estimate of dwelling yields and therefore population growth from the investigation areas, and should be treated as a guide only to potential overall growth in Helena Valley, rather than a literal indication of yield outcomes or even development potential.

Notwithstanding the planning rationale behind the identification of the Residential Investigation areas, detailed site planning having regard to environmental constraints, drainage and flooding, topography, civil engineering and other key issues will be necessary to establish the extent of development potential, if any.

Based on the identification of existing and future residential areas on the Land Use Plan, the following dwelling and associated population estimates are provided:

Table 12: Ultimate urban residential dwelling and population capacity estimates by precinct

Precinct	Land Classification	Future Dwelling Capacity	Future Population Capacity
1	Existing Residential	0	0
	Residential Expansion	109	272
	Residential Investigation	195	485
	Total	304	757
2	Existing Residential	580	1,446
	Residential Expansion	0	0
	Residential Investigation	0	0
	Total	580	1,446
3	Existing Residential	58	145
	Residential Expansion	460	1,147
	Residential Investigation	620	1,546
	Total	1,138	2,838
4	Existing Residential	260	648
	Residential Expansion	0	0
	Residential Investigation	188	469
	Total	448	1,117
5	Existing Residential	0	0
	Residential Expansion	0	0
	Residential Investigation	0	0
	Total	0	0
Overall	Existing Residential	898	2,239
	Residential Expansion	569	1,419
	Residential Investigation	1,003	2,500
	Total	2,470	6,157

In considering the Land Use Plan and potential dwelling/population numbers, the following assumptions and key factors should be noted:

- Assumes a long term downward trend in the number of persons per occupied dwelling consistent with population and demographic forecasts for the area. Population estimates above assume 2.77 persons per dwellings (down from 2.9 persons as recorded in the 2011 Census).
- Assumes a long term downward trend in the housing occupancy rate, from 94.4% as recorded in the 2011 Census down to 90% in line with the Perth metropolitan average.
- Assumes a residential density of 15 dwellings per net urban hectare for Residential Investigation areas, consistent with targets set by the Shire of Mundaring draft Local Planning Strategy. For the purpose of this study, a multiplier of 0.7 has been used to scale the 'Gross Area' to 'Net Area'.
- Although a standard density assumption has been applied to Residential Investigation areas, local variation in densities is recommended, with smaller lots and aged persons accommodation recommended in proximity to local centres and community facilities, and larger lots where interfacing with areas of remnant vegetation, bushfire hazard areas etc.

- No future residential development within Precinct 5, with continuation of rural residential land use preferred.

From the above table it can be seen that potential may exist for some 2,470 total residential dwellings across the study area, excluding any rural residential dwellings which are assumed to remain broadly at current supply levels. This constitutes an additional 1,572 dwellings over and above current levels, which would potentially increase the residential population of the area from 2,458 to approximately 6,157 people (not including the 300 – 400 residents likely remaining in rural residential areas).

Given the servicing, environmental and other constraints affecting the Residential Investigation area in Precinct 4, it is unlikely that significant urban residential development will occur in this area in the short to medium term. Accounting for this, a more realistic and defensible capacity estimate is provided as follows:

- **A total urban/residential dwelling capacity of 2,282 dwelling units, representing a net increase of 1,384 dwelling units; and**
- **A total urban/residential population capacity of 5,689 people, representing a net increase of 3,231 people.**

It is also noted that the proposed MRS amendment areas to the north and south of the Helena Valley study area have the potential to further increase the urban/residential population as follows:

- **Bushmead** – An additional 600 dwellings (300-400 in the short to medium term), with an estimated residential population capacity of 1,500 people.
- **Bellevue** – An additional 350 dwellings, with an estimated residential population capacity of 872 people.

Although these future development sites lie outside of the Helena Valley study area, their close proximity means that there will inevitably be a functional relationship between the areas, and an element of common demand/usage of local services and facilities (e.g. movement networks, commercial centres and community infrastructure).

4.2 Education

The Helena Valley Primary School adequately caters to the existing residential population. Discussion with the Department of Education has confirmed there are no current plans to change school site provision in the Helena Valley area. Accordingly, no attempt has been made at this time to consider any future land requirements. However, given the potential extent of future residential development outlined above (combined with potential future development of the adjacent Bellevue and Bushmead sites), further consultation with the Department of Education at an early stage (rather than as part of detailed site specific planning proposals) is recommended.

4.3 Commercial and industrial land supply

Consideration of commercial and industrial development within the study area has examined existing uses, opportunities for new development and potential land use options for sites otherwise not suitable for residential development (e.g. within the ANEF 25+ noise contour). This study has identified several opportunities, although any further increases in commercial or industrial floorspace should be assessed under a (revised) Local Commercial Strategy and/or site specific demand assessment.

4.3.1 Existing centres

The following two local retail/commercial centres are to remain:

- **Torquata Boulevard** – A local centre which offers the normal level of local convenience needs. The

centre appears to be appropriately developed for its location and service offerings and is not expected to warrant further expansion, although this will need to be considered as part of any future Local Commercial Strategy review and in the context of nearby residential development in Helena Valley, Bellevue and Bushmead.

- **Scott Street** – A local centre which primarily caters to local medical / health service needs. The centre appears to be underdeveloped and capable of supporting further expansion to support a substantial increase in local population demand. Expansion opportunities are available either immediately on site or on the opposite side of Scott Street, and it is well located to serve an increasing population catchment to the west (within Helena Valley Precincts 1 and 3), north west (Bellevue MRS amendment area) and south west (Bushmead). Although further away from Bellevue and Bushmead than the Torquata Boulevard centre, the Scott Street centre is better served by direct road links to these nearby development areas and appears to have greater expansion potential. Again, the ultimate amount of sustainable commercial floorspace in this location will require further consideration as part of any future Commercial Strategy review.

4.3.2 ANEF constrained area

The western-most extent of the Helena Valley study area adjacent to Roe Highway and within the ANEF 25 noise contour is not suitable for residential land use, and therefore, warrants further investigation of alternative non-residential land uses. RPS Economics has undertaken a high level review of non-residential land use options for the ANEF constrained land (refer **Appendix 2** for the full advice), and found that 'Light / Service Industrial' is the likely highest and best land use for the area, largely due to its accessibility characteristics, low level of amenity and proximity to nearby industrial and residential uses. The following additional land use options were considered, but were found to be less suitable / viable in this location:

- **Retail / Bulky Goods** – These land uses will benefit greatly from the surrounding and regional population growth, however, delivery of these land uses will largely be directed into specified activity centres in the region – particularly within the Midland Centre. Local economic drivers are strong, however, the co-location of surrounding land uses, catchment constraints and lack of direct highway / regional road frontage reduce the potential for the site in terms of its retail and bulky goods potential.
- **Business Park** – These uses are typically delivered in or nearby strategic centre locations and in that respect the location is relatively well suited to business park uses, however, competitive business parks closer to Midland would likely be more viable and have better accessibility to services (co-located uses) and be more accessible by road and rail. Demand for business parks are driven by regional economic growth and surrounding residential growth will have a lower bearing on the demand for the land use.
- **Heavy Industrial** – These land uses have similar drivers to light industrial uses, however are driven more heavily by regional demand drivers. While there is strong evidence that the regional economic drivers will lead to demand for heavy industrial uses including through strong population growth and increased freight demand, the subject land does not appear to be the most appropriate location for such uses due to nearby residential catchment and relatively small land availability.

While light / service industrial land uses have been identified as the most viable / suitable in this location, any proposals to rezone and/or develop the land for industrial or commercial land uses should be supported by detailed justification and technical reporting demonstrating its appropriateness in terms of:

- Market demand and potential impacts on other nearby industrial/commercial offerings;
- Management of environmental impacts in terms of land use interface/buffers, preservation of local flora/fauna assets, wetland and river corridor interface, stormwater management etc;
- Adequate provision of necessary utilities services;
- Transport networks, specifically in terms of traffic generation, capacity and efficiency of local and regional roads, road safety and provision of pedestrian/bicycle links to nearby residential areas (including Bellevue

to the north).

- Land requirements for potential regional road network upgrades (requiring liaison with Main Roads WA); and
- Local streetscape and amenity preservation, having regard for the area's role as a gateway entrance to the Helena Valley and transition between residential (Helena Valley) and industrial (Hazelmere) land uses.

4.4 Open space and recreation

Helena Valley benefits from a wealth of natural assets comprising both natural bushland and the Helena River environs. As a result there are a number of Regional Parks & Recreation considerations for an urban expansion planning:

- **Helena River Environs and Floodplain Protection:** A number of land parcels along the Helena River's western extent are already reserved under the Metropolitan Region Scheme and have subsequently been acquired. As urban residential planning occurs in an easterly direction a consistent approach to biodiversity protection through further identification, reservation and acquisition of river and floodplain environs is required.
- **Bush Forever Protection:** Important areas of vegetation stands within the study area both along the Helena River and in areas to the east are recognised under the Metropolitan Region Scheme Bush Forever mapping. Urban expansion planning under this study has recognised these areas.

Parks & Recreation land within the study area has been identified as:

- **Regional Parks & Recreation:** This land appropriately reflects Metropolitan Region Scheme reserved land for P&R purposes and includes both state acquire land as well as land reserved but yet to be acquired.
- **Regional Parks & Recreation Investigation:** This land reflects areas of both the Helena River environs and identified Bush Forever sites that are yet to be formally reserved under the Metropolitan Region Scheme. These areas are recognised as requiring formal MRS reservation and/or detailed confirmation of their extent and need for reservation.

District Open Space (DOS) within Helena Valley is presently limited to facilities at the intersection of Clayton Road and Scott Street (Helena Valley Recreation Ground). Urban expansion planning must consider potential future land requirements for DOS and access to that land, together with anticipated demand for DOS and the nature of sports likely to use the facilities.

This study has considered location options for potential new or relocated DOS sites. Each will require further detailed assessment as part of a detailed 'Active Open Space' study. This study should assess the type of sporting requirements to be provided locally, their forecast demand and growth and the spatial planning required for these. Through these investigations, and targeted consultation with local sporting and other interest groups an agreed DOS site or site combination would then be determined and the feasibility assessed.

For the purposes of further investigation, this study has identified the following potential new or alternative sites for active recreational use (also refer **Figure 18**):

- **Broz Park Western Surrounds:** MRS Parks and Recreation reserved Land to the immediate west of the Broz Park area appears well located to support a second Helena Valley District Open Space recreation area. The location is accessible from Helena Valley Road, and could service a catchment generally covering Precincts 1 and 2. The upgrade of the dual-use path river crossing through to Katharine Street north of Helena River would also provide pedestrian accessible for some Helena Valley and Koongamia residents living north of the Helena River.

The appropriateness of development in this location will need to consider the ability to develop outside of the river floodplain, the cost of access and construction, and the ability to size and orient sporting facilities required. Nevertheless, given the extent of existing, approved and potential new residential development at this western end of Helena Valley, further investigation of this site should be pursued.

Alternative locations catering to demand at the western extent of Helena Valley were considered, either within the former Hazelmere rifle range reservation, or on other private land holdings. No other site option was considered likely to provide the necessary site area, accessibility and proximity to catchment.

- **Helena Valley Homestead:** The Helena Valley Homestead site is centrally located within the study area and also central to the areas identified for residential investigation. The site abuts Samson Street, the suggested future road link river crossing. The site lies in close proximity to the existing Helena Valley Recreation Ground should the Shire of Mundaring consider relocation/expansion opportunities.

Notwithstanding the identification of this site, this study acknowledges the constraining nature of the Helena River floodplain, and the extent of State Heritage Register area affecting the Homestead property. Detailed site investigation and consultation with the landowner would be required. Given the site is currently held in private ownership, options for land exchange with the existing site may also warrant further investigation.

- **Helena Valley Road / Scott Street:** As previously noted, the land north of Helena Valley Road and south of Helena River in the vicinity of Scott Street presents opportunities for both residential development and potential expansion of the Local Centre, potentially creating a community hub in this central and highly accessible location. The opportunity also exists to provide additional recreational facilities in this location, to further strengthen the role of this centre which is also conveniently located near the primary school and areas of further residential investigation. The widening of the floodway over Lots 101 (No.3005) and 219 (No.3165) Helena Valley Road presents a significant constraint for more intensive private subdivision and development, however, may be capable of accommodating open space uses such as playing fields (with any supporting community infrastructure (e.g. parking areas, club rooms, other buildings) to be located outside of the floodway/flood fringe. Preliminary comment from the Department of Water has suggested that such an option may be feasible, subject to the necessary hydrological investigations being carried out and appropriate management measures being identified. Given the private ownership status of the land, such a proposal would also require negotiations for purchase, land swap or other suitable arrangements with affected land owners.

4.5 Movement and access

Helena Valley is well located within the eastern suburbs of Perth and, relative to many other metropolitan urban expansion areas, is closer to established services and amenities. Topographical constraints, the suburb's division by the Helena River and proximity to both Roe Highway and Great Eastern Highway (which form significant barriers) do, however, mean access into and out of the locality is limited. While existing access locations (via Clayton or Scott Streets, or Helena Valley or Ridge Hill Roads) are considered to be adequate, the limited number of these external connections to the wider road network highlights the need to improve road connectivity and functionality within the suburb as urban expansion occurs.

Urban expansion planning has considered the ease with which existing and future residents can move within the suburb as well as from Helena Valley into the wider network. There are considered to be a number of key considerations:

- **District Movement Network:** A continued level of acceptable service will require regular traffic monitoring of traffic levels on Katharine Street, Clayton Road, Scott Street, Helena Valley Road and Ridge Hill Road though no specific recommendations are made at this time.

The connection of a second direct route to Great Eastern Highway via extension of Katharine Street north of Clayton Street (Bellevue East) via Horace Street also warrants further investigation as a longer term

opportunity. Alternatively, further dialogue with Main Roads WA and the City of Swan to investigate the extension of Farrall Road/Horace Street southwards to Clayton Street could also assist in facilitating improved connectivity into Midland and the Great Eastern Highway.

- **Local Movement Network:** Road upgrade works to Helena Valley Road consistent with Shire of Mundaring requirements will be necessary as residential expansion occurs (enforced through the subdivision process), together with the assessment of existing and new access points onto Helena Valley Road. The 'Rural Village' vision for Helena Valley Road should be reaffirmed in local structure planning if bushland vistas are to be continued along the roadway as development occurs eastwards.

A number of opportunities to improve local traffic and pedestrian/cycle movements have been identified for further investigation:

Lakeside Drive to Katharine Street Dual-Use Path Link

Upgrade the existing pedestrian/cyclist link between Lakeside Drive (East of Broz Park) and Katharine Park, through to Katharine Street. On the southern (Helena Valley) side of the Helena River, the path is within state owned land classified as regional reserve, and is constructed to a sealed standard before crossing the river at a steel bridge (following the location of a services easement). On the northern (Bellevue) side of the river, the path continues across privately owned land (Lot 800) which is subject to proposed MRS Amendment 1228/41. Most of this privately owned land is already reserved for Parks and Recreation under the MRS, however, the proposed amendment seeks to slightly extend the Parks and Recreation reserve in this location, effectively ensuring the whole northern path portion is contained within the reserve. As previously noted, the landowner of Lot 800 and WAPC have entered into a legal agreement in respect of the transfer of the reserved land, which is to be sold to the WA Planning Commission within 30 days of the proposed MRS Amendment being gazetted. The transfer of this land into public ownership offers further opportunities to upgrade and formalise the path link on the northern side of the river, within a wider context of regional parklands and wildlife corridors.

The improvement of this route provides a stronger connection across Helena River at the western end of Helena Valley, where there is no other alternate crossing nearby. When considered as a link to potential commercial uses south of the river, to potential District Open Space near Broz Park, or an east-west Helena River foreshore path route, it is an important upgrade. Through structure planning and the statutory approvals process, further opportunities also exist to provide more extensive path networks through the large regional reserve area being formalised via the proposed MRS amendment and future limited residential development of Lot 800.

Samson Street Road Crossing

Construct the existing Samson Street road reservation for its full length across the Helena River. As a key local road connection across the river the existing road reserve is constructed from Clayton Road, to the river on its north side only. The completion of this road link would provide longer term local road network capacity where the existing Scott Street crossing is insufficient. The link is also central to identified areas of residential expansion and investigation and should be considered for planning and construction as these developments create additional demand.

Longer term conversation of this link for a road or path connection should be assessed in the context of detailed development planning for the central precinct, including consideration of future density and transport demand. This could also include consideration of the Helena Valley Homestead property (Lot 27) as a potential alternative district recreation site, however, such an arrangement would necessitate further discussion and negotiation with affected landowners and Heritage Council of WA with regard to proposed tenure and land use arrangements, as well as significant technical investigations to resolve any aboriginal heritage, environmental and engineering issues.

Fyfe Street Pedestrian and Emergency Vehicle River Crossing

Fyfe Street services a number of rural properties to the east of the study area. It is an important road link to the wider northern road network from the eastern extent of Helena Valley, but is currently not connected to the southern side of the river. If connected it would provide a useful dual-use path crossing to the Helena Valley Primary School and surrounding area. It could also cater for emergency vehicle access and serve as an alternative to Ridge Hill Road for the eastern parts of Helena Valley during fire fighting. It is noted, however, that engineering, environmental and heritage constraints are critical considerations for any such proposal, and that without the stimulus/incentive of more intensive development in the area (not recommended by this study), the business case for such a proposal may be limited.

Helena Valley Road to Midland Road

Establish a new road connection between Helena Valley Road and Midland Road in proximity to new residential development within the Bushmead site west of Kadina Brook. The establishment of this relatively short link would ensure better connectivity between new urban residential planned development and better link Helena Valley to Midland Road.

4.6 Precinct specific commentary

4.6.1 Precinct 1 – Kadina Brook

Description: The Kadina Brook precinct comprises the western ‘gateway’ to Helena Valley on Helena Valley Road. The precinct is bounded the Roe Highway to the west, the Helena River to the north, established residential development and the Kadina Brook to the east, and the former Bushmead Rifle Range reservation to the south.

Key Elements: Precinct 1 is a key development investigation area for Helena Valley encompassing both service commercial/light industrial and residential investigation areas as well as smaller areas of approved undeveloped residential development.

Key Considerations:

The retention of bushland vistas along Helena Valley Road, extending the established reserved land along the roadway in a westerly direction.

The appropriate mix of commercial uses, having regard to locality and accessibility and high standard of development required for a gateway precinct in proximity to residential development.

Residential investigation areas to be assessed against criteria including, but not limited to:

- Helena River, Kadina Brook and wetland interface, including buffers to defined conservation, resource enhancement and multiple use wetland areas;
- Recognition of ANEF 20-25 contour residential land use development requirements/restrictions, and interface to potential commercial land use within the ANEF 25-30 contour; and
- Opportunities for medium density and/or aged accommodation in appropriate locations, having regard to the precinct’s accessibility and higher surrounding amenity.
- Bushfire planning considerations in locations adjacent to heavily vegetated areas.
- The conservation and enhancement of natural assets of the Helena River and Kadina Brook environs.
- Potential accommodation of an active recreation site in proximity to Broz Park.
- Accessibility from the precinct to the northeast across the Helena River via pedestrian/cyclist link, and to

the south linking planned new urban residential development on the former Hazelmere Rifle Range.

- Future Main Roads WA planning for Roe Highway and the Great Eastern Highway Bypass interchange, including any additional land requirements east of Roe Highway.

Studies/Investigations Required to Support Further Rezonings and/or Subdivision

- Hydrological studies and water management strategies to confirm appropriateness of stormwater management proposals and interface with identified wetlands and other surface/ground water features;
- Flora and/or fauna studies and recommended management strategies where appropriate, particularly where land is identified as a Conservation Priority Area or Regional Ecological Linkage under the draft Local Planning Strategy.
- Acid sulfate soils investigations in identified Class 1 and 2 risk areas;
- Aboriginal heritage studies to confirm presence of sites and any requirements for clearances;
- Civil engineering investigations to confirm site servicing capacity;
- Transport assessment reports to confirm adequacy of local road network design and capacity, intersection treatments and interface with Helena Valley Road;
- Acoustic studies and/or management measures required for proposed sensitive land use within the ANEF 20-25 noise contour;
- Fire Management Strategies/Plans for land identified as having Moderate or Extreme bushfire hazard level; and
- For proposals seeking to facilitate non-residential development within the ANEF 25 contour (identified on the Land Use Plan as 'Commercial Investigation'), sufficient information/justification for the type and amount of land use proposed.

4.6.2 Precinct 2 – Helena Valley Road West

Description: Helena Valley Road West encompasses the existing residential area previously described as Residential Cell 1, together with the immediately adjoining Parks and Recreation reserved land adjoining the Helena River to the north.

Key Elements: Precinct 2 is an established residential area within Helena Valley, encompassing both local open space and a local centre. The precinct also includes the Broz Park reserve.

Key Considerations:

The precinct is recognised as an established residential area and is not expected to generate any notable residential growth in dwelling or population numbers, aside from potentially some increased residential density around the existing local commercial centre site.

Studies/Investigations Required to Support Further Rezonings and/or Subdivision

- N/A (no further urban expansion recommended within precinct)

4.6.3 Precinct 3 – Helena Valley Road Central

Description: Helena Valley Road Central encompasses the core area of land holdings north and south of Helena Valley Road, between the existing western residential areas and residential development adjacent to the Helena Valley Primary School.

Key Elements: Precinct 3 is a key development and development investigation area. The Precinct incorporates both known/planned residential expansion areas, as well as land identified for residential investigation. In some cases the latter is already the subject of development planning or submissions for MRS rezoning.

Precinct 3 centres along Helena Valley Road, encompassing properties south of Helena Valley Road as well as those fronting the Helena River.

Key Considerations:

The retention of bushland vistas along Helena Valley Road, extending the established reserved land along the roadway in an easterly direction.

Residential investigation areas to be assessed against criteria including, but not limited to:

- Helena River floodplain/flood fringe delineation and interface;
- Topographical response to site contour constraints;
- Opportunities for medium density and/or aged accommodation, having regard to the precinct's accessibility and higher surrounding amenity particularly adjoining Helena River and near key activity centres; and
- Bushfire planning considerations in locations within proximity to identified bushfire hazard areas, notably the old Bushmead Rifle Range site, Helena River environs, and existing/proposed Bush Forever areas;
- Flora/fauna conservation considerations.

The conservation and enhancement of the natural assets of the Helena River and floodplain environs, including conservation of Bush Forever Area No.216 and any identified conservation priority areas.

Investigate opportunities to introduce / expand local commercial uses either on-site or at the intersection of Scott Street and Helena Valley Road, to complement the existing centre with a level of local convenience retail. Such expansion of the local centre could also be combined with higher density residential development and potential recreational/community infrastructure.

Accessibility to/from the precinct, including:

- Along Helena Valley Road as new development potential may be identified and access locations planned;
- Across the Helena River via a road link at Samson Street in conjunction with new development; and
- Along the Helena River as further reservation and acquisition of foreshore environs occurs and the opportunity for a Helena River dual-use path route is established.

Studies/Investigations Required to Support Further Rezonings and/or Subdivision

- Hydrological studies and water management strategies to confirm appropriateness of stormwater management proposals and interface with identified wetlands, Helena River and other surface/ground water features;
- Flora and/or fauna studies and recommended management strategies where appropriate, particularly where land is identified as a Conservation Priority Area or Regional Ecological Linkage under the draft Local Planning Strategy.
- Acid sulfate soils investigations in identified Class 1 and 2 risk areas;
- Aboriginal heritage studies to confirm presence of sites and any requirements for clearances;
- Civil engineering investigations to confirm site servicing capacity, including the extension of / connection

to metropolitan sewerage networks;

- Transport assessment reports to confirm adequacy of local road network design and capacity, intersection treatments and interface with Helena Valley Road; and
- Fire management planning for land identified as having Moderate or Extreme bushfire hazard level.

4.6.4 Precinct 4 – Katharine Street / Clayton Road

Description: The Katharine St/Clayton Road Precinct comprises all land within the study area north of the Helena River. The precinct is bounded by Frederic Street, Scott Street, and the Helena River.

Key Elements: Precinct 4 comprises an established (mostly unsewered) residential area, rural residential properties along Katharine Street (to the west of the precinct backing onto the Helena River), and also land around the Clayton Road/Samson Street area identified for further residential investigation.

The precinct encompasses the two northern entry routes into Helena Valley being via Katharine Street to the northwest and Scott Street to the north. The only District Open Space in Helena Valley lies within the precinct at the intersection of Scott Street and Clayton Road.

Key Considerations:

The majority of Precinct 4 remains unsewered, with reticulated sewer provision limited to land fronting Frederic Street and Noel Street to the north. Opportunities for redevelopment of existing residential land and/or areas identified for residential investigation would be subject to the ability to provide reticulated sewer. This is a critical constraint for any further residential development in the area, and may deem such expansion activity to be a long term prospect at best.

The retention or relocation of the District Open Space site is recognised as a key consideration. The opportunity to provide a secondary facility to the southwest of Helena River and therefore service a wider catchment has been shown in Precinct 1. Similarly, an alternative location for the Scott Street facility is shown within this precinct but would require considerable further investigation and landowner consultation, along with associated infrastructure upgrades to facilitate improved connectivity south of the Helena River (e.g. new crossing at Samson Street).

Residential investigation areas to be assessed against criteria including, but not limited to:

- Helena River and floodplain/flood fringe delineation and interface, and maximisation of opportunities to extend regional parks and recreation reserve linkages along both sides of the river;
- Topographical response to site contour constraints;
- Flora/fauna conservation considerations;
- The feasibility of providing reticulated sewer;
- Recognition of the Helena Valley Homestead as a site of Heritage significance; and
- Opportunities for medium density and/or aged accommodation having regard to the precinct's accessibility and higher surrounding amenity particularly adjoining Helena River.

The conservation and enhancement of natural assets including the Helena River and floodplain environs, Bush Forever Areas and any identified conservation priority areas.

Accessibility to/from the precinct across the Helena River via a potential pedestrian/cyclist link at Samson Street in the short term, or full road/bridge construction in the longer term.

Retention of rural lifestyle properties backing onto the Helena River in the west of the precinct along Katharine Street, acknowledging the lack of further development potential given floodplain environs. Further subdivision and development of these properties may be achievable subject to the provision of reticulated sewerage, and/or the partial location of lots within the floodway/flood fringe area subject to the agreement of the Department of Water and provision of necessary riverpark reserves along the Helena River (to the agreement of the Swan River Trust / Department of Parks and Wildlife and Department of Planning).

Studies/Investigations Required to Support Urban Development

- Hydrological studies and water management strategies to confirm appropriateness of stormwater management proposals and interface with identified wetlands, Helena River and other surface/ground water features;
- Flora and/or fauna studies and recommended management strategies where appropriate, particularly where land is identified as a Conservation Priority Area or Regional Ecological Linkage under the draft Local Planning Strategy.
- Acid sulfate soils investigations in identified Class 1 and 2 risk areas;
- Aboriginal heritage studies to confirm presence of sites and any requirements for clearances;
- Civil engineering investigations to confirm site servicing capacity, including the extension of / connection to metropolitan sewerage networks;
- Transport assessment reports to confirm adequacy of local road network design, intersection treatments and interface with Clayton Road/Katharine Street; and
- Fire Management Strategies/Plans for land identified as having Moderate or Extreme bushfire hazard level.

4.6.5 Precinct 5 – Helena Valley Road East

Description: The Helena Valley Road East precinct comprises all rural residential land to the western extent of the study area generally east of properties on Ridge Hill Road and east of Scott Street. The precinct also includes land north of the Helena River accessed via Clayton Road and Fyfe Street.

Key Elements: The Helena Valley Road East precinct is characterised by steeper sloping rural lifestyle properties and encompasses areas of significant bushland, together with several rural orchard properties around Fyfe Street to the northeast. The precinct offers a high degree of rural bushland amenity with its undulating topography and view corridors. The precinct abuts Beelu National Park. The upper extent of the Helena River dissects the precinct running east-west. Access to the precinct is via Scott Street from the north, or from the south via Ridge Hill Road. A smaller number of small holdings are accessed via Clayton Road and Fyfe Street.

Key Considerations:

No further intensification of land use is identified for Precinct 5, reflecting both the physical nature of the precinct, the important natural character of the landholdings, and the need to protect further fragmentation of the small rural holdings.

The conservation and enhancement of natural assets including the Helena River and floodplain/flood fringe environs, Bush Forever Area No.215 and identified Conservation Priority Areas.

Investigate potential construction of a river crossing at Fyfe Street to improve pedestrian/cyclist links to local services and the Helena Valley Primary School while assisting emergency access.

Recognition of key fire management planning requirements, including permanent and emergency access, facilities management, development setbacks to bushland reserves and bush fuel management.

Studies/Investigations Required to Support Urban Development

- N/A (no further urban expansion recommended within precinct)

5.0 CONCLUSION AND NEXT STEPS

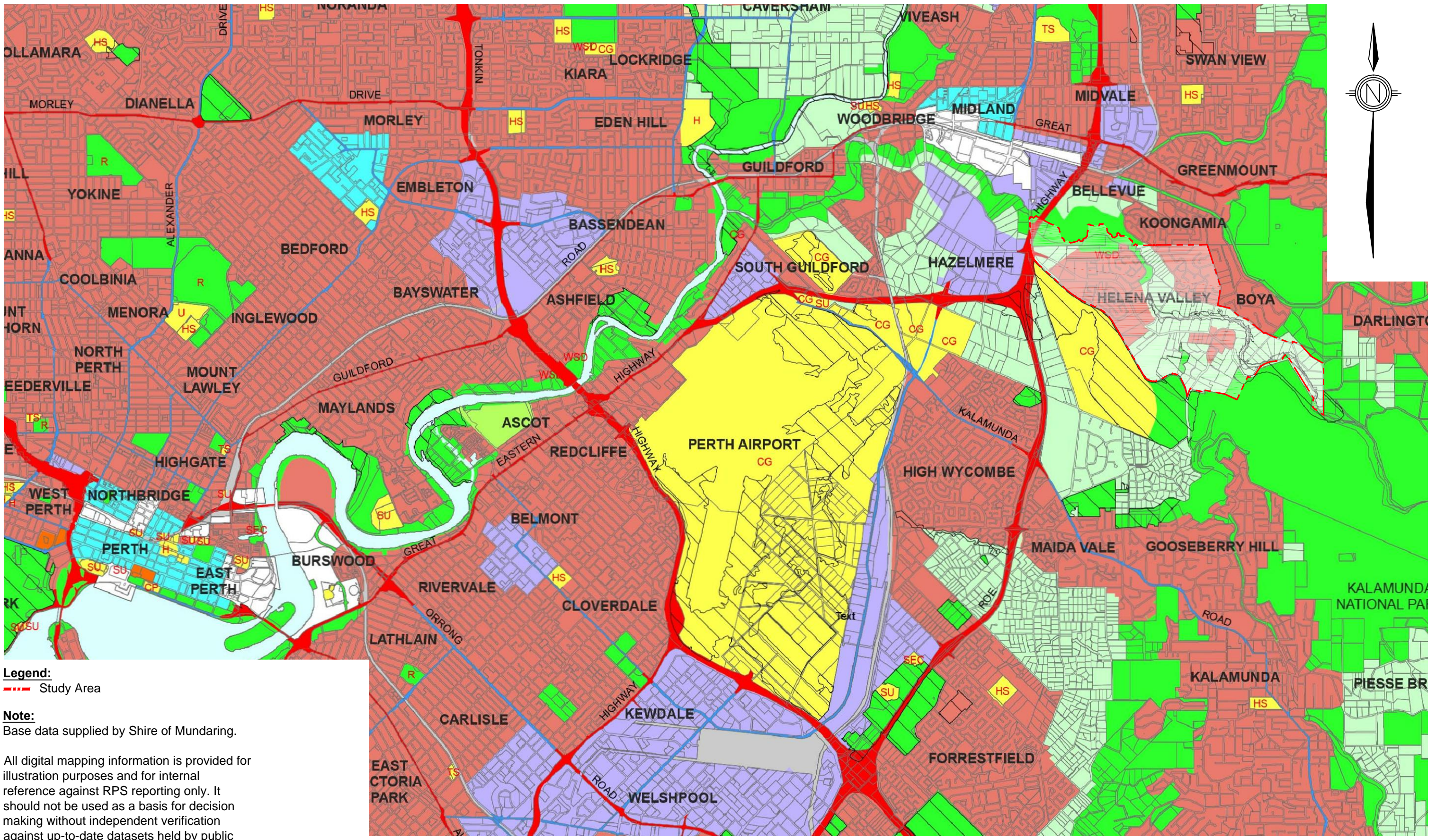
The Helena Valley presents a number of potential opportunities for future urban/residential development, over and above that currently identified by Directions 2031, the WAPC's Urban Development Program and existing MRS Urban zones. In this regard, the area has the opportunity to play a significant role in meeting future housing requirements of the Shire, where other localities are much more limited in their growth potential by local environmental and servicing constraints.

Although a number of sites are currently in the process of being planned and/or developed for more intensive residential land uses, there remain a number of further opportunities for residential investigation, particularly in the central portions of the study area south of the Helena River. Considering this, conservative estimates suggest the Helena Valley could potentially accommodate a doubling of its residential accommodation which, combined with significant development proposals in neighbouring Bellevue and Bushmead, will lead to significant additional local/regional demand for employment, services and community facilities.

The existing topography, environmental features and servicing constraints of the area are limiting factors in addressing existing connectivity issues and improving access between existing/future residents and local services. However, a number of opportunities have been identified in this study for further investigation, which may help to increase local service provision and improve functional linkages between residential communities north and south of the Helena River (along with neighbouring areas of Bellevue and Bushmead).

The findings and recommendations of this study are intended to inform the development of an urban expansion strategy for the Helena Valley, which will set out publicly the Shire's expectations for the area in terms of planning principles, zoning preferences and key connections, and provide a guide for future rezonings and/or structure planning for future development sites.

FIGURES



Legend:
 - - - Study Area

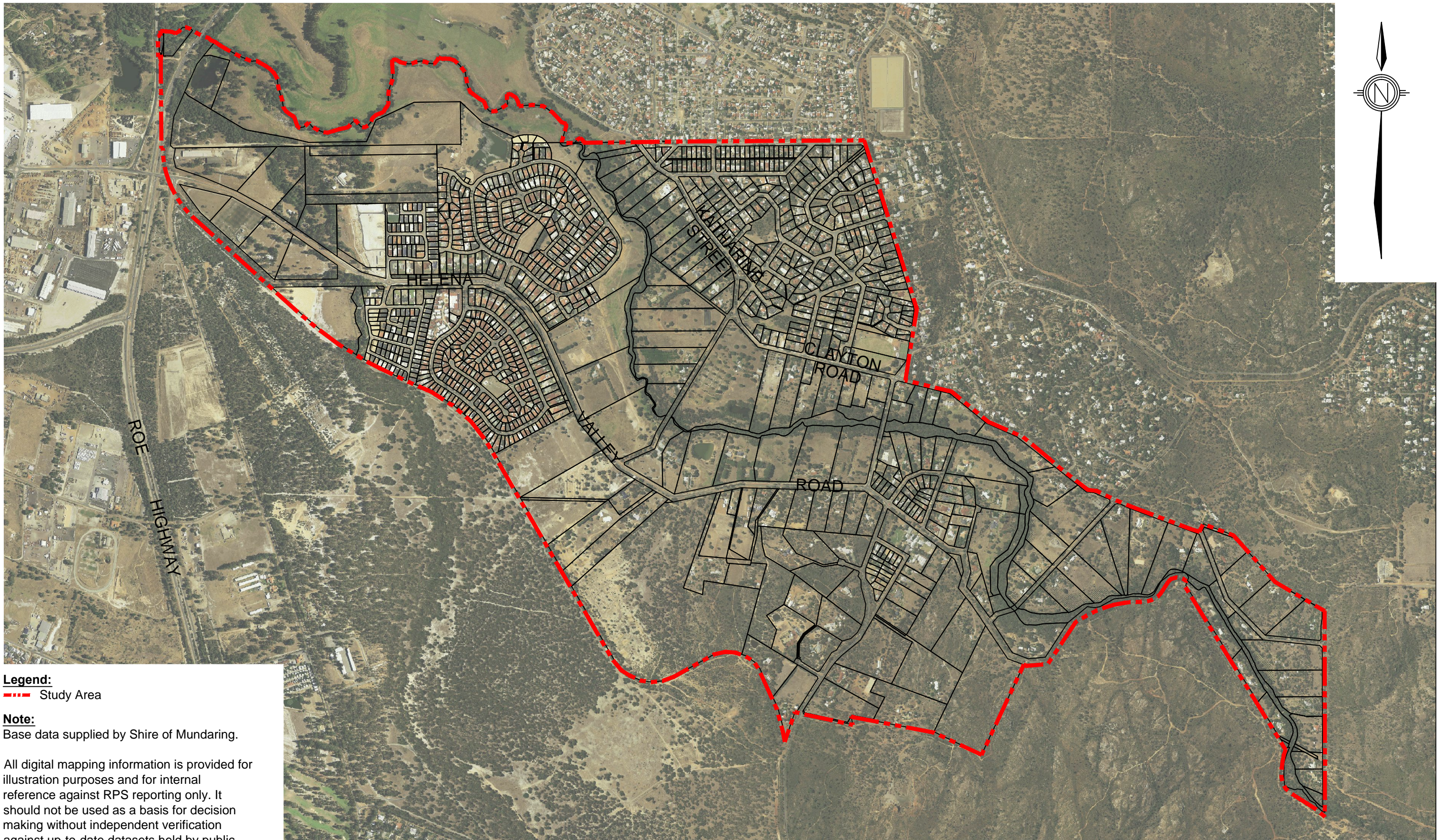
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PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref.	112870	Date	14 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 1 - LOCATION PLAN	

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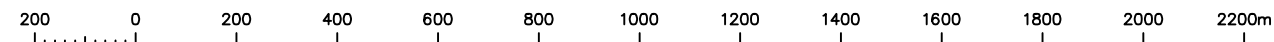
Legend:

--- Study Area

Note:

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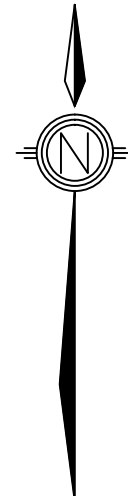
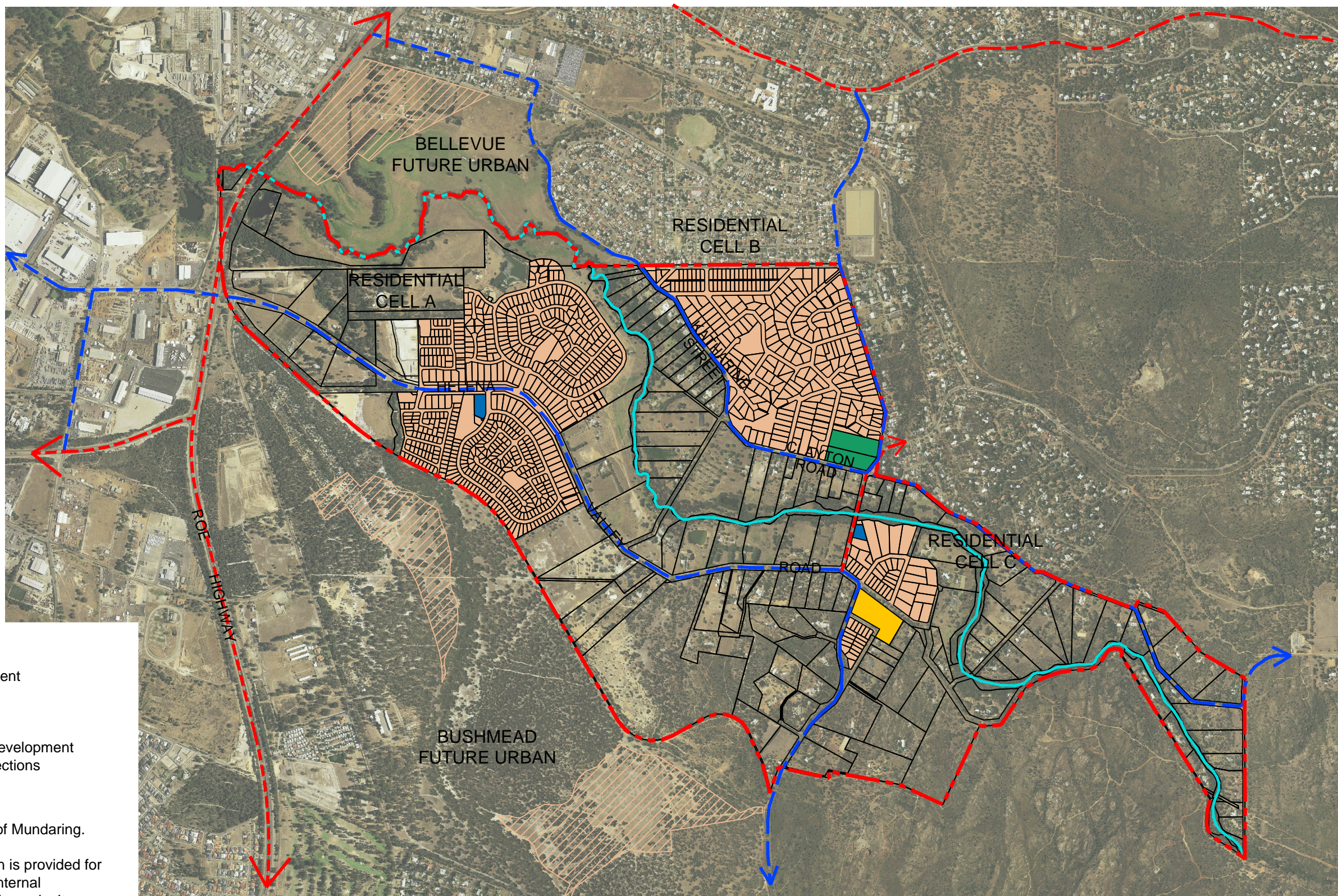
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PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref.	112870	Date	05 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 2 - STUDY AREA	

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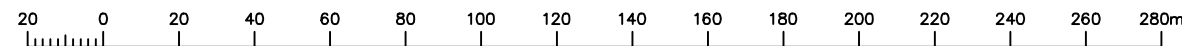
Legend:

- - - - Study Area
- Existing Urban Settlement
- Local Centres
- School
- National Parks
- Future Urban Zone / Development
- - - - Key Local Road Connections
- - - - Key Regional Roads

Note:

Base data supplied by Shire of Mundaring.

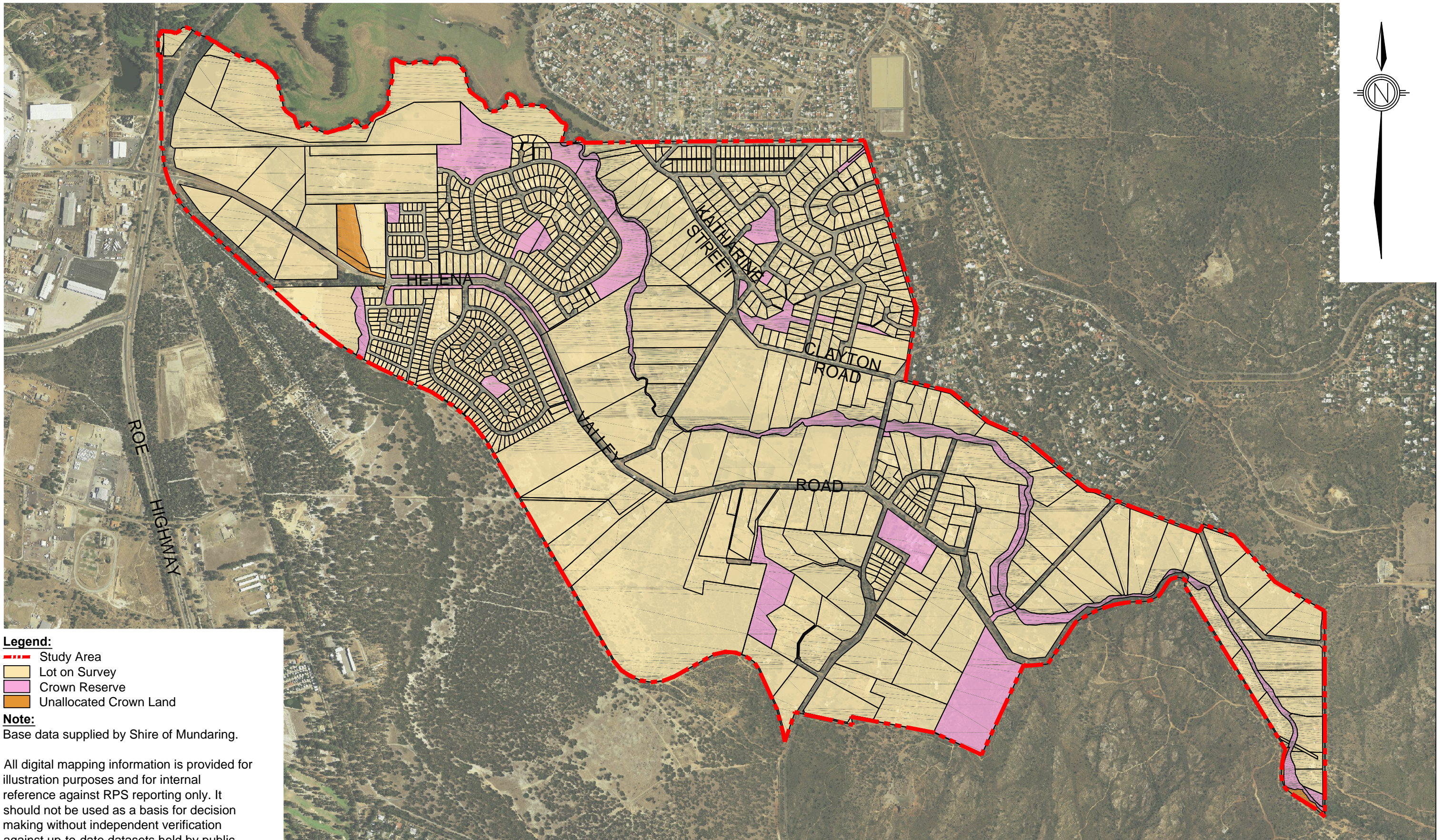
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Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 3 - LOCAL CONTEXT	

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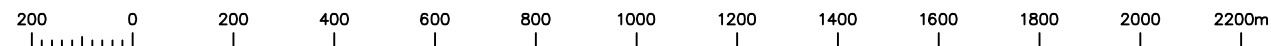
Legend:

- - - Study Area
- Lot on Survey
- Crown Reserve
- Unallocated Crown Land

Note:

Base data supplied by Shire of Mundaring.

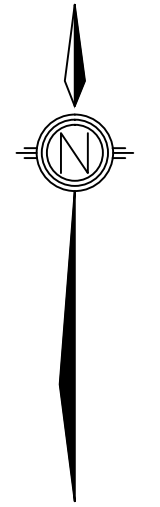
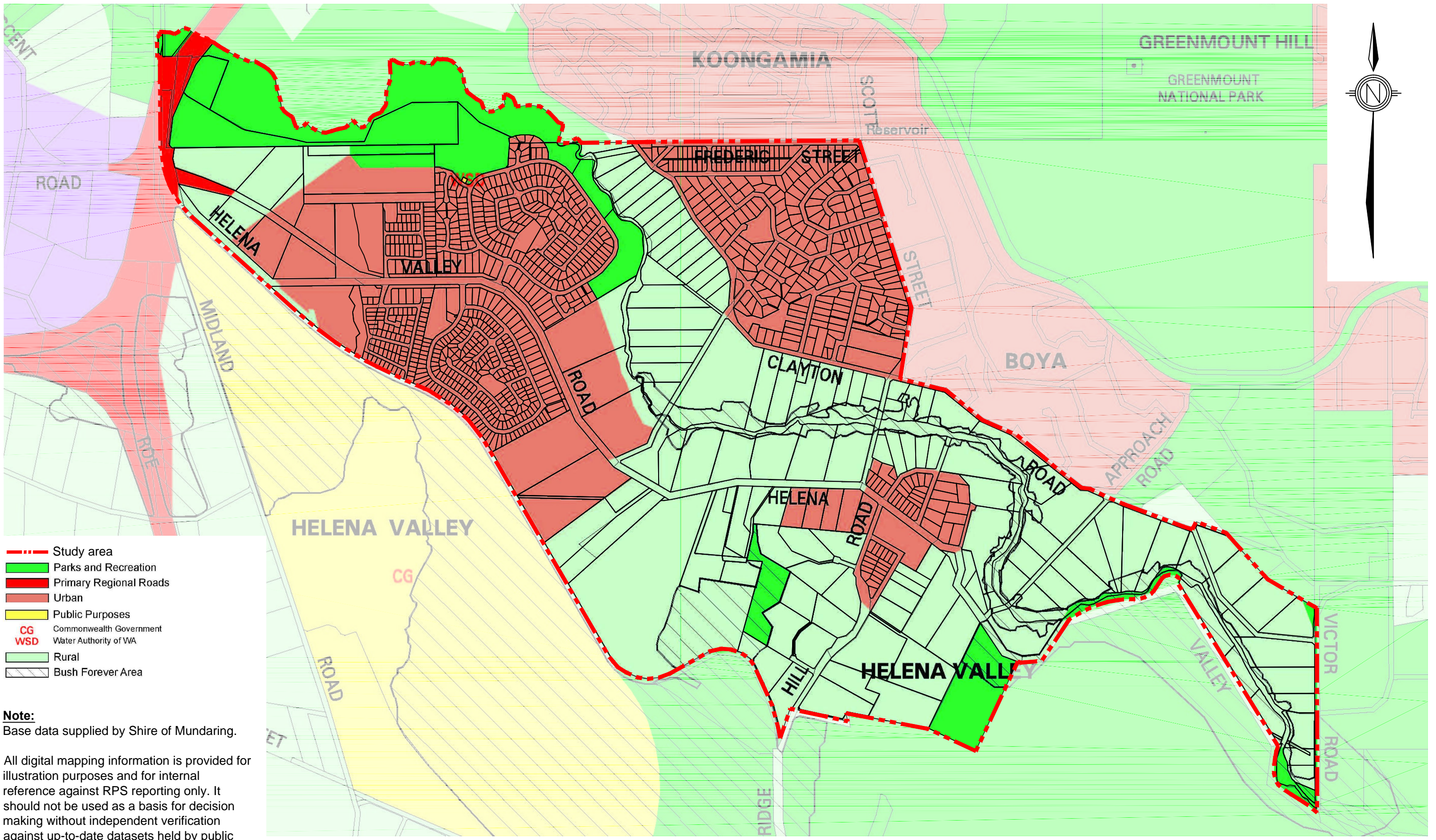
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PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref. 112870	Date 05 NOVEMBER 2013		
Comp By. BDC	DWG Name. 112870-b-002a.dwg		
Locality HELENA VALLEY	Local Authority		

CLIENT	SHIRE OF MUNDARING
FIGURE 4 - LAND TENURE	

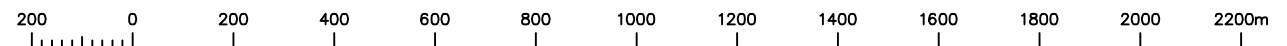
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- - - - Study area
- Parks and Recreation
- Primary Regional Roads
- Urban
- Public Purposes
- CG Commonwealth Government
- WSD Water Authority of WA
- Rural
- Bush Forever Area

Note:
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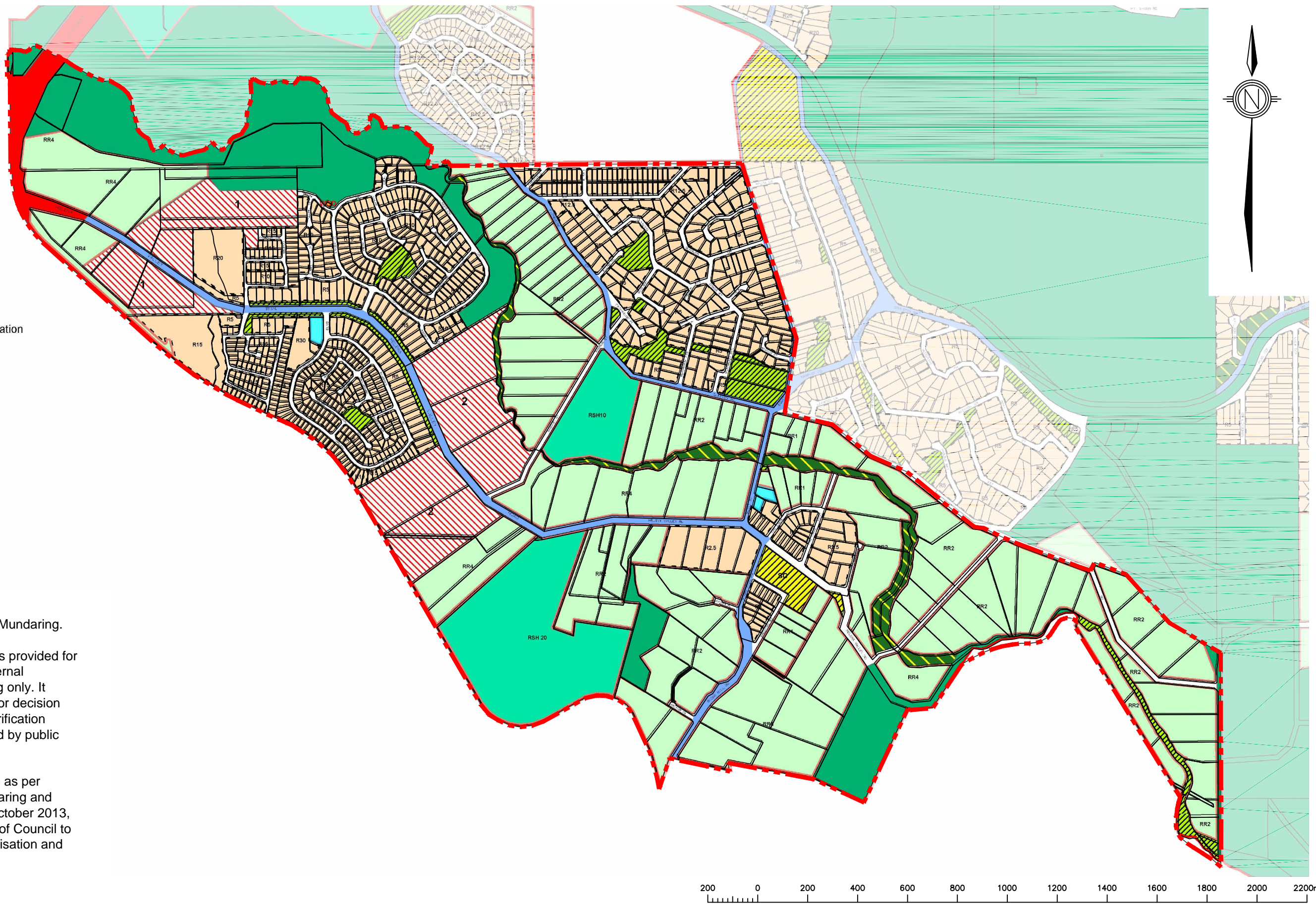
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Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 5 METROPOLITAN REGION SCHEME (MRS) MAP	

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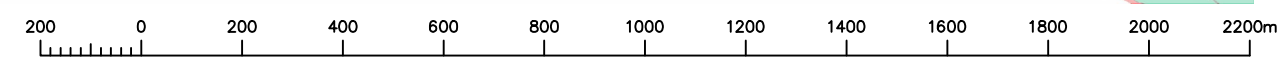


- Legend:**
- Study Area
 - Scheme Boundary
 - R20 R Codes
 - Regional Parks and Recreation
 - Public Purposes
 - WSD Water Authority of WA
 - Primary Regional Road
 - Important Local Roads
 - Other Local Roads
 - Recreation
 - Conservation
 - Public Purposes
 - sc School
 - Additional Use
 - Restricted Use
 - Residential
 - Local Centre
 - Rural Residential
 - Rural Small Holdings
 - Development

Note:
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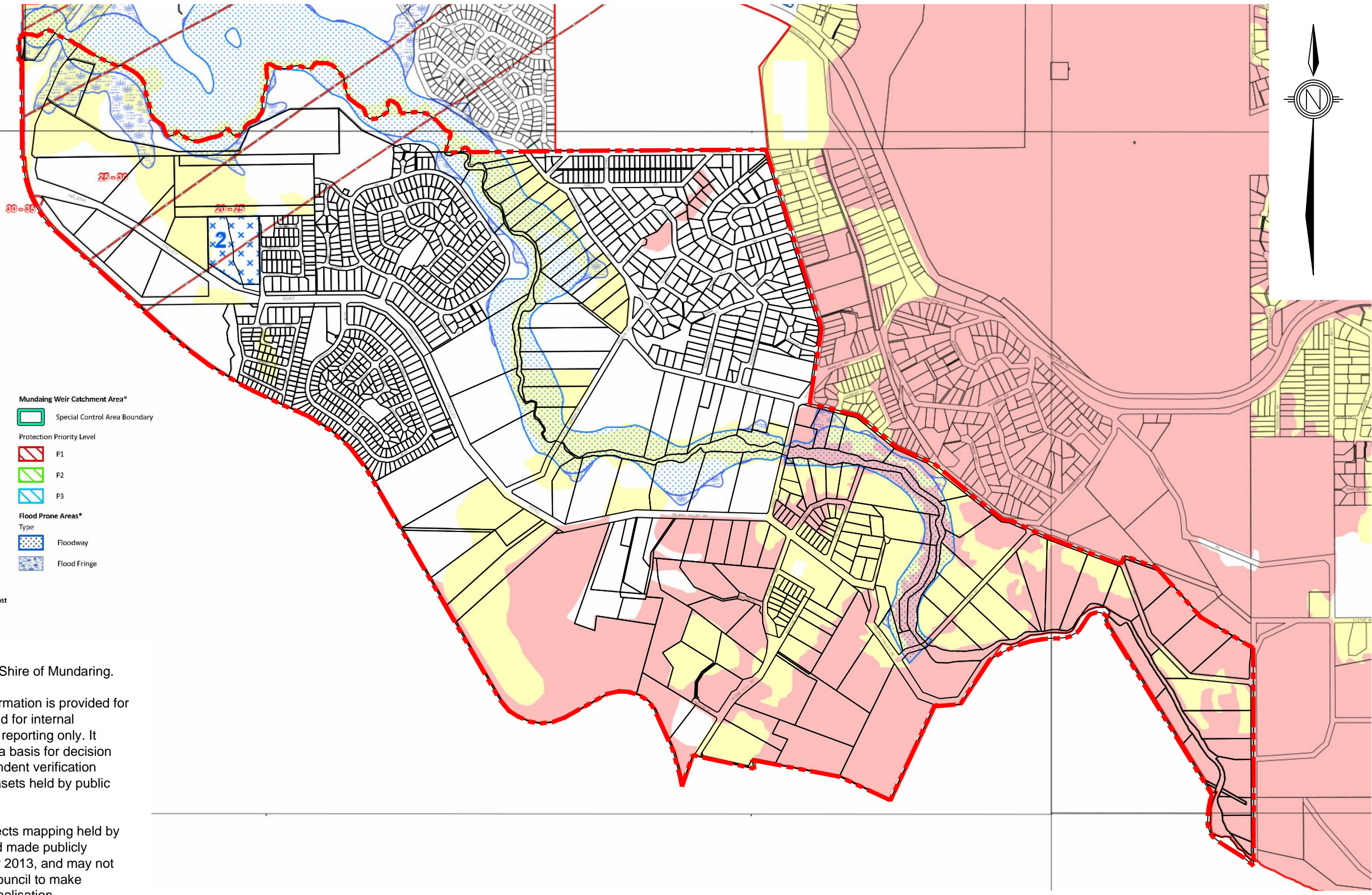
Zoning and reserves shown are as per mapping held by Shire of Mundaring and made publicly available as of October 2013, and may not reflect resolutions of Council to make amendments prior to finalisation and gazettal.



PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref.	112870	Date	05 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 6 - SHIRE OF MUNDARING DRAFT LOCAL PLANNING SCHEME NO. 4 MAP	

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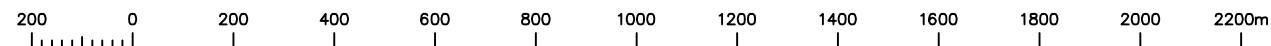


- Legend:**
- Study Area
 - Middle Helena Catchment Area* Special Control Area Boundary
 - Mundaing Weir Catchment Area* Special Control Area Boundary
 - Protection Priority Level P1
 - Protection Priority Level P2
 - Protection Priority Level P3
 - Bushfire Hazard Hazard Level Moderate
 - Bushfire Hazard Hazard Level Extreme
 - Other Aircraft Noise Exposure Forecast
 - Other Special Design Area
 - Flood Prone Areas* Type Floodway
 - Flood Prone Areas* Type Flood Fringe

Note:
Base data supplied by Shire of Mundaring.

All digital mapping information is provided for illustration purposes and for internal reference against RPS reporting only. It should not be used as a basis for decision making without independent verification against up-to-date datasets held by public agencies.

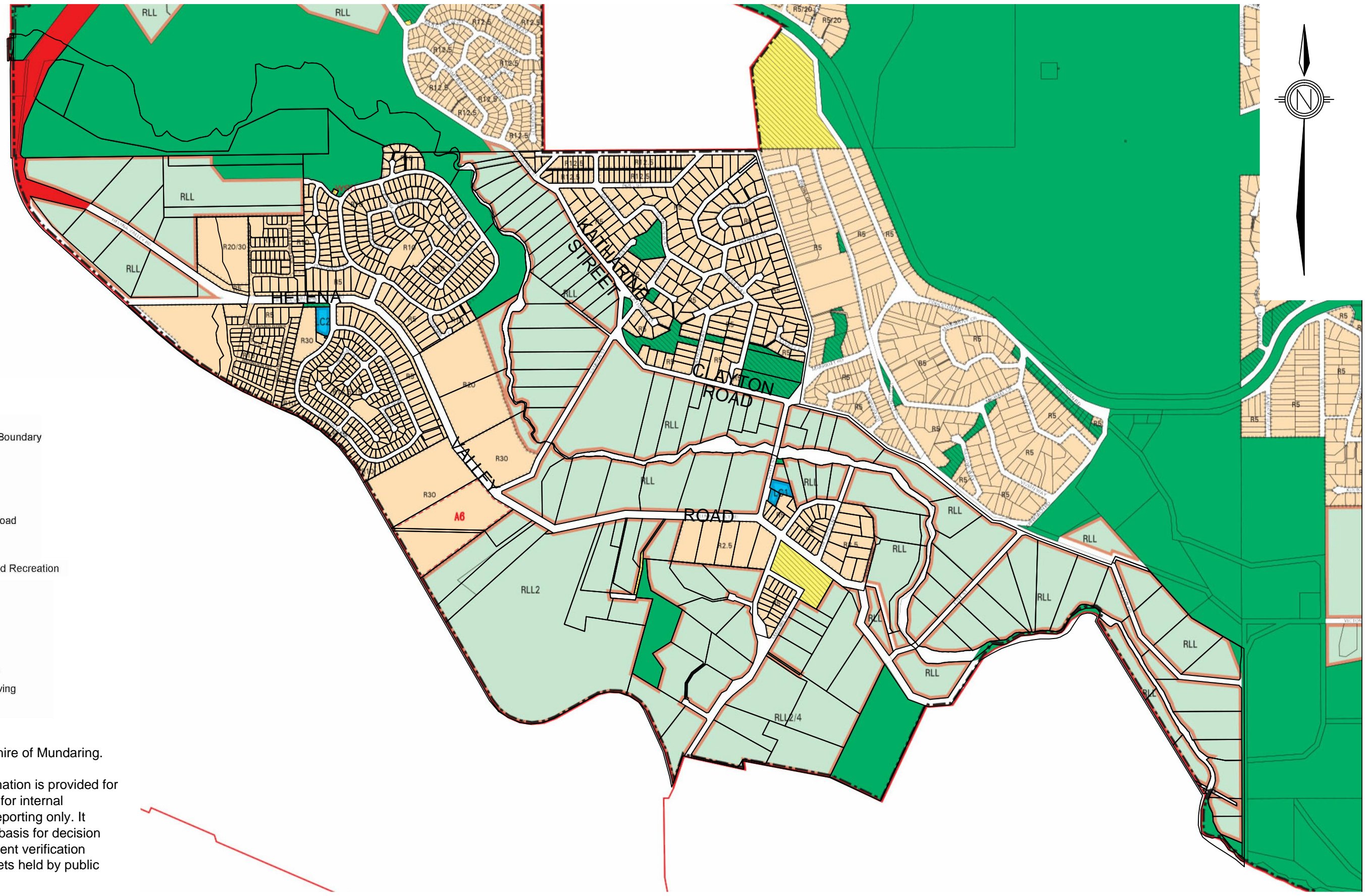
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PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref.	112870	Date	05 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 7 - SHIRE OF MUNDARING DRAFT LOCAL PLANNING SCHEME NO. 4 SPECIAL CONTROL AREAS	

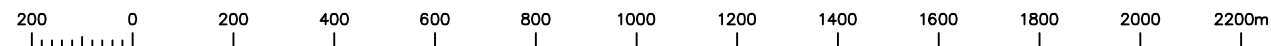
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1:15000	A3	112870-5-019		



- Legend:**
- Study Area
 - Scheme Boundary
 - Local Government Boundary
 - R Codes
 - Additional Uses
 - No Zone
 - Local Road
 - Primary Regional Road
 - Public Purposes
 - WSD Water Authority of WA
 - Regional Parks And Recreation
 - Public Open Space
 - Public Purposes
 - Residential
 - Local Centre
 - LC1 Convenience Store
 - LC2 Local Commercial Centre
 - Rural Landscape Living
 - RLL No further subdivision
 - RLL2/4 2 to 4 Ha

Note:
 Base data supplied by Shire of Mundaring.

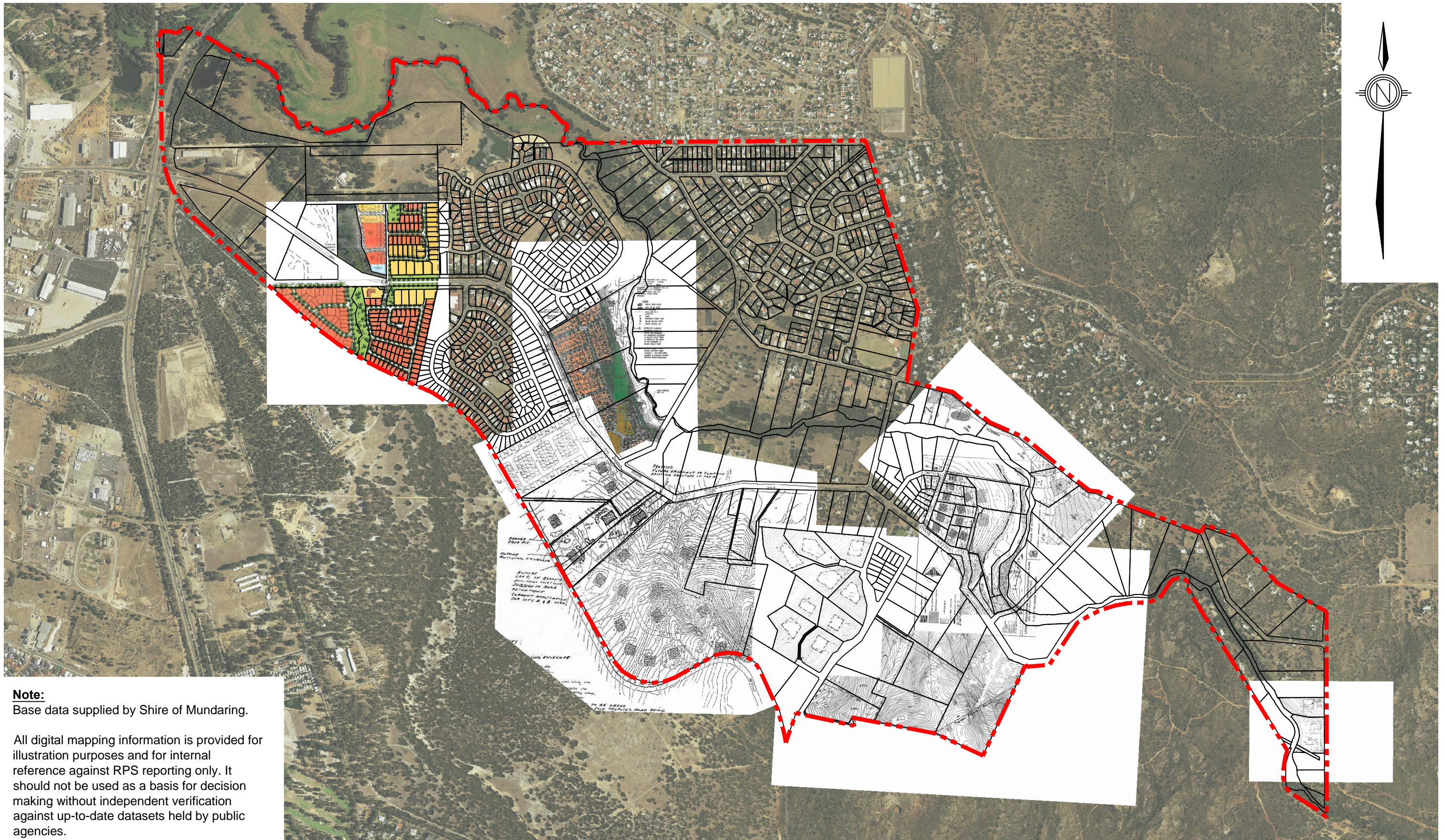
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PROJECT HELENA VALLEY LAND USE STUDY	
Job Ref. 112870	Date 05 NOVEMBER 2013
Comp By. BDC	DWG Name. 112870-b-002a.dwg
Locality HELENA VALLEY	Local Authority SHIRE OF MUNDARING

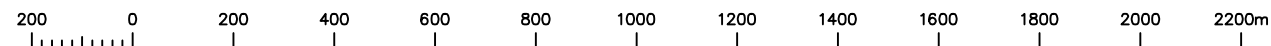
CLIENT	SHIRE OF MUNDARING
FIGURE 8 - SHIRE OF MUNDARING TOWN PLANNING SCHEME NO. 3 MAP	

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Scale 1:15000	Sheet A3	Plan Ref 112870-5-005	Rev A	



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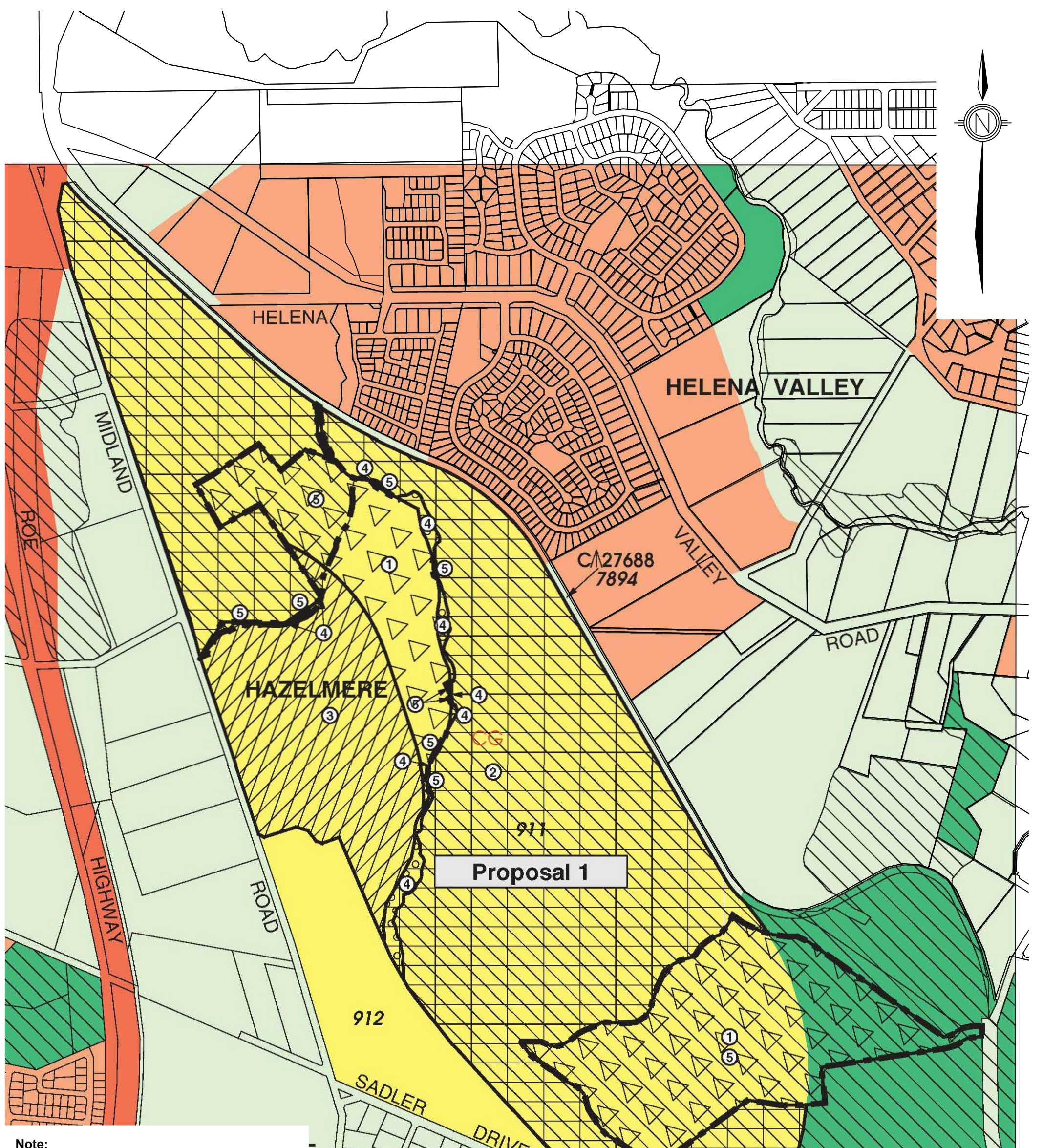
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PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref.	112870	Date	05 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	

CLIENT	SHIRE OF MUNDARING
	SHIRE OF MUNDARING LOCAL SUBDIVISION AND INFRASTRUCTURE PLAN (LSIP) AREAS

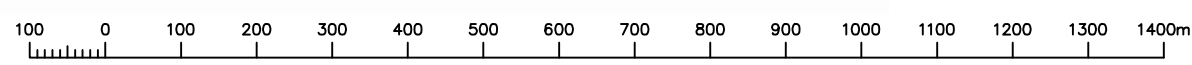
 Scale 1:15000	RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762		Subiaco Office 38 Station Street Subiaco WA 6008 T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au	
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Legend		
Proposed:	Existing:	
urban zone	urban zone	public purposes (CG) reservation
parks and recreation reservation	rural zone	primary regional roads reservation
urban deferred zone	industrial zone	Bush Forever area
Bush Forever area addition	parks and recreation reservation	
Bush Forever area removal		



PROJECT HELENA VALLEY LAND USE STUDY	
Job Ref. 112870	Date 06 NOVEMBER 2013
Comp By. BDC	DWG Name. 112870-b-002a.dwg
Checked By. MW	Locality HELENA VALLEY
Local Authority SHIRE OF MUNDARING	

CLIENT SHIRE OF MUNDARING
FIGURE 10 - PROPOSED BUSHMEAD MRS AMENDMENT



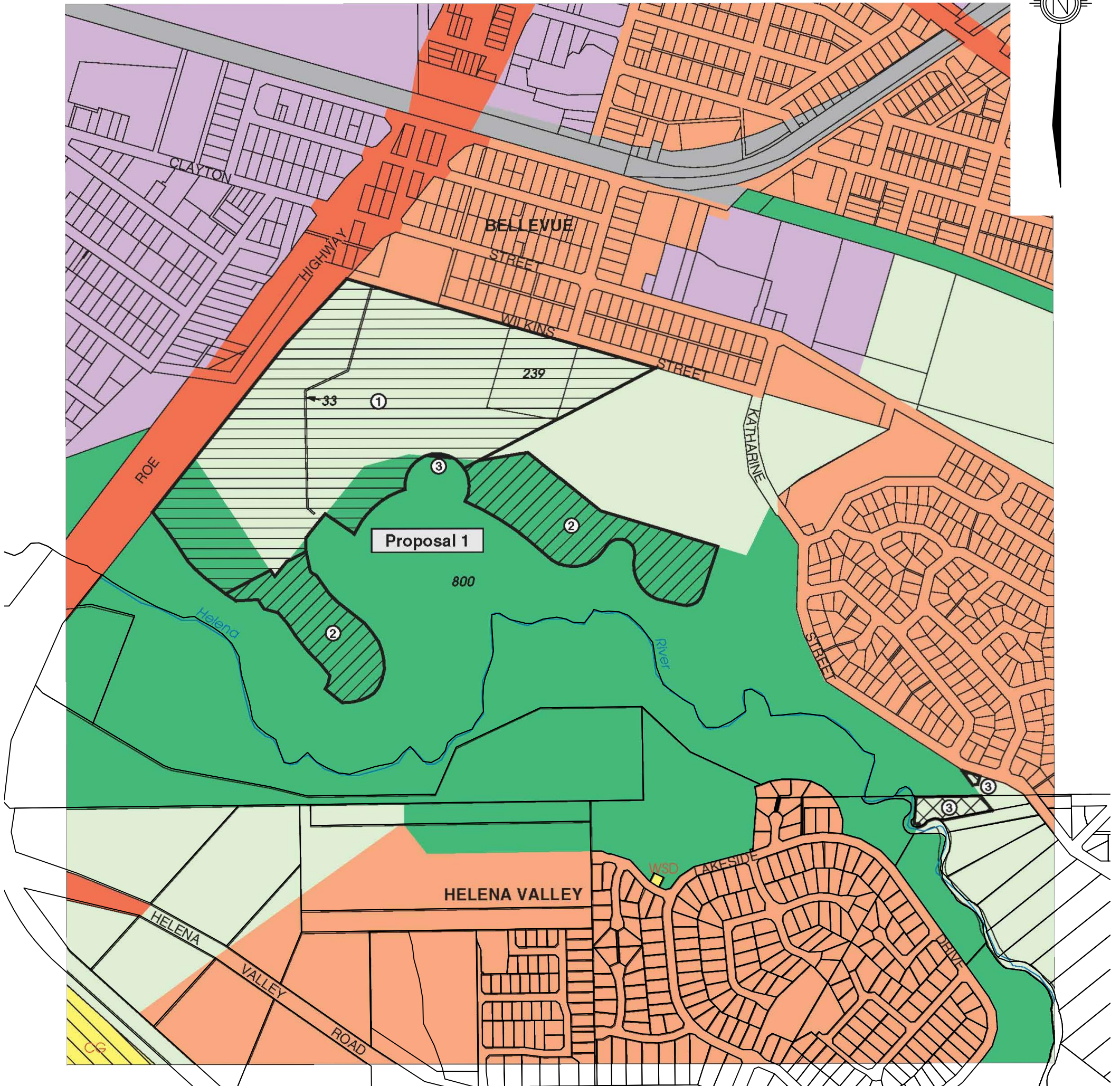
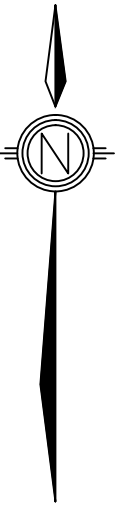
RPS Australia East Pty Ltd
ACN 140 292 762
ABN 44 140 292 762

Subiaco Office
38 Station Street
Subiaco WA 6008

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F +61 8 9211 1122
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


Scale 1:10000	Sheet A3	Plan Ref 112870-5-020	Rev
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


Note:
Base data supplied by Western Australian Planning Commission.

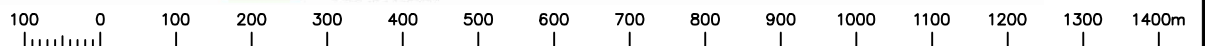
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Proposed:

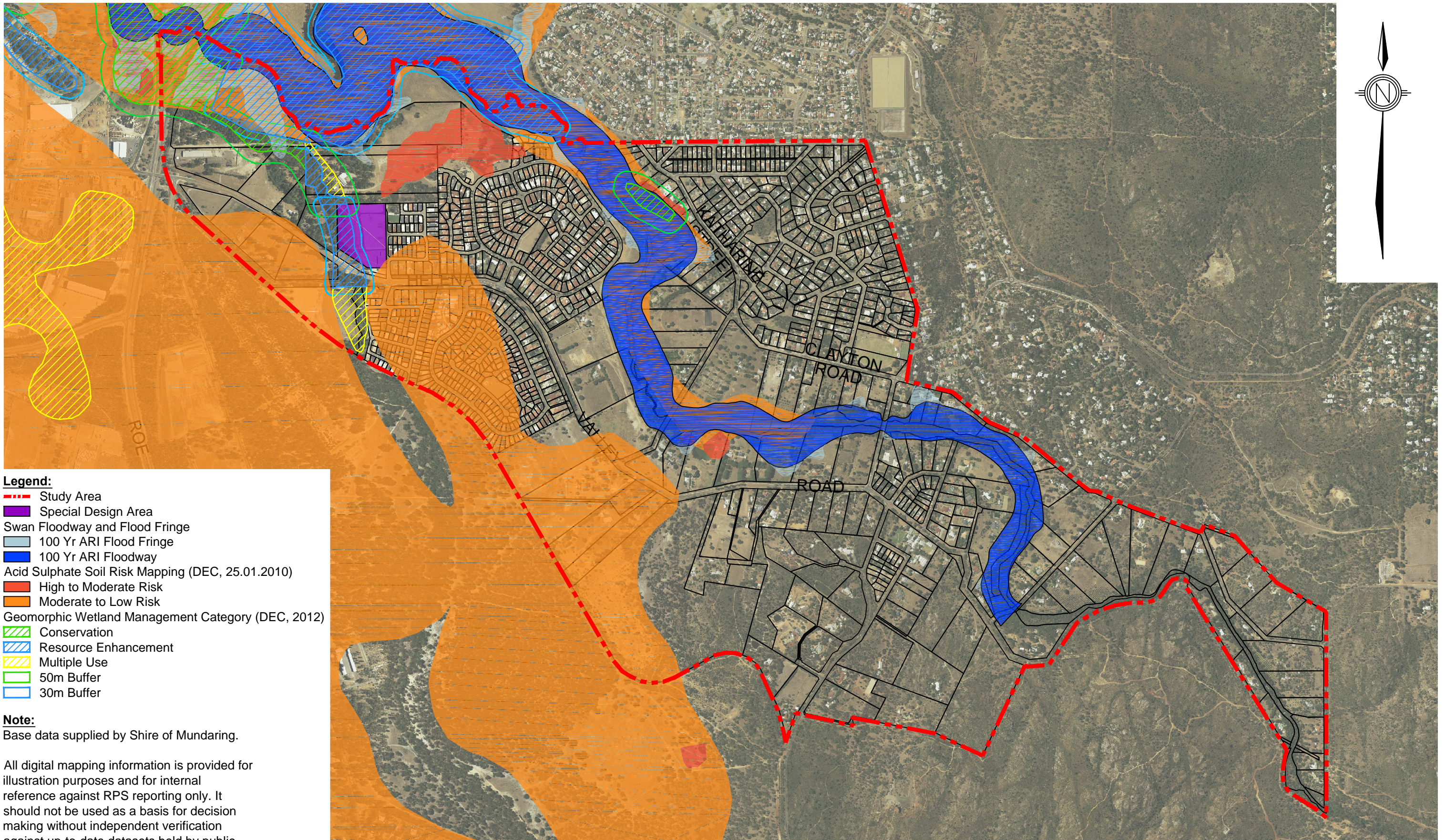
-  urban zone
-  rural zone
-  parks and recreation reservation

Existing:

-  rural zone
-  urban zone
-  industrial zone
-  railways reservation
-  parks and recreation reservation
-  public purposes reservation
-  primary regional roads reservation
-  Bush Forever area



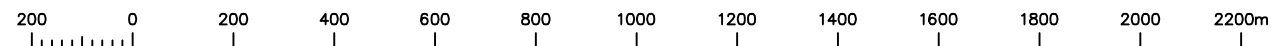
PROJECT HELENA VALLEY LAND USE STUDY		CLIENT SHIRE OF MUNDARING		 RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762 Subiaco Office 38 Station Street Subiaco WA 6008 T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au	
Job Ref. 112870	Date 06 NOVEMBER 2013	FIGURE 11 - PROPOSED BELLEVUE MRS AMENDMENT			
Comp By. BDC	DWG Name. 112870-b-002a.dwg				
Checked By. MW	Locality HELENA VALLEY				
Local Authority SHIRE OF MUNDARING		Scale 1:7500	Sheet A3	Plan Ref 112870-5-021	Rev



- Legend:**
- - - Study Area
 - Special Design Area
 - Swan Floodway and Flood Fringe
 - 100 Yr ARI Flood Fringe
 - 100 Yr ARI Floodway
 - Acid Sulphate Soil Risk Mapping (DEC, 25.01.2010)
 - High to Moderate Risk
 - Moderate to Low Risk
 - Geomorphic Wetland Management Category (DEC, 2012)
 - Conservation
 - Resource Enhancement
 - Multiple Use
 - 50m Buffer
 - 30m Buffer

Note:
Base data supplied by Shire of Mundaring.

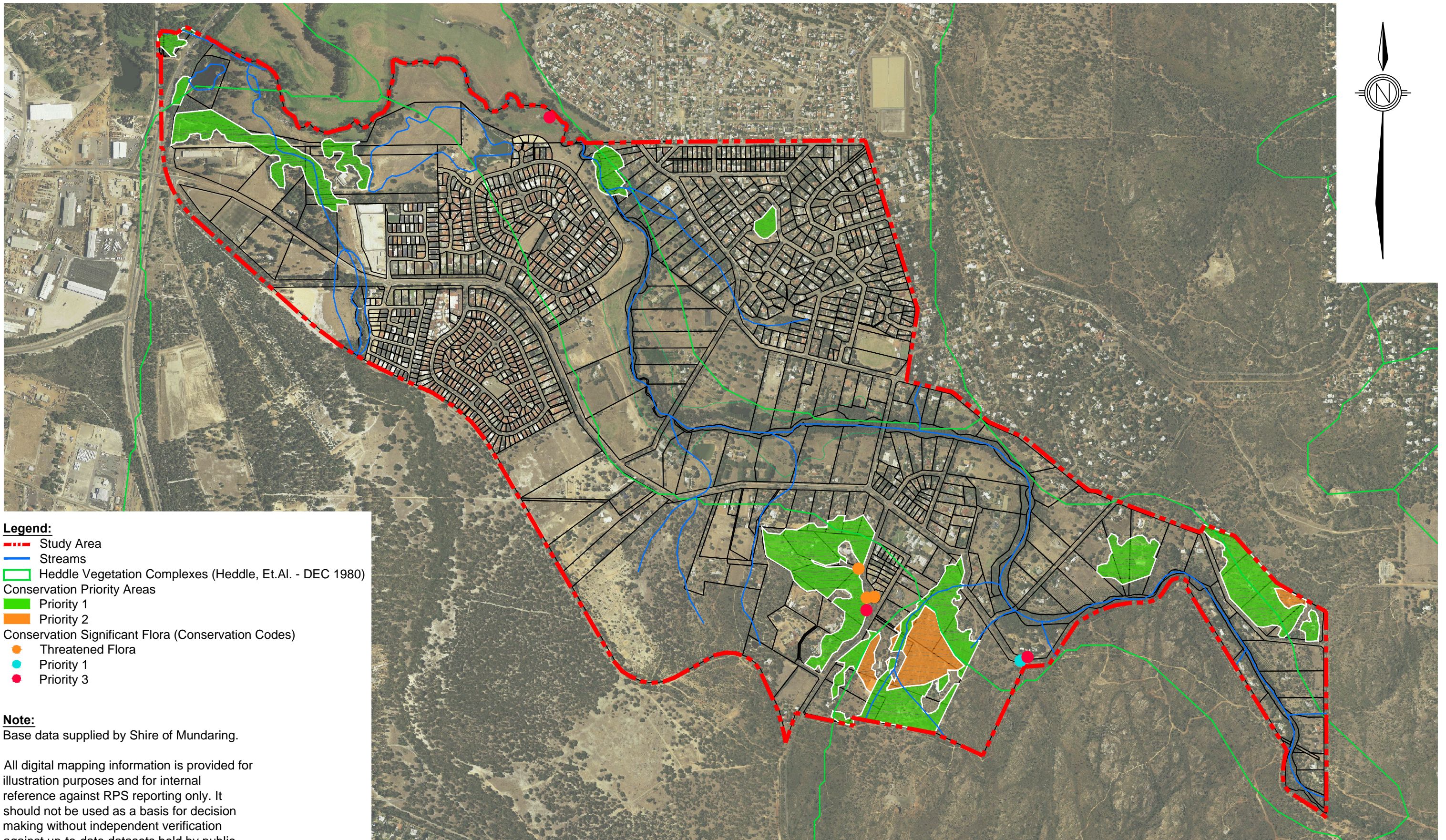
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Job Ref.	112870	Date	14 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 12 - GEOLOGY, HYDROLOGY & WETLANDS	

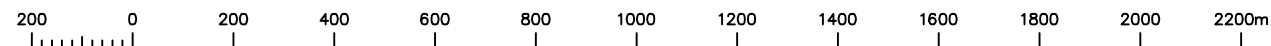
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1:15000	A3	112870-5-024		



- Legend:**
- - - Study Area
 - Streams
 - Hedde Vegetation Complexes (Hedde, Et.Al. - DEC 1980)
 - Conservation Priority Areas**
 - Priority 1
 - Priority 2
 - Conservation Significant Flora (Conservation Codes)**
 - Threatened Flora
 - Priority 1
 - Priority 3

Note:
Base data supplied by Shire of Mundaring.

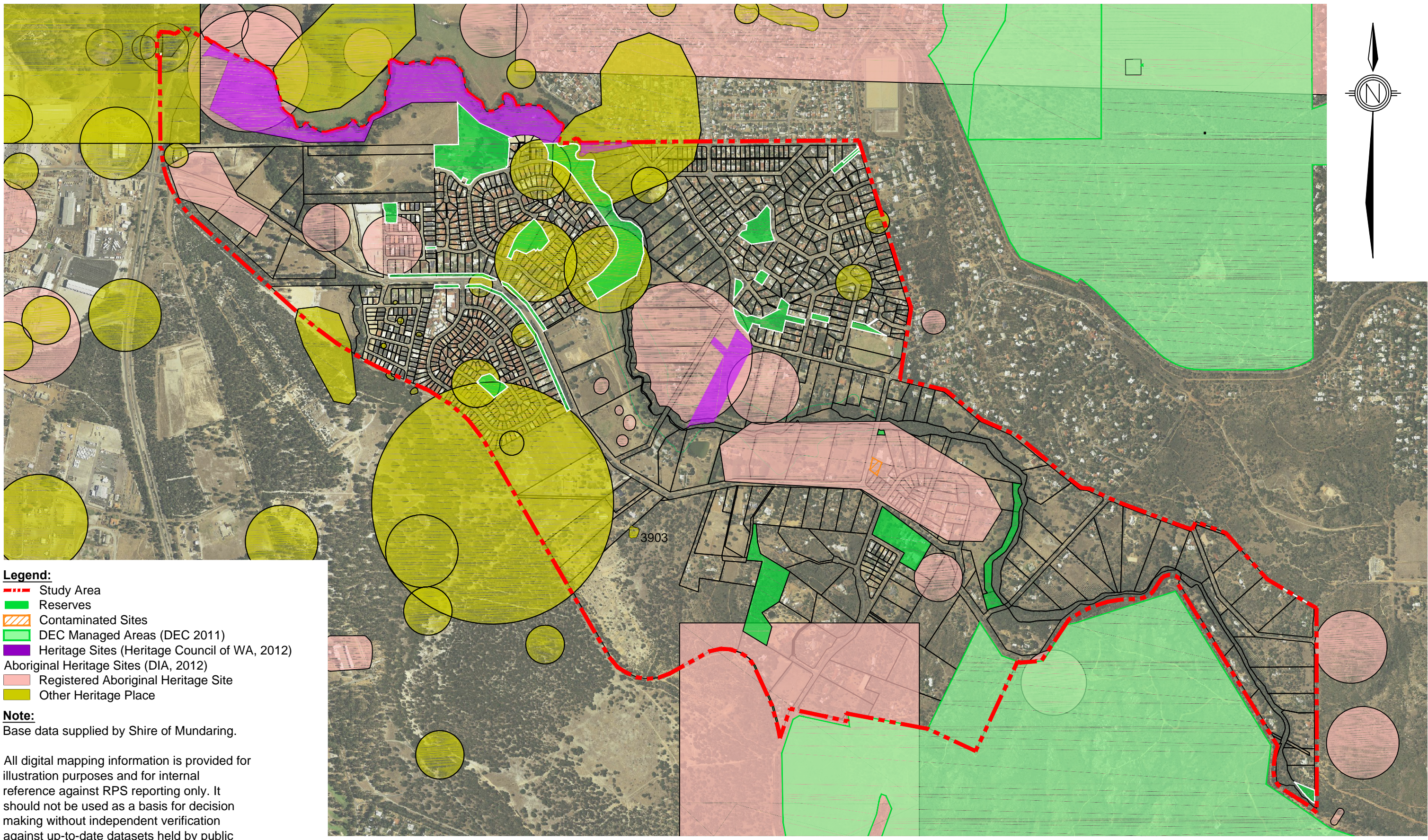
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PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref.	112870	Date	14 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 13 - FLORA & VEGETATION	

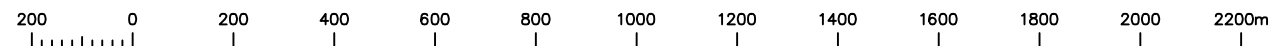
	RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762		Subiaco Office 38 Station Street Subiaco WA 6008 T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au				
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Scale	1:15000	Sheet	A3	Plan Ref	112870-5-026	Rev	



- Legend:**
- - - Study Area
 - Reserves
 - Contaminated Sites
 - DEC Managed Areas (DEC 2011)
 - Heritage Sites (Heritage Council of WA, 2012)
 - Aboriginal Heritage Sites (DIA, 2012)
 - Registered Aboriginal Heritage Site
 - Other Heritage Place

Note:
 Base data supplied by Shire of Mundaring.

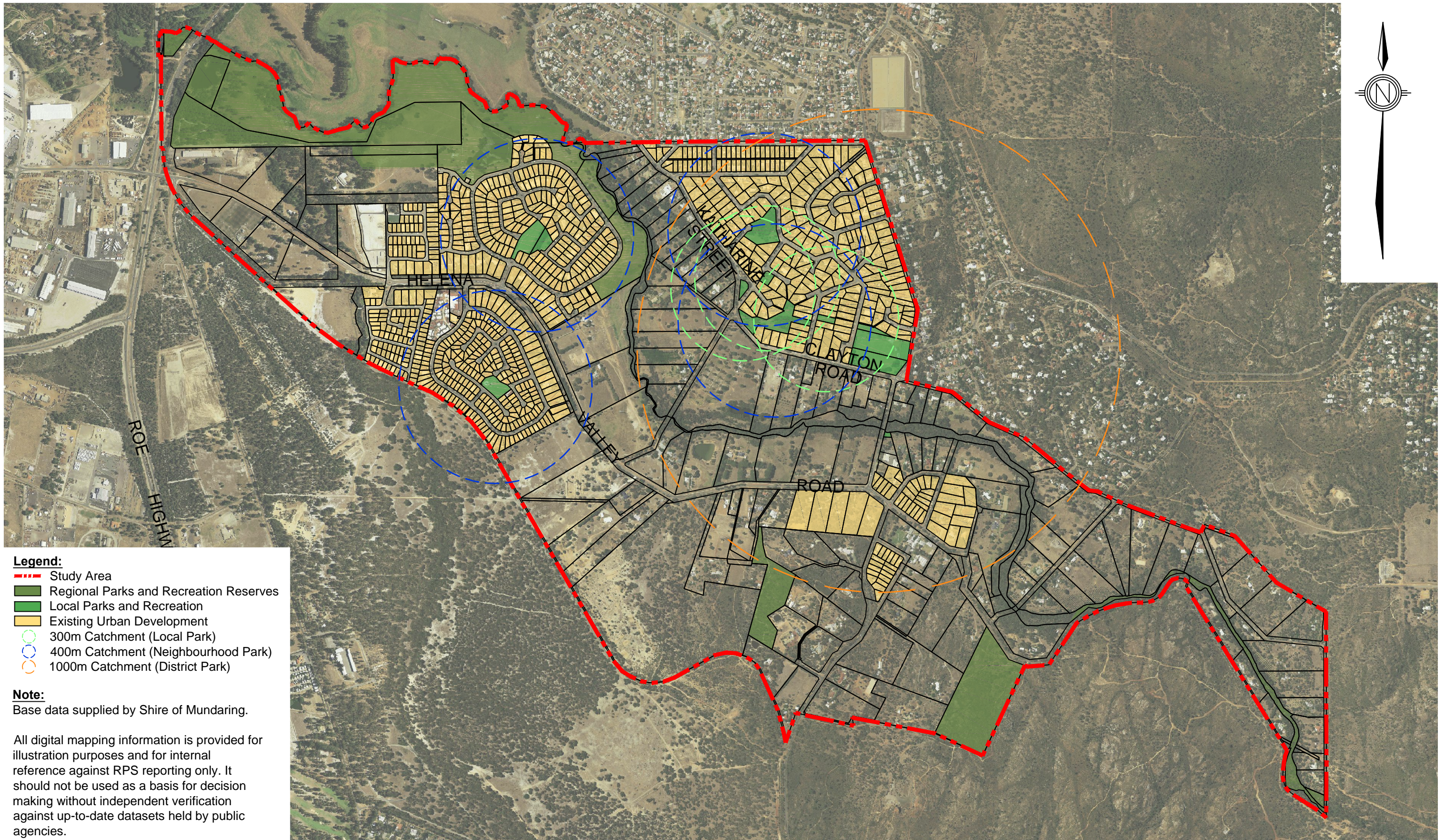
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Job Ref.	112870	Date	14 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 14 - CONTAMINATION & HERITAGE SITES	

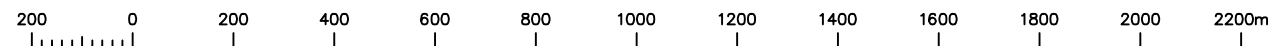
	RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762		Subiaco Office 38 Station Street Subiaco WA 6008 T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au	
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Scale	Sheet	Plan Ref	Rev	
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- Legend:**
- - - Study Area
 - Regional Parks and Recreation Reserves
 - Local Parks and Recreation
 - Existing Urban Development
 - 300m Catchment (Local Park)
 - 400m Catchment (Neighbourhood Park)
 - 1000m Catchment (District Park)

Note:
Base data supplied by Shire of Mundaring.

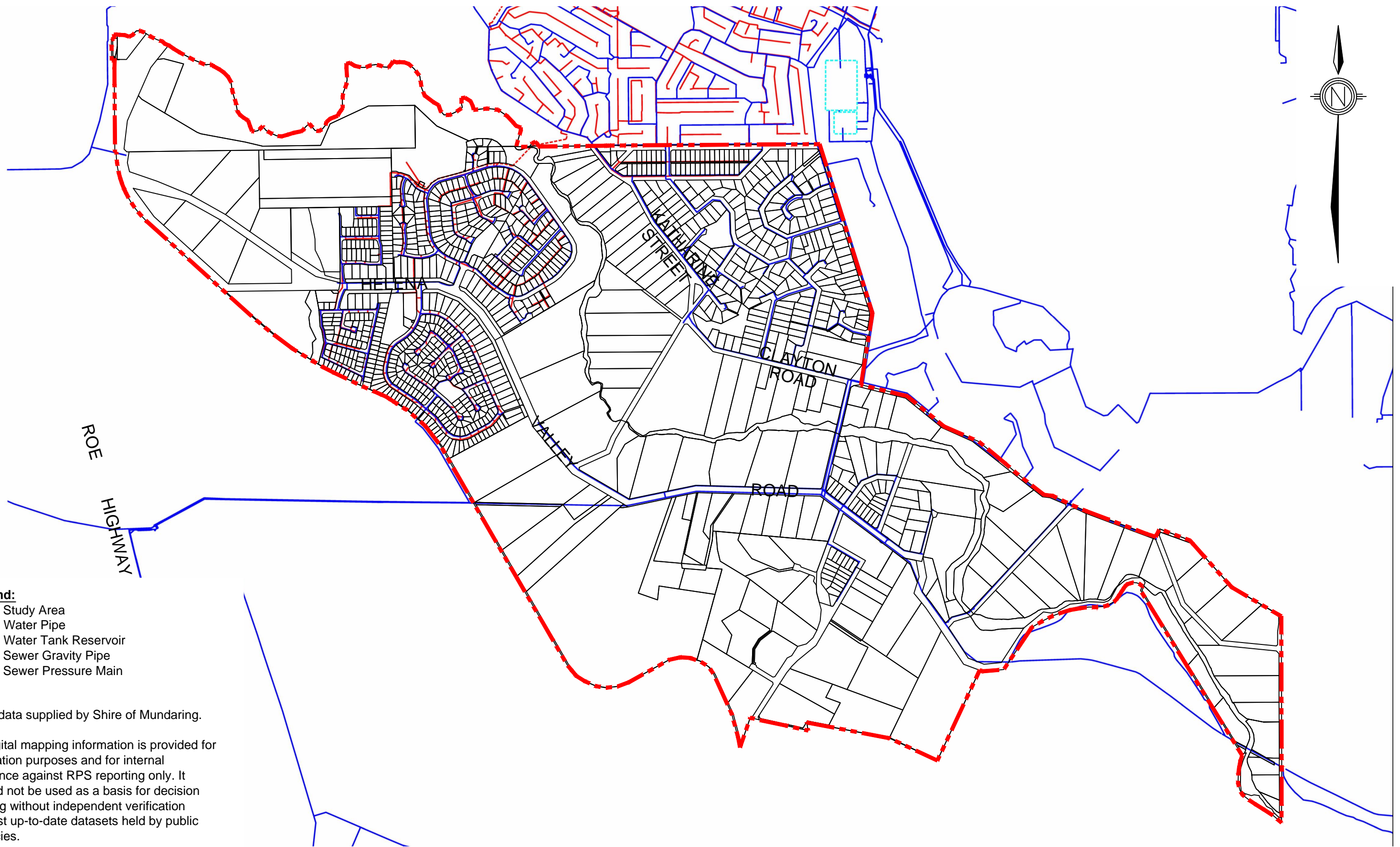
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Job Ref.	112870	Date	06 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 15 - REGIONAL AND DISTRICT OPEN SPACE DISTRIBUTION	

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Sheet	A3	Plan Ref	112870-5-016	Rev	A



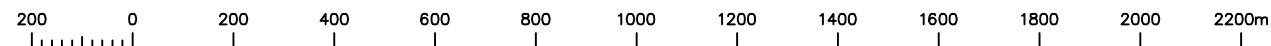
Legend:

- - - Study Area
- Water Pipe
- - - Water Tank Reservoir
- Sewer Gravity Pipe
- - - Sewer Pressure Main

Note:

Base data supplied by Shire of Mundaring.

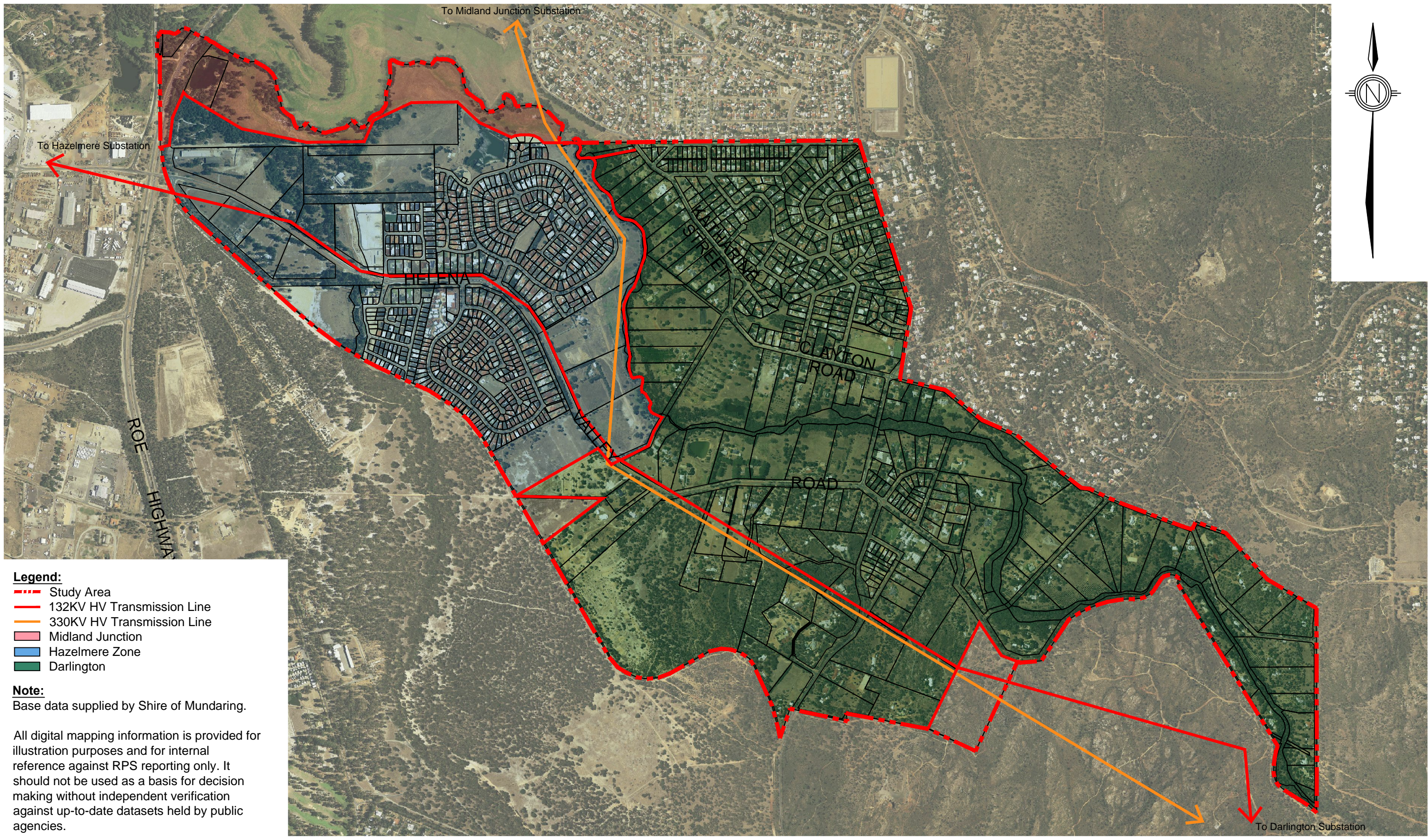
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Job Ref.	112870	Date	06 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 16 - WATER AND SEWER INFRASTRUCTURE	

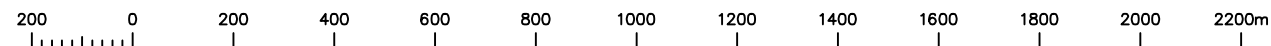
	RPS Australia East Pty Ltd ACN 140 292 762 ABN 44 140 292 762		Subiaco Office 38 Station Street Subiaco WA 6008 T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au				
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Scale	1:15000	Sheet	A3	Plan Ref	112870-5-022	Rev	



- Legend:**
- - - Study Area
 - 132KV HV Transmission Line
 - 330KV HV Transmission Line
 - Midland Junction
 - Hazelmeré Zone
 - Darlington

Note:
 Base data supplied by Shire of Mundaring.

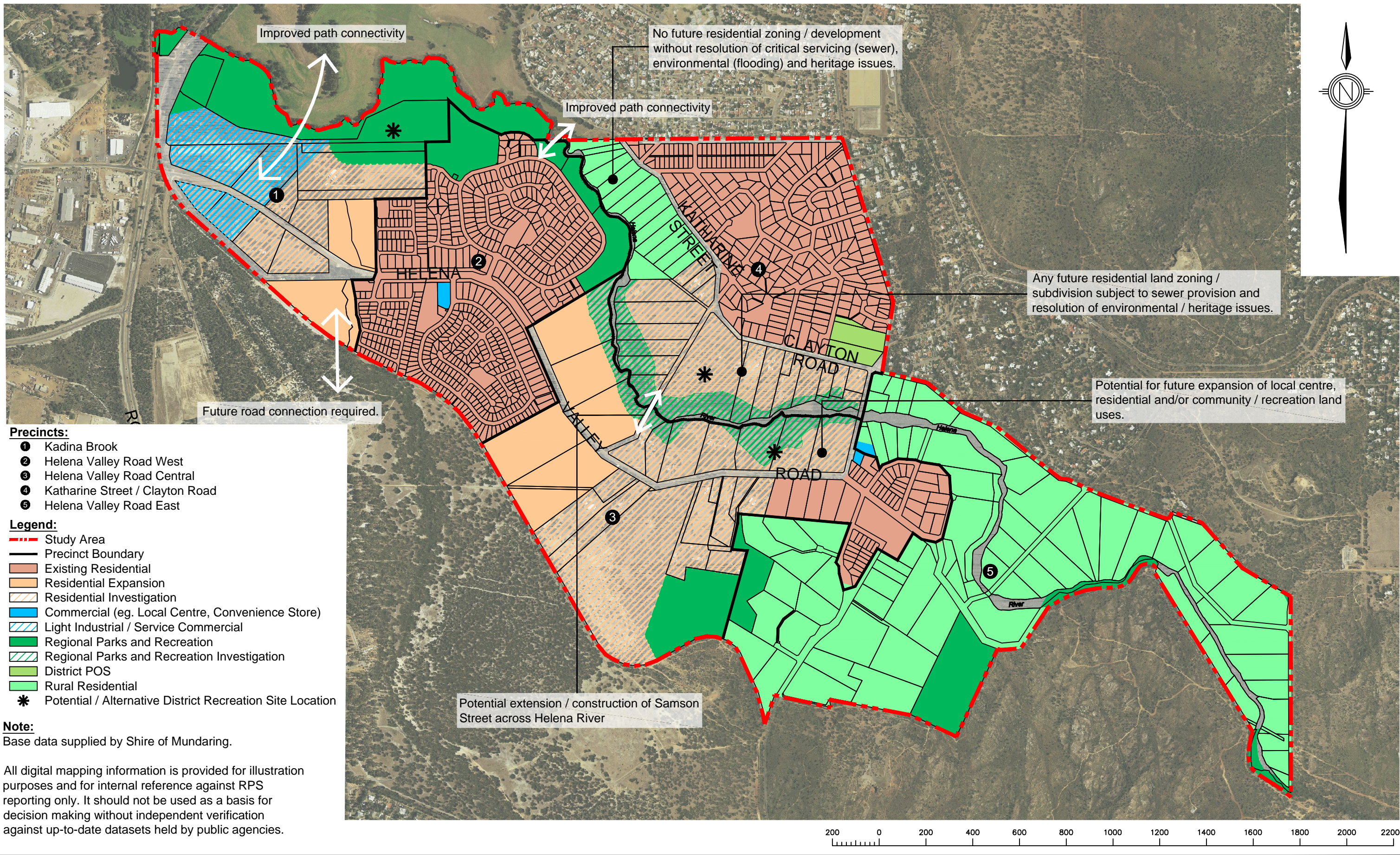
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Job Ref.	112870	Date	06 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 17 - HIGH VOLTAGE OVERHEAD TRANSMISSION LINES	

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PROJECT		HELENA VALLEY LAND USE STUDY	
Job Ref.	112870	Date	14 NOVEMBER 2013
Comp By.	BDC	DWG Name.	112870-b-002a.dwg
Locality	HELENA VALLEY	Local Authority	SHIRE OF MUNDARING

CLIENT	SHIRE OF MUNDARING
FIGURE 18 - HELENA VALLEY FUTURE LAND USE PLAN	

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APPENDIX I

RPS Environment Environmental Advice Note

Our Ref: L1217301

Email: giles.glasson@rpsgroup.com.au

Date: 2 August 2012

Scott Vincent
RPS
PO Box 465
SUBIACO WA 6904

Dear Scott

ENVIRONMENTAL CONSTRAINTS ADVICE – HELENA VALLEY

Thank you for this opportunity to provide you with advice relating to the key environmental constraints associated with the Helena Valley project area.

Scope of the Letter Report

This letter report identifies the broad environmental characteristics of the project area, describes the physical, biological, social and land use factors and recommends further assessments /surveys, where appropriate, required to make an informed assessment of the project area's environmental attributes.

Please note that this environmental advice is based solely on desktop research (a site investigation has not been conducted) and has been significantly constrained by time and budgetary requirements.

Helena Valley Project Area

The extent of the Helena Valley Project Area (the project area), shown in Figures 1 to 3, follows the cadastral boundary of the suburb of Helena Valley. The project area is located within the Shire of Mundaring and is situated approximately 17 km east of Perth's Central Business District.

This desktop investigation includes an assessment of the following factors:

- Topography
- Geology
- Acid Sulfate Soils
- Hydrology
- Drainage
- Wetlands
- Potential Contamination
- Vegetation and Flora
- Fauna

- Heritage
- Land Use.

Each factor is discussed further in the following sections. This report also includes information on potential implications for development and relevant environmental approval requirements.

Physical Factors

Topography

The topography of the project area undulates gently from an elevation of approximately 65 metres Australian Height Datum (m AHD) in the east, where the laterised foothills begin to transition to the Darling Scarp, to an elevation of approximately 11 m AHD in the west, where the relatively flat landscape of the Swan Coastal Plain commences (Western Australian Atlas: Shared Land Information Platform 2012).

Geology

The landform unit which underlies the project area is the Forrestfield soil association. This soil association is comprised of predominantly light grey colluvial quartz sands, clays and silts with intrusions of gravel, which may be at the surface or at depth. The creeklines are characterised by clays and sandy clays (Swan Catchment Council 2004).

Acid Sulfate Soils

Acid Sulfate Soils (ASS) are naturally occurring soils, sediments or organic substrates (e.g. peat) formed under reducing conditions, which contain iron sulfide minerals (predominantly pyrite – FeS₂) and/or their oxidation products. Upon exposure to atmospheric oxygen (from such processes as the lowering of the water table or by excavation) the sulfides in these soils readily oxidise. Sulfide oxidation produces sulfuric acid (H₂SO₄), accelerating the dissolution of metals such as iron. Under acidic conditions, heavy metals, metalloids (aluminium and arsenic) and nutrients can be mobilised from soils into shallow groundwater and surface water at concentrations that make them toxic to both flora and fauna.

The Western Australian Planning Commission (WAPC) Planning Bulletin No. 64 (WAPC 2003) has mapped the risk of Acid Sulfate Soils (ASS) for the Helena Valley (Figure 1). Figure 1 shows that extents of the project area have been mapped as “High to Moderate” risk and “Moderate to Low” risk of ASS occurring within 3 metres of the natural soil surface. For the extents of the project area which have not been assigned an ASS risk rating, it is assumed that there is a low to nil known risk of ASS occurring within 3 metres of the natural soil surface (or deeper).

Should development be proposed in areas which have been mapped as “High to Moderate” risk and “Moderate to Low” risk of ASS occurring within 3 metres of the natural soil surface a preliminary ASS investigation will need to be conducted to confirm the presence or absence of ASS prior to any site earth works being undertaken.

If ASS occurs and dewatering is part of planned site earth works, an ASS Dewatering Management Plan should be prepared to outline management practices for dewatering effluent and handling and / or treatment of ASS.

Hydrology

Groundwater Depth and Flow

The Department of Water's (DoW) *Perth Groundwater Atlas* only has data for the depth to groundwater for the northern third of the project area. This section can loosely be identified as the land holdings to the west of the eastern extent of Torquata Boulevard in the south and to the west of the eastern extent of Lakeside Drive in the north. For this third, the depth to groundwater is estimated to range from 15 metres below ground level (mbgl) south the eastern extent of Torquata Boulevard to 7 (mbgl) around the Helena Valley Road in the north-west. The areas of lower estimated depth to groundwater around the Helena Valley Road correlate with the areas of lowest elevation above sea level. These estimates fluctuate between 0.5 and 3.0 metres due to seasonal variation.

Groundwater flow appears to be in a north-westerly direction across the project area towards confluence of the Helena River with the Swan River.

Groundwater Quality

The DoW classifies the groundwater as into three categories within the project area.

- To the east of the boundary formed by Maguire Road, Ridgehill Road and Scott Street there is no groundwater quality information available.
- To the west of the boundary formed by Maguire Road, Ridgehill Road and Scott Street but before the boundary formed by the eastern extent of Torquata Boulevard in the south and the eastern extent of Lakeside Drive in the north, the groundwater quality is classified as being "unsuitable" in terms of the use of the groundwater for domestic irrigation in preference to scheme water.
- In the section to the west of the boundary formed by the eastern extent of Torquata Boulevard in the south and the eastern extent of Lakeside Drive in the north, the groundwater quality is classified as being "unsuitable" in terms of the use of the groundwater for domestic irrigation in preference to scheme water. Indicatively, the groundwater is of low risk of iron staining and the salinity is identified as "brackish", having total dissolved solids in the range of 1,500 to 3,000 milligrams per litre.

A search of the DoW's *Water Information Bore* database was not conducted during this investigation due to time constraints. As such no specific bore data is available.

Public Drinking Water Source Areas

A search of the DoW's *Perth Groundwater Atlas* database was undertaken on Tuesday 31 July 2012 and the project area was found not to be subject to any Public Drinking Water Source Areas.

Surface Water

The project area is dissected by the lower reaches of the Helena River. The Helena River flows from east to west and provides the function of a natural drainage channel, transporting the overland flows from the surrounding catchment during high intensity rainfall events.

The lower reaches of the Helena River can be subject to substantial flooding and the sandy fluvial deposits of its river bed can be subject to erosion, particularly in areas where the fringing vegetation has been degraded or removed.

Figure 1 identifies the 100 year Average Recurrence Interval (ARI) floodway and flood fringe for the lower reaches of the Helena River.

To protect the integrity of the Helena River’s water quality, associated riparian vegetation communities, the banks of the watercourse and to mitigate potential flooding it is recommended that development not be proposed within the 100 year floodway or fringe of the Helena River.

Drainage

In order to ensure compliance with the WAPC’s Better Urban Water Management Guidelines (WAPC 2008) the following water management actions are required as a matter of planning compliance.

- A District Water Management Strategy will be required to support the amendments to the Shire of Mundaring’s Town Planning Scheme (TPS) No. 3.
- A Local Water Management Strategy will be required to support local structure planning activities.
- An Urban Water Management Plan will be required to support subdivision activities.

Wetlands

There are three distinct categories of geomorphic wetlands within the project area (Figure 1):

- Conservation (C)
- Resource Enhancement (RE)
- Multiple Use (MU).

Table 1 identifies the management objectives for the categories of wetlands.

Table 1: Management objectives for the categories of wetlands

Management Category	General Description	Management Objectives
C	Wetlands support a high level of ecological attributes and functions	<p>Highest priority wetlands. Objective is preservation of wetland attributes and functions through various mechanisms including:</p> <ul style="list-style-type: none"> • reservation in national parks, Crown reserves and state-owned land. • protection under Environmental Protection Policies • wetland covenanting by landowners. <p>These are the most valuable wetlands and the Commission will oppose any activity that may lead to the further loss or degradation. No development.</p>

Management Category	General Description	Management Objectives
RE	Wetlands which may have been partially modified but still support substantial ecological attributes and functions	Priority wetlands. Ultimate objective is for management, restoration and protection towards improving their conservation value. These wetlands have the potential to be restored to conservation category. This can be achieved by restoring wetland structure, function and biodiversity. Protection is recommended through a number of mechanisms.
MU	Wetlands with few important ecological attributes and functions remaining	Use, development and management should be considered in the context of ecologically sustainable development and best management practice catchment planning through land care. Should be considered in strategic planning.

Source: Water and River Commission 2001

The position of the Environmental Protection Authority (EPA) on wetlands has its basis in the principle of ecologically sustainable development, wise use of natural resources, a holistic ecosystem management approach, inter-generational equity and the precautionary principle (EPA 2004). Specifically, with regard to the wetland categories the EPA's advice is:

- C wetlands and appropriate buffers are fully protected.
- All reasonable efforts are taken to minimise the potential impacts on RE wetlands and appropriate buffers.
- All reasonable efforts are taken to retain the MU wetland's hydrological functions and where possible other wetland functions (EPA 2008).

In accordance with the EPA's Environmental Guidance for Planning and Development (EPA 2008), it is recommended that development not be proposed within C and RE wetlands or their buffers (50 metres for C and 30 metres for RE; Figure 1).

Should development be proposed within a MU wetland, it is recommended that all reasonable efforts should be taken to retain the wetland's hydrological and other functions.

Potential Contamination

A search of the DEC's *Contaminated Sites Database* was conducted on 31 July 2012 which indicated that one site was recorded within the project area (Figure 2). The landholding at 164 Scott Street (Lot 47 on diagram 46741), Helena Valley has been classified by the Department of Environment and Conservation (DEC) as "Remediated for Restricted Use" on 5 July 2012.

The landholding is restricted to commercial / industrial use due to the presence of hydrocarbons in the soil (enc.).

Should development be proposed within 164 Scott Street Helena Valley it is required that only commercial / industrial use is proposed.

In order to identify if any additional potential contamination constraints are likely to impact potential development within the project area it is recommended that a regional Preliminary Site Investigation is undertaken to detect if any additional potential constraints are present within the project area and where further assessment may be required.

Social Factors

Heritage

Aboriginal Heritage

A search of the Department of Indigenous Affairs (DIA) Aboriginal Heritage Database was undertaken on 31 July 2012 and the project area was found to have 14 “Registered Aboriginal Heritage Sites” and 16 “Other Heritage Places” (Figure 2).

Registered Aboriginal Heritage Sites and Other Heritage Places are protected under the *Aboriginal Heritage Act 1972*.

Should development be proposed in areas where Aboriginal sites have been identified, it is recommended that advice be sought from the DIA or a specialist Aboriginal Heritage Consultant to ensure compliance with the *Aboriginal Heritage Act 1972*.

Additionally, should any Aboriginal objects be identified or unearthed during development activities then under the *Aboriginal Heritage Act 1972*, the findings must be reported to the DIA.

European Heritage

A search of the State Heritage Office's *inHerit* database was undertaken on 31 July 2012 and indicated that there are two places listed on the Register of Heritage Places within the project area (Figure 2).

The two heritage places are:

- Belle View / Helena Farm (place number 3836), 11000 Katherine Street and Corner Wilkins Street, Bellevue (enc.).
- Clayton Farm (place number 03839), Clayton Road, Helena Valley (enc.).

Heritage Places are protected under the *Heritage of Western Australia Act 1990*.

Should development be proposed upon any place listed on the Register of Heritage Places, it is recommended that advice be sought from the State Heritage Office or a specialist European Heritage Consultant to ensure compliance with the *Heritage of Western Australia Act 1990*.

Land Use

Aircraft Noise

Figure 2 shows that an extent of the project area is subject to the 20–25 Australian Noise Exposure Index (ANEI) contour for Perth Airport. Section 4.3 (4): *Special Application of Residential Planning Codes* of the Shire of Mundaring's TPS No. 3 contains approved provisions for managing noise within the 20–25 ANEI contour for Perth Airport.

It is recommended that any proposed development within the 20–25 ANEI contour for Perth Airport is subject to the approved provisions (or any amendments thereof) contained within Section 4.3 (4): *Special Application of Residential Planning Codes* of the Shire of Mundaring's TPS No. 3 as a minimum standard.

Special Design Area

Figure 1 shows that the Special Use Area proposed to be designated under the draft Local Planning Scheme No. 4 is intersected by C wetland UFI 15440, RE wetland UFI 14427 and the buffers of these wetlands.

It is advised that any land use proposed within the Special Use Area consider the management objectives for the categories of wetlands and the EPA's specific advice with regard to the management of C and RE categories of wetlands.

Conservation Priority Areas

Figure 3 shows the location of Priority 1 and 2 Local Natural Areas within the project area. Table 2 shows the Shire of Mundaring's aims with regard to these Local Natural Areas as presented in the draft Local Biodiversity Strategy (Shire of Mundaring 2004).

Table 2: Shire of Mundaring's aims for Priority Local Natural Areas

Shading on Figure 3	Priority	Aim	Conservation Assets
Green	1	To be conserved or protected and receive active management	Rare vegetation complexes. At risk vegetation complexes. Regional linkage over special features. Regional linkage over habitat.
Orange	2	To be conserved or protected and receive active management	Habitat Special features Regional linkages Within 20–50 m

Source: Shire of Mundaring 2009

Given the Shire of Mundaring's stated aims for the conserving or protecting Priority 1 and 2 Natural Areas, it is recommended that development not be proposed in these areas.

Bush Forever

Figure 3 shows the location of Bush Forever Sites (No. 215 – Helena River, Helena Valley and No. 216 – Adelaide Crescent Bushland, Helena Valley) within the project area.

State Planning Policy 2.8: *Bushland Policy for the Perth Metropolitan Region* provides a policy and implementation framework to ensure the protection and management of Bush Forever sites in the Perth Metropolitan Region is appropriately addressed and integrated with broader land use planning and decision making (WAPC 2010).

It is recommended that development proposed within the project area should be in accordance with State Planning Policy 2.8: *Bushland Policy for the Perth Metropolitan Region*.

Reserves and National Parks

Figure 2 shows the location of Reserves and a portion Beelu National Park within the project area.

The Reserves are either reserved under the Metropolitan Region Scheme (MRS) for the purpose of "Parks and Recreation" or under the Shire of Mundaring's TPS No. 3 for the purpose of "Public Open Space".

Beelu National Park is reserved under the MRS for the purpose of “Parks and Recreation”.

Biological Factors

Vegetation and Flora

Regional scale vegetation complexes were mapped by Hedde et al. (1980). The mapping indicates that the project area contains extents of the Southern River, Swan and Forrestfield Vegetation Complexes (Figure 3).

These vegetation complexes are described as follows:

- Southern River: Open woodland of *Corymbia calophylla* – *Eucalyptus marginata* – *Banksia* species with fringing woodland of *E. rudis* - *Melaleuca raphiophylla* along creek beds.
- Swan: Fringing woodland of *E. rudis* – *M. raphiophylla* with localised occurrence of low open forest of *Casuarina obesa* and *M. cuticulatis*.
- Forrestfield: Open forest of *C. calophylla* – *Eucalyptus wandoo* – *E. marginata* to open forest of *E. marginata* – *C. calophylla* – *Casuarina fraseriana* – *Banksia* species. Fringing woodland of *E. rudis* in the gullies that dissect this landform (Swan Catchment Council 2004).

Table 3 identifies the extent of these vegetation complexes remaining upon the Swan Coastal Plain / Perth Metropolitan Region and within the Shire of Mundaring.

Table 3: Native Vegetation Extents

Vegetation Complex	Swan Coastal Plain / Perth Metropolitan Region		Shire of Mundaring	
	Original Pre-European Extent (ha/%)	Remaining Extent (ha/%)	Original Pre-European Extent (ha/%)	Remaining Extent (ha/%)
Forrestfield	11,328 ha / 100%	1,020 ha / 9%	933 ha / 100%	51 ha / 5%
Southern River	31,148 ha / 100%	5,370 ha / 17%	32 ha / 100%	2 ha / 6%
Swan	5,962 ha / 100%	682 ha / 11%	294 ha / 100%	58 ha / 20%

Source: Del Marco et al. 2004 and Shire of Mundaring 2009

Table 3 identifies that all three vegetation communities are below a level of 30% of the pre-European extent upon the Swan Coastal Plain / Perth Metropolitan Region. EPA (2000) identifies that this is a level below which species loss appears to accelerate exponentially at an ecosystem level. The Forrestfield Vegetation Complex is below a level of 10% of the pre-European extent upon the Swan Coastal Plain / Perth Metropolitan Region, which is considered by EPA (2000) to represent an “endangered” level.

Figure 3 shows that the known locations of Threatened and Priority flora species within the project area are within Conservation Priority Areas. Threatened Flora are species which have been adequately surveyed and are considered to be in danger of extinction, rare or otherwise in need of special protection within Western Australia. Threatened Flora are protected under the *Wildlife Conservation Act 1950*. Priority Flora, are not specifically covered under the *Wildlife Conservation Act 1950*, however their conservation status warrants some protection.

A search of the *Environment Protection and Biodiversity Act 1999* (EPBC Act) Protected Matters Search Tool was undertaken on 31 July 2012 which identified that 15 threatened flora species and three threatened ecological communities that may be present within the project area and a radius of five kilometres surrounding the site (enc.). The Protected Matters Search Tool is designed to only provide an indication of species that may be present in an area.

Three Threatened Ecological Communities are known to occur within the search area, these are:

- *Corymbia calophylla* – *Kingia australis* woodlands on heavy soils of the Swan Coastal Plain
- *Corymbia calophylla* – *Xanthorrhoea preissii* woodlands and shrublands of the Swan Coastal Plain
- Shrublands and woodlands of the eastern Swan Coastal Plain.

A search of the DEC's *Threatened Flora* database, *Declared Rare Flora and Priority Flora Database* and the *Western Australian Herbarium* data records or the *Threatened Ecological Communities* database was not undertaken due to time and budget constraints.

It is recommended that appropriate flora and vegetation surveys are undertaken on a site specific basis to identify and assess the values of the existing flora and vegetation upon extents of land proposed to be developed for species and ecological communities of conservation significance.

It is recommended that the flora and vegetation surveys be undertaken in accordance with the objectives of the EPA's Guidance Statement No. 51 – *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia*.

Fauna

The project area, in general, exhibits a high level of disturbance from anthropogenic sources, such as the historic clearing native vegetation to allow for agricultural activities to be undertaken and the construction of buildings and roads to facilitate urban land uses. However, there are significant natural assets that remain within the project area and include riparian vegetation along the Helena River, wetlands, Bush Forever sites and a portion of the Beelu National Park. These natural assets provide habitat for various fauna species and potentially allow for the movement of fauna through the project area.

The EPBC Act Protected Matters Search Tool identified six threatened fauna species that may be present within the project area and a radius of five kilometres surrounding the site (enc.). Threatened Fauna species which may be present within the project area and are listed under the EPBC Act include:

- Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*)
- Forrest red-tailed black cockatoo (*Calyptorhynchus banksia naso*)
- Baudin's black cockatoo (*Calyptorhynchus baudinii*)
- Malleefowl (*Leipoa ocellata*)

- Australian painted snipe (*Rostratula australis*)
- Chuditch (*Dasyurus geoffroii*).

A search of the DEC's *Threatened Fauna database* database was not undertaken due to time and budget constraints.

It is recommended that appropriate fauna assessments / surveys are undertaken on a site specific basis to identify and assess the values of the existing habitat upon extents of land proposed to be developed for species of conservation significant fauna and any additional faunal assemblages.

It is recommended that the fauna assessments / surveys be undertaken in accordance with the objectives of the EPA's Guidance Statement No. 56 – *Terrestrial fauna Surveys for Environmental Impact Assessment in Western Australia*.

Environmental Approvals

Environmental Protection Act 1986

Under Section 38 of the *Environmental Protection Act 1986* should a proposal to undertake a development which is considered likely to have a significant effect on the natural environment within the project area be proposed, the Shire of Mundaring must refer the proposal to the EPA for determination of the level of assessment that the proposal will be subject to.

Under Section 48 of the *Environmental Protection Act 1986* should a proposal to change the existing land use of an extent of land within the project area be proposed, by way of amending the Shire of Mundaring's TPS No. 3, the Shire of Mundaring must refer the proposal to the EPA for determination of the level of assessment that the proposal will be subject to.

Indicatively, should a referral to the EPA be required, under the *Environmental Protection Act 1986*, it is recommended that an Environmental Assessment Report is prepared to support the referral.

Figure 3 shows the extent of Environmentally Sensitive Areas (ESA) as declared by the Minister for the Environment under Section 51B of the *Environmental Protection Act 1986* within the project area. ESAs are selected for their environmental values at state or national levels. ESAs include:

- defined C wetlands and riparian vegetation within 50 metres
- areas covered by Threatened Ecological Communities
- area of vegetation within 50 metres of Threatened Flora
- Bush Forever sites
- declared World Heritage Property Sites.

This classification ensures that should any clearing of native vegetation be proposed within an ESA it is necessary to apply to the DEC for a permit to clear, as exemptions under regulations contained in either Schedule 6 of the *Environmental Protection Act 1986* or Environmental Protection (Clearing of Native Vegetation) Regulations 2004 for the clearing of native vegetation do not apply (DoE 2005).

Environment Protection and Biodiversity Conservation Act 1999

The search of the EPBC Act Protected Matters Search Tool identified that 15 threatened flora species, six threatened fauna species and three threatened ecological communities that may be present within the project area and a radius of five kilometres surrounding the site.

The recommended fauna and flora surveys will establish if the above species occur or are likely to occur within the area assessed and will assist in quantifying any potential habitat within the project area. If any listed species are potentially located within the project area, a referral to the Department of Sustainability, Environment, Water, Population and Communities under the EPBC Act may be required.

Potential Implications for Development

Based on this preliminary assessment, it appears that the environmental factors that present a potential constraint to the future development within the project area relate to the flooding extent of the Helena River, Flora and Vegetation, Fauna and Heritage.

It is recommended that the following more detailed investigations be undertaken to assist in guiding design and obtaining relevant environmental approvals:

- Where development is proposed in areas that have been mapped as “High to Moderate” risk and “Moderate to Low” risk of ASS occurring within 3 metres of the natural soil surface, a preliminary ASS investigation will need to be conducted to confirm the presence or absence of ASS prior to any site earth works being undertaken.
- A District Water Management Strategy will need to be undertaken to support amendments to the Shire of Mundaring’s TPS No. 3, a Local Water Management Strategy will need to be undertaken to support structure planning activities and Urban Water Management Plans will need to be completed at the subdivision stage of the planning approvals process.
- Potentially, on site groundwater monitoring will be required to determine the maximum groundwater levels, water quality and flow direction. A minimum of 18 months (including two winter peaks) is recommended by the DoW.
- To identify if any potential contamination constraints are likely to impact development within the project area, it is recommended that a regional Preliminary Site Investigation is undertaken to detect if any additional potential contamination constraints are present within the project area and where further assessment may be required.
- Prior to the preparation of detailed structure / subdivision plans or development being undertaken, it is recommended that appropriate flora and vegetation surveys are undertaken on a site specific basis to identify and assess the values of the existing flora and vegetation for species and communities of conservation significance.
- Prior to the preparation of detailed structure / subdivision plans or development being undertaken, it is recommended that appropriate fauna assessments / surveys are undertaken on a site specific basis to identify and assess the values of the existing habitat for species of conservation significant fauna.



- Should clearing of native vegetation be proposed within an ESA it is necessary to apply to the DEC for a permit to clear.
- It is recommended that an Environmental Assessment Report is prepared to support an amendment to the Shite of Mundaring's TPS No. 3.

Should you have any queries regarding the content of this advice, please do not hesitate to contact me.

Yours sincerely

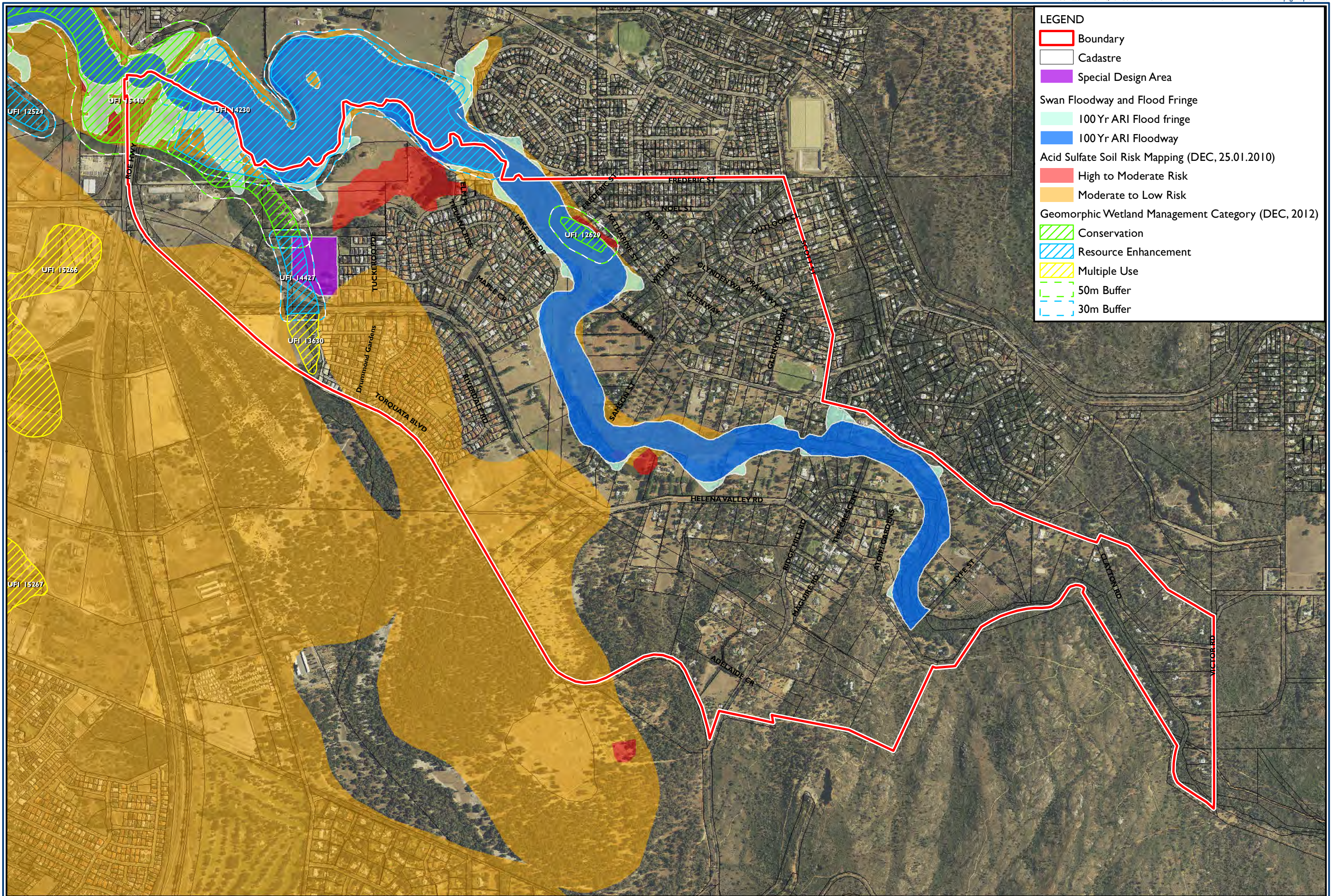
RPS

A handwritten signature in black ink, appearing to read 'Giles Glasson', written over a light blue horizontal line.

GILES GLASSON

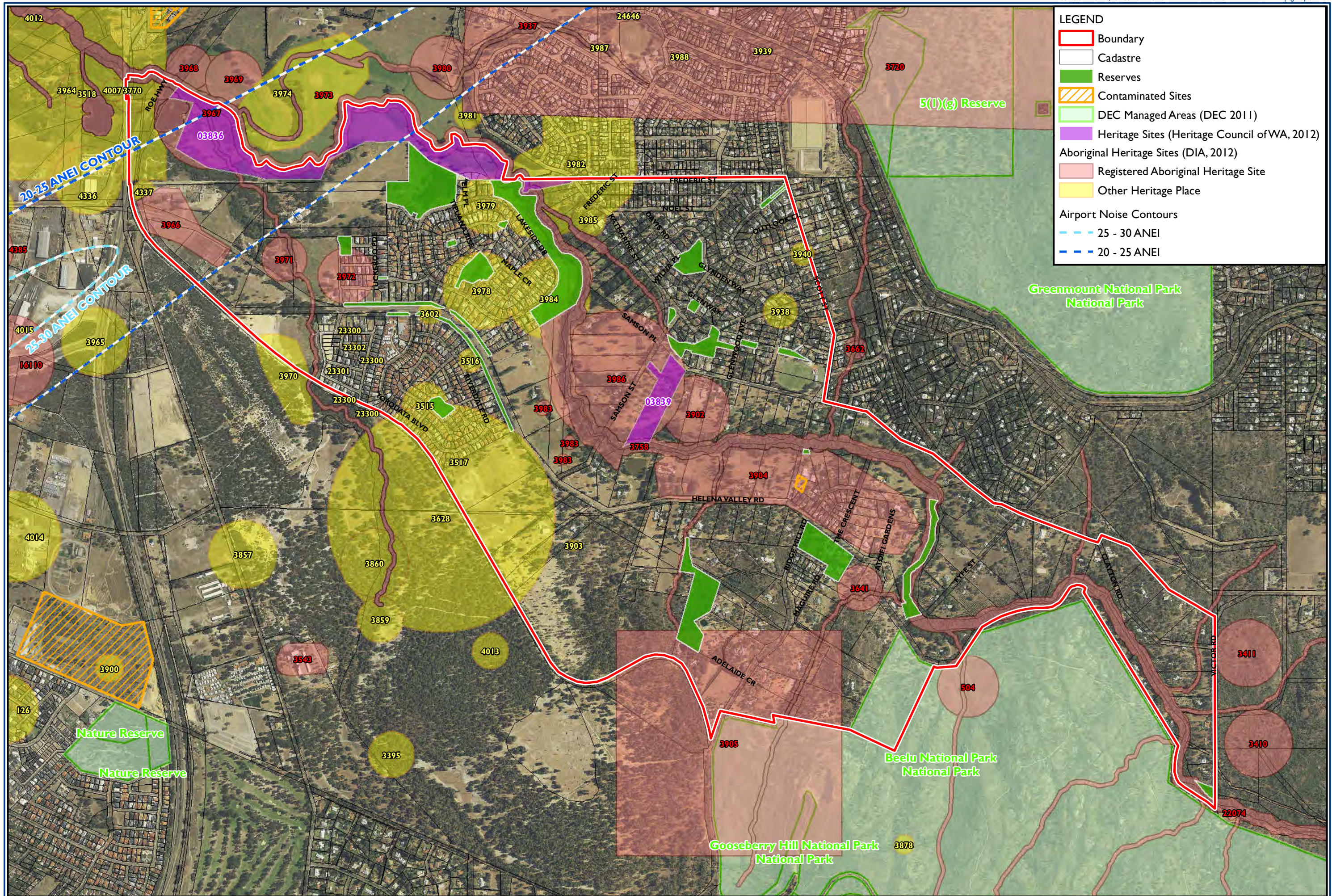
Supervising Environmental Scientist

- enc. *Figure 1: Geology, Hydrology and Wetlands*
Figure 2: Land Use, Contamination and Heritage
Figure 3: Flora and Vegetation
EPBC Act 1999 Protected Matters Search Tool Results
Basic Summary of Records Search Response
Register of Heritage Places

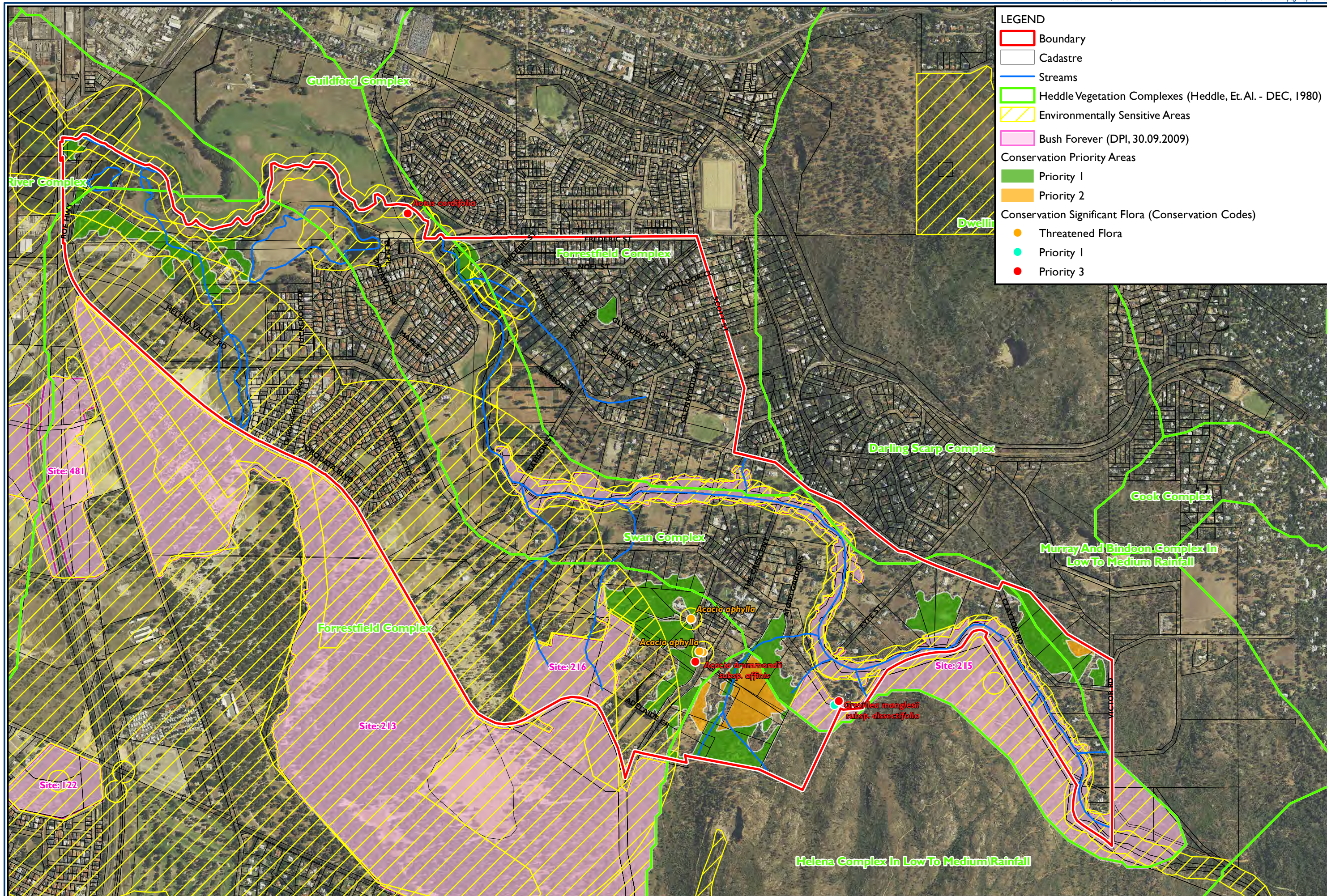


LEGEND

- Boundary
- Cadastre
- Special Design Area
- Swan Floodway and Flood Fringe
 - 100 Yr ARI Flood fringe
 - 100 Yr ARI Floodway
- Acid Sulfate Soil Risk Mapping (DEC, 25.01.2010)
 - High to Moderate Risk
 - Moderate to Low Risk
- Geomorphic Wetland Management Category (DEC, 2012)
 - Conservation
 - Resource Enhancement
 - Multiple Use
 - 50m Buffer
 - 30m Buffer



Job Number: L1217301
 Date: 02.08.12
 Scale: 1:15000 @ A3
 Revision: 0
 Drafted by: HT
 Source: Cadastre, Orthophoto - Landgate, 2012. Shire of Mundaring 2012. DoW 2012.



LEGEND

- Boundary
- Cadastre
- Streams
- Heddle Vegetation Complexes (Heddle, Et. Al. - DEC, 1980)
- Environmentally Sensitive Areas
- Bush Forever (DPI, 30.09.2009)
- Conservation Priority Areas**
- Priority 1
- Priority 2
- Conservation Significant Flora (Conservation Codes)**
- Threatened Flora
- Priority 1
- Priority 3



EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information about the EPBC Act including significance guidelines, forms and application process details can be found at <http://www.environment.gov.au/epbc/assessmentsapprovals/index.html>

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[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

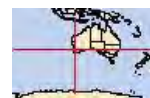
[Caveat](#)

[Acknowledgements](#)



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

[Coordinates](#)
 Buffer: 5.0Km



Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see <http://www.environment.gov.au/epbc/assessmentsapprovals/guidelines/index.html>

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Areas:	None
Threatened Ecological Communities:	3
Threatened Species:	21
Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place and the heritage values of a place on the Register of the National Estate. Information on the new heritage laws can be found at <http://www.environment.gov.au/heritage/index.html>

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at <http://www.environment.gov>.

Commonwealth Lands:	3
Commonwealth Heritage Places:	1
Listed Marine Species:	6
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

Place on the RNE:	24
State and Territory Reserves:	8
Regional Forest Agreements:	1
Invasive Species:	18
Nationally Important Wetlands:	None

Details

Matters of National Environmental Significance

Threatened Ecological Communities

[\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain	Endangered	Community known to occur within area
Corymbia calophylla - Xanthorrhoea preissii	Endangered	Community known to

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
woodlands and shrublands of the Swan Coastal Plain		occur within area
Shrublands and Woodlands of the eastern Swan Coastal Plain	Endangered	Community known to occur within area

Threatened Species [Resource Information]

Name	Status	Type of Presence
BIRDS		
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo [67034]	Vulnerable	Species or species habitat may occur within area
Calyptorhynchus baudinii Baudin's Black-Cockatoo, Long-billed Black-Cockatoo [769]	Vulnerable	Roosting known to occur within area
Calyptorhynchus latirostris Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Breeding likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Vulnerable	Species or species habitat may occur within area

MAMMALS

Dasyurus geoffroi Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
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PLANTS

Acacia aphylla Leafless Rock Wattle [13553]	Vulnerable	Species or species habitat known to occur within area
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat likely to occur within area
Anthocercis gracilis Slender Tailflower [11103]	Vulnerable	Species or species habitat likely to occur within area
Calytrix breviseta subsp. breviseta Swamp Starflower [23879]	Endangered	Species or species habitat may occur within area
Centrolepis caespitosa [6393]	Endangered	Species or species habitat likely to occur within area
Chamelaucium sp. Gingin (N.G.Marchant 6) Gingin Wax [64649]	Endangered	Species or species habitat may occur within area
Conospermum undulatum Wavy-leaved Smokebush [24435]	Vulnerable	Species or species habitat likely to occur within area
Darwinia foetida Muceha Bell [83190]	Critically Endangered	Species or species habitat likely to occur within area
Eucalyptus balanites Cadda Road Mallee, Cadda Mallee [24264]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Grevillea curviloba subsp. incurva Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat may occur within area
Lepidosperma rostratum Beaked Lepidosperma [14152]	Endangered	Species or species habitat likely to occur within area
Thelymitra manginii K.Dixon & Batty ms. [67443]	Endangered	Species or species habitat likely to occur within area
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat likely to occur within area
Verticordia fimbrilepis subsp. fimbrilepis Shy Featherflower [24631]	Endangered	Species or species habitat may occur within area
Villarsia calthifolia Mountain Villarsia [10886]	Endangered	Species or species habitat likely to occur within area

Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat may occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat may occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Migratory Terrestrial Species		
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Migratory Wetlands Species		
Ardea alba Great Egret, White Egret [59541]		Species or species habitat may occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Vulnerable*	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Lands

[[Resource Information](#)]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name

Commonwealth Land -
Defence - BUSHMEAD RIFLE RANGE
Defence - BUSHMEAD TRAINING AREA

Commonwealth Heritage Places

[[Resource Information](#)]

Name	State	Status
Natural		
Munday Swamp and Surrounding Bushland	WA	Indicative Place

Listed Marine Species

[[Resource Information](#)]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		

[Apus pacificus](#)

Fork-tailed Swift [678] Species or species habitat may occur within area

[Ardea alba](#)

Great Egret, White Egret [59541] Species or species habitat may occur within area

[Ardea ibis](#)

Cattle Egret [59542] Species or species habitat may occur within area

[Haliaeetus leucogaster](#)

White-bellied Sea-Eagle [943] Species or species habitat likely to occur within area

[Merops ornatus](#)

Rainbow Bee-eater [670] Species or species habitat may occur within area

[Rostratula benghalensis \(sensu lato\)](#)

Painted Snipe [889] Vulnerable* Species or species habitat may occur within area

Extra Information

Places on the RNE

[[Resource Information](#)]

Note that not all Indigenous sites may be listed.

Name	State	Status
Natural		
Midgegooroo and Kalleep Munday Heritage Precincts	WA	Indicative Place
Bushmead Rifle Range Area	WA	Registered
Bushmead Rifle Range Commonwealth Area	WA	Registered
Gooseberry Hill National Park	WA	Registered
Greenmount National Park	WA	Registered
John Forrest National Park	WA	Registered
Kalamunda National Park	WA	Registered
Munday Swamp Bushland	WA	Registered
Munday Swamp and Surrounding Bushland	WA	Registered
Talbot Road Natural Area	WA	Registered
Historic		
Clayton Farm	WA	Indicative Place
Geer / Lyons Memorial Fountain	WA	Indicative Place

Name	State	Status
Hugo Throssell Memorial	WA	Indicative Place
Midland Junction Town Centre Conservation Area	WA	Indicative Place
Midland Railway Workshops	WA	Indicative Place
Water Supply Office (former)	WA	Indicative Place
Blackboy Hill Commemorative Site	WA	Registered
Katharines Place	WA	Registered
Midland Courthouse (former)	WA	Registered
Midland Junction School Buildings Group (former)	WA	Registered
Midland Post Office	WA	Registered
Midland Town Hall Complex	WA	Registered
Western Australian Bank (former)	WA	Registered
Westrail Railway Buildings	WA	Registered

State and Territory Reserves [\[Resource Information \]](#)

Name	State
Beelu	WA
Gooseberry Hill	WA
Greenmount	WA
John Forrest	WA
Kalamunda	WA
Talbot Road	WA
Unnamed WA45106	WA
Unnamed WA49079	WA

Regional Forest Agreements [\[Resource Information \]](#)

Note that all areas with completed RFAs have been included.

Name	State
South West WA RFA	Western Australia

Invasive Species [\[Resource Information \]](#)

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resources Audit,

Name	Status	Type of Presence
Mammals		
Capra hircus		
Goat [2]		Species or species habitat likely to occur within area
Felis catus		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Oryctolagus cuniculus		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Sus scrofa		
Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides		
Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Brachiaria mutica		
Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris		
Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area

Name	Status	Type of Presence
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat may occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area

Coordinates

-31.91826 116.03673

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World Heritage and Register of National Estate properties, Wetlands of International Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Department of Environment, Climate Change and Water, New South Wales](#)
- [Department of Sustainability and Environment, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment and Natural Resources, South Australia](#)
- [Parks and Wildlife Service NT, NT Dept of Natural Resources, Environment and the Arts](#)
- [Environmental and Resource Management, Queensland](#)
- [Department of Environment and Conservation, Western Australia](#)
- [Department of the Environment, Climate Change, Energy and Water](#)
- [Birds Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Museum Victoria](#)
- [Australian Museum](#)
- [SA Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Atherton and Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [State Forests of NSW](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact Us page](#).

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Department of Sustainability, Environment, Water, Population and Communities

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Canberra ACT 2601 Australia

+61 2 6274 1111



Contaminated Sites Act 2003
Basic Summary of Records Search Response

Report Generated at: 12:14:55PM, 31/07/2012

Search Results

This response relates to a search request received for:

164 Scott St
Helena Valley WA 6056

This parcel belongs to a site that contains 1 parcel(s).

According to Department of Environment and Conservation records, this land has been reported as a known or suspected contaminated site.

Address	164 Scott St Helena Valley WA 6056
Lot on Plan Address	Lot 47 On Diagram 46741
Parcel Status	<p>Classification: 05/07/2012 - Remediated for restricted use</p> <p>Nature and Extent of Contamination:</p> <p>Remedial works have been undertaken at the site. However, some hydrocarbons (such as from petrol or diesel) remain present in soils at the site.</p> <p>Restrictions on Use:</p> <p>The land use of the site is restricted to commercial/industrial use. The site should not be developed for a more sensitive use such as recreational open space; residential use or childcare centres without further contamination assessment and/or remediation.</p> <p>Reason for Classification:</p> <p>This site was originally reported to the Department of Environment and Conservation (DEC) prior to the commencement of the 'Contaminated Sites Act 2003' (the Act), and was reported again as per reporting obligations under section 11 of the Act in May 2007. The site classification is based on information submitted to DEC by June 2012.</p> <p>The site was originally reported because an environmental site assessment and decommissioning report, undertaken in 1997, found hydrocarbons (such as from petrol/diesel) in soil.</p> <p>The site was subsequently reported in 2007 when another environmental investigation identified hydrocarbons in soil and groundwater at the site.</p> <p>The site was historically used as a service station for approximately 35 years, from 1971 to 2006. This is a land use that has the potential to cause contamination, as specified in the guideline 'Potentially Contaminating Activities, Industries and Landuses' (Department of Environment, 2004).</p>

Disclaimer

This Summary of Records has been prepared by Department of Environment and Conservation (DEC) as a requirement of the *Contaminated Sites Act 2003*. DEC makes every effort to ensure the accuracy, currency and reliability of this information at the time it was prepared, however advises that due to the ability of contamination to potentially change in nature and extent over time, circumstances may have changed since the information was originally provided. Users must exercise their own skill and care when interpreting the information contained within this Summary of Records and, where applicable, obtain independent professional advice appropriate to their circumstances. In no event will DEC, its agents or employees be held responsible for any loss or damage arising from any use of or reliance on this information. Additionally, the Summary of Records must not be reproduced or supplied to third parties except in full and unabridged form.

Contaminated Sites Act 2003
Basic Summary of Records Search Response

Report Generated at: 12:14:55PM, 31/07/2012

A contamination assessment was initially carried out prior to site divestment in 1997. The assessment found hydrocarbons exceeding the relevant criteria at the time in soil and groundwater at the site. Remedial works were then undertaken involving the removal of underground storage tanks, and the removal and off-site disposal of contaminated soil. However, following decommissioning and remedial works, some impacted soil remained on the site.

The site was once again operated as a service station by a different operator from 1997. Site investigation and remedial works were undertaken between 2006 and 2011.

Hydrocarbons (such as from petrol/diesel) were present in soils at concentrations exceeding Health-based Investigation Levels for commercial and industrial sites and Ecological Investigation Levels, as published in 'Assessment Levels for Soil, Sediment and Water' (Department of Environment, 2003).

Hydrocarbons (such as from petrol/diesel) and heavy metals were present in groundwater at concentrations exceeding Aquatic Ecosystems - Freshwater, as published in 'Assessment Levels for Soil, Sediment and Water' (Department of Environment, 2003) and exceeding Groundwater Intervention Values (Netherlands Ministry for Housing, Spatial Planning and Environment, 2000).

Remedial works comprising excavation and off-site disposal of soils have been carried out on the site, and all identified impacted soils have been successfully remediated to comply with commercial/industrial land use guidelines. However, validation sampling identified hydrocarbons at concentrations exceeding ecological investigation levels and in the absence of speciation analysis, possibly health-based investigation levels for residential landuse, as published in 'Assessment Levels for Soil, Sediment and Water' (DEC, 2010).

Subsequent groundwater investigations undertaken in 2012 identified only minor concentrations of hydrocarbons. However, heavy metals were still present in groundwater at concentrations exceeding Aquatic Ecosystems - Freshwater, as published in or 'Assessment Levels for Soil, Sediment and Water' (DEC, 2010). The heavy metal concentrations were expected to represent background groundwater quality of the area.

Based on the information provided, the site appears suitable for continued commercial/industrial use, but may not be suitable for more sensitive land uses (such as residential housing, child care centres).

As the site has been remediated such that it is suitable for commercial/industrial landuse, but may not be suitable for a more sensitive landuse, the site is classified as 'remediated for restricted use'.

A memorial stating the site's classification has been placed on the certificate of title, and will trigger the need for further investigations and risk assessment should the site be proposed for a more sensitive land use.

Disclaimer

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Contaminated Sites Act 2003
Basic Summary of Records Search Response

Report Generated at: 12:14:55PM, 31/07/2012

Certificate of Title Memorial
Current Regulatory Notice Issued
General

DEC, in consultation with the Department of Health, has classified this site based on the information available to DEC at the time of classification. It is acknowledged that the contamination status of the site may have changed since the information was collated and/or submitted to DEC, and as such, the usefulness of this information may be limited.

In accordance with Department of Health advice, if groundwater is being, or is proposed to be abstracted, DEC recommends that analytical testing should be carried out to determine whether the groundwater is suitable for its intended use.

Action Required

If the site is proposed for a more sensitive landuse, further soil and groundwater investigations are required to adequately delineate and characterise the nature and extent of any soil and groundwater contamination across the site. Investigations should meet the standards outlined in the DEC's Contaminated Sites Management Series of guidelines.

Under the Contaminated Sites Act 2003, this site has been classified as "remediated for restricted use". For further information on the contamination status of this site, please contact the Contaminated Sites Branch of the Department of Environment & Conservation.

Type of Regulatory Notice: Nil

Date Issued: Nil

No other information relating to this parcel.

Disclaimer

This Summary of Records has been prepared by Department of Environment and Conservation (DEC) as a requirement of the *Contaminated Sites Act 2003*. DEC makes every effort to ensure the accuracy, currency and reliability of this information at the time it was prepared, however advises that due to the ability of contamination to potentially change in nature and extent over time, circumstances may have changed since the information was originally provided. Users must exercise their own skill and care when interpreting the information contained within this Summary of Records and, where applicable, obtain independent professional advice appropriate to their circumstances. In no event will DEC, its agents or employees be held responsible for any loss or damage arising from any use of or reliance on this information. Additionally, the Summary of Records must not be reproduced or supplied to third parties except in full and unabridged form.



REGISTER OF HERITAGE PLACES

Permanent Entry

1. **DATA BASE No.** 3836
2. **NAME** *Belle View* (1887)
FORMER NAME Helena Farm
3. **LOCATION** 1100 Katherine Street & cnr Wilkins Street, Bellevue
4. **DESCRIPTION OF PLACE INCLUDED IN THIS ENTRY**
Lot 50 the subject of Plan 15997, being the whole of the land comprised in Certificate of Title Volume 2039 Folio 591.
5. **LOCAL GOVERNMENT AREA** Shire of Mundaring
6. **OWNER** Emlen Pty. Ltd.
7. **HERITAGE LISTINGS**

• Register of Heritage Places:	Interim Entry	03/06/1997
	Permanent Entry	02/06/1998
• National Trust Classification:		-----
• Town Planning Scheme:		-----
• Municipal Inventory:	Adopted	23/04/1997
• Register of the National Estate:		-----
8. **CONSERVATION ORDER**

9. **HERITAGE AGREEMENT**

10. **STATEMENT OF SIGNIFICANCE**

Belle View, a single-storey, brick and iron, Victorian Regency style residence, together with stables and former barn, has cultural heritage significance for the following reasons:

the place is a demonstration of the Victorian Regency architecture, lifestyle and use of a mid to late 19th Century farm and residence; is comparatively rare and retains a high degree of authenticity and integrity;

the place is rare in particular for its location, which still retains its context in a rural setting within the metropolitan area, despite the adjacent impact of urbanisation;

the stables are a rare, surviving example of farming techniques and rural architecture of the period, and have the potential to add to the knowledge of transport, farming and husbandry practices no longer used;

the place has strong associations with Edward Robinson, pastoralist, farmer, politician and developer who was part of the socially influential group known as the 'Nor'Westers';

the Victorian Regency house is a significant, representative example of a substantial residence built by an influential Western Australian who acquired prosperity prior to the gold rush period;

the place has associations with Governor Stirling's Woodbridge land grant, later purchased by Henry Brockman; and is the last of several original large rural land holdings left in the district, eg. *Woodbridge*, *Water Hall* and *Bushmead*; and,

the place has given its name to the suburb of Bellevue which is an example of an early planned suburb compared to the adjacent town of Midland which just grew around 'The Junction' without any proper planning.



**HERITAGE
COUNCIL**
OF WESTERN AUSTRALIA

REGISTER OF HERITAGE PLACES

Permanent Entry

1. **DATA BASE No.** 03839
2. **NAME** *Clayton Farm* (c.1850s; 1861; 1971)
3. **LOCATION** Clayton Road, Helena Valley
4. **DESCRIPTION OF PLACE INCLUDED IN THIS ENTRY**
Portion of Lot 27 on Plan 4508 being the part of the land contained in Certificate of Title Volume: 162 Folio: 90A as is defined in Heritage Council of Western Australia Survey Drawing No: 3839 as amended and prepared by Warren King & Company and Midland Survey Services and dated 6 November 2007.
5. **LOCAL GOVERNMENT AREA** Shire of Mundaring
6. **OWNER**
David Innes Dick, David Anthony Dick, Dorothy Nadine Dick & Graeme Innes Dick
7. **HERITAGE LISTINGS**

• Register of Heritage Places:	Permanent Entry	14/03/2008
• National Trust Classification:	Classified	02/08/1971
• Town Planning Scheme:		-----
• Municipal Inventory:	Adopted	22/04/1997
• Register of the National Estate:		-----
8. **CONSERVATION ORDER**

9. **HERITAGE AGREEMENT**

10. **STATEMENT OF SIGNIFICANCE**

Clayton Farm, which consists of a two storey brick and iron residence in the Victorian Georgian style (1861), a single storey brick and iron cottage in vernacular style (c.1850s), and a brick lined well, in a rural setting relating to the Helena River, has cultural heritage significance for the following reasons:

the place is the oldest remaining farmhouse on the Helena River, and retains a high degree of integrity and authenticity;

the place is an excellent example of a Victorian Georgian style homestead which has retained its rural setting;

the place is a rare, intact example of a two-storey colonial homestead that was built on a portion of a land grant made in the first three years of

colonial settlement, as part of the system of land grants involving narrow land parcels with river frontage;

the place is an important historical marker of a site of early colonial agricultural activity which became the basis for the development of Western Australia's agricultural industry;

the place was built by Richard and Mary Smith who were amongst the earliest colonists to arrive in Western Australia, arriving in 1829, and is held in high esteem by their descendants; and,

the place has the potential to contain archaeological deposits which would provide additional information about early colonial life.

The horse shelters on the south west side of the brick residence, the garage to the rear of the brick residence, the asbestos cement house to the north east of the brick residence and the corrugated iron stables and sheds to the east of the brick residence are considered to have low significance. The in-ground swimming pool is considered to be intrusive. The sun-room, while having low significance, has been successfully incorporated into the house and is not considered to be intrusive.

APPENDIX 2

RPS Economics Highest and Best Use Advice Note



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PO Box 465, Subiaco, Western Australia 6904
T +61 8 9211 1111 F +61 8 9211 1122 E perth@rpsgroup.com.au W rpsgroup.com.au

Our Ref: PR112870-1
Date: 24 September 2013

Mr Scott Vincent
Senior Planner
RPS Australia Asia Pacific
PO Box 465
SUBIACO WA 6904

Via: scott.vincent@rpsgroup.com.au

Dear Scott

RE: RESPONSE – HELENA VALLEY APPROPRIATE LAND USE ASSESSMENT

Thank you for the meeting on Thursday 5th September 2013 to discuss the most appropriate non-residential land use for the land in Helena Valley located within the Aircraft Noise Exposure Forecast (ANEF) 25 Contour. As requested, I have undertaken a high level, highest and best land use assessment to understand the most appropriate and productive non-residential land use for the site ("subject site").

This letter of advice has been undertaken given our expertise and understanding of a range of land uses throughout Perth including residential, retail, business park and industrial, and the respective economic drivers of these uses. The assessment has broadly explored population growth, broad land use drivers, and access to the freight network. The letter concludes with a recommended highest and best land use for the site.

Surrounding Population Growth

One of the key driving factors for additional land use demand in an area comes as a result of increased population. Increased population in an area leads to increased residential demand, as well as demand for more retail services, office precincts and industrial lands to service this population.

RPS has estimated the population growth in and around Helena Valley based on land availability and likely land budgets to calculate the population at capacity. As at the 2011 census, the population of Helena Valley was 3,017, with urban residential growth of the precinct likely to increase its population capacity to some 6,000 people – effectively doubling the population. On top of this strong population growth in Helena Valley, an additional 900 residents to the north of the subject site in Bellevue, and another 1,500 residents in Bushmead to the south are anticipated as a result of planned major development projects.

While the ultimate timing and sequencing of this population growth is uncertain, the development potential in the area across a range of estates will likely see population growth rates in the area well above the Perth metropolitan average.

Anticipated Highest and Best Land Use

The table below explores a number of land uses and the subject site’s ability to cater for key driving attributes of these land uses. This table therefore presents the likely highest and best use for the site.

Land use attribute	Retail / Bulky Goods	Business Park	Light Industrial / Service Commercial	Heavy Industrial
Surrounding residential catchment	? Truncated catchment area	✓ Growing local population	✓ Growing population with buffer	✓ Strong regional catchment
Accessibility benefits	✗ Direct access is of key importance	? Visible but indirect access	✓ Indirect access to key freight network	✓ Indirect access to key freight network
Appropriate for adjoining land mix	? Lack of catchment / beneficial uses	✓ Residential and industrial mix	✓ Residential and industrial mix	✗ Close proximity to growing population
Employment activity	✓ Increases local employment	✓ Increases local employment	✓ Increases local employment	? Low job density
Amenity	✗ Low amenity location	? Needs higher amenity	✓ Sufficient amenity	✓ Sufficient amenity
Sufficient land availability	✓ Yes	✓ Yes	✓ Yes	✗ Need larger land mass
Estimated market viability	? Viability questioned	? Viability questioned	✓ Likely viable	✓ Likely viable
Totals	2	4	7	4

The table above shows a strong leaning towards light industrial / service commercial land uses as the most appropriate use for the subject site. In fact, light industrial / service commercial uses are appropriate across all seven attributes explored by RPS. Such land use at the site is considered appropriate in terms of the surrounding residential catchment; the accessibility to the site; the context of the adjoining land mixes; creating diversity of employment activity in the region; appropriate for the amenity of the location; has sufficient land availability; and is believed to be a viable use for the site.

RPS has now explored some of the wider regional and locational economic drivers for light industrial in more detail below, to ensure the use is appropriate for the subject site.

Major Regional Economic Drivers

Local economic development is increasingly influenced and guided by national and global macro-economic trends. The globalisation of international trade, travel, telecommunications and finance has underpinned the integration of local economies with national, regional and international markets. This has undermined the historical nation-based economic trade with cities and regions increasingly trading with one another as drivers of global economic growth. RPS has identified a range of national and global economic drivers relevant to the future development of non-residential, employment-generating land uses at the subject site. These drivers, along with a brief description and a qualitative assessment of their relevance to the subject site are as follows:

- **Regional population growth** – as discussed earlier in this letter, the population growth surrounding the subject site, both in Helena Valley, and in the Perth's north east. This is one of Western Australia's fastest growing regions and will provide a large labour force catchment and will support local commercial and business activity. According to the official population growth projections, the Perth Metropolitan region is expected to increase in population by over 33,000 per annum for the next decade.
- **Increased freight demand** – an effective and efficient transport network will assist in moving goods and managing congestion as well as give workers access to employment. This will also drive growth in demand for industrial land uses along the key transport networks. The subject site is strategically located near Roe Highway and Great Eastern Highway Bypass with access to local, regional and national freight routes.
- **Industrial land fragmentation** – regions will undergo natural evolution over time. The area surrounding the site includes a relatively high level of heavy industrial land which is well serviced by the transport network. Over time, and as lot availability becomes less available (particularly to the east of Roe Highway), more intensive higher order industrial land uses are demanded and price points lead to more fragmented land.
- **Other external economic drivers** – there are a number of other drivers which are driving the need for industrial land uses such as the growth of online retail leading to increased need for distribution warehousing. Long run exchange rate changes also can impact on the type of tenants who demand industrial land uses. Higher exchange rates lead to more import related tenants (e.g. WA based online retailers), while lower long term rates can bolster export exposed tenants (e.g. mining related).

Locational Economic Drivers

- **Key Transport Network** - the subject site is located in close proximity to key transport corridors in the Perth Metropolitan region. The site does not have direct ingress and egress from Roe Highway, however, it is estimated that travel times to Great Eastern Highway Bypass and Roe Highway take 2 minutes and 3 minutes respectively. This network then has strong linkages to the Great Eastern Highway, and other freight networks to the south such as Tonkin Highway. This access to key freight and arterial networks is a critical economic driver for industrial land uses, particularly heavy industrial, which has flow on economic benefits for light and service industrial uses.
- **Proximity to materials and commercial land uses** – the subject site is appropriately located

in close proximity to a range of land uses which make it suitable for light/service industrial uses. This includes heavy industrial (to service logistical and materials needs), residential (to provide local employment) and retail/commercial to the north in Midland (transport/warehousing needs).

- **Proximity to employment sources** – while the subject site is within the Mundaring municipality, it is located adjacent to the Swan municipality and the fast growing centre of Midland. This area is expected to have very strong population and economic growth over the coming decade. The growth in population nearby (as discussed earlier), along with the strong regional population growth, will assist in supporting employment uses at the site.
- **Buffers between industrial and residential** – one of the major drawbacks for heavy industrial at the site is the proximity to residential and future residential land uses. Light industrial land uses are more appropriate as a buffer between the busy Roe Highway and residential land uses and has less impacts on the amenity for nearby residential.
- **Current and/or future co-location to similar land uses** – it is understood that land further south of the subject site along Midland Road may also support light industrial land uses in the future. Rather than adversely impacting the development of the subject site, the critical mass of light/service industrial uses are likely to increase the overall viability of these uses in the area due to the resulting co-location benefits.

Other Land Uses

RPS has explored the regional and local economic drivers in the context of light industrial / service commercial land uses above. The same drivers have been examined briefly below in terms of the remaining three potential land uses for the subject site (retail/bulky goods, business park and heavy industrial).

- **Retail/bulky goods** land uses will benefit greatly from the surrounding and regional population growth, however, delivery of these land uses will largely be directed into specified activity centres in the region – particularly within the Midland Centre. Local economic drivers are strong, however, the co-location of surrounding land uses, catchment constraints and lack of direct highway/regional road frontage reduce the potential for the site in terms of its retail and bulky goods potential.
- **Business parks** are typically delivered in or nearby strategic centre locations and in that respect the location is relatively well suited to business park uses, however, competitive business parks closer to Midland would likely be more viable and have better accessibility to services (co-located uses) and be more accessible by road and rail. Demand for business parks are driven by regional economic growth and surrounding residential growth will have a lower bearing on the demand for the land use.
- **Heavy industrial** land uses have similar drivers to light industrial uses, however are driven more heavily by regional demand drivers. While there is strong evidence that the regional economic drivers will lead to demand for heavy industrial uses including through strong population growth and increased freight demand, the subject land does not appear to be the most appropriate location for such uses due to nearby residential catchment and relatively small land availability.

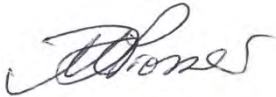
Conclusions

Thank you again for the opportunity to provide this letter advising on the highest and best land use for the subject site land at Helena Valley. As noted, RPS Economics has found that the most appropriate land use at the site would be for light industrial / service commercial uses.

This conclusion has been based on a high level attributes study, however, it should be noted that this has been done in the absence of a full market gap assessment which would investigate the current supply and demand balance of a range of land uses. While a full market gap assessment would be helpful, it is not essential for understanding the most appropriate use of this land and RPS believes that the above advice is sufficient to demonstrate that light/service industrial is likely the best use for the site.

If you have any further questions, please do not hesitate to contact me on 0410 412 493.

Yours sincerely

A handwritten signature in black ink, appearing to read 'M Prosser'.

Michael Prosser
Senior Economist
RPS



Appendix 4

Traffic and Land Use Study

Helena Valley

CEP02375



Prepared for
Shire of Mundaring

August 2015

Document Information

Prepared for Shire of Mundaring
Project Name Helena Valley
File Reference CEP02375-TR-R001-A-Helena Valley Traffic Study-Final DJ-JM.docx
Job Reference CEP02375
Date August 2015

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Document Control

Version	Date	Author	Author Initials	Reviewer	Reviewer Initials
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1 Introduction

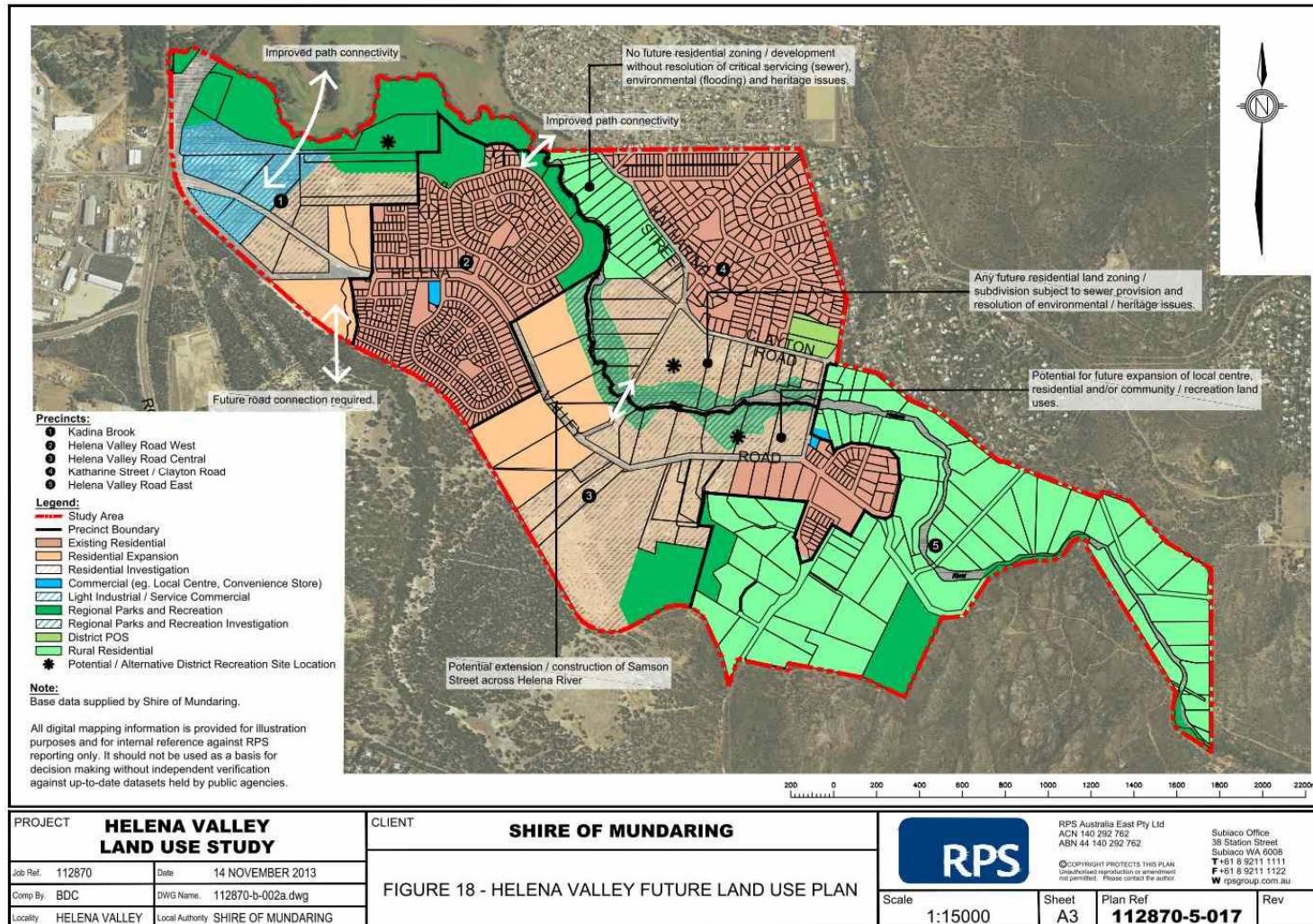
Cardno have been commissioned by the Shire of Mundaring (“the Shire”) to undertake a Land Use Traffic Study, in order to understand the implications, in traffic and transport-planning terms, of the impacts of continued population growth in Helena Valley.

1.1 Background and Development Proposals

The need for this study has arisen from proposed population expansion in the Helena Valley area. This has been assessed in terms of various planning issues by RPS Australia East Pty Ltd (“RPS”) in their report “*Helena Valley Land Use Study*”, prepared for the Shire of Mundaring in October 2013 (“the RPS report”).

This Land Use Traffic Study, however, focusses specifically on the required transport infrastructure to accommodate the growth identified in the RPS report. The study area for the Land Use Traffic Study is the same as for the RPS report and is illustrated in **Figure 1.1** below.

Figure 1-1 Study Area (source: RPS Report)



PROJECT HELENA VALLEY LAND USE STUDY		CLIENT SHIRE OF MUNDARING			RPS Australia East Pty Ltd ACN 140 252 762 ABN 44 140 252 762		Subiaco Office 38 Station Street Subiaco WA 6008 T +61 8 9211 1111 F +61 8 9211 1122 W rpsgroup.com.au	
Job Ref: 112870	Date: 14 NOVEMBER 2013	FIGURE 18 - HELENA VALLEY FUTURE LAND USE PLAN			Scale: 1:15000	Sheet: A3	Plan Ref: 112870-5-017	Rev:
Comp By: BDC	DWG Name: 112870-b-002a.dwg			Locality: HELENA VALLEY		Local Authority: SHIRE OF MUNDARING		

The projected ultimate number of dwellings in the study area is up to 2,470, to accommodate a population of up to 6,157, according to the RPS report.

The proposed developments are summarised in **Tables 1.1 and 1.2** below:

Table 1-1 Proposed Residential Developments, Helena Valley (source: the RPS report, Table 12)

Precinct	Land Classification	Dwellings
1	Existing residential	0
	Residential expansion	109
	Residential investigation	195
	Total	304
2	Existing residential	580
	Residential expansion	0
	Residential investigation	0
	Total	580
3	Existing residential	58
	Residential expansion	460
	Residential investigation	620
	Total	1,138
4	Existing residential	260
	Residential expansion	0
	Residential investigation	188
	Total	448
5	Existing residential	0
	Residential expansion	0
	Residential investigation	0
	Total	0

Table 1-2 Proposed Retail/Commercial Developments, Helena Valley

Precinct	Land Classification	Gross Floor Area (m ²)
1	Commercial - assumed to be service commercial (services to the trades)	53,227
	Bulky Retail	53,227

Source: discussion with Shire of Mundaring; Site Area of Precinct 1 taken from Figure 18 of the RPS report; floor space ratio of 50% agreed with Shire; split between service commercial and bulky retail agreed with Shire)

1.2 Structure of Report

This report is set out as follows:

- > Section 2 details the findings of the site visit and data collection
- > Section 3 covers existing transport operations, including traffic accident data
- > Section 4 details the Traffic Network Model which is used to determine future traffic volumes
- > Section 5 details the SIDRA modelling assessments of critical intersections
- > Section 6 details recommended improvements
- > Section 7 contains a summary and conclusions of the study

2 Site Visit and Data Collection

2.1 Meeting and Site Visit

A site visit was undertaken on 5 February 2015 to understand the current road network in the study area and the connections to external roads. This was followed by a meeting with representatives of the Shire to discuss the crucial issues to be addressed.

The key points raised were as follows:

- > There is limited access from the study area to Roe Highway: currently, Roe Highway can be accessed via the Great Eastern Highway or Midland Road to Kalamunda Road, as well as limited movements at the Clayton Street / Roe Highway intersection.
- > GEH Bypass / Roe Highway intersection: the type of intersection is being reviewed by Main Roads WA (MRWA). MRWA anticipate that it will be a standard trumpet-type interchange with no connection to local roads to the east.
- > Roe Highway / GEH intersection is already at capacity.
- > Off or on-ramps between Helena Valley Road and Roe Highway should be considered.
- > East-west links need more capacity; consider possibility of upgrading Helena Valley Road to dual carriageway.
- > The Department of Planning is reviewing a re-alignment of the freight rail line to deviate southwards. This will have implications for the Bushmead Road/Helena Valley Road flyover bridge, which may need to be raised to allow high-wide loads under it on Roe Highway. Currently, high-wide loads need to divert onto Military road – Midland Road, rather than use Roe Highway. Raising of the bridge will probably have land requirements implications next to Helena Valley Road.
- > Gateway WA project may have implications for the Helena Valley Study, e.g. if Gateway WA includes cycle lane proposals, consider if these could be linked to cycle lanes in the Helena Valley study area.
- > Lack of north-south connections within the study area is an issue.
- > Samson Street extension across the river to link Clayton Road with Helena Valley Road was discussed. It is considered unlikely due to its proximity to the Scott Street river crossing; however it is still worth investigating. Furthermore, if a road link remains unfeasible, consideration should be given to a pedestrian/cycle link.
- > The Scott Street timber bridge may be prone to bushfires.
- > Scott Street is the only road crossing the Helena River, which presents challenges for daily movement and also emergency management.
- > Suggestion of pedestrian/cycle link along the southern boundary of the study area.
- > Suggestion of a road also along the southern boundary of the study area, between Ridge Hill Road and Midland Road – this would relieve pressure on Helena Valley Road and also create a bushfire break.
- > Scott Street / Great Eastern Highway (GEH): this is a hazardous intersection, e.g. the right turn from Scott Street onto GEH requires crossing 4 or 5 lanes of traffic onto a busy road. Signals may provide the solution here. GEH is a busy road partly because it is the only way north for many trips from the study area; and also because of the lack of an alternative distributor road.
- > Suggestion of raising hierarchy of Katherine Street, which is currently a “Distributor B” in the MRWA Hierarchy. This would require road modification.
- > Scott Street / Clayton Street intersection is hazardous due to visibility restriction.
- > Midland Station may be moved slightly further east, to the east of Helena Street (it is currently situated immediately west of Helena Street), although this project is not funded yet.
- > A proposal to use the freight rail line to extend passenger rail further east was looked at and considered unviable.
- > Public transport improvements are needed; very low frequency of buses at the moment. Public transport improvements could be simply improved bus frequency; improvements do not necessarily have to be ‘fancy’.

2.2 Traffic Data

Traffic data for this study have been obtained from the following sources:

- > Traffic counts undertaken by the Shire of Mundaring at various links within the study area – these counts are enclosed in Appendix A;
- > Cardno traffic counts – enclosed in Appendix A;
- > MRWA Short-term traffic counts;
- > MRWA Metropolitan Traffic Digest, 2008/09 to 2013/14;
- > MRWA Regional Operations Model (ROM) data for 2031 – used to determine rates of background traffic growth between the present and 2031, with interpolation used for interim years.

2.3 Other Data

Other data sources for this Study comprise the following:

- > The RPS report provides various details, in particular details of the future development scenarios;
- > Crash data from MRWA for the 5-year period 1 January 2009 to 31 December 2013, for various intersections in the study area. This is discussed in more detail in Section 3 “*Existing Operations*”.

3 Existing Operations

3.1 Crash Data

Crash data within the study area has been extracted from the Main Roads WA Crash Analysis Reporting System (CARS). The available data from January 2009 to December 2013 has been assessed for the below locations. The data are then summarised in Tables 3.1 to 3.15, together with further descriptions in the following sections.

It should be noted that this is an overview of crash patterns and trends; it is not a detailed safety study. As such, further assessment would be required before undertaking safety remedial work at any of the locations discussed in this report.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Bushmead Road / Military Road intersection is summarised in **Table 3-1**. The data were provided by Main Roads WA.

Table 3-1 Bushmead Road / Military Road intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Thru - Right				1		1	3%
Right angle		2		4	1	7	19%
Rear End			5	11	10	26	72%
Hit object				1		1	3%
Other			1			1	3%
Total		2	6	17	11	36	-

In summary:

- > There is a record of 2 accidents requiring medical attention;
- > Rear-end crashes were the most common form of accident, comprising 72% of crashes; these may have resulted from unexpected deceleration by vehicles slowing down to turn;
- > Right angle crashes were the second most common form of crash.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Bushmead Road / Stirling Crescent intersection is summarised in **Table 3-2**. The data were provided by Main Roads WA.

Table 3-2 Bushmead Road / Stirling Crescent intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle				2	1	3	33%
Rear End			1	1	4	6	67%
Total			1	3	5	9	-

In summary:

- > There is a record of 1 accident requiring medical attention;
- > From the total of 9 crashes happened at this intersection 6 were rear end crashes; rear end crashes at the roundabouts can be caused by either speeding before the roundabouts. The skid mark on the circulation lane and approaches to the roundabout, on the Nearmap images, suggest vehicles speeding while passing through the roundabout.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Clayton Street/ Military Road intersection is summarised in **Table 3-3**. The data were provided by Main Roads WA.

Table 3-3 Clayton Street/ Military Road intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle			1	1	1	3	11%
Right turn through				1		1	4%
Rear end			3	11	10	24	86%
Total			4	13	11	28	-

In summary:

- > There is a record of 4 accidents requiring medical attention;
- > Rear end crashes were the most common form of crash , comprising 86% of crashes, these may have resulted from unexpected deceleration by vehicles slowing down to turn;
- > Right angle crashes were the second most common form of accident, comprising 11% of crashes.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Clayton Street/ Irwin Street intersection is summarised in **Table 3-4**. The data were provided by Main Roads WA.

Table 3-4 Clayton Street/ Irwin Street intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle					1	1	50%
Rear end				1		1	50%
Total				1	1	2	-

In summary:

- > No fatalities or accidents requiring medical attention (either hospital or other medical treatment) were recorded;
- > Right angle crashes were the most common form of accident, comprising 50% of crashes;
- > Rear end crashes were the second most common form of crash; these may have resulted from unexpected deceleration by vehicles slowing down to turn.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Helena Valley Road/ Lakeside Drive intersection is summarised in **Table 3-5**. The data were provided by Main Roads WA.

Table 3-5 Helena Valley Road/ Lakeside Drive intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle		1				1	100%
Total		1				1	-

In summary:

- > There is a record of 1 right angle accident that required medical attention.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Helena Valley Road/ Midland Road, Bushmead Road intersection is summarised in **Table 3-6**. The data were provided by Main Roads WA.

Table 3-6 Helena Valley Road/ Midland Road, Bushmead Road intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle				2	2	4	44%
Right turn through				2		2	22%
Rear end				3		3	33%
Total				7	2	9	-

In summary:

- > No fatalities or accidents requiring medical attention (either hospital or other medical treatment) were recorded;
- > Right angle crashes were the most common form of accident, comprising 44% of crashes;
- > Rear end crashes were the second most common form of crash; these may have resulted from unexpected deceleration by vehicles slowing down to turn.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Helena Valley Road/ Scott Street intersection is summarised in **Table 3-7**. The data were provided by Main Roads WA.

Table 3-7 Helena Valley Road/ Scott Street intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle			2			2	40%
Right turn through				1		1	20%
Rear end				1		1	20%
Side Swap Same Direction					1	1	20%
Total			2	2	1	5	-

In summary:

- > There is a record of 2 right angle accidents and both of them required medical attention.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Helena Valley Road/ Torquata Boulevard intersection is summarised in **Table 3-8**. The data were provided by Main Roads WA.

Table 3-8 Helena Valley Road/ Torquata Boulevard intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right turn through			1			1	100%
Total			1			1	-

In summary:

- > There is a record of 1 right turn through accident that also required medical attention.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Roe Highway/ Great Eastern Highway intersection is summarised in **Table 3-9**. The data were provided by Main Roads WA.

Table 3-9 Roe Highway/ Great Eastern Highway Bypass intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle			1	6		7	6%
Right turn through	1	1	1	2		5	4%
Rear end		4	16	53	23	96	78%
Side Swap Same Direction				1	6	7	6%
Hit Object				2	2	4	3%
Non Collision				1	2	3	2%
Other				1		1	1%
Total	1	5	18	66	33	123	-

In summary:

- > There is a record of 1 fatality plus 23 accidents requiring medical attention;
- > Rear end crashes were the most common form of accident, comprising 78% of crashes, these may have resulted from unexpected deceleration by vehicles slowing down to turn.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Scott Street/ Fredric Street intersection is summarised in **Table 3-10**. The data were provided by Main Roads WA.

Table 3-10 Scott Street/ Fredric Street intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Thru Right				1		1	100%
Total				1			-

In summary:

- > No fatalities or accidents requiring medical attention (either hospital or other medical treatment) were recorded.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Scott Street/ Great Eastern Highway intersection is summarised in **Table 3-11**. The data were provided by Main Roads WA.

Table 3-11 Scott Street/ Great Eastern Highway intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle		1	4	14	3	22	44%
Right turn through		1	1	2	1	5	10%
Rear end		1	4	6	11	22	44%
Non Collision					1	1	2%
Total		3	9	22	16	50	-

In summary:

- > There is a record of 12 accidents requiring medical attention;
- > Right angle and rear end crashes were the most common form of accident, comprising 88% of crashes.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Scott Street/ Jinda Road intersection is summarised in **Table 3-12**. The data were provided by Main Roads WA.

Table 3-12 Scott Street / Jinda Road intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Thru Right				1		1	100%
Total				1			-

In summary:

- > No fatalities or accidents requiring medical attention (either hospital or other medical treatment) were recorded.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Scott Street/ Clayton Road intersection is summarised in **Table 3-13**. The data were provided by Main Roads WA.

Table 3-13 Scott Street/Clayton Road intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle			2	5	4	11	73%
Rear end				2	1	3	20%
Non collision				1		1	7%
Total			2	8	5	15	-

In summary:

- > There is a record of 2 accidents requiring medical attention;
- > Right angle crashes were the most common form of accident, comprising 73% of crashes.

Crash data for the five year period between 1 January 2009 and 31 December 2013 for Stirling Crescent/ great Eastern Highway Bypass intersection is summarised in **Table 3-14**. The data were provided by Main Roads WA.

Table 3-14 Stirling Crescent/ Great Eastern Highway Bypass intersection Crash Statistics, 1 January 2009 – 31 December 2013

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Right angle		1	4	2	1	8	10%
Right turn through		3	2	6	2	13	17%
Rear end		1	6	25	15	47	60%
Side Swap Same Direction				2	2	4	5%
Hit Object				3	1	4	5%
No Collision					1	1	1%
Other					1	1	1%
Total		5	12	38	23	78	-

In summary:

- > There is a record of 17 accidents requiring medical attention;
- > Rear end crashes were the most common form of accident; these may have resulted from unexpected deceleration by vehicles slowing down to turn.

Crash data for the five year period between 1 January 2010 and 31 December 2014 for Darlington Road / Great Eastern Highway intersection is summarised in **Table 3-15**. The data was provided by Main Roads WA.

Table 3-15 Darlington Road / Great Eastern Highway intersection Crash Statistics, 1 January 2010 – 31 December 2014

Movement	Severity					Total	Percentage Breakdown by Movement
	Fatal	Hospital	Medical	PDO Major	PDO Minor		
Thru - Right				1		1	9%
Right angle			1	3		4	36%
Rear End			1	5		6	55%
Hit object							
Other							
Total			2	9		11	-

In summary:

- > There is a record of 2 accidents requiring medical attention;
- > Rear End crashes were the most common form of accident, comprising 55% of crashes;
- > Right angle crashes were the second most common form of crash; these may have resulted from poor visibility from Darlington Road entering into Great Eastern Highway.

4 Traffic Network Model

A high-level traffic model has been developed using an Excel spreadsheet, in order to determine the changes in traffic volumes as a result of:

- > Development in the study area, as detailed in Section 1;
- > Background traffic growth, as determined from the MRWA's ROM data;
- > The following proposed network changes (referred to in the model as "Scenarios", with Scenario 1 being 'no change'):
 - Scenario 2: Samson Street extension across river, to link Helena Valley Road to Katherine Street/Clayton Road;
 - Scenario 3: North-south link from Katherine Street to Helena Valley Road (partly using road reserve that joins Helena Valley Road just west of Midland Rd);
 - Scenario 4: Farrall Road extension from Great Eastern Highway (GEH) to Clayton Street;
 - Scenario 5: Implementation of Lloyd Street/Bushmead Road intersection;
 - Scenario 6: Scott Street / GEH intersection restricted to left-in, left-out;
 - Scenario 7: Roe Highway link to northern side of Helena Valley Road.

4.1 Modelling Process

The full model, including details of data sources, assumptions and methodologies, has been supplied to the Shire separately as an Excel file, to enable Shire representatives to understand the modelling by viewing the links between data in the model. A brief outline summary of the modelling process is as follows:

1. Development traffic generation was determined from the NSW RTA "*Guide to Traffic Generating Developments*" Version 2.2, October 2002; and the ITE's "*Trip Generation*", 7th Edition 2003
2. Development traffic distribution was determined by ROM data. The model includes origin/destination zones: the internal zones are the development Precincts 1 to 5; while the external zones are determined by the directions of the primary routes and how these affect route choice within the study area. Thus the external zones are as follows:
 - a. West: locations accessed by GEH By-pass, Bushmead Road, Clayton Street and GEH west of study area
 - b. North-west: locations accessed by Roe Highway north of study area
 - c. North: locations accessed by the local access roads between Scott Street and Farrall Road
 - d. North-east: accessed by GEH to the east of Scott Street
 - e. South: accessed by Ridge Hill Rd, Midland Rd and Roe Hwy to the south.
3. Directional traffic distribution was determined using these external zones around the study area, the proportions of which were determined by using ROM data to indicate the relative volumes of traffic travelling north, south, west etc. along the primary routes.
4. Furthermore, in assessing development traffic distribution, the following details were assumed:
 - a. In the AM Peak Hour, residential outbound trips will be mostly commuting, so these were assumed to be mostly (but not all) to destinations outside the study area (to the external zones as mentioned above); residential inbound trips will be mostly retail deliveries and tradespeople, again the majority would be from outside the study area (the study area is mostly residential);
 - b. Service commercial development in the westernmost part of Precinct 1: as this was initially expected to be services to the trades, the AM outbound movements would be nearly all to outside the study area, i.e. the external zones; AM inbound movements would be workers, distributed according to external zones (there would be some workers living in the internal zones of the study area too, but these movements are already be accounted for by the residential trips).

- c. The Precinct 1 service commercial development was later amended to 50% bulky retail; however, the assumptions on distribution were still considered to be reasonable as the bulky goods retail may have many similar characteristics to services to the trades. In particular, the customer catchment is likely to be a wide area as bulky goods retailers tend to be few and far between compared to, e.g. newsagents, grocery retailers etc. Therefore, it is likely that the majority of AM outbound movements would be deliveries outside the study area. Again, AM inbound movements would be workers, distributed according to external zones – see explanation above at 4b.
5. Assignment of development traffic was determined separately for each origin-destination pair, in order to give a relatively fine grain of analysis. For each O-D pair, the most logical route was determined and the traffic assigned accordingly to the links that comprise that route. For most O-D pairs, there is more than one logical route, in part due to different routes offering approximately the same distance and convenience; and in part because within an origin zone or a destination zone, some locations are better suited to different routes than others.
6. Assignment also accounts for the cumulative effect of traffic on some links. For example, trips from Kadina Brook (Precinct 1) to the external zone “North-East” are assumed to use the route via Helena Valley Road to Scott Street in Scenario 1 (no new road links or modifications). Approximately 10% of Precinct 1 would be likely to use the link “Helena Valley Road (Bushmead Rd), east of Military Rd”, a link which is bound to the east by Midland Road. The remaining 90% would initially access Helena Valley Road at its subsequent links to the east of Midland Road – these links would however carry 100% of traffic for the O-D pair “Precinct 1 – North-East”, as they would include the 10% from the westerly end of Precinct 1 as well.
7. Base traffic was determined from various sources including MRWA, the Shire and Cardno’s own traffic counts.
8. Future growth of base traffic was determined from ROM data provided by MRWA, where available. Where ROM data were not available, past growth was used as a proxy for future growth. In such cases, traffic growth was not applied to links that are unlikely to serve a strategic function as growth on these could be expected to be entirely due to development traffic. Some links experienced negative traffic growth in recent years; in these cases zero growth has been assumed for the subsequent years.
9. On some links, base traffic data were not available; in some such cases, these volumes were assumed to be equal to neighbouring links where such links are separated only by a local road.
10. AM Peak traffic was assumed to be 10% of daily traffic where hourly flows were not available.
11. The model includes comparison tables illustrating the base and development traffic volumes on the various links under each Scenario.
12. It should be noted that the ROM data from MRWA assumes the following changes (which are not expected to significantly affect our analysis in this study):
 - a. 2011 to 2016: Great Eastern Highway / Roe Highway grade separation (i.e. as existing now).
 - b. 2021 to 2031:
 - i. Lloyd Street extension (from Clayton Street to GEH Bypass)
 - ii. Roe Highway Widening (an extra lane each direction from Toodyay Road to Kwinana Freeway)
 - iii. Roe Highway / GEH Bypass grade separation (diamond)
 - iv. Roe Highway / Morrison Road grade separation (no connection).

4.2 Modelling Results

The full model can be viewed in Excel (supplied separately). However, some of the key results are discussed below. From discussions with the Shire, the key traffic volume-related issues are:

- At what point, if any, will Helena Valley Road require widening?
- Will there be a benefit to a left-in, left-out restriction at the Scott Street / GEH intersection?

The latter point is covered in more detail in Section 5. The former point is discussed below.

In the model, the “Scenario comparison with base” tab shows the predicted traffic volumes on the main links in the study area, for each Scenario and for each of the years 2016, 2021 and 2031. Using the assumption that the capacity of a road is defined by a minimum 2-second headway between cars – e.g. capacity of 3,600 cars per hour for a 2-lane road – the only modelled links that are expected to exceed their capacity are along Helena Valley Road.

The Scenarios and years in which this excess occurs are summarised in **Table 4.1 to 4.3** below. Link-scenario combinations in which capacity is exceeded are shown in bold and red.

Table 4-1 Volumes on Helena Valley Road (links where capacity is exceeded): AM Peak Hour, 2016

Link	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
Helena Valley Road (Bushmead Rd), east of Military Rd	3,366	3,366	3,289	3,366	3,366	3,812	4,260
Helena Valley Road between Midland Road and north-south link from Katherine St	N/A	N/A	4,485	N/A	N/A	N/A	N/A
Helena Valley Road, west of Torquata Boulevard	4,763	4,806	3,833	4,763	4,763	4,808	4,894
Helena Valley Road, east of Torquata Boulevard	3,767	3,782	2,254	3,767	3,767	3,311	2,985

Table 4-2 Volumes on Helena Valley Road (links where capacity is exceeded): AM Peak Hour, 2021

Link	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
Helena Valley Road (Bushmead Rd), east of Military Rd	3,690	3,690	3,613	3,690	3,690	4,136	4,584
Helena Valley Road between Midland Road and north-south link from Katherine St	N/A	N/A	4,809	N/A	N/A	N/A	N/A
Helena Valley Road, west of Torquata Boulevard	4,763	4,806	3,833	4,763	4,763	4,808	4,894
Helena Valley Road, east of Torquata Boulevard	3,881	3,896	2,368	3,881	3,881	3,425	3,099

Table 4-3 Volumes on Helena Valley Road (links where capacity is exceeded): AM Peak Hour, 2031

Link	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6	Scenario 7
Helena Valley Road (Bushmead Rd), east of Military Rd	3,746	3,746	3,669	3,746	3,746	4,192	4,640
Helena Valley Road between Midland Road and north-south link from Katherine St	N/A	N/A	4,865	N/A	N/A	N/A	N/A
Helena Valley Road, west of Torquata Boulevard	4,763	4,806	3,833	4,763	4,763	4,808	4,894
Helena Valley Road, east of Torquata Boulevard	3,725	3,740	2,212	3,725	3,725	3,269	2,943

The above results illustrate the following:

- Scenarios 6 and 7 – Scott Street/GEH LILO and Roe Highway link to northern side of Helena Valley Road – will worsen conditions at the western end of Helena Valley Road, but improve them at the eastern end;
- Scenario 3 – north-south link from Katherine Street to Helena Valley Road – relieves congestion at the eastern end of Helena Valley Road (east of Torquata Boulevard) in all 3 years;
- By 2021, all of Helena Valley Road west of Scott Street will be over-capacity, except in Scenarios 3, 6 and 7 when the eastern link (east of Torquata Boulevard) will be within capacity (also the case for 2031).

5 SIDRA Assessments

SIDRA capacity modelling of the GEH / Scott Street intersection has been undertaken to assess the impact of the proposed modification to left-in, left-out (LILO) configuration. This assessment included the amended traffic volumes as a result of the LILO configuration, as determined from the network model.

Additional SIDRA modelling was considered unnecessary due to the results of the above models. This is discussed further below.

5.1 SIDRA Results

Full SIDRA outputs are enclosed in Appendix B. SIDRA input files can be provided on request also.

The results are summarised below in **Tables 5.1 to 5.6**. All results are for AM peak, base plus development traffic. For each arm, the worst-performing movement is shown.

Table 5-1 SIDRA Results for GEH / Scott Street, current configuration, 2016

Approach	DOS (volume/capacity)	Level of Service	95 th Percentile Queue Distance (m)
Scott Street	17.520	F	8,877
GEH east	0.474	A	18.8
GEH west	1.379	F	311

Table 5-2 SIDRA Results for GEH / Scott Street, current configuration, 2021

Approach	DOS (volume/capacity)	Level of Service	95 th Percentile Queue Distance (m)
Scott Street	17.578	F	8,899
GEH east	0.524	A	21
GEH west	1.530	F	311

Table 5-3 SIDRA Results for GEH / Scott Street, current configuration, 2031

Approach	DOS (volume/capacity)	Level of Service	95 th Percentile Queue Distance (m)
Scott Street	19.075	F	9,687
GEH east	0.622	A	20
GEH west	1.540	F	311

Table 5-4 SIDRA Results for GEH / Scott Street, left-in, left-out configuration, 2016

Approach	DOS (volume/capacity)	Level of Service	95 th Percentile Queue Distance (m)
Scott Street	13.456	F	6,766
GEH east	0.453	A	0
GEH west	0.327	A	0

Table 5-5 SIDRA Results for GEH / Scott Street, left-in, left-out configuration, 2021

Approach	DOS (volume/capacity)	Level of Service	95 th Percentile Queue Distance (m)
Scott Street	13.526	F	6,788
GEH east	0.507	A	0
GEH west	0.340	A	0

Table 5-6 SIDRA Results for GEH / Scott Street, left-in, left-out configuration, 2031

Approach	DOS (volume/capacity)	Level of Service	95 th Percentile Queue Distance (m)
Scott Street	15.035	F	7,580
GEH east	0.600	A	0
GEH west	0.365	A	0

The most significant effect of the LILO configuration shown by the above results is that GEH west arm is improved from F to A. However, in each case the movement experiencing LoS of F in the existing configuration is the right-turn movement; therefore this improvement is due to removal of this movement.

In each of the existing configuration models, the through movement on GEH west experiences LoS of A, as in the LILO configuration.

This demonstrates that the LILO proposal could be expected to simply shift the problem elsewhere. The demand for the right turn from GEH west would be reassigned elsewhere, potentially creating **a worse problem at other intersections** as the demand for the right-turn movement would be concentrated at a smaller number of intersections.

While it could be considered that there may be a benefit due to shifting the right-turn from GEH to less congested intersections, where the negative impacts might be more tolerable, such a shift – if beneficial – could be expected to have happened already anyway. If, for example, it were easier to make the right turn into Stuart Street, then access Scott Street via Wangalla Road and Jinda Road, it is likely that drivers would already be making this switch without being coerced by a turning restriction. This is particularly the case here as Scott Street leads to a mostly residential area; therefore, nearly all drivers making the right turn would be very familiar with which intersections are congested and which are less so (if any), and ‘automatic’ reassignment would have occurred.

The impact of the LILO proposal at GEH/Scott Street could therefore be summarised as:

- > Zero (or very little) improvement for Scott Street movements;
- > Negative impacts on other intersections.

6 Recommended Improvements

In view of the analysis in this report, a series of improvements are recommended to accommodate the increases in travel demand as a result of the Helena Valley developments. These are summarised in **Table 6.1** below.

Table 6.1 also details the expected “triggers” for requiring each improvement; while some of the improvements could be implemented as soon as is practicable, some may not be required until traffic volumes have reached a certain level. In these cases, **Table 6.1** details the year by which background traffic growth plus development traffic is expected to exceed the threshold, from the three modelled years of 2016, 2021 and 2031 and/or if this is dependent on a road-modification Scenario (**refer to Section 4 for definitions of all Scenarios**).

Note that it is not clear from the information provided in which year(s) the development proposals will be implemented, so they are assumed to be in place for all modelled years. Furthermore, background traffic growth on its own will not cause any of the links to exceed capacity; capacity excess will be caused by the *combination* of background growth and developments within the study area.

It is assumed that the maximum capacity of a 2-lane road is 3,600 cars per hour; defined by a minimum 2-second headway between cars.

Table 6-1 Recommended Transport Improvements

Improvement Measure	Trigger for Requirement	Issues Addressed	Miscellaneous comments
Widening of Helena Valley Road to 4 lanes, from Military Road to Midland Road	Traffic growth plus development by year 2021; or implementation of Scenarios 3, 6 or 7	Link capacity	Refer to Section 4.2 for more details
Widening of Helena Valley Road to 4 lanes, from Midland Road to Torquata Boulevard	Traffic growth plus development by year 2016 (any Scenario)	Link capacity	Refer to Section 4.2 for more details
Widening of Helena Valley Road to 4 lanes, from Torquata Boulevard to Scott Street	Traffic growth plus development by year 2016; <i>unless</i> Scenarios 3, 6 or 7 are implemented	Link capacity	Refer to Section 4.2 for more details
Safety-improved intersection between GEH and Scott Street – right turn from Scott Street diverted into underpass, which then merges into GEH eastbound; GEH westbound to be reduced to one lane in vicinity of intersection – see concept sketch in Figure 6.1 below	No trigger needed; current accident risk.	Improved safety for the right-turners; lessens area of conflict.	Scheme to be subject to formal Road Safety Audit. Narrowing of GEH may cause localized congestion – however, 2-way volumes in any scenario in 2031 are not expected to exceed 4,355, which is only 21% over theoretical capacity (2-second headway). While the impact would be felt upstream of the bottleneck point, it would still be relatively localized and not severe.
Samson Street extension across the river to link Clayton Road with Helena Valley Road	No trigger needed; current hazard due to limited emergency vehicle access within study area	Current lack of north-south connections within the study area; particularly an issue for emergency access.	Modelled as Scenario 2
North-south link from Katherine Street to Helena Valley Road (partly using road reserve that joins	No trigger needed; current hazard due to limited emergency vehicle access	Current lack of north-south connections within the study area; particularly an issue for emergency	Modelled as Scenario 3

Helena Valley Road just west of Midland Rd)	within study area. However, in terms of relieving traffic pressure on eastern Helena Valley Road, the trigger would be traffic growth plus development by year 2016	access. Also will relieve pressure on Helena Valley Road, east of Torquata Boulevard
Visibility improvements on Scott Street intersections	No trigger needed; current accident risk	Safety
Pedestrian/cycle link along the southern boundary of the study area	Similar triggers as for widening of Helena Valley Road (see above); could slow traffic growth	Improved access by non-car modes; safety for pedestrians and cyclists.
Pedestrian/cycle link from Samson Street across river to Helena Valley Road	Similar triggers as for widening of Helena Valley Road (see above); could slow traffic growth	Improved access by non-car modes; safety for pedestrians and cyclists.
Improved bus services frequencies	Similar triggers as for widening of Helena Valley Road (see above); could slow traffic growth	Improved access by non-car modes
Reconstruction of Scott Street bridge – currently made of timber and so is prone to bushfires	No trigger needed	Potential congestion in the event that bridge is destroyed and traffic becomes more concentrated on other routes. Also as this is currently the only road crossing Helena River, this presents challenges for daily movement and also movement in times of emergency

Figure 6-1 Simple Concept Sketch of Recommended Intersection Improvement: Scott Street / GEH



7 Summary and Conclusions

This Land Use Traffic Study examines the implications, in traffic and transport-planning terms, of the impacts of continued population growth in Helena Valley.

It focusses specifically on the required transport infrastructure to accommodate the growth identified in the RPS Australia East Pty Ltd report “Helena Valley Land Use Study”, prepared for the Shire of Mundaring in October 2013.

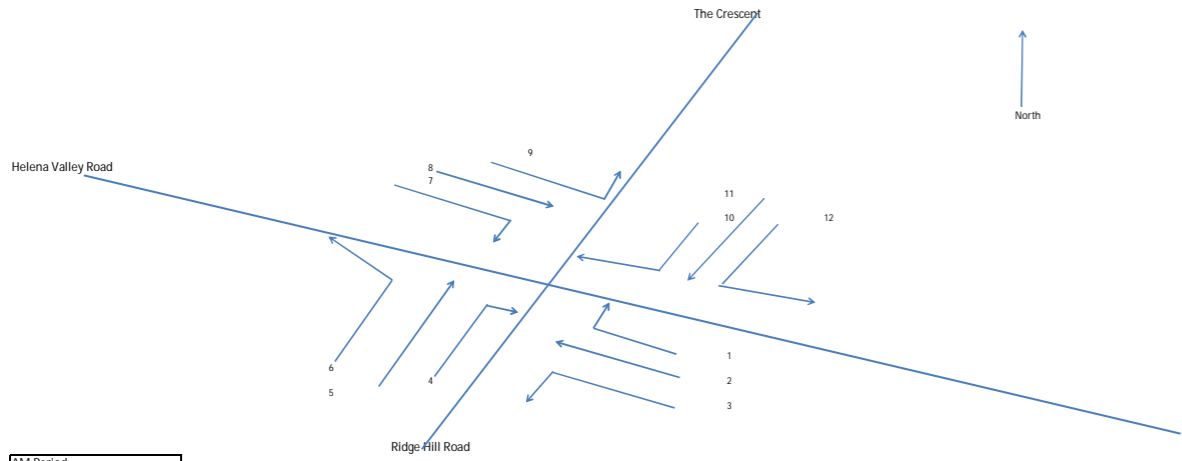
The study has comprised the following broad steps:

- Site visit and background data collection;
- Consultation with the Shire of Mundaring;
- Creation of a high-level network traffic model to determine the changes in traffic volumes as a result of the identified developments in the study area and background traffic growth, as well as due to a series of potential road modifications identified by the Shire and/or Main Roads WA;
- SIDRA intersection assessment to assess a proposed modification of the Scott Street / Great Eastern Highway intersection to left-in, left-out (LILO) configuration; the assessment suggests that this LILO proposal would probably **not** be an appropriate solution to the issues identified here.
- A list of recommended improvements to the transport infrastructure of the study area, to address identified concerns.

The recommended improvements and the ‘triggers’ that would create the need for them are detailed in Section 6 of this report. It is recommended that these be taken forward for more detailed consideration.

APPENDIX A
TRAFFIC COUNTS

Traffic Turning Counts by Cardno: Intersection of Ridge Hill Road, Helena Valley Road and The Crescent in Helena Valley, Shire of Mundaring.



AM Period		Movement																								Total vehicles over all movements															
Date: Tuesday 31 March 2015	Time Period	Light	1	Heavy	Light	2	Heavy	Light	3	Heavy	Light	4	Heavy	Light	5	Heavy	Light	6	Heavy	Light	7	Heavy	Light	8	Heavy		Light	9	Heavy	Light	10	Heavy	Light	11	Heavy	Light	12	Heavy			
	07:30 to 07:45				3		1										42		1	105		1	3		1				1												158
	07:45 to 08:00	1			1			3			1						58			114		4	5						3					2							192
Peak hour	08:00 to 08:15				9			2			3						51		4	85		3	11						2					3							173
	08:15 to 08:30				9			4			6						63		1	83		2	28			2			1			2			1						202
	08:30 to 08:45	1			36			3			2						65			90		3	55								1										256
	08:45 to 09:00				29			4			4						85		2	63		1	7																		195
	09:00 to 09:15				12		1	1			2						52			54		1	2			1			2												128
	09:15 to 09:30				5												47		2	30		1	4			1															90
	Peak hour 8 to 9am	1		0	83		0	13		0	15		0	0		0	264		7	321		9	101		0	2		0	3		0	6		0	1		0				826



SHIRE OF MUNDARING

TRAFFIC ANALYSIS SUMMARY

STREET: FREDERIC STREET SUBURB: HELENA VALLEY

LOCATION / DESCRIPTION: 80m West of Scott St intersection no.60

CHAINAGE (SLK): 0.740 CO-ORDINATES: x _____ y _____

FILE / SITE NO: Fr 2 DATE START: 27/02/2015 DATE FINISH: 06/03/2015

DIRECTION OF TRAVEL - 1: Westbound DIRECTION OF TRAVEL - 2: Eastbound

POSTED SPEED LIMIT: 50 (default) KM/H PREVIOUS VOLUME DATA: _____

BUS ROUTE: YES NO PREFERRED TRUCK ROUTE: YES NO

		UNIT	DIRECTION 1	DIRECTION 2	COMBINED
AVERAGE WEEKDAY TRAFFIC (AWT)		VEH/DAY	328.8	307.8	636.6
AVERAGE DAILY TRAFFIC (ADT)		VEH/DAY	314.4	296.3	610.7
A.M. PEAK		TIME	0700-0800	1100-1200	0700-0800
		VOLUME	23.0	18.4	38.8
P.M. PEAK		TIME	1700-1800	1700-1800	1700-1800
		VOLUME	35.8	32.0	67.8
AVERAGE SPEED		KM/H	49.4%	49 km/h	49 km/h
85 TH PERCENTILE SPEED		KM/H	58 km/h	57 km/h	58 km/h
VEHICLES EXCEEDING SPEED LIMIT		%	50.0%	51%	50.2%
AUSTROADS	CLASS 1	%	90.2%	91.1%	90.6%
	CLASS 2	%	2.2%	2.4%	2.3%
	CLASS 3	%	7.1%	5.9%	6.5%
	CLASS 4 ≥	%	0.5%	0.5%	0.5%

AWT - AVERAGE 24 HOUR TRAFFIC VOLUME ON WEEKDAYS THROUGHOUT THE PERIOD OF THE COUNT. (AVERAGE WEEKDAY TRAFFIC)

ADT - AVERAGE 24 HOUR TRAFFIC VOLUME ON COMPLETE WEEK. (AVERAGE DAILY TRAFFIC)

NOTES: 2/2 - Public holiday; could lower AWT value

OFFICER: R. News CLASSIFIER #: 2474TAGS

ENTERED ON DATABASE DATE: _____ OFFICER: _____
(PLEASE PRINT NAME CLEARLY)



SHIRE OF MUNDARING

TRAFFIC ANALYSIS SUMMARY

STREET: KATHARINE STREET SUBURB: HELENA VALLEY

LOCATION / DESCRIPTION: Power Pole, opp 1515

CHAINAGE (SLK): 1515 X _____
CO-ORDINATES: y _____

FILE / SITE NO: ka4 DATE START: 11/11/2013 DATE FINISH: 18/11/2013

DIRECTION OF TRAVEL - 1: Southbound DIRECTION OF TRAVEL - 2: Northbound

POSTED SPEED LIMIT: 60 KM/H PREVIOUS VOLUME DATA: _____

BUS ROUTE: YES NO PREFERRED TRUCK ROUTE: YES NO

		UNIT	DIRECTION 1	DIRECTION 2	COMBINED
AVERAGE WEEKDAY TRAFFIC (AWT)		VEH/DAY	771.4	915.6	1687.0
AVERAGE DAILY TRAFFIC (ADT)		VEH/DAY	734.7	866.5	1601.3
A.M. PEAK		TIME	0800-0900	0800-0900	0800-0900
		VOLUME	59.4	104.4	163.8
P.M. PEAK		TIME	1600-1700	1500-1600	1600-1700
		VOLUME	88.8	78.8	155.0
AVERAGE SPEED		KM/H	59.2 km/h	58.9 km/h	59.0 km/h
85 TH PERCENTILE SPEED		KM/H	66.6 km/h	66.6 km/h	66.6 km/h
VEHICLES EXCEEDING SPEED LIMIT		%	47.84%	45.8%	46.7%
AUSTROADS	CLASS 1	%	94.6%	95.3%	95.0%
	CLASS 2	%	1.6%	1.7%	1.7%
	CLASS 3	%	3.0%	2.3%	2.6%
	CLASS 4 ≥	%	0.7%	0.7%	0.7%

AWT - AVERAGE 24 HOUR TRAFFIC VOLUME ON WEEKDAYS THROUGHOUT THE PERIOD OF THE COUNT. (AVERAGE WEEKDAY TRAFFIC)

ADT - AVERAGE 24 HOUR TRAFFIC VOLUME ON COMPLETE WEEK. (AVERAGE DAILY TRAFFIC)

NOTES: _____

OFFICER: Richard Ness CLASSIFIER #: _____

ENTERED ON DATABASE DATE: 18/11/2013 OFFICER: Richard Ness
(PLEASE PRINT NAME CLEARLY)



SHIRE OF MUNDARING

TRAFFIC ANALYSIS SUMMARY

STREET: HELENA VALLEY ROAD SUBURB: HELENA VALLEY

LOCATION / DESCRIPTION: 280m West of Scott St intersection

CHAINAGE (SLK): 3.150 CO-ORDINATES: x _____ y _____

FILE / SITE NO: He5 DATE START: 27/02/2015 DATE FINISH: 6/03/2015

DIRECTION OF TRAVEL - 1: Westbound DIRECTION OF TRAVEL - 2: Eastbound

POSTED SPEED LIMIT: 70 KM/H PREVIOUS VOLUME DATA: _____

BUS ROUTE: YES NO PREFERRED TRUCK ROUTE: YES NO

		UNIT	DIRECTION 1	DIRECTION 2	COMBINED
AVERAGE WEEKDAY TRAFFIC (AWT)		VEH/DAY	2436.0	2465.2	4901.1
AVERAGE DAILY TRAFFIC (ADT)		VEH/DAY	2245.4	2293.1	4538.6
A.M. PEAK		TIME	0700-0800	0800-0900	0800-0900
		VOLUME	258.2	190.0	426.0
P.M. PEAK		TIME	1500-1600	1700-1800	1700-1800
		VOLUME	211.6	285.2	460.2
AVERAGE SPEED		KM/H	67km/h	63km/h	65 km/h
85 TH PERCENTILE SPEED		KM/H	73km/h	71 km/h	72 km/h
VEHICLES EXCEEDING SPEED LIMIT		%	30.4%	18.8%	24.8%
AUSTROADS	CLASS 1	%	93.7%	92.8%	93.3%
	CLASS 2	%	1.8%	1.7%	1.8%
	CLASS 3	%	3.7%	4.8%	4.3%
	CLASS 4 ≥	%	0.7%	0.7%	0.7%

AWT - AVERAGE 24 HOUR TRAFFIC VOLUME ON WEEKDAYS THROUGHOUT THE PERIOD OF THE COUNT. (AVERAGE WEEKDAY TRAFFIC)

ADT - AVERAGE 24 HOUR TRAFFIC VOLUME ON COMPLETE WEEK. (AVERAGE DAILY TRAFFIC)

NOTES: 2/3 was public holiday, volume maybe lower than usual.

OFFICER: R. Nese CLASSIFIER #: 2443TEVF

ENTERED ON DATABASE DATE: _____ OFFICER: _____
(PLEASE PRINT NAME CLEARLY)



SHIRE OF MUNDARING

TRAFFIC ANALYSIS SUMMARY

STREET: KATHARINE STREET. SUBURB: HELENA VALLEY

LOCATION / DESCRIPTION: 100m NW of Frederic St intersection, no. 1120

CHAINAGE (SLK): 1.040 CO-ORDINATES: x _____ y _____

FILE / SITE NO: Ka 4. DATE START: 27/02/2015 DATE FINISH: 6/03/2015

DIRECTION OF TRAVEL - 1: Northbound DIRECTION OF TRAVEL - 2: Southbound

POSTED SPEED LIMIT: 60 KM/H PREVIOUS VOLUME DATA: _____

BUS ROUTE: YES NO PREFERRED TRUCK ROUTE: YES NO

		UNIT	DIRECTION 1	DIRECTION 2	COMBINED
AVERAGE WEEKDAY TRAFFIC (AWT)		VEH/DAY	955.4	769.0	1724.4
AVERAGE DAILY TRAFFIC (ADT)		VEH/DAY	938.4	747.7	1686.1
A.M. PEAK		TIME	0800-0900	0800-0900	0800-0900
		VOLUME	94.4	52.2	146.6
P.M. PEAK		TIME	1500-1600	1600-1700	1500-1600
		VOLUME	80.6	85.0	155.0
AVERAGE SPEED		KM/H	56 km/h	54.1 km/h	55 km/h
85 TH PERCENTILE SPEED		KM/H	63 km/h	61 km/h	62 km/h
VEHICLES EXCEEDING SPEED LIMIT		%	28.0%	17.2%	23.2%
AUSTROADS	CLASS 1	%	95.0%	94.5%	94.8%
	CLASS 2	%	1.6%	1.9%	1.7%
	CLASS 3	%	2.7%	2.9%	2.8%
	CLASS 4 ≥	%	0.7%	0.7%	0.7%

AWT - AVERAGE 24 HOUR TRAFFIC VOLUME ON WEEKDAYS THROUGHOUT THE PERIOD OF THE COUNT. (AVERAGE WEEKDAY TRAFFIC)

ADT - AVERAGE 24 HOUR TRAFFIC VOLUME ON COMPLETE WEEK. (AVERAGE DAILY TRAFFIC)

NOTES: 2/2 - Public Holiday, could lower AWT Value.

OFFICER: R. Nuss CLASSIFIER #: 2454CWF.E.

ENTERED ON DATABASE DATE: _____ OFFICER: _____
(PLEASE PRINT NAME CLEARLY)

TRAFFIC DATA DETAILS from Shire of Mundaring - HELENA VALLEY AREA					
ROAD	DATE	LOCATION	AWDT*	AVE. SPEED	BUS ROUTE
Clayton St.					
Clayton Rd	17/11/'14	Outside house number 1350; 770 metres east of Scott St	1994 combined	71.2	N
Coulston Rd	11/3/'11	54m east of Boya Crs	2838 combined	53.7	Y
Davis Road	No Date Avail.				
Frederic St	No Date Avail.				
Glynden Way	No Date Avail.				
Helena Valley Rd	8/11/'08	600m west of Allamanda Gates r'about			
Ridge Hill Rd	No Date Avail.				
Scott St	18/3/'11	70m south of G.E.H.	5423 combined	52.3	N

APPENDIX B SIDRA
RESULTS

MOVEMENT SUMMARY

Site: Great Eastern Highway /
Scott Street Existing Layout BG +
Dev 2016, AM

CEP02375 - Great Eastern highway / Scott Street, AM 2016
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Scott Street											
1	L	60	0.0	1.006	271.7	LOS F	6.9	48.4	1.00	1.54	7.1
3	R	1051	0.0	17.520	29793.0	LOS F	1268.1	8876.5	1.00	8.89	0.1
Approach		1112	0.0	17.520	28190.2	LOS F	1268.1	8876.5	1.00	8.49	0.1
East: Great Eastern Highway											
4	L	588	0.0	0.456	8.1	LOS A	2.7	18.8	0.27	0.57	48.3
5	T	1847	0.0	0.474	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		2436	0.0	0.474	2.0	NA	2.7	18.8	0.07	0.14	56.6
West: Great Eastern Highway											
11	T	1112	0.0	0.290	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	115	0.0	1.379	786.6	LOS F	44.4	310.7	1.00	3.75	2.7
Approach		1227	0.0	1.379	73.8	NA	44.4	310.7	0.09	0.35	19.8
All Vehicles		4775	0.0	17.520	6582.8	NA	1268.1	8876.5	0.29	2.14	0.3

Level of Service (LOS) Method: Delay (HCM 2000).

Vehicle movement LOS values are based on average delay per movement

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model used.

Processed: Friday, 24 July 2015 6:09:29 PM

SIDRA INTERSECTION 5.1.13.2093

Project: \\AUPERCFS01\Data\$\Projects\Traffic\PROJECTS\OLD CEPO Series Projects\CEP02375 Helena Valley

Traffic Study\5_Technical\Traffic\Modelling\CEP02375.sip

8000955, CARDNO, ENTERPRISE

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MOVEMENT SUMMARY

Site: Great Eastern Highway /
Scott Street Existing Layout BG +
Dev 2021, AM

CEP02375 - Great Eastern highway / Scott Street AM peak, 2021
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Scott Street											
1	L	61	0.0	1.019	267.7	LOS F	7.1	49.4	1.00	1.57	7.2
3	R	1055	0.0	17.578	29894.3	LOS F	1271.2	8898.5	1.00	9.04	0.1
Approach		1116	0.0	17.578	28271.4	LOS F	1271.2	8898.5	1.00	8.63	0.1
East: Great Eastern Highway											
4	L	642	0.0	0.496	8.0	LOS A	3.0	21.3	0.24	0.56	48.5
5	T	2044	0.0	0.524	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		2686	0.0	0.524	1.9	NA	3.0	21.3	0.06	0.13	56.7
West: Great Eastern Highway											
11	T	1186	0.0	0.309	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	92	0.0	1.530	1077.9	LOS F	44.4	310.7	1.00	3.56	2.0
Approach		1278	0.0	1.530	77.4	NA	44.4	310.7	0.07	0.26	19.2
All Vehicles		5080	0.0	17.578	6230.1	NA	1271.2	8898.5	0.27	2.03	0.3

Level of Service (LOS) Method: Delay (HCM 2000).

Vehicle movement LOS values are based on average delay per movement

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model used.

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SIDRA INTERSECTION 5.1.13.2093

Project: \\AUPERCFS01\Data\$\Projects\Traffic\PROJECTS\OLD CEPO Series Projects\CEP02375 Helena Valley

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MOVEMENT SUMMARY

Site: Great Eastern Highway /
 Scott Street Existing Layout BG +
 Dev 2031, AM

CEP02375 - Great Eastern highway / Scott Street AM peak, 2031
 Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Scott Street											
1	L	62	0.0	1.031	258.6	LOS F	7.1	49.6	1.00	1.61	7.4
3	R	1144	0.0	19.075	32585.6	LOS F	1383.8	9686.5	1.00	9.32	0.1
Approach		1206	0.0	19.075	30928.3	LOS F	1383.8	9686.5	1.00	8.93	0.1
East: Great Eastern Highway											
4	L	625	0.0	0.483	8.0	LOS A	2.9	20.4	0.23	0.56	48.5
5	T	2425	0.0	0.622	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		3051	0.0	0.622	1.6	NA	2.9	20.4	0.05	0.12	57.2
West: Great Eastern Highway											
11	T	1281	0.0	0.333	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
12	R	92	0.0	1.540	1072.0	LOS F	44.4	310.7	1.00	3.76	2.0
Approach		1374	0.0	1.540	72.1	NA	44.4	310.7	0.07	0.25	20.1
All Vehicles		5631	0.0	19.075	6644.7	NA	1383.8	9686.5	0.26	2.04	0.3

Level of Service (LOS) Method: Delay (HCM 2000).

Vehicle movement LOS values are based on average delay per movement

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model used.

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SIDRA INTERSECTION 5.1.13.2093

Project: \\AUPERCFS01\Data\$\Projects\Traffic\PROJECTS\OLD CEPO Series Projects\CEP02375 Helena Valley

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MOVEMENT SUMMARY

Site: Great Eastern Highway /
 Scott Street left in left out-BG+
 Dev 2016 , AM

CEP02375 - Great Eastern highway / Scott Street left-in, left-out, AM peak, 2016
 Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Scott Street											
1	L	807	0.0	13.456	22501.0	LOS F	966.6	6766.0	1.00	7.57	0.1
Approach		807	0.0	13.456	22501.0	LOS F	966.6	6766.0	1.00	7.57	0.1
East: Great Eastern Highway											
4	L	668	0.0	0.360	7.6	X	X	X	X	0.60	49.7
5	T	1767	0.0	0.453	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		2436	0.0	0.453	2.1	NA	0.0	0.0	0.00	0.17	56.8
West: Great Eastern Highway											
11	T	1275	0.0	0.327	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1275	0.0	0.327	0.0	NA	0.0	0.0	0.00	0.00	60.0
All Vehicles		4518	0.0	13.456	4022.1	NA	966.6	6766.0	0.18	1.44	0.5

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (HCM 2000).

Vehicle movement LOS values are based on average delay per movement

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Great Eastern Highway /
 Scott Street left in left out-BG+
 Dev 2021, AM

CEP02375 - Great Eastern highway / Scott Street, left-in, left-out, AM peak, 2021
 Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Scott Street											
1	L	812	0.0	13.526	22622.1	LOS F	969.6	6787.5	1.00	7.81	0.1
Approach		812	0.0	13.526	22622.1	LOS F	969.6	6787.5	1.00	7.81	0.1
East: Great Eastern Highway											
4	L	711	0.0	0.383	7.6	X	X	X	X	0.60	49.7
5	T	1976	0.0	0.507	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		2686	0.0	0.507	2.0	NA	0.0	0.0	0.00	0.16	56.9
West: Great Eastern Highway											
11	T	1326	0.0	0.340	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1326	0.0	0.340	0.0	NA	0.0	0.0	0.00	0.00	60.0
All Vehicles		4824	0.0	13.526	3806.9	NA	969.6	6787.5	0.17	1.40	0.6

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (HCM 2000).

Vehicle movement LOS values are based on average delay per movement

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model used.

MOVEMENT SUMMARY

Site: Great Eastern Highway /
Scott Street left in left out-BG+
Dev 2031, AM

CEP02375 - Great Eastern highway / Scott Street, left-in, left-out, AM peak, 2031
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	Turn	Demand Flow veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Scott Street											
1	L	902	0.0	15.035	25331.3	LOS F	1082.8	7579.8	1.00	8.18	0.1
Approach		902	0.0	15.035	25331.3	LOS F	1082.8	7579.8	1.00	8.18	0.1
East: Great Eastern Highway											
4	L	709	0.0	0.382	7.6	X	X	X	X	0.60	49.7
5	T	2341	0.0	0.600	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		3051	0.0	0.600	1.8	NA	0.0	0.0	0.00	0.14	57.2
West: Great Eastern Highway											
11	T	1422	0.0	0.365	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		1422	0.0	0.365	0.0	NA	0.0	0.0	0.00	0.00	60.0
All Vehicles		5375	0.0	15.035	4252.7	NA	1082.8	7579.8	0.17	1.45	0.5

X: Not applicable for Continuous movement.

Level of Service (LOS) Method: Delay (HCM 2000).

Vehicle movement LOS values are based on average delay per movement

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model used.



Appendix 5



CONFIRMED MINUTES

ORDINARY COUNCIL MEETING

9 AUGUST 2016



**CONFIRMED MINUTES
ORDINARY COUNCIL MEETING
9 AUGUST 2016**

ATTENTION/DISCLAIMER

The purpose of this Council Meeting is to discuss and, where possible, make resolutions about items appearing on the agenda. Whilst Council has the power to resolve such items and may in fact appear to have done so at the meeting, no person should rely on or act on the basis of such decision or on any advice or information provided by an Elected Member or employee, or on the content of any discussion occurring during the course of the Meeting. Persons should be aware that regulation 10 of the *Local Government (Administration) Regulations 1996* establishes procedures to revoke or change a Council decision. No person should rely on the decisions made by Council until formal written advice of the Council decision is received by that person.

The Shire of Mundaring expressly disclaims liability for any loss or damage suffered by any person as a result of relying on or acting on the basis of any resolution of Council, or any advice or information provided by an Elected Member or employee, or the content of any discussion occurring during the course of the Council Meeting.

LEGEND

To assist the reader, the following explains the method of referencing used in this document:

Item	Example	Description
Page Numbers	C1 AUGUST 2016 (C2, C3, C4 etc)	Sequential page numbering of Council Agenda or Minutes for August 2016
Report Numbers	10.1 (10.2, 10.3 etc) 11.1 (11.2, 11.3 etc)	Sequential numbering of reports under the heading "10.0 Reports of Committees" or "11.0 Reports of Employees"
Council Decision Reference	C7.08.16	Council Decision number 7 from Council meeting August 2016

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10.2 Endorsement of Draft Helena Valley Urban Expansion Strategy for Advertising

File Code	PS.PCT 10 – Helena Valley
Location / Address	See ATTACHMENT 3-1
Landowner	Various
Applicant	Nil
Zoning	LPS4 – Various MRS – Various
Area	255 hectares
Use Class	N/A
Ward	South
Author	Christopher Jennings, Senior Strategic Planning Officer
Senior Employee	Mark Luzi, Director Statutory Services
Disclosure of Any Interest	Nil

SUMMARY

Council is requested to advertise the Draft Helena Valley Urban Expansion Strategy (HVUES) for public comment.

Draft HVUES is a strategy for future urban growth in Helena Valley in a way which seeks to accommodate a growing population in a manner which protects the environment and amenity, improves and provides new infrastructure, and responds to fire risk and landowner aspirations.

Central to Draft HVUES is an understanding that urban growth and environmental and amenity protection are not opposing objectives. In most cases, as with subdivision, urban growth can lead to significant improvements to the environment, infrastructure, risk mitigation which benefits the wider public.

For clarification, Council is not being asked to provide final approval of the plan at this stage. This will be sought in mid-2017, after public feedback has been incorporated into the plan, pursuant to Council's resolution.

BACKGROUND

ACRONYMS & ABBREVIATIONS	MEANING
ANEF	Australian Noise Exposure Forecast
DoP	Department of Planning
HVLAS	Helena Valley Landowner Aspiration Survey
HVLUS	Helena Valley Land Use Study
HVUES	Helena Valley Urban Expansion Strategy
LPS	Shire of Mundaring's Local Planning Strategy

LPS4	Shire of Mundaring's Local Planning Scheme No. 4
MRS	Metropolitan Region Scheme
Planning framework	The total of all planning legislation, strategies, policies and guidelines within the Western Australia's planning system.
SAT	State Administrative Tribunal
Shire	Shire of Mundaring
SPP 5.1	State Planning Policy 5.1 – Land Use Planning in the Vicinity of Perth Airport
Subject area	The area covered by HVUES
WALGA	West Australian Local Government Association
WAPC	Western Australian Planning Commission

FIGURE NO.	DESCRIPTION
1	ANEF contours
2	HVUES study area
3	HVLUS study area
4	District recreation site context and location

Helena Valley

Helena Valley is an urban growth area in the Shire due to its proximity to activity centres, public transport networks and the availability of utilities and community infrastructure.

The majority of properties in the locality are zoned Urban under the MRS and have been, or are being, subdivided. Approximately 255 hectares of land zoned Rural under the MRS has been identified as potentially suitable for further investigation for urban development.

As well as growth pressures, Helena Valley is also a location of important environmental, historic, cultural, lifestyle and aesthetic significance – containing the Helena River, areas of Bush Forever, Local Natural Areas, heritage places and small rural properties.

As such, many interrelated issues have converged in Helena Valley - including:

- proximity to Midland provides an opportunity to create a more sustainable urban form and assists the State Government to achieve its urban infill targets;
- a number of environmental assets are currently held on private properties with varying degrees of management quality;
- objectives to minimise exposure of a future population to bushfire hazard and linking urban growth to improvement of bushfire risk mitigation efforts;
- protection of heritage/cultural places of significance and exposing them to public use and enjoyment;
- existing, disconnected urban cells and the associated issues of movement and traffic safety;
- fragmented land ownership; and
- diverse public views regarding concepts like 'sense of place' and 'amenity, to list a few.

Some of these issues have been explained spatially in **ATTACHMENT 3-2**.

Purpose of Draft HVUES

Draft HVUES seeks to understand and synthesise these numerous, complex and interrelated issues and provide a 'roadmap' for logical and prudent growth in Helena Valley for the long-term (2050).

Its current form is one exclusively for the purpose of public comment. It is in a simple and easy-to-read format, but is based on a rigorous understanding of the various planning issues and requirements within the study area and the planning framework.

There are six basic components which comprise Draft HVUES:

1. A map of the study area;
2. An overlay of study area showing the extent of the proposed Urban zone, Urban Deferred zone and Parks and Recreation Reserve under the MRS;
3. A Strategic Infrastructure Plan
4. A Precinct Plan;
5. Precinct Strategies; and
6. Indicative Density and Designs

The following sections of this report:

- Describe why Draft HVUES has been prepared in the way it has;
- Provides the rationale behind the project scope;
- Describe the purpose and outcomes of various technical studies undertaken to inform Draft HVUES; and
- Seek Council consent to advertise.

Importantly, Council should recognise that Draft HVUES is not a request to rezone properties, a structure plan or subdivision application. Therefore, it does not concern itself with the details characteristic of these stages.

It is a first, pro-active and strategic step in a much longer process of land development, involving nominal risk to the Shire.

Strategic Planning Background

Perth and Peel @ 3.5 Million & Draft North-East Sub-Regional Planning Framework

Perth's population is anticipated to grow to 3.5 million by 2050. The WAPC aims to manage this growth through high level strategic planning - Perth and Peel @ 3.5 Million and the Draft North-East Sub-Regional Planning Framework.

These strategies aim to manage population growth by supporting development which is:

- Liveable;
- Prosperous;
- Connected;
- Sustainable; and

- Collaborative

Perth and Peel @ 3.5 Million identifies areas in the Shire suitable for growth, including:

- North Parkerville Townsite;
- North Stoneville Townsite; and
- a portion of 1100 (Lot 800) Katharine Street, Bellevue (Council resolved to support a structure plan over this area at its meeting of 12 July 2016 – C7.07.16).

The Draft North-East Sub-Regional Planning Framework refines the growth strategies in Perth and Peel @ 3.5 Million for the Shire of Mundaring, Shire of Kalamunda and the City of Swan. They are as follows:

- *Avoid, protect and mitigate environmental attributes (with the emphasis on avoiding and protecting) when allocating proposed land uses;*
- *Develop a consolidated urban form that limits the identification of new greenfield areas to where they provide a logical extension to the urban form, and that places a greater emphasis on urban infill and increased residential density;*
- *Limited support for new rural residential development, with the emphasis on areas currently zoned for the purpose;*
- *Avoid areas that are of a high risk of bushfire to manage the potential impact on people, property and infrastructure;*
- *Provide effective and sustainable management of water resources including drainage, nutrient management and water allocation to minimise environmental impacts, recognising a drying climate;*
- *Promote shared infrastructure corridors for transport, community/social and service infrastructure (where appropriate);*
- *Maximise the use of existing infrastructure, including transport, community/social and service infrastructure where there is a concentration of urban and employment opportunities;*
- *Increase the number of people living close to where they work with the identification of suitable sites for employment within the sub-region, with a concentration on strategic employment;*
- *Protect employment land from other competing land uses;*
- *Integrate land use and public transport to contribute to maintaining air quality; and*
- *Identify ultimate land uses for industrial and public purposes sites, while promoting access to finite basic raw materials, through the staging and sequencing of development.*

Particular mention is made of tree protection:

The abundance of trees in the 'hills' landscape is an important component of the 'tree change' lifestyle which attracts people to the area. Future development within the sub-region will need to have careful consideration of these attributes and also address bushfire risks... The challenge will be to integrate or create design responses to existing environmental and landscape features (such as significant slopes, wetlands, distinctive vegetation and view corridors) at more detailed planning stages to maintain Helena Valley's sense of place.

Lifestyle factors have also been considered:

A key environmental attribute that attracts population growth in the sub-region is the hills landscape, with its string of traditional low-density rural settlements set in undulating agricultural areas with a substantial number of large remnant trees and pockets of orchards and other more intensive rural pursuits. These areas will be subject to additional pressure to meet residential, recreation and tourism demands, while the increased risk of bushfire in a drying climate also needs to be considered.

And

The retention of aesthetic, recreational and cultural values is also important.

And

Planning and development of the hills landscape will need to be undertaken in careful consideration of these local and strategic issues.

Importantly, with regards to staging and sequencing:

Development which is not sequential, even when supported by an approved structure plan, will be expected to have agreed and finalised funding arrangements with essential service providers in place before rezoning under a region planning scheme will be considered.

These high-level strategic planning principles have been used to underpin the more detailed precinct strategies in Draft HVUES.

However, there is an evident disparity between the Draft North-East Sub-Regional Planning Framework and the Shire's own LPS.

Local Planning Strategy Background

Before the release of both Perth and Peel @ 3.5 Million and the Draft North-East Sub-Regional Planning Framework, the WAPC endorsed the Shire's LPS.

The LPS provides specific strategic planning guidance to the Shire for the next 10-15 years and was adopted by Council on 31 July 2012 (SC5.07.12).

In relation to Helena Valley, the LPS states:

*Land between the area rezoned to Urban in MRS Amendment 1160/41 (see **ATTACHMENT 3-3**) and the smaller residential area to the east, around the intersection of Helena Valley and Ridge Hills Roads, is identified in the Foothills Structure Plan as Landscape Protection, effectively a rural buffer which may include rural residential subdivision and use...However, it is now appropriate to review this position, in light of the now recognised need to promote a more compact form of urban development at the metropolitan level. Parts of this landscape buffer may be able to accommodate more development (residential or rural residential), while still retaining some buffer to protect landscape and environmental values.*

*Accordingly, this Strategy recommends that a **separate study investigate the potential for closer subdivision, either residential or special residential (these would require amendment of the MRS) or smaller-lot rural residential for land north and south of Helena Valley Road, between the two existing areas of MRS Urban zoned land, but having strong regard for landscape protection, floodplain management and protection of watercourses traversing the area.***

The Draft North-East Sub-Regional Planning Framework does not identify this area as one for 'Urban Investigation' (refer to **ATTACHMENT 3-4**). The Shire has sought an explanation as to why the WAPC's draft framework does not identify Helena Valley for Urban Investigation. A response has not yet been provided.

Advocacy

When the WAPC released the Draft North-East Sub-Regional Planning Framework for public comment, the Shire outlined its concern that it underestimated the Shire's growth prospects and was inconsistent with the LPS.

The Shire's submission gave general support for a strategic approach to growth, but expressed concern about the exclusion of Helena Valley from the 'Urban Investigation' area and recommended it for inclusion, consistent with the LPS.

A subsequent letter was addressed to the Minister reiterating the Shire's concerns and requesting that the Draft North-East Sub-Regional Planning Strategy be amended to ensure consistency with the LPS.

The Draft North-East Sub-Regional Planning Framework has not yet been finalised by the WAPC nor has a response been provided by the Minister.

Should the Draft North-East Sub-Regional Planning Framework be finalised in its current form, it may restrict the Shire or WAPC being able to contemplate urban growth in Helena Valley pre-2050.

This has created an awkward situation where the Shire is expected to advance a strategy for urban growth for an area identified for growth in one strategic planning document but not in another.

The various risk implications of this situation is discussed later in the report.

Local Government Reform

In addition to these planning matters, the WA Liberal Government's Local Government Reform agenda delayed the Draft HVUES project.

The Local Government Reform agenda was formally commenced in 2009. In October 2014, the government announced local government boundary adjustments and proposed amalgamations.

Relevant to the Shire was a decision to realign the City of Swan's boundary to incorporate the Shire of Mundaring. Unexpectedly, the reform agenda was dropped in February 2015 for the foreseeable future.

As a consequence, the Draft HVUES project was held in abeyance in the lead-up to local government reform as it was foreseen that Shire projects would be re-prioritised under City of Swan. That is, it was considered imprudent to continue resourcing a project that was likely to be reprioritised.

As well as these reforms, the State planning framework continued to undergo a number of changes affecting the area of land in Helena Valley able to be considered for urban growth; most significantly, to State Planning Policy 5.1.

State Planning Policy 5.1: Land Use Planning in the Vicinity of Perth Airport

SPP 5.1 is a policy of the WAPC which identifies land use planning controls in areas affected by aircraft noise. It was reviewed by the WAPC and subsequently adopted in July 2015. Among its changes was the withdrawal of a plan showing the ANEF and reference made instead to the latest version of the ANEF on the Perth Airport Pty Ltd website:

This policy is predicated upon the ANEF prepared by Perth Airport Pty Ltd in consultation with Airservices Australia, which is incorporated by reference into this policy. A copy of the current ANEF can be found on the Perth Airport website and is a requirement of the Airports Act 1996.

The version of the ANEF in the former SPP 5.1 and that currently maintained by Perth Airport Pty Ltd are substantially different.

Specifically, the ">25 ANEF" has contracted over Bellevue and Helena Valley (refer to **Figure 1** below).

This has a number of key strategic planning implications on the Shire.

Most significantly, the land able to be considered for Urban development under the MRS has grown in proportion with the contraction of the ">25 ANEF" contour.

As set out in SPP 5.1 for areas between 20 ANEF and 25 ANEF:

Where land is zoned for residential purposes or to permit residential development, the maximum dwelling density should generally be limited to R20, except where:

- *land is identified as appropriate for more intensive development through strategic planning instruments such as a regional or sub-regional structure plan;*
- *a higher density coding is desirable to facilitate redevelopment or infill development of an existing residential area; and*
- *it can be demonstrated that the public benefits of higher density coding outweigh the negative impacts of exposing additional residents to aircraft noise.*

For land affected by an ANEF greater than 25, the following provision applies:

Under no circumstances should 'Rural' or other non-residential zoned land be rezoned for residential development or any other form of development involving building types identified as 'Unacceptable' with reference to the building site acceptability table in Appendix 1.

Simply put, additional land in Helena Valley and Bellevue has become potentially suitable for rezoning to Urban under the MRS as a result of changes to SPP 5.

Since the changes to SPP 5.1 were made after the release of the Shire's LPS and the WAPC's Draft North-East Sub-Regional Structure Plan, such areas have not been identified in these documents, but reasonably should be identified now.

Therefore, one of the strategies in Draft HVUES is to undertake an amendment to LPS4 to bring it into conformity with SPP 5.1 by modifying the Special Control Area related to aircraft noise and investigating the Rural zoned land for an Urban zone under the MRS.

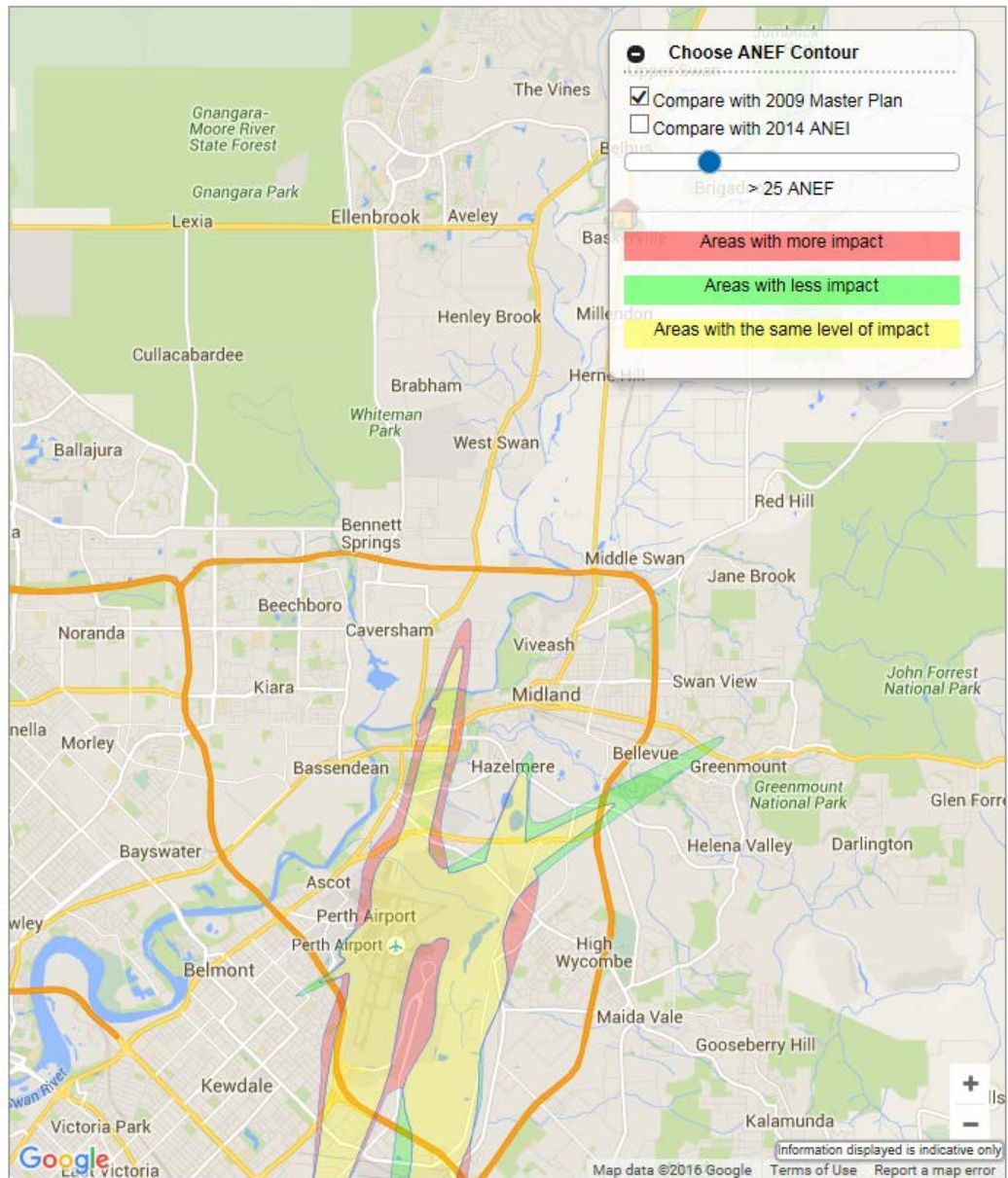


Figure 1. Source: Perth Airport Pty Ltd.

Approach

The fluidity of planning strategies and timing of reforms are the reasons the Shire has deliberately taken a precautionary approach to preparing Draft HVUES.

A district-level structure plan was considered but would have required a number of detailed technical reports to be prepared at considerable cost (around \$400,000). Given the high degree of uncertainty around whether the study area will even be considered for urban expansion by the WAPC, it was considered financially imprudent to proceed with this option.

An adaptive management approach was adopted instead to appropriately respond to the high levels of uncertainty. Measures included the preparation of a simple yet robust plan and associated strategies, informed by a number of technical documents and landowner survey results to be further refined through a rigorous consultation process.

Studies

Various investigations, technical studies and plans were prepared in the lead-up to Draft HVUES and are outlined in the table below. Due to local government reform, uncertainties around the planning framework and priorities within the Shire's Corporate Business Plan, these studies and plans have been staggered over a number of years.

Year	Study and Purpose
2012	Helena Valley Urban Expansion Planning Investigations: <ul style="list-style-type: none">• groundwork for preparation of a District Structure Plan for Helena Valley;• investigated issues including but not limited to: bushfire management, commercial demand, allocation of recreation facilities and open space, road network capacity and connectivity; and• literature review.
2013	Helena Valley Urban Expansion Planning Investigations scope extended and renamed HVLUS. Modifications included: <ul style="list-style-type: none">• consideration of development in Bushmead and Bellevue;• examination of a number of constraints including floodways and infrastructure;• setting expectations for planning principles, zoning preferences and key connection points;• liaison with state government agencies responsible for foreshore protection and service provision; and• providing more detailed population forecasts.
2014	(Local Government Reform)
2015	Traffic and Land Use Study prepared to identified potential transport infrastructure required to accommodate the growth anticipated by the HVLUS.
2015	Focus groups in each precinct undertaken to gauge landowner aspirations for their properties and Helena Valley more broadly (HVLAS).

STATUTORY / LEGAL IMPLICATIONS

Draft HVUES is a strategic planning document and does not have statutory weight. Therefore, there are no statutory or legal implications if Council resolves to advertise Draft HVUES for public comment. Should Council resolve in mid-2017 to adopt a final version of HVUES, it will be the responsibility of individual landowners to pursue the statutory processes of rezoning under the MRS and LPS, by means of preparing structure plans and subdivision applications. Each of these processes is bound by separate legislation and would be subject to further reporting to Council.

POLICY IMPLICATIONS

The strategic policy implications of the Shire and WAPC have been discussed in the Background section of this report.

FINANCIAL IMPLICATIONS

Should Council resolve to consent to advertise Draft HVUES, it is expected that there will be significant public interest in the proposal.

Officer time will be spent answering questions, meeting with community groups and collating and assessing feedback. Preparation of final plans is likely to require specialised graphic design work which will attract some costs. However, these are not expected to be significant.

STRATEGIC IMPLICATIONS

This section of the report addresses implications to the Shire's strategic administrative objectives.

The Shire's *Corporate Business Plan 2015/16-2018/19* identifies the preparation of HVUES as follows:

BALANCED DEVELOPMENT	
Objectives	
1. To promote and encourage environmentally sustainable development	
Year 1 (15/16)	Year 2 (16/17)
Helena Valley Urban Expansion Strategy – endorse draft for the purpose of consultation	Helena Valley Urban Expansion Strategy – adopt

The underpinning strategies of Draft HVUES are aligned to the WAPC's and Shire's strategic planning agenda which seek to "promote and encourage environmentally sustainable development."

Draft HVUES is therefore consistent with the intent and timing for the project set out in the *Corporate Business Plan 2015/16-2018/19*.

The Shire's 2016-2026 Strategic Community Plan – *Mundaring 2026* – sets out community priorities. Draft HVUES aligns with priorities set out in *Mundaring 2026*, as per the table below:

Priority	Description
Prudently consider resource allocation & practise effective governance and financial risk management	As discussed previously in this report, Draft HVUES has been prepared with a precautionary, adaptive management approach.
Plan in place for mitigating the effects of natural disasters	Draft HVUES proposes to create important district-level network linkages and infrastructure upgrades to mitigate bushfire risk. Strategies recognise flood prone areas and seek

	to avoid development in those areas.
Provide community venues and facilities for different demographics	Open space and opportunities for recreation are a vital component of Draft HVUES. Specific strategies have been identified for recreation grounds south of the Helena River.
Encourage environmental tourism by supporting nature based activities & encourage preservation of clean local waterways	Draft HVUES proposes extension to the Parks and Recreation Reserves under the MRS around the Helena River which will likely encourage environment based tourism and activity.
Engage with and support the local business community	Should Council resolve to adopt Draft HVUES for the purposes of advertising, it will be made widely available to the public – including businesses. Furthermore, particular strategies have been made relating to commercial needs. These investigations are anticipated to involve further consultation with the business community.
Improve safety on road, cycle and footpath networks	The scope of infrastructure requirements will be refined through the consultation process. Pedestrian, vehicle and public transport issues have been addressed in the traffic study and will be given closer attention at each stage of subsequent planning (i.e. finalisation of HVUES, MRS Amendment, scheme amendment, structure planning and so on).

SUSTAINABILITY IMPLICATIONS

Draft HVUES is underpinned by planning principles within the State and Local planning framework which itself is based on the objective of sustainability. relevant parts of the planning framework. Therefore, the sustainability implications of Draft HVUES are set out in the sections of this report assessing the relevant parts of the planning framework.

RISK IMPLICATIONS

The Background section of this report discusses how an adaptive management approach has been used to address some of the uncertainties involved in the project. This section provides a more detailed risk assessment of the two key risks identified.

Discontinuation

Should the WAPC resolve to exclude the Draft HVUES study area from 'Urban Investigation' in the adopted version of the North-East Sub-Regional Structure Plan discussed earlier, it will likely prevent urban growth in the study area for the foreseeable future.

The Shire has continued to prepare HVUES in a manner which recognises this as a possibility.

Consideration was given to abandoning HVUES. However, this was ultimately considered imprudent since the WAPC may ultimately resolve to include the study area within the 'Urban Investigation' category.

The Shire has been advised by DoP officers that the Draft North-East Sub-Regional Planning Framework is likely to be finalised towards the end of the year. The Shire has been verbally advised it will be invited to make a deputation on Shire concerns.

Consideration has been given to awaiting an outcome of this decision. However, this was considered imprudent for two reasons:

1. There is also an expectation from the community to deliver Draft HVUES; and
2. If Draft HVUES is adopted before a decision by the WAPC on the sub-regional structure plan, it would act as a strong advocacy tool to advance the objectives of the Shire's LPS.

Appeal

Draft HVUES is a strategy to provide high level guidance on future amendments to the MRS, LPS4, subdivision and development applications. It is not a statutory document and therefore, is not subject to appeal to SAT.

Should an applicant resolve to appeal a WAPC decision on a future structure plan, subdivision or development made on the basis of HVUES, HVUES may come under scrutiny.

However, each of the strategy precincts are based on sound planning principles and will have undergone a comprehensive process of public advertising and refinement. Therefore, any appeal on the planning merits of HVUES would be difficult for an appellant to justify.

EXTERNAL CONSULTATION

Initiation of advertising Draft HVUES is the recommendation of this report.

As well as internal consultation, officer-level comment has been sought from Water Corporation, Western Power, WAPC, Department of Water and Main Roads.

The advice of the WAPC is that since Draft HVUES is a strategy under the LPS, separate approval from the WAPC is not required. Nevertheless, the Shire considers it prudent to refer Draft HVUES to the WAPC for comment since it has responsibility for administering Perth and Peel @ 3.5 Million, the Draft North-East Sub-Regional Planning Framework, amendments to the MRS and LPS4, structure plans, subdivision and some developments.

Water Corporation advised that a road crossing over Helena River, connecting Katharine Street with Helena Valley Road in the location identified for district recreation grounds may be suitable.

Service providers (Western Power and Water Corporation) advised that the growth scenarios appear to be a logical extension of the urban front and subsequent to endorsement, will be factored into the long-term planning of those agencies.

Discussions with Main Roads have involved elevating the priority of and proposing potential solutions to the Scott Street/Great Eastern Highway intersection.

COMMENT

The following sections provide the rationale behind and a detailed description of the contents of Draft HVUES which, if adopted by Council, will be provided during advertising.

Components

There are six basic components of Draft HVUES:

1. A map of the study area (see **ATTACHMENT 3-1**);
2. An overlay of study area showing the extent of the proposed Urban zone, Urban Deferred zone and Parks and Recreation Reserve under the MRS (see **ATTACHMENT 3-7**);
3. A Strategic Infrastructure Plan (see **ATTACHMENT 3-6**)
4. A Precinct Plan (see **ATTACHMENT 3-5**);
5. Precinct Strategies (see **ATTACHMENT 6**); and
6. Indicative Density and Designs.

Extent of Study Area

Draft HVUES study area was defined by the LPS in the following terms:

...land north and south of Helena Valley Road, between the two existing areas of MRS Urban zoned land

As identified in **Figure 2**, the study area covers most of the rural zoned land under the MRS between the two existing urban zoned areas in Helena Valley, south of Katharine Street and north of the City of Swan's/Shire of Kalamunda's municipal boundaries. The property at 1100 (Lot 800) Katharine Street and the rural zoned properties further to the south were not identified for inclusion in the

original study area as, at the time the LPS was written, the ANEF had not contracted in this location.

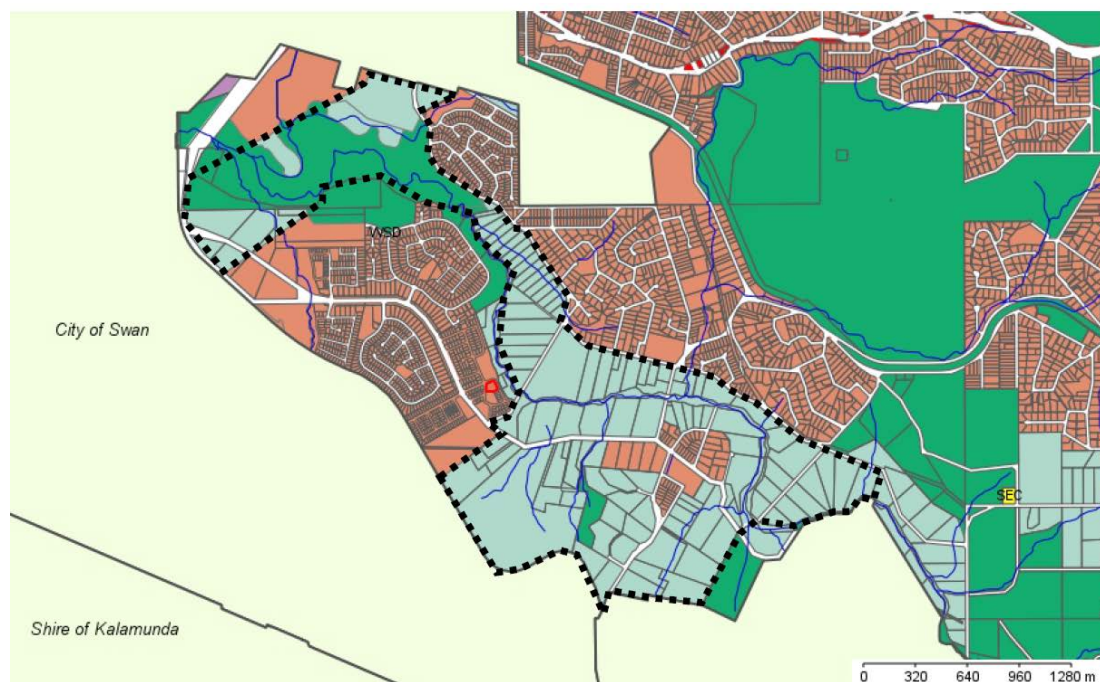


Figure 2

It is anticipated that the final subject area may be varied as a result of wider consultation and changes to the planning framework.

Helena Valley Land Use Study (HVLUS)

The purpose of the HVLUS study (refer to **ATTACHMENT 4**) was to:

Identify key opportunities, issues and constraints for future land use and development in the area. It is intended to guide and inform future proponents in the initiation of requests for amendments to the Metropolitan Region Scheme (MRS) and the preparation of more detailed local structure plans.

The study area covered by HVLUS is slightly different to that covered by Draft HVUES (refer to **Figure 3**) in that it excluded the northern portion of 1100 (Lot 800) Katharine Street and included existing urban zoned land north of Katharine Street and additional land east of Fyfe Street containing sensitive environments.

Draft HVUES has excluded land currently zoned Urban under the MRS north of Katharine Street which is subject to a separate strategy within the LPS.

Some properties east of Fyfe Street were also excluded given the significant constraints to urban development potential by watercourses, fire risk, topography and significant vegetation.

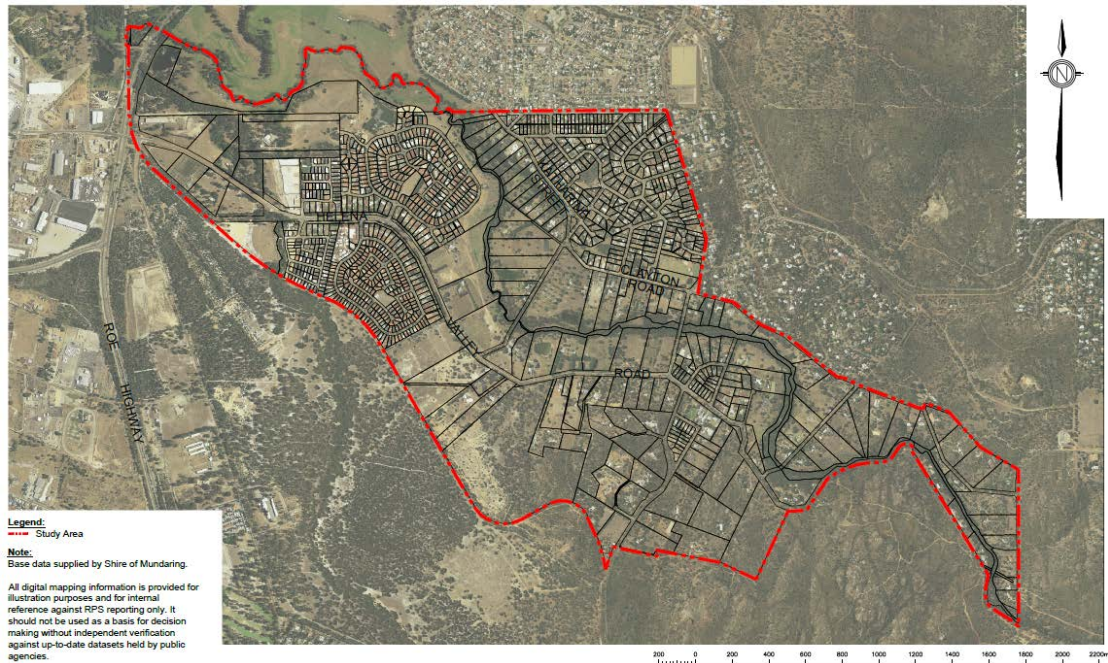


Figure 3 (Source: RPS)

HVLUS revealed a number of findings which guided the preparation of Draft HVUES which have been summarised in the table below:

HVLUS - Opportunities/Objectives
Environmental
<ul style="list-style-type: none"> • Secure the Helena River foreshore as Crown land and facilitate public access • Environmental protection – landscape, floodplain, watercourses and threatened species • Seek continuity with ecological corridors • District Water Management Strategy not required
Social
<ul style="list-style-type: none"> • Provide for an ageing population • Seek to maintain some rural lifestyles • Protect place of cultural significance and views of significance
Economic/Infrastructure
<ul style="list-style-type: none"> • Encourage housing diversity, employment diversity and employment self-sufficiency • Seek to achieve a density of 15 dwellings per gross hectare area (approximately Residential R30) but also provide a variety of densities and housing typologies • Review service levels • Limited need for local POS given extent of Parks and Recreation Reserve • Secure active open space/recreational facilities south of Helena River • Seek road connection to former Bushmead Rifle Range site • Provide pedestrian and cycle access to Helena River and connections to existing networks • Investigate need for increased capacity in local schools • Telecommunication networks and power supply available

<ul style="list-style-type: none"> • Industrial/service commercial expansion • Assess commercial and recreational needs as part of separate studies • Extend Samson Street across the Helena River • Extend Fyfe Street across the Helena River as an emergency vehicle crossing
Constraints
Environmental
<ul style="list-style-type: none"> • Poorly draining soils near the Helena River • Areas of Acid Sulphate Soils • Absence of groundwater data • Erosion near existing watercourses • Contaminated sites • Water scarcity • Flood prone areas • Bushfire hazard and limited means of egress
Social
<ul style="list-style-type: none"> • House sizes disproportionate to number of occupants
Economic / Infrastructure
<ul style="list-style-type: none"> • Provision of sewer required to areas not currently connected • Unavailability of gas network in some areas • New wastewater pump station/s required • 330kV power easement • Cost of waterway management and bridge crossings • Limited additional commercial floor space available • Extent of future urban zone under the MRS not known • Low public transport patronage • Transport infrastructure requirements: <ul style="list-style-type: none"> ○ Upgrade of Roe Highway to a freeway standard; ○ Freight rail realignment; ○ Extension of Farrall Road to Clayton Road ○ Widening of Clayton Road to four lanes around Roe Highway; ○ Upgrade of Helena Valley Road, including a flyover Roe Highway; and ○ Upgrade of other local roads as required

Several of the opportunities/objectives and constraints identified by HVLUS are able to be dealt with at a more detailed levels of planning - for example, investigation of identified heritage places and the preparation of flora/fauna assessments.

However, there are also some higher level strategic planning issues which have direct impact on Draft HVUES and have been incorporated into the plan. These included:

- Securing the Helena River foreshore as Crown reserve;
- Protecting areas of landscape significance;
- Avoiding bushfire prone areas or seeking to mitigate risks if rezoning/development in a bushfire prone areas would deliver strategic benefits;

- Preserving some rural lifestyle lots and places of cultural significance for amenity and intrinsic heritage values;
- Providing a diversity of housing with densities averaging Residential R30;
- Providing district-level recreation facilities;
- Providing strategic road, bridge, cyclist and pedestrian connections in response to traffic and safety requirements;
- Investigating and providing for commercial requirements;
- Implementing appropriate funding/staging mechanisms for key pieces of infrastructure (Development Contribution Plan); and
- Acknowledging that growth rates, staging and commercial needs are market-driven and strategies should remain flexible to respond to these changes, but rigorous enough to provide a clear direction for growth.

Future traffic demand and infrastructure requirements/funding in particular were a major consideration in the preparation of Draft HVUES.

A separate traffic study was commissioned to examine in more detail the traffic demands arising from anticipated population growth and the effect that this could have on the wider road network and funding arrangements.

Helena Valley Traffic Study

HVLUS provided for an estimated total population of 6,157 persons and 2,470 dwellings (1,003 new dwellings and 2,500 additional persons).

Overall	Existing Residential	898	2,239
	Residential Expansion	569	1,419
	Residential Investigation	1,003	2,500
	Total	2,470	6,157

(Source: RPS)

These figures were based on a number of assumptions, including a residential density of 15 dwellings per gross hectare (Residential R30) and limited growth potential under the former ANEF contours, which are assumptions that have since changed.

Nevertheless, these figures provide a useful starting point in gauging the potential traffic and infrastructure impacts of growth.

The Helena Valley Traffic Study (refer to **ATTACHMENT 5**) examined population data from HVLUS and traffic data from Main Roads, the City of Swan and the Shire to test the impacts of seven possible network changes:

- Scenario 1 – no change
- Scenario 2 – Samson Street extension across the Helena River to link Helena Valley Road and Katharine Street/Clayton Street;
- Scenario 3 – New north-south link from Katharine Street to Helena Valley Road;
- Scenario 4 – Farrall Road extension from Great Eastern Highway to Clayton Street;
- Scenario 5 – implementation of Lloyd Street/Bushmead Road intersection;

- Scenario 6 – Scott Street / Great Eastern Highway intersection restricted to left-in, left-out; and
- Scenario 7 – Roe Highway link to northern side of Helena Valley Road.

The traffic impacts of the seven scenarios were projected into the years: 2016, 2021 and 2031 to examine what the network impacts would be and what conditions would trigger the requirement for specific works to be undertaken. These findings will be reviewed and will assist the Shire determine the proper sequencing of development.

The conclusions of the traffic study were advocate a number of improvements and relate these to particular timeframes and scenario triggers, as follows:

Improvement	Trigger
Widening of Helena Valley Road to four lanes, from Military Road to Midland Road	Traffic growth plus development by year 2021; or implementation of Scenarios 3, 6 or 7
Widening of Helena Valley Road to four lanes, from Midland Road to Torquata Boulevard	Traffic growth plus development by year 2016 (any Scenario)
Widening of Helena Valley Road to four lanes, from Torquata Boulevard to Scott Street	Traffic growth plus development by year 2016; unless Scenarios 3, 6 or 7 are implemented
Safety-improved intersection between Great Eastern Highway and Scott Street – right turn from Scott Street diverted into underpass, which then merges into Great Eastern Highway eastbound; Great Eastern Highway westbound to be reduced to one lane in vicinity of intersection	No trigger needed; intersection current hazard.
Samson Street extension across the river to link Clayton Road with Helena Valley Road	No trigger needed; current hazard due to limited emergency vehicle access within study area
North-south link from Katharine Street to Helena Valley Road (partly using road reserve that joins Helena Valley Road just west of Midland Rd)	No trigger needed; current hazard due to limited emergency vehicle access within study area. However, in terms of relieving traffic pressure on the eastern part of Helena Valley Road, the trigger would be traffic growth plus development by year 2016
Visibility improvements on Scott Street intersections	No trigger needed; current hazard
Pedestrian/cycle link along the southern boundary of the study area	Similar triggers as for widening of Helena Valley Road (see above); could slow traffic growth
Pedestrian/cycle link from Samson Street across river to Helena Valley Road	Similar triggers as for widening of Helena Valley Road (see above); could slow traffic growth
Improved bus services frequencies	Similar triggers as for widening of

	Helena Valley Road (see above); could slow traffic growth
Reconstruction of Scott Street bridge – currently made of timber and so is prone to bushfires	Current hazard, no trigger needed

(Source: Cardno)

The traffic study made two primary conclusions; (1) Scenario 3 (north-south link from Katharine Street to Helena Valley Road) was the most efficient in terms of future service provision and cost minimisation and (2) certain improvements were needed as a minimum requirement, including:

- Widening Helena Valley Road to four lanes from Midland Road to Torquata Boulevard;
- Advocate improved safety at the intersection of Great Eastern Highway and Scott Street;
- Extend Samson Street across the Helena River to connect Katharine Street to the Helena Valley Road;
- Provide a north-south link from Katharine Street to Helena Valley Road;
- Provide pedestrian/cycle links to the existing network with access to Helena River; and
- Provide for reconstruction of Scott Street bridge.

However, the conclusions raised questions regarding implementation:

1. How funding for the works should be coordinated;
2. How works should be sequenced so as to be undertaken when required; and
3. In which areas development should occur to suitably arrange land and economically fund infrastructure requirements.

Draft HVUES responds to these complex issues and concludes that the infrastructure upgrades warrant preparation of a detailed infrastructure contribution plan where works/contributions would be triggered by development to ensure that upgrades are commensurate with traffic generation.

In anticipation of such a requirement, the provisions of the WAPC's SPP 3.6 – Development Contributions for Infrastructure were examined.

As explained by SPP 3.6:

The careful planning and coordination of infrastructure is fundamental to the economic and social well-being of any community. New urban development and redevelopment needs to ensure the cost efficient provision of infrastructure and facilities, such as roads, public transport, water supply, sewerage, electricity, gas, telecommunications, drainage, open space, schools, health, community and recreation facilities. All of these utilities and services greatly influence the standard of living, mobility and lifestyle choices of a community.

And

The development contribution plan must have a strategic basis and be linked to the local planning strategy and strategic infrastructure plan and program which identify the infrastructure and facilities required over the next 5-10 years and the cost and revenue sources for the provision of the infrastructure. In this way, those contributing towards the development contribution plan will be assured that the funds will contribute to the local government's longer term planning and programming of infrastructure in an integrated and coordinated way.

Importantly for the Shire:

A development contribution plan does not have effect until it is incorporated into a local planning scheme. As it forms part of the scheme, the Town Planning Regulations 1967, including advertising procedures and the requirement for Ministerial approval, will apply to the making or amendment of a development contribution plan.

A crucial understanding is that the true extent of infrastructure requirements is not fully known until much later in the planning process – e.g. rezoning and structure planning.

Therefore, Draft HVUES provides a very broad estimation of the infrastructure requirements and this report foreshadows the possibility of requiring implementation of funding mechanisms (including, but not limited to, Development Contribution Plans and possibly Special Area Rates) prior to considering rezoning.

It should be noted that Clause 5.7 of SPP 3.6 states:

Local governments are not to impose development contributions beyond the scope of Western Australian Planning Commission policy as conditions or prerequisites for rezoning.

The Development Contribution Plan anticipated by Draft HVUES is not expected to go beyond the scope for such a plan set out in SPP 3.6.

Regarding the currency of the traffic study, it is expected that a review will occur prior to adoption of HVUES to refine recommendations and reflect any modifications resulting from consultation.

As well as providing coordination for infrastructure, both the LPS and HVLUS identified future demand for additional recreation space.

District recreation grounds

Land reserved Parks and Recreation, south of the Helena River, was identified as potentially suitable for additional recreation opportunities and establishing a possible road link between Katharine Street (north) and Helena Valley Road (south).

Figure 4 identifies the area subject of Structure Plan 71 and 74, the location of an existing road (pink dashed line), flood prone areas (blue hatched area) and location considered for district recreation site (circled red).

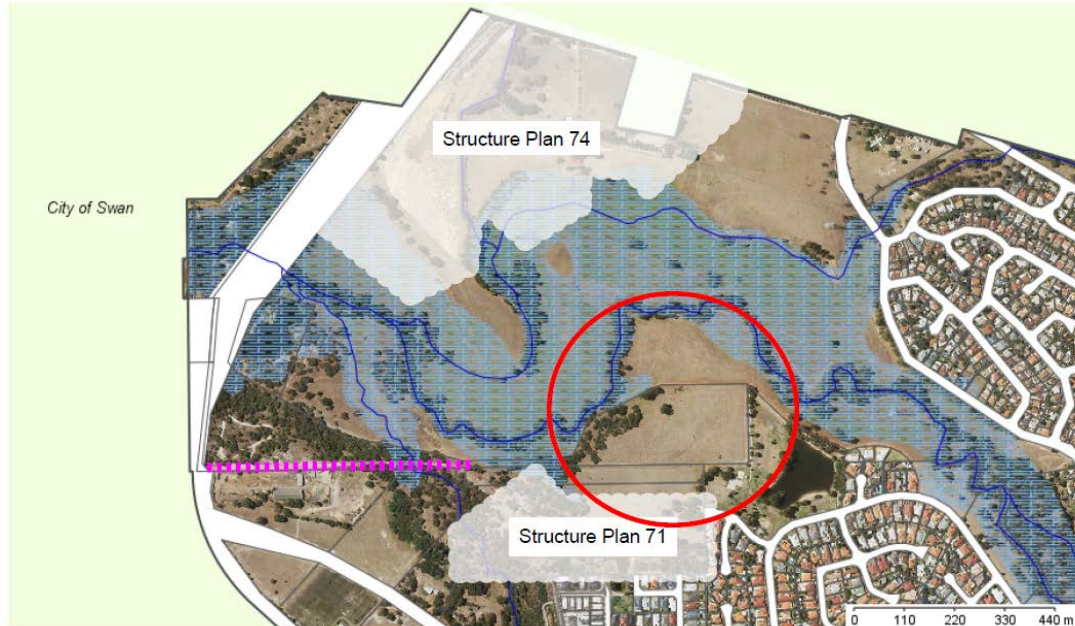


Figure 4

Preliminary discussions with officers from the WAPC in relation to Structure Plan 71 & 74 indicated that the tenure and zoning of land in the locality shown in Figure 4 is potentially suitable for providing district recreation grounds and a road link.

Helena Valley Landowner Aspiration Survey

The Shire undertook landowner aspiration surveys to:

1. gauge the level of interest in the development of individual properties;
2. understand what is liked and disliked about living in Helena Valley; and
3. what aspirations are for the future of Helena Valley.

It was important to understand the development aspirations of landowners. As people invested in the community and the future of the areas in which they live, landowners provide useful empirical and pragmatic understandings of existing issues, opportunities and possible solutions.

A series of targeted workshops were undertaken with landowners in five precincts. Precincts were defined on the basis of common factors e.g. close proximity to one another, similar environmental factors, access to the same road

network etc and also to provide a more manageable and focussed approach to consultation.

Each workshop was held on a weekday evening for one to two hours (depending on the number of attendees) in the Boya Oval Hall. The format of the workshops followed the outline below:

1. Explain the context for Draft HVUES;
2. Describe the purpose of the workshop;
3. Outline the process for completing Draft HVUES;
4. Identify the precinct study area;
5. Distribute Survey 1 (refer to **ATTACHMENT 7**), engage in an open discussion and prioritise issues;
6. Explain the conditions affecting the precinct area (e.g. environmental features, availability of infrastructure etc);
7. Distribute Survey 2 (refer to **ATTACHMENT 8**), discuss and prioritise issues; and
8. Close with a summary of the session and outline how the feedback will be used.

Opportunity was provided for landowners to discuss various issues and engage with the various aspirations of others. Results from the workshops are provided in **ATTACHMENT 9**.

At the conclusion of the workshops, the aspirations were examined in light of the growth strategies from technical work previously undertaken to inform specific strategies within each precinct which, in turn, would define the overarching strategy for the study area.

Reconciliation of district-level and precinct-level strategies and local aspirations was required to provide a balanced strategic direction for growth in Helena Valley.

In summary, there was a high level of interest in subdivision of properties between the two existing residential areas, with a greater interest in preserving existing lot sizes and amenity on the periphery.

Detailed strategies within each precinct are contained in **ATTACHMENT 6** and provide the rationale for growth in those locations. The precinct strategies and the broader, district-level strategies taken from the technical work have been formulated into a plan synthesising all work done to date.

Despite the detail into which these studies have gone, it is important to reiterate that until such time as public advertising has been undertaken, Draft HVUES cannot be finalised as a strategy of the Shire.

Advertising

Should Council resolve to adopt Draft HVUES for the purposes of advertising, the documents will be compiled into a presentation format (including concise explanatory text) and widely advertised for public comment by sending letters to

affected landowners and service providers, publication on the Shire's website and advertised in newspapers.

Officer time will be made available to consult with ratepayer and business groups and for drop-in enquiries at the Shire's Administration Centre.

At the conclusion of the advertising period, comments will be compiled into a schedule of submissions and amendments made to the plans/strategies as required. Further technical studies are wholly expected prior to finalisation – including a review of the traffic modelling undertaken previously.

Council will be invited to adopt the final plan mid-2017 pursuant to the Corporate Business Plan. If given final approval by Council, HVUES will provide strategic planning guidance for the future growth of Helena Valley until 2050.

Summary

Draft HVUES sets out a plan for growth in Helena Valley in response to Perth's growing population. It is the culmination of state and local strategic objectives, landowner aspirations and a number of technical studies. The scope of the plan has been refined by a highly dynamic planning framework and reform agenda. After having considered the content to this plan, it is recommended Council adopt Draft HVUES for the purpose seeking public input. At the conclusion of advertising, comments will be collated and used to refine the draft which will be presented back to Council in a format for final approval within the 17/18 financial year. If given final approval by Council, HVUES will act as a planning strategy for growth in Helena Valley and used in conjunction with and to augment a number of existing planning controls to manage growth.

VOTING REQUIREMENT

Simple majority

COUNCIL DECISION RECOMMENDATION	C6.08.16
<i>Moved by: Cr Brennan</i>	<i>Seconded by: Cr Bertola</i>

That Council adopts the Draft Helena Valley Urban Expansion Strategy for the purpose of advertising.

CARRIED 11/0

For: Cr Lavell, Cr Bertola, Cr Martin, Cr Clark, Cr Fisher, Cr Brennan, Cr Perks, Cr Fox, Cr Cook, Cr Jeans, Cr Cuccaro.

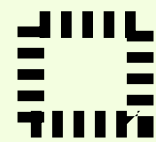
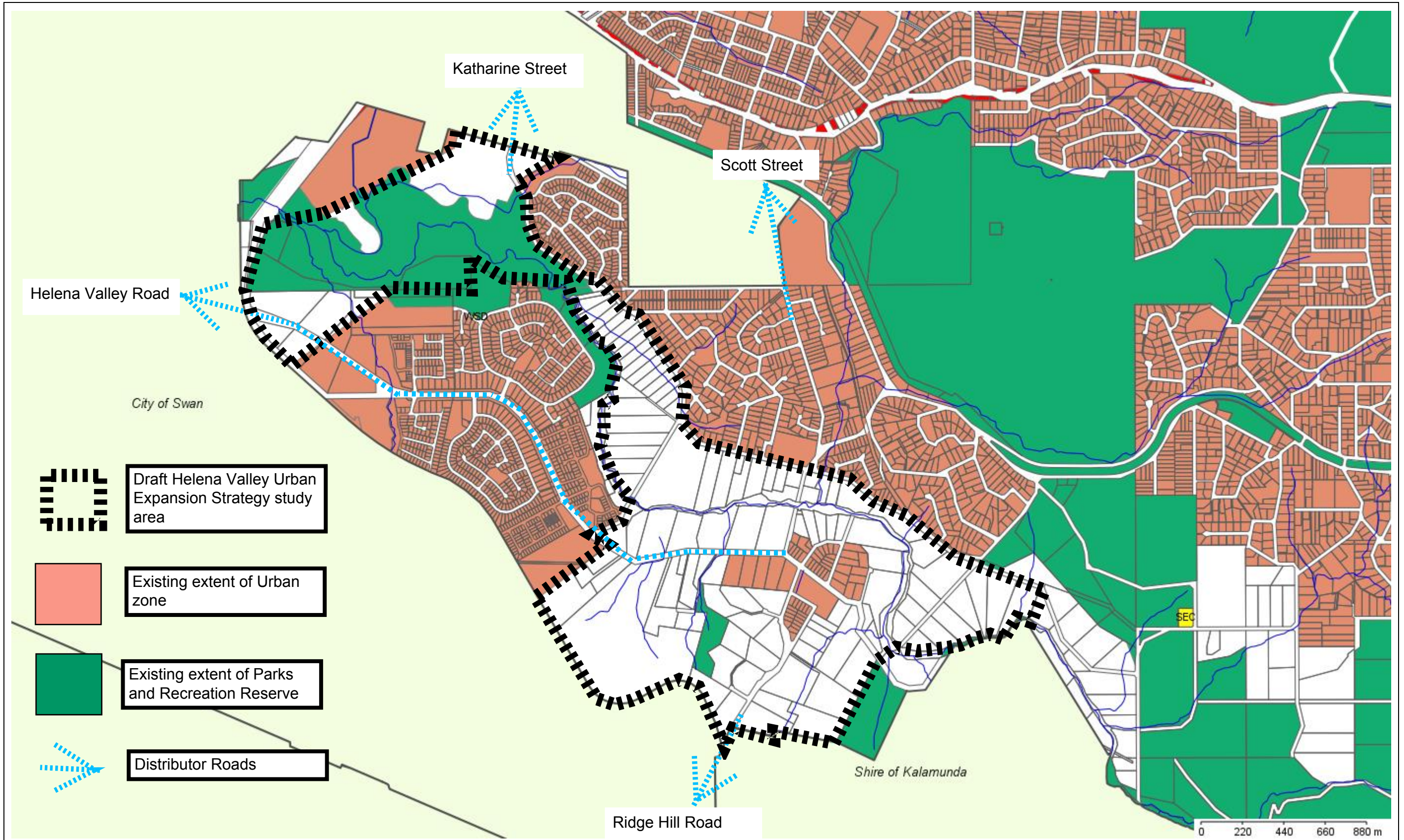
Against: Nil

Next Report

Attachment 3

Report 10.2

7 Pages



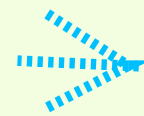
Draft Helena Valley Urban Expansion Strategy study area



Existing extent of Urban zone



Existing extent of Parks and Recreation Reserve

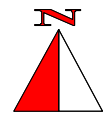


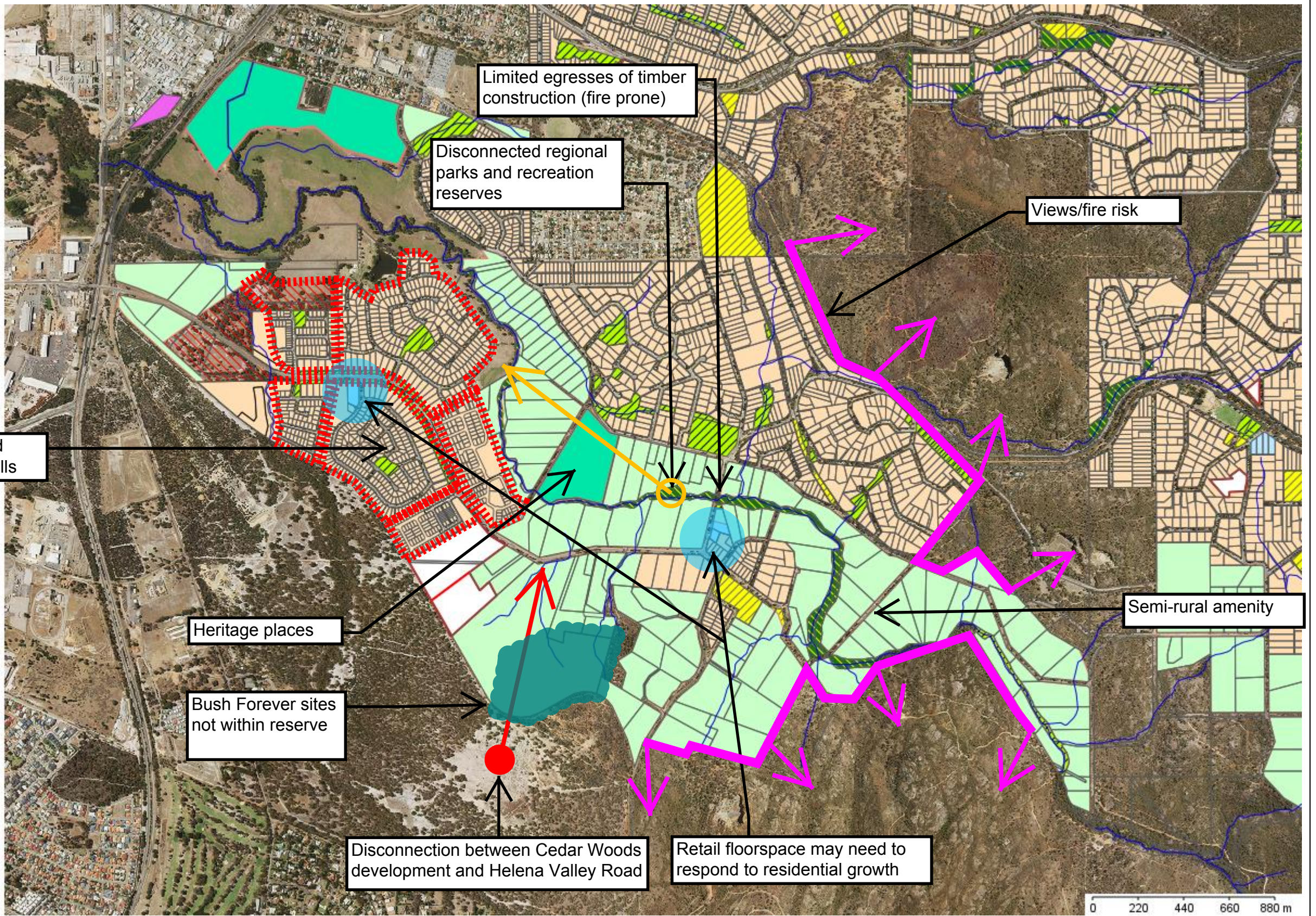
Distributor Roads



Draft Helena Valley Urban Expansion Study Area

SCALE
1:20000





Disconnected residential cells

Limited egresses of timber construction (fire prone)

Disconnected regional parks and recreation reserves

Views/fire risk

Heritage places

Semi-rural amenity

Bush Forever sites not within reserve

Disconnection between Cedar Woods development and Helena Valley Road

Retail floorspace may need to respond to residential growth

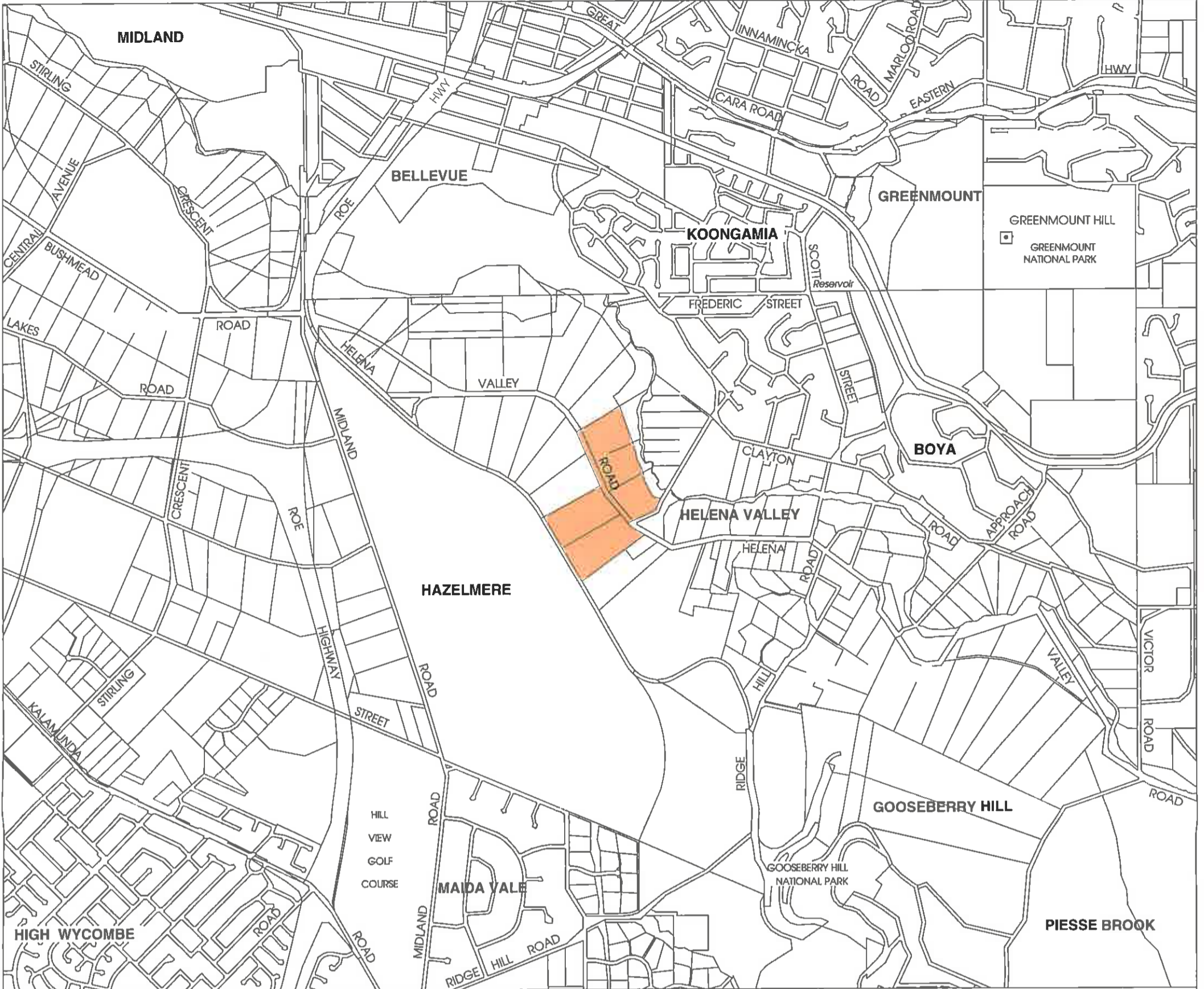
0 220 440 660 880 m



Issues Plan

SCALE 1:20000





Signed for and on behalf of the
Western Australian Planning Commission

 Excluded from rural zone
and included in urban zone.

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

Metropolitan Region Scheme
Amendment No. 1160/41
Map number 16/199m
As Modified

Witness _____

Date _____

Approved _____
Governor

Date _____



Project manager: A. Muscara
Draftsperson: T. Lynch
Examined: _____
Revised: _____
Date: MRPC/255 9 June 2009

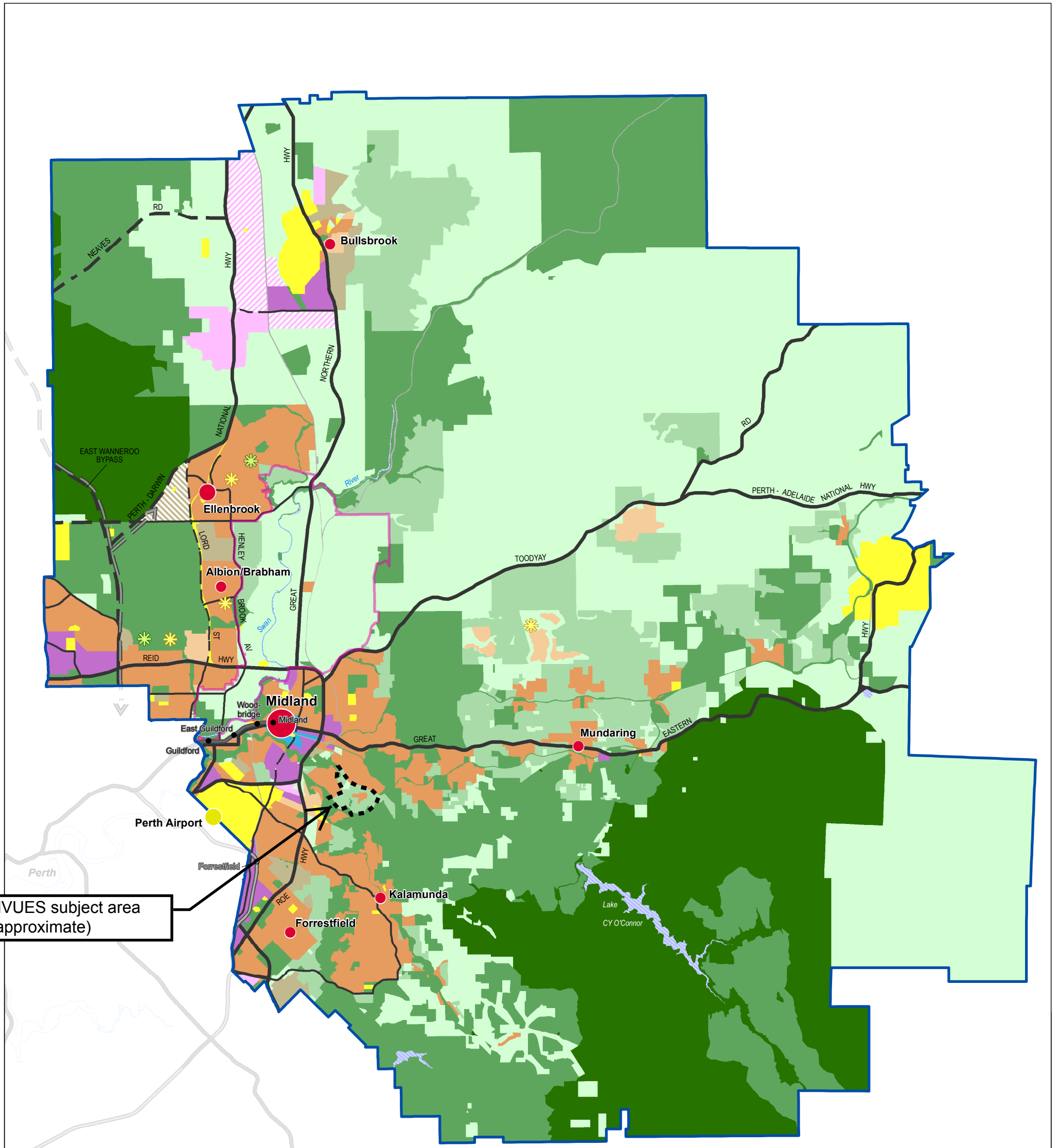


Scale 1:25000

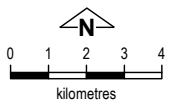
Plan number
3.2273/1

2560

File number: 809/2/27/10
Plan reference: _____
Metropolitan Region Scheme 1:25000 sheet 16
Perth 1:2000 sheets 23.28, 23.29, 24.28
detail plan 3.2274/1



HVUES subject area (approximate)



Produced by:
GeoSpatial Planning Support
Department of Planning, WA
On behalf of:
Western Australian Planning Commission
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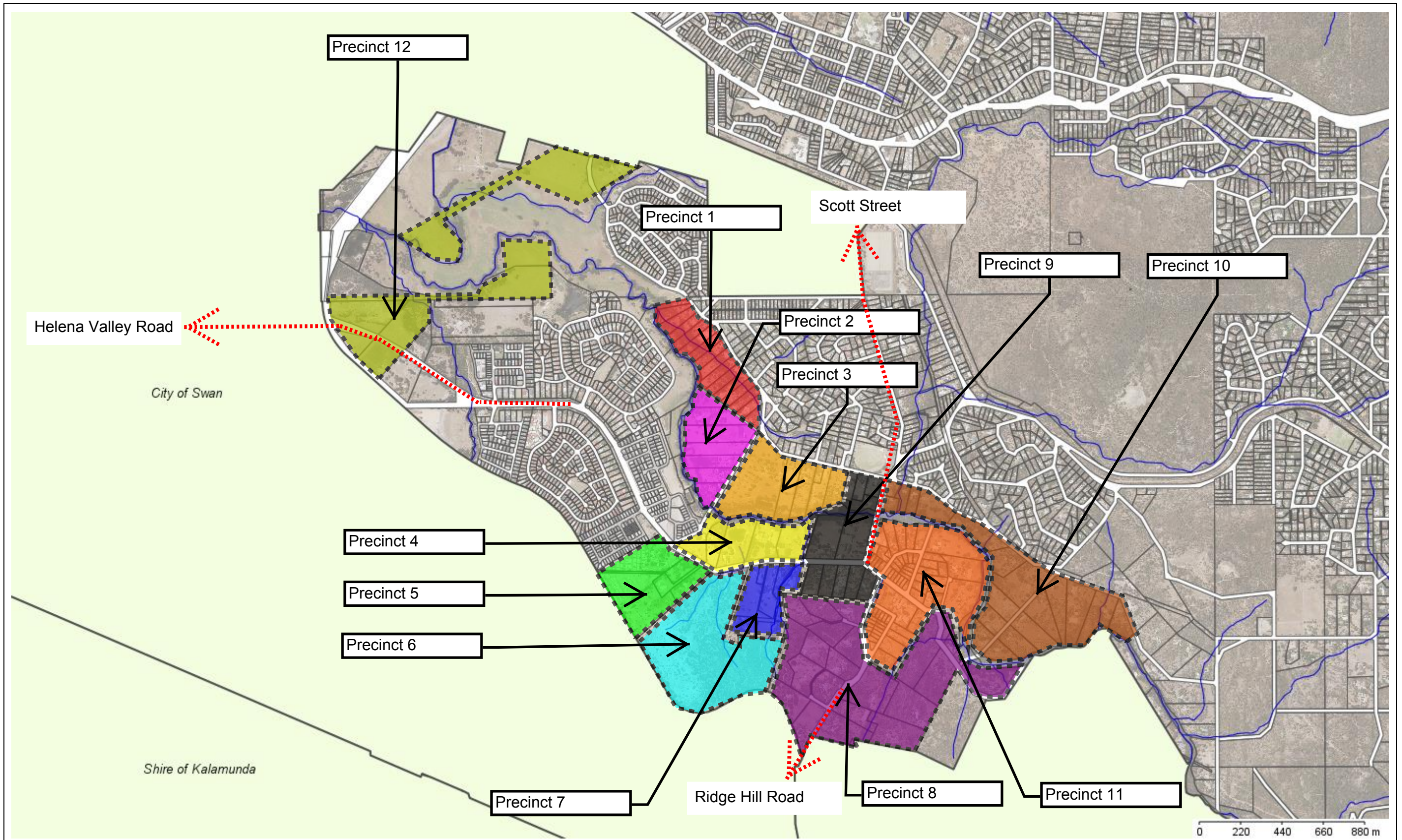
\\Nts-perf\magsprojects\State_MultiRegion\StructurePlans_SubRegional_NW_NE_SMP\WorkingAreas\NorthEast\SubRegionalStructurePlan_NESRSP1\NESRSP_Plan1_ThePlanningFramework_A3.mxd

Base information supplied by:
Western Australian Land Information Authority
LI 646-2014-3

Legend

- | | | | |
|-----------------------------------|--------------------------|---|------------------------|
| Sub-region Boundary | Industrial | Public Purposes - Proposed | Activity Centres |
| Swan Valley Planning Act Boundary | Industrial Expansion | Proposed Open Space - Sport | Strategic Metropolitan |
| Framework Land Uses | Industrial Investigation | Regional Roads (MRS) | Secondary |
| Railway | Rural Residential | Existing | District |
| Urban | Rural | Proposed | Specialised |
| Urban Deferred | State Forest | Rail | |
| Urban Expansion | Open Space | Passenger Rail/Station - Existing | |
| Urban Investigation | Waterway | Passenger Rail/Station - Proposed | |
| City Centre | Public Purposes | Passenger Rail - Potential (Subject to further investigation) | |

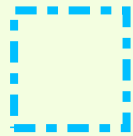
NOTE: This is a conceptual representation of landuse within the sub-region. Further planning processes will need to be undertaken, including amendments to statutory mechanisms and detailed planning.



Precincts

SCALE
1:20000





Study area

Possible connection

Incorporate a Development Contribution Plan into Local Planning Scheme No. 4 to coordinate infrastructure provision as development occurs. Investigate requirement for Special Area Rate.

Upgrade at intersection of Scott Street and Great Eastern Highway

District recreation grounds

Upgrade intersection

City of Swan

Widen Helena Valley Road to four lanes

Construction of Samson Street crossing Helena River

Sewer pump station

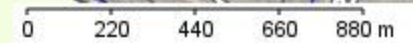
Utility extensions

Shire of Kalamunda

Upgrade Scott Street bridge

Sewer pump station

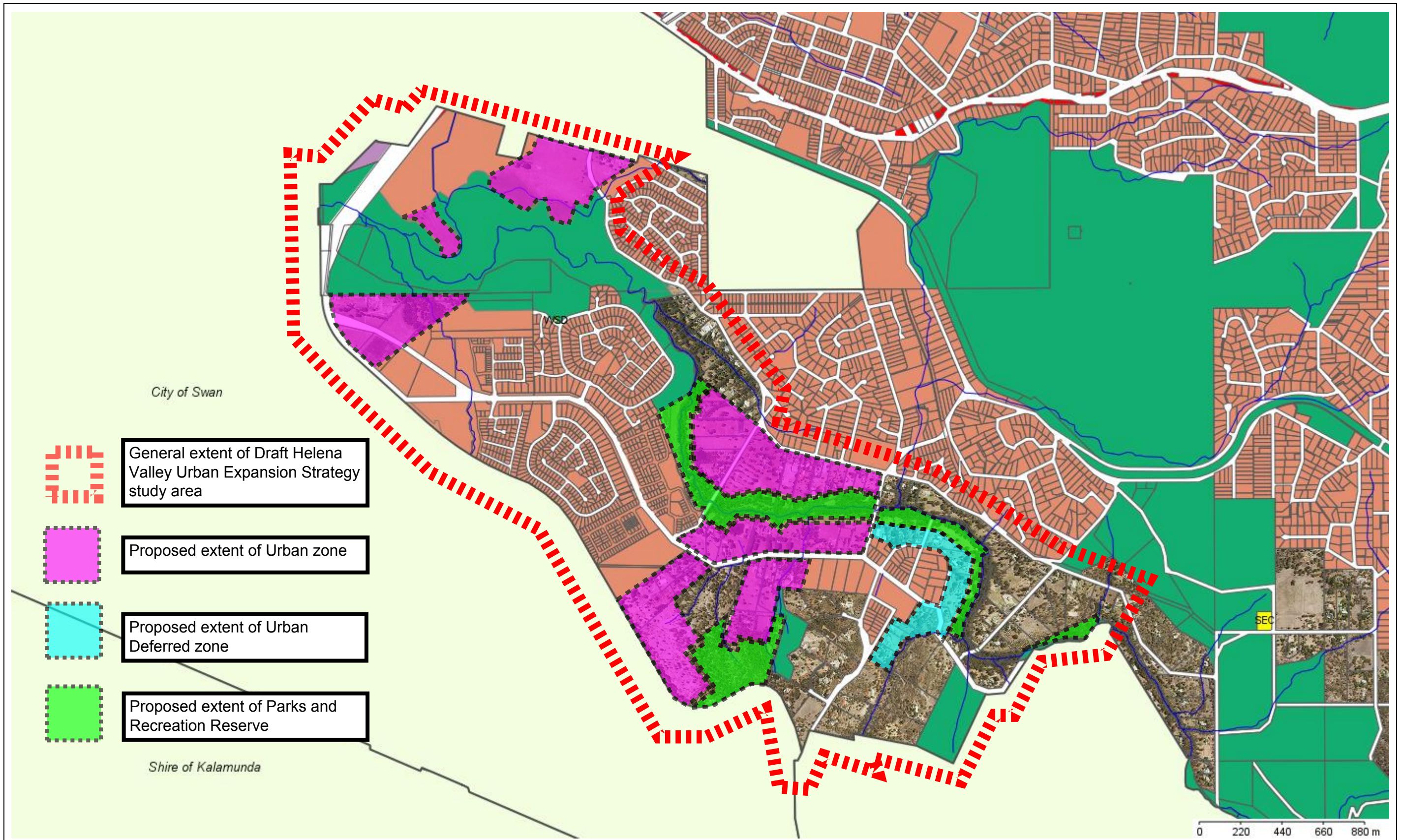
Emergency access from Fyfe Street to Helena Valley Road



Strategic Infrastructure Plan

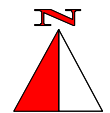
SCALE 1:20000





Draft Helena Valley Urban Expansion Strategy

SCALE
1:20000



Attachment 4

Report 10.2

91 Pages

Attachment 5

Report 10.2

41 Pages

Attachment 6

Report 10.2

5 Pages

Precinct Strategies

Precinct No.	Strategy
1	<p>Suggest not supporting rezoning for further subdivision potential under the Metropolitan Region Scheme or Local Planning Scheme No. 4 to protect rural amenity and avoid development on flood prone land.</p>
2	<p>Suggest investigating rezoning to Urban under the Metropolitan Region Scheme and Residential R30 under Local Planning Scheme No. 4 to accommodate population growth, connect services on Samson Street and Katharine Street and contribute towards district infrastructure costs.</p> <p>R30 is the benchmark dwelling density for new urban development set by the state government. Medium density development better offsets infrastructure costs than lower density development and can provide a more suitable interface with land required as reserve around the Helena River foreshore.</p> <p>In addition to standard planning requirements, it is suggested rezoning, structure planning, subdivision and development recognise existing agricultural uses of land, not result in undesirable fencing along Samson Street, integrate with adjoining rezoning, structure planning, subdivision and development and limit direct vehicular access from properties onto Samson Street. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore.</p>
3	<p>Suggest investigation of rezoning to Urban under the Metropolitan Region Scheme and Residential R40 under Local Planning Scheme No. 4 to accommodate population growth, connect services on Samson Street and Katharine Street and contribute towards district infrastructure costs.</p> <p>R40 lots are more suited to development on narrower parent lots than lower densities, provide for diversity in housing stock and allow the urban form to gradually transition between proposed R30 in the west to R60 in the east. Medium density lots are generally better able to fund infrastructure costs than lower densities and can provide a more suitable interface with land required as reserve around the Helena River foreshore and incentivise protection of heritage places (including their curtilage). Slightly higher than average densities approximately average the overall density within the Draft HVUES study area to R30 which is the benchmark density required for urban development.</p> <p>In addition to standard planning requirements, it is suggested rezoning, structure planning, subdivision and development should seek to protect views from public places over the Helena River (e.g. through view corridors and building design), retain (as much as practicable) the natural topography, limit direct vehicular access from houses onto Katharine Street and Samson Street, not result in undesirable fencing along Samson Street or Katharine Street, protect/emphasise heritage elements of Clayton Farm and integrate with adjoining rezoning, structure planning, subdivision and development. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore.</p>

4	<p>Suggest investigation of rezoning to Urban under the Metropolitan Region Scheme and Residential R40 under Local Planning Scheme No. 4 to accommodate population growth, connect services on Helena Valley Road and contribute towards district infrastructure costs.</p> <p>R40 lots provide for a diverse housing stock and allow for densities to gradually transition from existing R30 to the west to proposed R60 to the east. Medium density lots are generally better able to fund infrastructure costs than lower density development and can provide a more suitable interface with land required as reserve around the Helena River foreshore. Slightly higher than average densities would approximately average the overall density within the Draft HVUES study area to R30 which is the benchmark density required for urban development.</p> <p>In addition to standard planning requirements, it is suggested rezoning, structure planning, subdivision and development should seek to design around existing mature trees, retain (as much as practicable) the natural topography, limit direct vehicular access from houses onto Helena Valley Road, not result in undesirable fencing along Helena Valley Road and Samson Street and integrate with adjoining rezoning, structure planning, subdivision and development. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore.</p>
5	<p>Suggest investigation of rezoning to Urban under the Metropolitan Region Scheme and Special Use (Park Home Park) under Local Planning Scheme No. 4 to accommodate population growth for aged persons, connect services on Helena Valley Road and contribute towards district infrastructure costs.</p> <p>Extension of the existing Park Home Park is a logical ‘rounding off’ of the existing Park Home Parks and would provide for a diversity of dwelling types. Park Home Park design is well suited to protecting existing stands of trees. The amalgamation of all properties within the precinct is likely if rezoning is approved. This can be beneficial for future subdivision in that it provides a single parcel of land with a single owner rather than fragmented ownership and tenure boundaries. The development of and interface with heritage trails should be investigated as part of future rezoning and development.</p> <p>In addition to standard planning requirements, it is suggested rezoning and development should seek to design around existing trees, retain (as much as practicable) the natural topography, limit direct vehicular access from houses onto Helena Valley Road and integrate with adjoining rezoning, structure planning, subdivision and development.</p>
6	<p>Suggest investigating rezoning of largely cleared portions to Urban under the Metropolitan Region Scheme and Residential R60 under Local Planning Scheme No. 4 to accommodate population growth, incentivise service extensions along Helena Valley Road to the Cedar Woods development at the former Bushmead Rifle Range in the City of Swan and contribute towards district infrastructure costs.</p> <p>Densities may also be suitable for providing an appropriate interface with the Bush Forever vegetation in the property’s eastern section which is</p>

	<p>bushfire prone. Locating medium/high density in a relatively cleared and unobtrusive location near to Midland town centre fulfils objectives to minimise impacts on amenity and provide for growth near to activity centres. The development of and interface with heritage trails should be investigated as part of future rezoning and development.</p> <p>In addition to standard planning requirements, it is suggested rezoning, structure planning, subdivision and development should respond to fire risk, seek to design around existing trees, retain (as much as practicable) the natural topography, limit direct vehicular access from houses onto Helena Valley Road, not result in undesirable fencing along Helena Valley Road or distributor roads, include multiple dwelling provisions in Local Planning Scheme No. 4 and integrate with adjoining rezoning, structure planning, subdivision and development.</p> <p>Ceding of a Parks and Recreation reservation into public ownership the vegetation identified as Bush Forever and the retention of a Rural Residential 2 zone for the balance should be anticipated.</p>
7	<p>Suggest investigating rezoning to Urban under the Metropolitan Region Scheme and Residential R10 under Local Planning Scheme No. 4 to accommodate population growth, connect services on Helena Valley Road, provide for lifestyle diversity and contribute towards district infrastructure costs.</p> <p>R10 lots could provide for a diverse housing stock within the study area and may provide for a lot configuration which releases currently land-locked parcels. Larger lot sizes may also be suitable to address power easements and infrastructure transecting the subject properties and bushfire risk mitigation to/from the Bush Forever sites in the upland areas.</p> <p>In addition to standard planning requirements, it is suggested that rezoning, structure planning, subdivision and development should respond to fire risk, seek to protect existing trees, retain (as much as practicable) the natural topography, limit direct vehicular access from houses onto Helena Valley Road, not result in undesirable fencing along Helena Valley Road and integrate with adjoining rezoning, structure planning, subdivision and development.</p> <p>Ceding of Parks and Recreation reservation for the vegetation identified as Bush Forever should be anticipated.</p>
8	<p>Suggest not supporting rezoning for further subdivision potential under the Metropolitan Region Scheme or Local Planning Scheme No. 4 so as to protect local amenity, protect significant vegetation and avoid locating the growing population in fire prone areas.</p>
9	<p>Suggest investigating rezoning to Urban under the Metropolitan Region Scheme and Development under Local Planning Scheme No. 4 to accommodate population growth, connect services on Helena Valley Road, Katharine Street and Scott Street, provide for a variety of residential densities, commercial floor space and civic uses to link Boya Oval to the Scott Street shops and contribute towards district infrastructure costs.</p>

	<p>Medium/higher density lots provide for lifestyle diversity, are generally better able to fund infrastructure costs than lower density development and can offset land ceded to reserve the Helena River foreshore within regional park. Medium/higher density development in lower lying areas can reduce visual prominence in the wider landscape and allow for a higher quality of urban design at the focal point of Helena Valley Road and Scott Street than otherwise provided by lower densities.</p> <p>In addition to standard planning requirements, it is suggested rezoning, structure planning, subdivision and development should ensure a high standard of urban design, plan around existing trees, retain (as much as practicable) the natural topography, limit direct vehicular access onto distributor roads, not result in undesirable fencing along distributor roads, investigate multiple dwelling provisions in Local Planning Scheme No. 4 and integrate with adjoining rezoning, structure planning subdivision and development. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore.</p>
10	<p>Suggest not supporting rezoning for further residential subdivision potential under the Metropolitan Region Scheme to protect semi-rural amenity. However, investigate a Special Use zone under Local Planning Scheme No. 4 for the former CSIRO building for reuse as accommodation or similar and a higher Rural Residential zone for selected properties.</p> <p>In addition to standard planning requirements, rezoning, structure planning, subdivision and development should respond to fire risk, seek to protect existing trees, retain (as much as practicable) the natural topography and integrate with adjoining rezoning, structure planning, subdivision and development. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore and vegetation identified as Bush Forever.</p>
11	<p>Suggest investigating rezoning to Urban Deferred under the Metropolitan Region Scheme those properties currently zoned Rural and Development under Local Planning Scheme No. 4 those properties currently zoned Residential to accommodate population growth, connect services on Helena Valley Road, Scott Street and Ridge Hill Road, provide for a variety of residential densities, commercial floor space, civic uses, extension of educational facilities and contribute towards district infrastructure costs.</p> <p>Development in this precinct contains properties with established houses currently zoned Urban under the Metropolitan Region Scheme and Residential in Local Planning Scheme No. 4. Due to these factors, rezoning, structure planning, subdivision and development require coordination between multiple landowners and possible upgrades to existing services. Due to this complexity, development is likely to follow rezoning and subdivision in the balance of the study area. It is therefore important for growth scenarios within this precinct to remain flexible in response to the various demands generated by surrounding growth e.g. retail, civic and educational needs.</p> <p>It is suggested that rezoning and the lifting of the Urban Deferred zone of the land should not occur until such time as a comprehensive Precinct</p>

	<p>Plan has been prepared over this precinct area. The Precinct Plan should, in addition to standard planning requirements, respond to fire risk, seek to retain (as much as practicable) the natural topography, provide for a high quality of urban design, investigate; infrastructure provision, staging of development, tenure, commercial, educational and civic demands in the allocation of land uses and floor space, seek to understand landowner aspirations and integrate with adjoining rezoning, structure planning, subdivision and development. This may require a separate study to be undertaken by the Shire.</p> <p>The rationale for this strategy is similar to the others - medium/higher density lots and dwellings are generally better able to fund infrastructure costs than lower density development and can offset land ceded to reserve the Helena River foreshore within regional park. Medium/higher density development in the lower lying areas of Helena Valley can reduce visual prominence in the wider landscape and encourages a higher quality of urban design at the focal point of Helena Valley Road and Scott Street. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore.</p>
12	<p>Suggest investigating rezoning to Urban under the Metropolitan Region Scheme and subsequently Development zone under Local Planning Scheme No. 4 to accommodate population growth, connect services on Helena Valley Road, provide for a variety of; residential densities, commercial floor space, district recreation grounds and contribute towards district infrastructure costs.</p> <p>It is desirable to locate commercial land uses at the western end of Helena Valley Road to provide a transition between the residential land uses to the east and industrial land uses to the west in Hazelmere and mitigate noise impacts from aircraft, traffic and railways and provide an attractive entry to Helena Valley, pursuant to the Shire's Local Planning Strategy.</p> <p>In addition to standard planning requirements, it is suggested that rezoning, structure planning, subdivision and development should seek to design around existing trees, retain (as much as practicable) the natural topography, protect significant wetlands and riparian areas, seek to reflect the latest version of the ANEF in LPS4, cede land for the widening of Helena Valley Road and integrate with adjoining rezoning, structure planning, subdivision and development. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore.</p>

Attachment 7

Report 10.2

1 Page

TASK 1: What do you like about living in Helena Valley and what could be improved?

SOCIAL

ENVIRONMENTAL

ECONOMIC

OTHER

Attachment 8

Report 10.2

1 Page

TASK 2: Property Aspirations

Attachment 9

Report 10.2

2 Pages

PRECINCT 1 - Aspirations for Helena Valley

- Support bulky goods retail immediately east of Roe Highway;
- District-level playing fields should try to reduce water use where possible;
- Katharine Street invites dangerous driving – improvements should be made;
- As population increases, the Scott Street/Helena Valley Road intersection will become more dangerous;
- Like the small-scale and community aspects of shops;
- Schools should be located in scenic surrounds/

PRECINCT 1 - Aspirations for properties

- Preservation of rural-lifestyle lot
- Renovation, environmental protection and drainage management

PRECINCT 2 & 3 - Views on Helena Valley

1. A convenient location with a rural lifestyle (7/18)
2. Allow for subdivision to secure financial futures (3/18)
3. Provide housing options for the next generation (2/18)
4. Rates are high (2/18)
5. Support rural business (1/18)
6. Birdlife (1.5/18)
7. Allow for the keeping of stock (1/18)
8. Quietness (0.5/18)

Other views: maintain low crime rate, enjoy close proximity to Boya Oval, like things to remain as is, large properties, low noise and traffic, fox control a problem.

PRECINCT 2 & 3 - Aspirations for properties

- Continue to operate small business/cottage industry/hobby farm
- Subdivision
- Keep “as-is”

PRECINCT 3 & 4 - Views on Helena Valley

1. Dedicated bike lane needed on Helena Valley Road / Ridge Hill Road with focus on safety (7/39)
2. Link onto Roe Highway needed (5/39)
3. Expand communication infrastructure (4/39)
4. More sporting facilities with focus on youth e.g. skate park (4/39)
5. More street lighting needed (3/39)
6. Self-sufficient lifestyle focussed on nature (3/39)
7. Privacy and quietness (2/39)
8. Being close to retail, education and medical facilities (2/39)
9. Limited subdivision (2/39)
10. Reserves protection (2/39)
11. Verge maintenance needed on Ridge Hill Road (2/39)
12. More public transport needed (1/39)
13. Watercourse protection needed (1/39)
14. Helena Valley/Scott Street intersection dangerous (1/39)

Other views: enjoy interacting with neighbours, close to Midland/city/train station/airport, views, not having to pay higher rates if zones change, provide affordable housing, biodiversity and wildlife relocation and safety, fire risk, quietness, stopping bays needed for buses.

PRECINCT 3 & 4 - Aspirations for properties

- Conservative & large scale subdivision
- Provision of recreation space
- Develop shops
- Develop over 55s units

PRECINCT 5 - Views on Helena Valley

1. Subdivisions in balance of Helena Valley should provide necessary infrastructure and services (10/45)
2. Rural lifestyle close to amenities (8/45)
3. Dangerous Clayton Road (6/45)
4. Problems with inappropriate businesses operating from private properties (5/45)
5. Provide safe recreation spaces for horse riding, walking and cycling (3/45)
6. Helena River as a bush corridor, important wetland and biodiverse place (3/45)
7. Quiet lifestyle (2/45)
8. Views of surrounds (2/45)
9. Poor quality public transport (1/45)
10. Presence of wildlife (1/45)
11. Large private properties (1/45)
12. Hooning is a problem (1/45)
13. Too much traffic (1/45)
14. Rates are too high (1/45)

Other views: like small community feel, dislike high density dwellings – aesthetically and due to heat-island effect, small scale of shops supported, available public transport, good arterial roads, property values should not decrease, large blocks are hard to maintain, subdivision helps next generation, weed clearing needed to stop invasion, improve fire safety, National Park and private property biodiversity beneficial, clean air, local schools convenient, neighbours are friendly, trail bikes a problem, environment is good for mental health, prevalence of crime, retain existing density, upgrade telecommunications infrastructure, some neglected properties, verge maintenance required, development is an opportunity for planting/revegetation.

PRECINCT 5 - Aspirations for properties

- Leave 'as-is'
- Small rural subdivision



Appendix 6



UNCONFIRMED MINUTES

ORDINARY COUNCIL MEETING

11 JULY 2017



**UNCONFIRMED MINUTES
ORDINARY COUNCIL MEETING
11 JULY 2017**

ATTENTION/DISCLAIMER

These minutes are subject to confirmation.

The purpose of this Council Meeting is to discuss and, where possible, make resolutions about items appearing on the agenda. Whilst Council has the power to resolve such items and may in fact appear to have done so at the meeting, no person should rely on or act on the basis of such decision or on any advice or information provided by an Elected Member or employee, or on the content of any discussion occurring during the course of the Meeting. Persons should be aware that regulation 10 of the *Local Government (Administration) Regulations 1996* establishes procedures to revoke or change a Council decision. No person should rely on the decisions made by Council until formal written advice of the Council decision is received by that person.

The Shire of Mundaring expressly disclaims liability for any loss or damage suffered by any person as a result of relying on or acting on the basis of any resolution of Council, or any advice or information provided by an Elected Member or employee, or the content of any discussion occurring during the course of the Council Meeting.

LEGEND

To assist the reader, the following explains the method of referencing used in this document:

Item	Example	Description
Page Numbers	C1 JULY 2016 (C2, C3, C4 etc)	Sequential page numbering of Council Agenda or Minutes for July 2017
Report Numbers	10.1 (10.2, 10.3 etc) 11.1 (11.2, 11.3 etc)	Sequential numbering of reports under the heading "10.0 Reports of Committees" or "11.0 Reports of Employees"
Council Decision Reference	C7.07.17	Council Decision number 7 from Council meeting July 2017

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10.0 REPORTS OF EMPLOYEES

10.1 Adoption of Shire of Mundaring Foothills Growth Strategy

File Code	PS.STG 02
Location / Address	Helena Valley and Bellevue
Landowner	Various
Applicant	N/A
Zoning	LPS4 – Various MRS – Rural and Urban
Area	300 hectares
Use Class	n/a
Ward	South
Author	Christopher Jennings, Senior Strategic Planning Officer
Senior Employee	Mark Luzi, Director Statutory Services
Disclosure of Any Interest	Nil

SUMMARY

It is recommended Council adopt the Helena Valley Urban Expansion Strategy ('the Strategy') in **ATTACHMENT 1** to manage future growth in Helena Valley and Bellevue in a coordinated and sustainable way.

The draft was advertised for public comment for 109 days, during which time a total of 69 submissions were received from public agencies, residents and interest groups. The draft has been modified where appropriate to respond to submissions received.

The final Strategy is considered a fair and reasonable response to local and state planning requirements, stakeholder aspirations/views, uncertainties within the state's overall growth agenda, existing growth pressures and pragmatic servicing/maintenance requirements.

It is proposed to change the name of the Strategy to "Shire of Mundaring Foothills Growth Strategy" as this better reflects the objectives and scope of the strategy.

Should Council resolve to adopt the Strategy, it will operate as a guide to deliver growth in a manner which is representative, coordinated and sustainable.

BACKGROUND

<i>Acronyms and Abbreviations</i>	
Acronym/Abbreviation	Definition
LPS	Local Planning Strategy

LPS4	Local Planning Scheme
MRS	Metropolitan Region Scheme
The Draft Strategy	The Draft Helena Valley Urban Expansion Strategy
The Strategy	The Shire of Mundaring Foothills Growth Strategy
WAPC	Western Australian Planning Commission

Attachments	
Number	Description
1	The Shire of Mundaring Foothills Growth Strategy

Perth is experiencing population growth pressures. The WAPC's Draft North North-East Sub-Regional Planning Framework estimates (conservatively) that Mundaring's population will reach 56, 927 people by 2050 requiring the construction of approximately 8,073 new dwellings.

Without proper planning, population growth can lead to uncoordinated development resulting in poor urban design outcomes, congestion, environmental degradation and amenity loss.

In anticipation of population growth, the Shire's LPS identified Helena Valley and Bellevue as future growth areas in the Shire due to their proximity to Midland strategic metropolitan centre, availability of infrastructure and relatively few development constraints. As stated by the LPS:

Land between the area rezoned to Urban in MRS Amendment 1160/41 and the smaller residential area to the east, around the intersection of Helena Valley and Ridge Hills Roads, is identified in the Foothills Structure Plan as Landscape Protection, effectively a rural buffer which may include rural residential subdivision and use (see section 2.2.3.2 above). However, it is now appropriate to review this position, in light of the now recognised need to promote a more compact form of urban development at the metropolitan level. Parts of this landscape buffer may be able to accommodate more development (residential or rural residential), while still retaining some buffer to protect landscape and environmental values.

Accordingly, this Strategy recommends that a separate study investigate the potential for closer subdivision, either residential or special residential (these would require amendment of the MRS) or smaller-lot rural residential for land north and south of Helena Valley Road, between the two existing areas of MRS Urban zoned land, but having strong regard for landscape protection, floodplain management and protection of watercourses traversing the area.

At its meeting of 9 August 2016, Council resolved to adopt the Draft Strategy, made pursuant to the LPS, for advertising.

The Draft Strategy aimed to explain the:

- history, drivers and rationale for urban growth in the Strategy area;
- numerous and diverse opinions/recommendations of stakeholders;
- technical studies used/needed to inform the Strategy; and
- Growth scenarios proposed in each of the precincts.

69 submissions were received (refer **ATTACHMENT 2** and **Confidential ATTACHMENT 3**), uncovering a diversity of opinions and recommendations from the public, organisations and government agencies. Details about community engagement methodologies and outcomes are contained under External Consultation.

Feedback has been used to modify the Strategy so that it represents a fair and reasonable balance between:

- planning requirements, including uncertainties around the state's strategic growth framework;
- diverse community and public agency aspirations and expectations;
- demand to plan for and accommodate Perth's growing population within a more sustainable urban form;
- protection of important natural environments and cultural features which coincide with spaces for recreation;
- Bushfire risk;
- servicing requirements; and
- provision of commercial development and infrastructure proportionate to the growth anticipated.

STATUTORY / LEGAL IMPLICATIONS

Completing a strategy in Helena Valley fulfils a strategy requirement specified within the Shire's Local Planning Strategy. While the strategy is not statutory, it will guide the Shire's approach in making and informing future statutory decisions such as rezoning proposals in the locality.

POLICY IMPLICATIONS

If adopted, the Strategy will express Council's preferred growth pattern, form and method within the Strategy area.

It will be used to guide future Council decision-making relative to MRS and LPS Amendments, structure plans, subdivision and development - each of which have separate, legislated processes for public engagement, assessment and decision-making.

The Strategy would not 'bind' Council to particular decisions, but instead provide a robust strategic planning framework to inform decisions.

FINANCIAL IMPLICATIONS

The final strategy contains a number of additional strategic investigations not currently budgeted for within the Shire's Corporate Business Plan or Long Term

Financial Plan. It is recommended that these only be examined more closely should the WAPC finalise the North-East Sub-Regional Structure Plan and confirms infill is supported within Helena Valley.

STRATEGIC IMPLICATIONS

Given the wide scope of the Strategy, a number of strategies from the Shire's Strategic Community Plan 2016-2026 are considered relevant.

Of most relevance, however, is the overarching vision "A sense of space, a sense of place".

Two fundamental elements of the Strategy are having land ceded around the Helena River as foreshore reserve and through appropriate subdivision and development design, enhance local identity – both of which would contribute to the sense of space and place.

SUSTAINABILITY IMPLICATIONS

Refer to Strategic Implications.

RISK IMPLICATIONS

The products of unmanaged growth (e.g. traffic congestion, fragmented environmental management, lack of services and facilities etc) in Helena Valley and Bellevue is likely to occur if a strategy for growth is not prepared due to growth occurring in surrounding localities e.g. in Koongamia, Bellevue and Hazelmere.

There are reputational, economic, social and environmental risks that could be encountered if urban expansion continues incrementally. Further there could be opportunities, developer contributions and open space improvements that could never be realised without an overarching planning framework in place.

EXTERNAL CONSULTATION

Advertising Period

The Draft Strategy was advertised from 31 October 2016 to 9 February 2017 (which was extended to 17 February 2017) – a total of 109 days. Staff time was made available to meet with Councillors, agencies, groups and residents, which were well received.

A total of 69 submissions were made. A summary of the main outcomes of consultation has been provided below.

Some concern was expressed about the need for growth, the design and density of residential development, tree protection and the impact that a larger population will have on traffic volumes and safety.

A number of recommended improvements were also put forward. This type of feedback suggests that the community felt engaged in the decision-making process and that their contribution would be meaningfully incorporated.

The Shire has considered each submission in detail and incorporated appropriate recommendations. Where recommendations could not be supported due to being inconsistent with contemporary planning practise, reasons have been provided both in the Strategy and schedule of submissions appended to this report.

Main Themes

Submitters were encouraged to explain their objection/support and make recommendations to improve the Draft Strategy so that the detail could be properly understood and implemented. Consequently, a large percentage of the responses were noted not as “support” or “object” but “advice.”

The number of recommendations provided is a sound indication that the community was engaged in the process. The following elements of the Draft Strategy were supported:

- Intent to manage growth in a co-ordinated and sustainable way;
- allocation of residential and commercial development to appropriate areas;
- Further community engagement;
- Protection of the Helena River in foreshore reserve;
- High quality urban design at medium densities which focusses on tree protection implemented through detailed precinct planning;
- Additional commercial land; and
- Infrastructure provision and upgrades e.g. district playing fields, road safety improvements and walk trails.

Objections were received and related to:

- Environmental degradation;
- Lack of recreation facilities;
- Erosion of rural landscape;
- The visual impact created by medium density residential development;
- Traffic and safety impacts created by a growing population; and
- Ongoing management of infrastructure, the environment and fire risk.

Both the Strategy and the schedule of submissions appended to this report identify how the Strategy has been modified to accommodate recommendations/objections.

Specifically:

- the need for subdivision to occur to enable the ceding of Helena River into a continuous public reserve has been further explained;
- A foreshore vision plan has been included to better illustrate how open space could be arranged to simultaneously cater for recreational needs and deliver environmental benefits;
- areas have been identified where further subdivision will not be supported due to environmental factors and to retain elements of rural amenity;
- requirements have been inserted to ensure that high density development is subject to comprehensive precinct planning (architecture guidelines) to

- ensure that visual amenity and accommodating a growing population in a sustainable manner are reconciled; and
- requirements have been inserted to develop an overall infrastructure plan, Helena River foreshore management plan and infrastructure funding mechanism to link population thresholds with improvements.

Helena Valley Estate Ratepayers' Association meeting

Shire officers met with Councillors Martin and Cook and residents at the Helena Valley Estate Ratepayers' Association meeting on 6 February 2017.

At the beginning of the meeting, there was clear opposition to:

- Lack of recreation spaces;
- Lack of schools; and
- Loss of amenity and vegetation brought about by road upgrades, a growing population and residential densities.

Officers reassured attendees that it is the explicit intention of the Draft Strategy to deliver a vision for the locality which includes:

- Public parkland around the Helena River for environmental protection and passive recreation (e.g. walking cycling);
- Active recreation space (e.g. for organised sports such as football and cricket) in proximity to 500 (Lot 799) Katharine Street, Bellevue;
- A requirement for a school/s depending on advice from the Department of Education;
- A high quality of urban design which incorporates tree protection, verge trees amongst medium/high density development with the requirement for detailed precinct planning in some areas;
- Land which is not proposed for further rezoning/minimal subdivision potential to preserve existing amenity and respond environmental factors; and
- Infrastructure upgrades and the provision of facilities e.g. shops, district recreation grounds

It was also expressed that the impacts of a growing population (e.g. more traffic) would be felt whether or not urban development occurs in Helena Valley as a result of development outside of the district e.g. Koongamia, Hazelmere, Midland and parts of Bellevue.

The view at the meeting was that the Strategy is intended as a proactive step required to respond to these changes.

Although consensus was not reached (arguably, this is an unrealistic expectation for any kind of community engagement), the sentiment at the conclusion of the meeting differed from that at the beginning. In particular, the general view was that:

- Population growth is inevitable and should be managed;
- The Draft Strategy is a useful management tool;

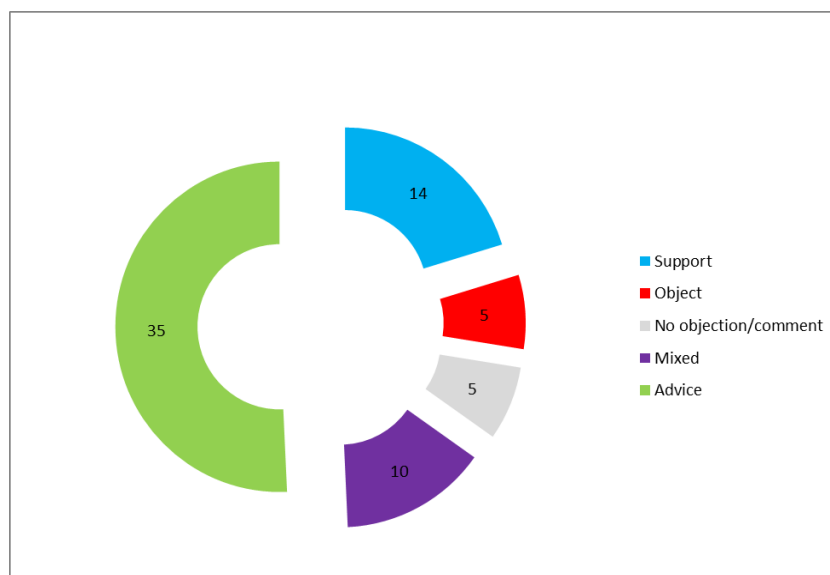
- There is a strong desire to keep Helena Valley ‘green’ i.e. trees retained and plenty of street trees in new subdivisions;
- There is a strong desire to avoid the mistakes of the past e.g. small lots in disconnected urban cells with no trees retained/planted;
- There is uncertainty about what constitutes ‘high’, ‘medium’ and ‘low’ density development;
- There is recognition that density development is not necessarily opposed if it is done well e.g. Park Home Park on southern side of Helena Valley Road; and
- There are potential benefits if development does occur e.g. recreation spaces, environmental protection, emergency accesses, footpaths, cycle paths and so on.

There was still an amount of unease about the idea of urban growth in Helena Valley and the impacts it may have, but also recognition that the Strategy’s intention is a positive one – to harness and direct growth rather than to avoid it and continue to be reactive to the effects of externally-generated growth pressures.

Data

The graphs and tables below provide summary data on the number and percentage of submissions received within five categories:

- ‘*Support*’ – submission clearly in favour of the Draft Strategy.
- ‘*Object*’ – submission clearly opposed to the Draft Strategy.
- ‘*No objection/comment*’ – submission (usually from a government agency) expressing that it does not wish to make a comment/express opposition to the Draft Strategy.
- ‘*Mixed*’ – submission that could not be distinguished as clearly in favour or opposed to the Draft Strategy and which often contained advice for consideration.
- ‘*Advice*’ – submissions which generally had a neutral stance on the Draft Strategy but put forward recommendations/advice for consideration.



COMMENT

Council considered the planning merits of the Draft Strategy at its 9 August 2016 meeting. There have been no fundamental shifts in planning perspective since that time.

This section reports on matters related to the format and implementation of the Strategy.

Strategy Format

The advertised version of the Draft Strategy was comprised of four parts:

1. Context Plan;
2. Precinct Plan;
3. Precinct Strategies;
4. Explanatory reports:
 - a. Council report;
 - b. Land use study; and
 - c. Traffic and land use study.

Each of these was made available to inform submitters of the latest available land information and data to assist preparation of submissions.

The final version of the Strategy has been compiled into a stand-alone document which:

1. Explains the rationale for growth;
2. Describes the outcomes of public consultation and how the Strategy has been refined as a result;
3. Describes specific growth strategies for precincts within the strategy area;
4. Identifies the steps required for the Strategy's implementation; and
5. Is sufficiently detailed and proportional to the level of certainty regarding growth in the locality under the state's planning framework.

The Strategy is contained in **ATTACHMENT 1**.

Implementation Milestones

Before any amendments to the MRS and LPS4 will be seriously considered, additional investigations are required to ensure that, when/if subdivision does occur; it will result in a coordinated outcome.

An explanation of these milestones is provided in **ATTACHMENT 1**, together with an estimated time and cost factor, under the heading Implementation Milestones.

These will require closer consideration subsequent to the decision of the WAPC regarding the North-East Sub-Regional Structure Plan and future corporate business planning.

As a very rough estimate, all implementation milestones may be completed within five years.

Status of Draft North-East Sub-Regional Planning Framework

At the time of writing, the WAPC has not endorsed the North-East Sub-Regional Structure Plan. While residential infill was considered by the Shire and the WAPC as logical in Helena Valley in 2013, the WAPC's new position in the NESRSP remains unclear. The Strategy has been prepared acknowledging this risk.

Recent officer-level advice from the WAPC is that preparation of the Strategy is useful prior to finalisation of the North-East Sub-Regional Structure Plans.

WAPC endorsement

Although not requiring its endorsement, the WAPC was invited to provide comment on the Strategy. A response has not yet been received.

Name change

Since the Strategy also covers part of Bellevue and is focussed on more than urban expansion, it is recommended that the title "Helena Valley Urban Expansion Strategy" should be changed to "Shire of Mundaring Foothills Growth Strategy".

Updates

During the life of the Strategy, the local and state planning framework will change. Updates will also be required to the Implementation Milestones as work is undertaken. It is intended for the Strategy to be reviewed as these changes occur to ensure currency.

Working Group

An inter-service Shire working group was formed to discuss and refine the contents and implementation of the Strategy.

Pending the outcome of the North-East Sub-Regional Structure Plan and Council's decision, this working group will continue to oversee its implementation.

Publication

Should Council resolve to adopt the Strategy, it will be published in presentation format and made available on the Shire's website and libraries. Letters will be sent to those who made a submission advising them of where to find the Shire's response to their submission and Council's decision.

Conclusion

The Strategy is the Shire's proactive response to population growth pressures and establishes an aspiration for growth as well as detailed, pragmatic strategies and implementation mechanisms, based on a fair balance of planning requirements and principles, public interests and land capabilities.

It is therefore recommended that Council adopt the Shire of Mundaring Foothills Growth Strategy as a document to give high level guidance and coordination to future development in Helena Valley and Bellevue.

VOTING REQUIREMENT

Simple majority

COUNCIL DECISION RECOMMENDATION	C3.07.17
<i>Moved by: Cr Brennan</i>	<i>Seconded by: Cr Bertola</i>

That Council -

1. Renames the Helena Valley Urban Expansion Strategy to “Shire of Mundaring Foothills Growth Strategy” as this best reflects the scope and objective of the Strategy;
2. Considers the Shire of Mundaring Foothills Growth Strategy contained in **ATTACHMENT 1**;
3. Adopts the Shire of Mundaring Foothills Growth Strategy as a framework to manage future growth in Helena Valley and Bellevue; and
4. Following the preparation of a publication standard document, requests the CEO release the document and notify the public and those who made submissions of Council’s decision.

CARRIED 9/2

For: *Cr Martin, Cr Clark, Cr Fisher, Cr Brennan, Cr Fox,
Cr Bertola, Cr Jeans, Cr Cuccaro, Cr Lavell*

Against: *Cr Daw, Cr Perks*

Next Report

ATTACHMENT 1

Item 10.1

78 pages

ATTACHMENT 2

Item 10.1

227 pages

**Schedule of Submissions
Shire of Mundaring Foothills Growth Strategy**

SUBMISSION	COMMENT
1. Shire of Toodyay	
1) The opportunity to comment is acknowledged. In this instance the Shire has no comment to offer on your proposed draft Strategy.	1) The submission is noted
2. ATCO Gas Australia	
1. Thank you for allowing ATCO Gas Australia the opportunity to comment.	1) The submission is noted
2. You have already identified within the Draft HVUES_Council Report (Economic/Infrastructure) C80.AUGUST.2016 that gas supply and services are not available in all areas of the Draft Helena Valley Urban Expansion Area.	2) The submission is noted
3. Standard cost models require funding for the gas installation enhancements from the developer(s), however additional opportunities for reducing or sharing of costs could be achieved via incorporation of natural gas energy efficient appliances such as natural gas powered Co-Generation and Tri-Generation power facilities.	3) The submission is noted
4. In addition to our general information document "Working around Gas Infrastructure", please find below ATCO Gas Australia's technical response. <ul style="list-style-type: none"> • Network supply capacity for the area. Gas supply to the area can be enhanced to meet the incremental demand. Existing infrastructure within 	4) The submission is noted

SUBMISSION	COMMENT
2. ATCO Gas Australia (cont'd)	
<p>the Precinct can be modified to enable provision for the planned growth.</p> <ul style="list-style-type: none"> • Design guidelines additional comments. ATCO Gas Australia would recommend the addition of the following guidelines for gas services: • Footpaths/cycle paths/frontages. Natural gas when released rises due to it's lighter than air nature. Leak detection of below ground gas infrastructure is a key control for ATCO Gas Australia. In the unlikely event where a gas release occurs, in general installation locations the gas will rise to the surface enabling personnel and equipment to detect the product and instigate repair. Where the surface above the gas infrastructure is non permeable, the gas will rise to the underside of that surface then "track" horizontally to find a release point. Where there is surface of non-permeable material from road to building line, gas can track into buildings. This may result in a hazardous situation. This situation has been minimised in similar conditions in the City of Perth with the utilization of installed vent points. Within the non-permeable surfaces, above the gas infrastructure, small tubes are located through the non-permeable material providing the leak path to 	

SUBMISSION	COMMENT
2. ATCO Gas Australia (cont'd)	
<p>the surface. Please refer to drawing "pavement vent" for details.</p> <ul style="list-style-type: none"> Boundary line construction. As noted in the ATCO Gas design guideline, buildings are likely to be constructed up to the boundary lines. The concern for ATCO Gas Australia and other utilities with this style of construction is the provision of services and isolation of those services in accordance with the Australian Standards. For gas supply, AS4645 nominates that gas piping should not be installed under buildings. Customer piping (after the meter) is covered under AS5601 and the requirements for piping location are relaxed. It is recommended that where buildings are to be built to the boundary line, that provision of service meter and isolation enclosures (with appropriate ventilation as per AS5601 and AS60079:10) be made on the boundary to meet these requirements. It should also be noted that supply of water has associated issues. Due to water piping alignments in the street to the boundary and the provision of isolation valves in that space, difficulties have been encountered in some locations. Subject to Water Corp approval, provision of water meter and isolation enclosures on the boundary may assist. Awnings over walkways with gas assets below. If there is a gas release and the gas is released to the surface, the gas will continue to rise. Gas may 	

SUBMISSION	COMMENT
2. ATCO Gas Australia (cont'd)	
<ul style="list-style-type: none"> • be contained under awnings. Additional risks occur if there is ignition sources located in that position i.e. advertising signs or lighting. Proposed amendment to the design guidelines is to either design awnings so that the high point is away from the building or designed to include other venting methods to prevent trapping of gas. • Utilisation of common trench agreements with Water Corp and ATCO Gas Australia could be utilised to reduce installation costs if co-ordination of works can be conducted with sufficient lead times. • ATCO Gas is keen to collaborate with developers and would appreciate early notification of any forums to ensure we can provide the most cost effective solution. 	
3. Submitter No. 3	
<ol style="list-style-type: none"> 1. As someone who has been in retail for over 30 years in the Midland, Mundaring and Kalamunda areas I totally support high density residential development. I am 65 years old and only ever lived in these three shires. 2. Retail business has never been more difficult than it currently is, and there is little sign of it improving. The retail market currently has no appeal to prospective buyers. As Retail declines, jobs disappear, and the market moves to other areas which are of no benefit to the general community. 	<ol style="list-style-type: none"> 1) High density residential development is identified in Precinct 9 2) The submission is noted

SUBMISSION	COMMENT
3. Submitter No. 3 (cont'd)	
<p>3. The only positive would be to have increased population, which would improve all aspects of business in the area. Number one on this list would be increased jobs.</p> <p>4. Small business can survive against big business if we have the traffic flow.</p> <p>5. The proposed development of 600 plus lots at "Bushmead" is a positive, and will help the general area in many ways.</p> <p>6. The Shire needs to look at high density housing (small lot sizes), as this is what is now affordable to most. It is obvious to all, how difficult it is for our younger ones to own their own house. This also gives us the increase in population which the business community desperately needs.</p> <p>7. With water restrictions, and the costs of maintaining large properties, I think we are better served by having smaller lot sizes. The Shire would, financially prosper considerably by having more smaller lots. This would then be passed on to all members of the shire.</p> <p>8. The sooner we get moving the better. It won't affect my generation, but the young ones starting out, desperately need help. This may help keep them in the area, close to their families, rather than moving away to more affordable areas.</p>	<p>3) The submission is noted</p> <p>4) The submission is noted</p> <p>5) The submission is noted</p> <p>6) Refer to 3(1)</p> <p>7) Rates increases are not a planning consideration</p> <p>8) The submission is noted</p>

SUBMISSION	COMMENT
4 Submitter No. 4	
<p>1. As a long term resident of Helena Valley I feel there are a number of issues to be addressed:</p> <p>2. Increased traffic on Helena Valley Road and Scott Street that will require a revision of current speed zones - along Helena Valley Road there are 4 speed zone changes (5 if you include the primary school speed zone). This makes it very confusing for drivers and frustrating when drivers do under the speed limit and because they aren't sure what speed to do and hold up traffic.</p> <p>3. More maintenance of walking paths/footpaths is required with children walking to school and the elderly walking along the footpath along Helena Valley Road. It is often covered in gravel or on occasion has had glass bottles smashed on it.</p> <p>4. More maintenance of walking paths/footpaths is required with children walking to school and the elderly walking along the footpath along Helena Valley Road. It is often covered in gravel or on occasion has had glass bottles smashed on it.</p> <p>5) More traffic calming options at the Mundaring end of Helena Valley Road - down past the primary school. Already there has been an increase in numbers of people accessing the national park on this road and traffic travels at a dangerous speed along this road. It is often used for antisocial behaviour such as burn outs.</p>	<p>1) The submission is noted</p> <p>2) Comment referred to Shire's Infrastructure Services for investigation.</p> <p>3) Refer to 4(2)</p> <p>4) Refer to 4(2)</p> <p>5) Refer to 4(2)</p>

SUBMISSION	COMMENT
4 Submitter No. 4 (cont'd)	
<p>6) Increase population density means that there is an urgent need for an increase of services to this area - including a full size supermarket, restaurants, cafes, more parks and open spaces.</p> <p>7) The public transport system in this area is DESPERATELY in need of a major review. Given there is already a large increase in the number of people living in the area, only having a VERY limited bus service for the part of Helena Valley that includes the estates and the retirement village is unacceptable. As this population has grown an increase to this service is needed already.</p> <p>8) A local high school is also needed urgently (and will continue to be needed as population numbers rise). Currently children living in this area have to access either Swan View HS, Governor Stirling HS or Kalamunda HS - none of these are local and all require significant bus/car travel.</p>	<p>6) Development zones identified for Precincts 9 and 11 to accommodate commercial uses. Recreation spaces proposed around the Helena River and Precinct 11.</p> <p>7) Refer to comment from Public Transport Authority (submitter 6)</p> <p>8) Refer to comment from Department of Education (submitter 10)</p>
5. Department of Mines and Petroleum	
<p>1) The Department of Mines and Petroleum has determined that this proposal raises no significant issues with respect to mineral and petroleum resources, geothermal energy and basic raw materials.</p>	<p>1) The submission is noted</p>

SUBMISSION	COMMENT
6. Public Transport Authority	
<p>1) The Public Transport Authority (PTA) finds the proposed Strategy to be generally conducive to the operation and growth of the Transperth network. Transperth is supportive of medium density residential development within 500 metres of Helena Valley Road given that the Route 307 bus service can be extended to accommodate these residents. It should be noted that this is subject to the continued development of the area and the availability of resources.</p> <p>2) As stated in the Traffic and Land Use Study, at this stage Transperth has no plans to extend or improve the current level of service provision in the Helena Valley. However, we will continue to monitor and review the adequacy of bus services in the area as further development occurs and demand increases</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p>
7. Submitter No. 7	
<p>a) I would like to bring to your attention the footpath network especially with regards to the new community hub on Scott Street. As a frequent user of the footpath, living halfway along Scott Street on the West side, I/we find it to be a dangerous prospect crossing the road to stay on the footpath and then back again to access the new Community Hub.</p> <p>This has always been the case when walking up the hill to the existing library where you have to cross the</p>	<p>a) Refer to 4(2)</p>

SUBMISSION	COMMENT
7. Submitter No. 7 (cont'd)	
<p>road to remain on the footpath at the blind crest of the hill. Walking down the hill you would need to cross the road at the bottom of the hill on a blind corner.</p> <p>To reiterate our safety concerns, we have 3 children under 5 usually transported via pram; there is constant heavy traffic flow with a large percentage of this traffic travelling at excessive speed and another large percentage being heavy vehicles taking a short cut to/from Hazelmere.</p> <p>I would like to suggest that the existing footpath is extended from point to point on the West side of Scott Street to provide safe access to and from the new Hub and prevent unnecessarily crossing the road.</p>	
8 Burgess Design Group	
<p>1) Burgess Design Group, on behalf of our clients, and, the registered landowners of, Helena Valley (subject site or land), writes in response to the Shire of Mundaring's advertising of the draft Helena Valley Urban Expansion Strategy (HVUES).</p> <p>2) is currently zoned 'Rural' under the Metropolitan Region Scheme (MRS), and 'Rural Residential (RR2 under the Shire of Mundaring Local Planning Scheme No.4 (LPS4). The proposed draft HVUES directly affect our clients' landholding by way of classifying the land for future urban development, and reserving the land as 'Parks and Recreation'.</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
8 Burgess Design Group (cont'd)	
<p>3) Background</p> <p>We submitted an MRS amendment request in 2011 to the Western Australian Planning Commission (WAPC) to rezone a portion of the land from 'Rural to 'Urban', and reserve Bush Forever Site No.216 as 'Parks and Recreation' under the Metropolitan Region Scheme (MRS). This amendment was initially included in MRS (Minor) Amendment 1292/57 - North-East and North-west Districts Omnibus No. 1. However, the WAPC at its meeting of 31 March 2015, resolved to defer the amendment request pending the finalisation of the Helena Valley Urban Expansion Strategy and the Draft North-East Sub-Regional Planning Framework.</p>	<p>3) The submission is noted</p>
<p>4) Perth and Peel @ 3S Million & Draft North-East Sub-Regional Planning Framework</p> <p>We made a submission and deputation, on behalf of our client, to the WAPC seeking the identification and inclusion of the subject land as 'Urban Expansion' or 'Urban Investigation' so that it may be developed for residential purposes to complement the existing Helena Valley urban development immediately to the west under the draft North-East Sub-Regional Planning Framework.</p> <p>Given the site's strategic location the land should be identified as 'Urban Expansion' under the Framework, and subsequently rezoned to 'Urban' under the MRS. In this regard, our client supports the Shire's efforts to</p>	<p>4) The submission is noted</p>

SUBMISSION	COMMENT
8 Burgess Design Group (cont'd)	
<p>identify the whole Helena Valley area as 'Urban Investigation' under the draft Framework.</p> <p>5) Precinct Strategies</p> <p>We note the subject site falls within Precinct 6 on the Precinct Plan. The HVUES Precinct Strategies suggest that the largely cleared portions of the site should be rezoned to 'Urban' under the MRS, and 'Residential R60 under Shire of Mundaring Local Planning Scheme No.4 (LPS4).</p> <p>Our client supports the precinct strategy to rezone the land to 'Urban', and reserve Bush Communities or Threatened Ecological Communities on site; however several occur in the area.</p> <p>Whilst we acknowledged that there may be environmental issues that could restrict urban development over a portion of this site, the land should not be excluded from the 'Urban' area until such a time that more detailed environmental investigations (such as a Level 2 Flora and Vegetation Survey) has been undertaken. As such, we recommend that the land be shown as 'Urban' in the Strategy Map. Any issues regarding the environmental values of the site can be reviewed through the formal MRS rezoning process.</p> <p>6) Conclusion</p> <p>On behalf of our clients, we respectfully advise the Shire that we support In principle the draft Helena Valley Urban Expansion Strategy as advertised.</p>	<p>5) The Strategy has been modified to emphasise that the extent of the urban zones should be defined by technical environmental studies.</p> <p>6) The submission is noted.</p>

SUBMISSION	COMMENT
8 Burgess Design Group (cont'd)	
<p>We recommend that the area excluded from the 'Urban' classification on the Strategy Map should be shown as 'Urban' and that further environmental studies can be undertaken to confirm if the land is suitable for rezoning during the MRS amendment process.</p> <p>We trust these comments serve to inform the Shire in its assessment of the proposed draft HVUES, and that they are given due consideration.</p>	
9 Submitter No. 9	
<p>1) I would like to make the following submission in relation to the <i>Draft Helena Valley Urban Expansion Strategy</i> involving Fyfe Street, Helena Valley. Being elderly and the owner of six acres at the above address, I would like to be able to subdivide my property into two 3-acre lots, with the aim of living on one of them. This block size would be easier for me to maintain.</p> <p>2) By subdividing it would also allow younger families to move into the area and make it more difficult for developers to turn the area into high-density urban housing.</p> <p>4) There are already three Lots in Fyfe Street that are around the 3-acre size.</p>	<p>1) Precinct 10 makes provision for limited rural subdivision.</p> <p>2) The submission is noted.</p> <p>4) The submission is noted.</p>

SUBMISSION	COMMENT
10 Department of Education	
<p>1) The Department of Education has reviewed the strategy and wishes to make the following comments;</p> <p>2) The Department did acknowledge that there were no plans at the time the Helena Valley Land Use Study was being compiled for major school capacity improvements or new school sites planned within the study area.</p> <p>3) It should be noted that since the student data was compiled in 2012, in 2015 Year 7 students moved to high school thereby increasing those numbers.</p> <p>4) Item 4.2 indicated that given the future potential extent of residential development in the adjacent Bellevue and Bushmead sites further consultation with the Department at an early stage was recommended. Given the extent of the potential development within these areas along with the increased student numbers it would be prudent to discuss a potential primary school site within this development area.</p> <p>5) Although there is no objection to the Strategy the Department would seek to meet and discuss future school site planning with the Shires planners at a convenient time in the future.</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p> <p>3) The submission is noted</p> <p>4) Discussions undertaken with Department of Education about future primary school site.</p> <p>5) Refer to 10(4)</p>

SUBMISSION	COMMENT
11 Department of Transport	
<p>1) The DoT has reviewed the strategy plan and acknowledges that a considerable amount of work has been undertaken by the Shire of Mundaring for this draft strategy.</p> <p>2) However, the Department of Transport recommends that the following comments to be taken into consideration by the Shire as part of the next planning stages:</p> <ul style="list-style-type: none"> • Figures 1 - 18 of the land use report were not included with the application submission and needs to be included with any future structure plan application. • The applicant should include plans showing the existing and proposed pedestrian/cyclist routes, public transport routes and road network in accordance with 10.6 and 10.7 of the Transport Impact Assessment Guidelines Volume 2. • It is noted that a number of the traffic analysis summaries were carried out on a public holiday. This is likely to result in reduced traffic numbers being recorded on those road links. It is unclear if this was considered as part of the traffic analysis. The applicant should make reference to this in the text and make adjustments to the assessment where necessary. 	<p>1) The submission is noted</p> <p>2) Implementation Milestones modified to require Traffic and Land Use Study to be reviewed and Infrastructure Plan to be prepared. Strategy added to Precinct 9 requiring safe assessment to be conducted as part of detailed precinct planning. Other comments are standard requirements of structure planning and have been referred to the Shire's Infrastructure Services as advice.</p>

SUBMISSION	COMMENT
11 Department of Transport (cont'd)	
<ul style="list-style-type: none"> • Principal shared paths (dual use paths) should be a minimum width of 4m plus clearance which is to be • determined in consultation with the Department of Transport. • It is noted that Helena Valley Primary School is located within the study area. A safe assessment should be carried out in accordance with 10.10.9 of the Traffic Impact Assessment Guidelines. <p>Please note that no Transport Plan has been submitted with the proposal. The DoT is of the view that this long-term growth strategy will become a significant traffic generator in the future. Therefore for any future development within this area requires a comprehensive transport plan to assist DoT in assessing the transport impacts to Roe Hwy. The Transport plan will need to include all the information as per the WAPC's Transport Guidelines checklist and consider other relevant developments nearby. Liaison with Main Roads WA will be necessary.</p> <p>3) In view of the above, the DoT looks forward in working collaboratively with Local Government on the implementation of the plan including in relation to the above comments which should be taken into consideration by the City as part of the next planning stages.</p>	<p>3) The submission is noted.</p>

SUBMISSION	COMMENT
12 Department of Environment Regulation	
1) DER has no comment on this matter in reference to regulatory responsibilities under the <i>Environmental Protection Act 1986</i> and the <i>Contaminated Sites Act 2003</i> .	1) The submission is noted
13 Department of Aboriginal Affairs	
<p>1) Thank you for your letter providing the Department of Aboriginal Affairs (DAA) an opportunity to comment on the draft Helena Valley Urban Expansion Strategy (the Strategy).</p> <p>I can confirm that the area defined for the Strategy is within the boundary of 12 Registered sites under the <i>Aboriginal Heritage Act 1972</i> (AHA) as currently mapped on the Register of Aboriginal Sites (the Register). There are also four places within the Plan areas where a decision under section 5 of the AHA is yet to be made.</p> <ul style="list-style-type: none"> • There are 19 heritage places that have been assessed by the Aboriginal Cultural Material Committee as not, or no longer, meeting the criteria of section 5 of the AHA and therefore are not sites under the AHA. • The Strategy area is located along <i>DAA 3758 Helena River</i> and this valley is known through the archaeological record to have been a rich area for human habitation in the past. There is one site 	1) Although not requested by the Department of Aboriginal Affairs, the protection and enhancement of cultural features is a core tenet underpinning the Strategy. It is also important for the Helena River foreshore reserve to be developed and maintained cohesively and consistently. The Strategy's Implementation Milestones has includes a requirement to prepare a Helena River Reserve Development and Management Strategy in conjunction with relevant State agencies and community groups.

SUBMISSION	COMMENT
13 Department of Aboriginal Affairs (cont'd)	
<p>with demonstrated antiquity.</p> <ul style="list-style-type: none"> • <i>DAA 3967 Helena River A-C.</i> <p>2) This site returned a date of 29,000 years before present for human occupation in the Helena Valley. There are also other occupation sites in the valley that have not yet been investigated or dated.</p> <p>3) Locations and extent for the above sites as well as all Aboriginal heritage places may be viewed at the DAA Aboriginal Heritage Inquiry System (AHIS) by searching for Registered Sites and for Other Heritage Places under the Local Government Authority Area or specific sites under the DAA ID number (e.g. 3967):</p> <p>4) As the AHA protects all important and significant Aboriginal sites whether or not they are known to the DAA, all parties conducting activities will need to ensure their works comply with the AHA, and that they do not inadvertently impact Aboriginal heritage sites that may be present in the Strategy area that have not been previously reported.</p> <p>5) To assist proponents to minimise risk to Aboriginal heritage the State has published the '<i>Aboriginal Heritage Due Diligence Guidelines</i>'. and I recommend that you make these available to all parties engaged in the Strategy areas.</p> <p>6) If any applicants are considering creating infrastructure within the Helena River, or think that the development may have an indirect impact on the River such as altered drainage or other run off, then they should be advised to familiarize themselves with</p>	<p>2) The submission is noted</p> <p>3) The submission is noted</p> <p>4) The submission is noted</p> <p>5) The submission is noted</p> <p>6) The submission is noted</p>

SUBMISSION	COMMENT
13 Department of Aboriginal Affairs (cont'd)	
<p>the Guidelines. Consent is also recommended for any stabilization, riparian restoration or revegetation work conducted within the boundaries of Aboriginal heritage sites. If the Aboriginal people who claim custodianship for the place see this work as enhancement then consent could be granted for these activities under Regulation 10 of the AHA.</p> <p>7) Should any party engaged in activities within the Strategy area have any queries or concerns regarding the use of the Guidelines, or heritage in general, they may be referred to this office for assistance. It is recommended that developers are advised to meet with a DAA officer prior to any survey work being undertaken or a Section 18 Notice being prepared to discuss the most appropriate approach to this work.</p>	<p>7) The submission is noted</p>
14. Public Transport Authority (Transperth)	
<p>1) The PTA finds the proposed Strategy to be generally conducive to the operation and growth of the Transperth network. Transperth is supportive of increased residential development within 500 metres of Helena Valley Road given that the Route 307 bus service can be extended to accommodate these residents. It should be noted that this is subject to the continued development of the area and the availability of resources.</p>	<p>1) The submission is noted</p>

SUBMISSION	COMMENT
15. Submitter No. 15	
<p>1) Thank you for the opportunity to comment on the Draft Helena Valley Urban Expansion Strategy. I will comment principally on matters affecting Precinct 10, where I live.</p> <p>2) Strategy 12: "Establish connections over Helena River"</p> <p>A 'bridge' across the river at Fyfe Street would indeed be valuable as an emergency fire vehicle access, giving an alternative exit for the houses to the east along Helena Valley Road as well as permitting quicker access to the hydrants on Fyfe Street for fire fighting vehicles. Those 4 property owners (3 of which are in Kalamunda Shire) could be given keys to the bridge gate that they could use in an emergency.</p> <p>However, it must not be free vehicle access, as this would decrease that local amenity. It could be designed such that pedestrians, horse and bicycle riders could cross at all times but not vehicles.</p> <p>3) Strategy 11: "Establish public reserve around Helena River"</p> <p>Although this concept is theoretically a good idea and has been talked about for a long time, it could lead to problems for adjacent landholders. Australia does not have a tradition of public footpaths across private land - such as happens in Europe - and this path would give opportunities for easy and unobserved access to orchards, for example, to steal fruit (as has happened in the past) and greater opportunities for arson, littering, and out of control dogs</p>	<p>1) the submission is noted</p> <p>2) The requirements and standards of river crossings require closer investigation as part of Development Contribution Position Paper. A specific provision has been made in the Implementation Milestones for the preparation of a Development Contribution Position Paper/implementation incorporating community engagement to ensure that amenity aspects are considered.</p> <p>3) Refer to 14(1)</p>

SUBMISSION	COMMENT
15. Submitter No. 15 (cont'd)	
<p>harassing livestock and the wildlife, kangaroos and bandicoots.</p> <p>Many properties have land titles that run to the centre erf the river and in some instances, compulsory acquisition would take away a sizable portion of each property.</p> <p>Managing the river bank to keep it weed-free and fire-safe is a labour-intensive activity that landholders will undertake if it is their land. However, they are very much less inclined to put their valuable time into managing 'government' land, as the Helena River Catchment Group has found during its long-running project to rehabilitate this section of the Helena River. If the Shire is to take on this task. It will cost a lot of money, and thus the Shire will have to increase rates to pay for it - not a popular option</p> <p>4) Suggestion to Increase the housing density.</p> <p>I am not in favour of increasing the housing density on lots abutting the river. However, it could be considered on a house by house basis.</p>	<p>4) The subdivision of properties adjacent to the Helena River under the Strategy would trigger the requirement for landowners/developers to cede land to the Crown free of cost for foreshore reserve - in time, creating a continuous recreational/ecological link. Compulsory acquisition of land for foreshore reserve is not contemplated by the Strategy.</p> <p>Consideration of subdivision on a house by house basis would constitute ad hoc development and is a method of development not supported by the Strategy.</p>

SUBMISSION	COMMENT
16. Helena River Catchment Group (cont'd)	
<p>1) Thank you for the opportunity to comment on the Draft Helena Valley Urban Expansion Strategy. The Helena River Catchment Group (HRCG) has as its principal aim the health and environmental quality of the Helena River, thus we will confine our comments to proposals that affect the river.</p> <p>2) Strategy 11: "Establish public reserve around Helena River"</p> <p>Although the HRCG supports in principle the concept of 'Greenways' and walking paths, we must point out that in the area covered by this plan it would be difficult to do, and extremely expensive to maintain. Land titles for many properties run to the centre of the river, and compulsory acquisition would take away a sizable portion of each property. There is then the concern over who would pay to manage the land thus brought in to public ownership. As an example, after subdivision of a larger property on the south side of the river west of Fyfe Street in the 1960s, a 'river reserve' was excised, 20-30 metres wide. It is unvested, and unmanaged - apart from work done under the aegis of the HRCG. At least our weed control has reduced the fire hazard!</p> <p>From 2004, the HRCG has undertaken a series of weed control followed by replanting operations along the 5km of river from the pump back dam to Scott Street. This work has been done with the help of</p>	<p>1) The submission is noted</p> <p>2) Refer to 13(1) and 15(4)</p>

SUBMISSION	COMMENT
16. Helena River Catchment Group (cont'd)	
<p>grants totalling in excess of \$200,000. If a publically owned riverside corridor is to be created, then it must be vested in a suitable authority, and sufficient funds made available for its upkeep. That upkeep includes: weed control, replanting, fire management (firebreaks?), storm debris removal to minimise fire risk, litter (human) removal, control of human vandalism - not to mention the construction of a trail, and appropriate car parking places.</p> <p>3) Strategy 12: "Establish connections over Helena River"</p> <p>A 'bridge' across the river at Fyfe Street would indeed be valuable as an emergency fire vehicle access, giving an alternative exit for the houses to the east along Helena Valley Road as well as permitting quicker access to the hydrants on Fyfe Street for fire fighting vehicles. However, it must not be free vehicle access, or it could become an alternative to Scott Street. It could be designed such that pedestrians, horse and bicycle riders could cross at all times but not vehicles. The same comments apply to Sampson Street.</p>	<p>3) Refer to 11(2)</p>

SUBMISSION	COMMENT
16. Helena River Catchment Group (cont'd)	
<p>4) Various suggestions to increase the housing density. The HRCG opposes any suggestions to increase the density of housing on lots abutting the river, as this could increase the destructive pressure on the river and its immediate environment.</p> <p>5) Facilities for horses. The strategy proposes "preserving rural lifestyle lots", but many of these lots have horses. The facilities for horses have not been considered in this plan. A connection to the Railway Bridle Trail along Approach Road would be one good option. The proposed Fyfe Street bridge would be useful to permit horse riders to access the Bridal Trail in Beelu National Park, without having to travel on the narrow Clayton Road, where traffic does not take into account the safety of horses (or cyclists, for that matter).</p>	<p>4) Refer to 15(4)</p> <p>5) Refer to 11(2) and 15(2)</p>
17. Submitter No. 17	
<p>1) I am in favour of an amendment to the Metropolitan Regional Scheme to allow for closer subdivision in the section of Helena Valley covered in the HVUES.</p> <p>2) I have lived at 185 Fyfe Street Helena Valley since 1990. It is the house and community in which I raised my three children. It is the unique lifestyle offered in Helena Valley that has kept my wife and I in the same house for almost 30 years. I believe</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
17. Submitter No. 17 (cont'd)	
<p>a moderate increase in residential density in the area would not endanger this special lifestyle. Indeed, well managed subdivisions could enhance the area and community be allowing new families to enjoy what Helena Valley has to offer.</p>	
18. Department of Water	
<p>1) The Department of Water (DoW) has assessed the referral and would like to provide the following advice.</p> <p>The subject site contains the Helena River and other significant water resource constraints. The DoW is unaware if these water resources have been considered and investigated. In accordance with the Western Australian Planning Commissions (WAPC) <i>Better Urban Water Management</i> (BUWM) Policy (Oct 2008), water constraints should be considered as early as possible in the planning process. While the DoW acknowledges that the proposed strategy is non-statutory, this is the first planning stage whereby the proposal for urban development in the area should be able to demonstrate that the subject site can accommodate the proposed urban development in regards to water resource constraints. Therefore at this stage the DoW is unable to support the proposal as the sites water resource constraints have not been sufficiently identified and investigated.</p> <p>2) <u>Water resource constraints</u> In summary the subject area contains:</p>	<p>1) Water resource constraints have been incorporated as a Special Control Area in LPS4 and were investigated in the Helena Valley Land Use Study made available during the public comment period.</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
18. Department of Water (cont'd)	
<ul style="list-style-type: none"> • The Helena River; • A Resource Enhancement and Conservation Category wetland; • Several minor, perennial tributaries of the Helena River; • Significant foreshore vegetation along the Helena River and some tributaries; • Significant flood prone areas including a wide floodway; • An absence of available groundwater for irrigation; • Areas of acid sulphate soils; and • Fragmented land ownership. <p>3) <u>Better Urban Water Management</u> The DoW would strongly recommend the application of the WAPC's BUWM Policy in regards to this proposal and would also recommend that a statutory District Structure Plan (DSP) is developed rather than a non-statutory strategy that does not currently justify the proposed urban development. In addition a District Water Management Strategy (DWMS) should be prepared, in accordance with the BUWM Policy, that details how the following water resource constraints would be managed to demonstrate that the subject site can accommodate urban development. A coordinated DWMS undertaken by the Shire of Mundaring and/or Department of Planning is of significant importance as</p>	<p>3) The Council report made available during the public comment period detailed why a strategy was prepared in favour of a District Structure Plan. Section 3.8.3 of the Helena Valley Land Use Study states that a District Water Management Strategy may not be appropriate. The Implementation Checklist incorporates a requirement to investigate this requirement further with the relevant agencies.</p>

SUBMISSION	COMMENT
18. Department of Water (cont'd)	
<p>the areas contains mostly fragmented land ownership. Therefore the preparation of a coordinated DWMS at the Metropolitan Region Scheme Amendment stage would be highly unlikely as it is likely that individual land owners will apply for rezoning to urban.</p> <p>4) <u>Helena River Foreshore</u> The Helena River is a significant environmental asset of this area and contains a significant vegetated corridor. The DoW supports the proposal to retain the River as a Parks and Recreation Reserve. However, in order for the reserve to appropriately protect the Helena River an accurate reserve needs to be identified and protected as early in the planning process as possible. The DoW would recommend that this is done in accordance with the DoW's <i>Operational Policy 4.3: Identifying and establishing waterways foreshore areas (Sept 2012)</i>. This assessment should be undertaken as part of the DWMS and associated DSP as it is unlikely that individual landowners will coordinate to undertake this foreshore assessment and DWMS.</p> <p>5) <u>Flood Management</u> The DoW has mapped a relatively wide floodway area associated with the Helena River. Development within the floodway is generally prohibited and this will need to be reflected in the strategy and other planning stages. The DoW would not support urban development that is located within the floodway as it</p>	<p>4) Refer to 13(1)</p> <p>5) Refer to 13(1)</p>

SUBMISSION	COMMENT
18. Department of Water (cont'd)	
<p>would cause a high risk of detrimental impact to upstream and downstream properties. The proposed strategy does not appear to have taken this into consideration as current proposed zoning maps do not reflect the mapped floodway. Detailed floodplain mapping can be provided by the DoW.</p> <p>6) <u>Water availability for irrigation</u> The subject site is located within the Perth South Confined Leederville aquifer, which is a fully allocated resource, and within the Fractured Rock West aquifer, which is a highly variable source that is not licensed. If water for irrigation of Regional or District Open Space is required then an existing water license will need to be traded or an alternative water source investigated.</p> <p>7) <u>Proposed River Crossing</u> Future vehicle bridges over the Helena River can become very expensive and will need to be investigated so as to ensure that the River is not detrimentally impacted by bridge pylons and footings and that upstream and downstream flooding is not also adversely affected.</p> <p>8) <u>Bushfire Risk</u> The significant future issue is likely to be created by the proposal to have urban development directly adjacent to the Helena River foreshore. That is, a rehabilitated foreshore area will be heavily vegetated and will create a significant bushfire risk to adjacent properties. The DoW has recently experienced that</p>	<p>6) The submission is noted</p> <p>7) Refer to 11(2) and 13(1)</p> <p>8) Refer to 13(1)</p>

SUBMISSION	COMMENT
18. Department of Water (cont'd)	
<p>this issue, and as a result of recent changes to bushfire planning requirements, has resulted in a less than ideal outcome for the foreshore area that has had vegetation and its width restricted due to the need to protect adjacent property. This issue will need to be considered early in the planning process to ensure that the Helena Rive foreshore area appropriately reflects the environmental significance of the Helena Rive and that adjacent urban development does not restrict revegetation of the foreshore area.</p> <p>In conclusion the DoW has determined that the subject area constrains significant water resource constraints and environmental values that should be investigated and addressed early in the planning process before the area can be proposed for urban development. This is consistent with the WAPC's BUWM Policy. The DoW cannot support the proposal strategy until sufficient information has been provided to demonstrate that the subject site can accommodate urban development without detrimental impact on the areas water resources.</p> <p>Following the release of the draft Perth and Peel @ 3.5million sub-regional planning frameworks documents in 2015 and the receipt of subsequent public written and verbal submissions in 2016, the WAPC is currently engaged in detailed process considering final recommendations to the Western Australian Government. During this consideration</p>	

SUBMISSION	COMMENT
18. Department of Water (cont'd)	
<p>process, it is not appropriate for the Department to make a final recommendation until the WAPC have released their decisions on the Perth and Peel @ 3.5million sub- regional planning frameworks.</p>	
19. Submitter No. 19	
<p>1) We own the property at:</p> <p>In regard to the further housing estate development moving this way down Helena Valley Road which seems inevitable, we would ask that the development be well set back from the road and maintain trees in the setback area. This did not happen in the last development and caused much bad feeling throughout the local community. This requirement would seem to be a common sense requirement where an urban area meets what is presently a semi-rural area.</p> <p>2) In regard to our own street, The Crescent, where there is a mixture of residential and urban landscape, we would hope to be saved from high density housing development. We would like to be able to subdivide our block which is just over a hectare into 2 residential properties for which we would be prepared to forfeit a river front setback for public use.</p> <p>I hope this comment is of value</p>	<p>1) Strategies for precinct adjoining Helena Valley Road and Scott Street refined to include a requirement to establish a suitable development setback from Helena Valley Road.</p> <p>2) Precinct 9 has been identified for a mixture of commercial and residential land uses, with medium-high residential densities, subject to comprehensive precinct planning and further consultation.</p> <p>The strategies for Precinct 9 have been modified to provide further rationale for this objective.</p>

SUBMISSION	COMMENT
20. Perth Airport Pty Ltd	
<p>1) I refer to your letter received 3rd November 2016 requesting comment with regard to the draft Helena Valley Expansion Strategy.</p> <p>2) While there is no objection to the strategy in principle, Perth Airport strongly objects to the placement of any residential natured land uses within the designated Precinct 12, and to residential development within the northern part of Precinct 1.</p> <p>3) ASSESSMENT UNDER THE PERTH AIRPORT 2014 AUSTRALIAN NOISE EXPOSURE FORECAST (ANEF) & "NOISE ABOVE" CONTOURS</p> <p>The north-western corner of the subject area is within the 2014 endorsed ANEF. Specifically, precinct 12 is within the 20-25 and potentially the 25-30 ANEF zones as seen in Attachment 1.</p> <p>Under State Planning Policy 5.1 (Land Use Planning in the Vicinity of Perth Airport) residential and development is considered unacceptable within the 25-30 ANEF zone. Residential development within the 20-25 ANEF contour is considered "conditionally acceptable", in line with the Australian Standard AS2021:2015 Acoustics - Aircraft Noise Intrusion - Building Siting and Construction (AS2021). Any residential development within the 20-25 ANEF zone should be subject to discretionary control under local planning schemes and will require aircraft noise attenuation in line with the above standard.</p>	<p>1) The submission is noted</p> <p>2) Precinct 1 and 11 (precinct 12 in Draft Strategy) strategies amended to highlight requirement for development to comply with State Planning Policy 5.1 (as amended).</p> <p>3) Refer to 20(2)</p>

SUBMISSION	COMMENT
20. Perth Airport Pty Ltd (cont'd)	
<p>The remainder of the subject area is outside of the ANEF, however, it is noted that the area will still be exposed to levels of aircraft noise that may be unacceptable to some people.</p> <p>Perth Airport produces additional 'noise above' metrics, which can assist in demonstrating the likely impact of aircraft noise exposure on an area at the ultimate airfield capacity. The N65 is one such 'noise above' metric, and is produced because the ANEF is not well suited to conveying the impact of aircraft noise and aircraft noise exposure to the community, as over-flight frequency and the sound level of single events (typically two factors that determine how a person will react to noise) are not clearly translated by the ANEF system. The N65 overlaid with the subject area is included for reference in Attachment 2.</p> <p>Under the N65 for Perth Airport, the western portion of the Precinct 12 will be exposed to up to 199 aircraft movements exceeding 65 decibels across an average day.</p> <p>The remainder of the precinct and a small portion of Precinct 1 will be exposed to up to 99 aircraft movements exceeding 65 decibels across an average day. Noise at this level is considered disruptive to a normal conversation. Whilst it is acknowledged that existing residential within Helena Valley is subject to an excess of 50 of these type of movements per day, Perth Airport will not support any further residential</p>	

SUBMISSION	COMMENT
20. Perth Airport Pty Ltd (cont'd)	
<p>development within this contour. It is for this reason that Perth Airport objects to the placement of any additional residential development within Precinct 12 and the affected area of Precinct 1.</p> <p>4) AIRSPACE ASSESSMENT</p> <p>The proximity of the subject area to the runway 06/24 extended centreline means the airspace is complex in this area. The lower level of the airspace varies from 61m AHD in the west to 166m AHD in the east. Preliminary assessment indicates structures up to 20m above ground level would not infringe Perth Airport's prescribed airspace. Any application for a structure over this height would need to be referred to Perth Airport for further assessment. A map of Perth Airport's prescribed airspace over the subject area is included in Attachment 3.</p>	<p>4) The submission is noted</p>
<p>5) ASSESSMENT UNDER PERTH AIRPORT LIGHTING INTENSITY CONTROL ZONES</p> <p>The Civil Aviation Safety Authority has the power through regulation 94 of the <i>Civil Aviation Regulations 1989 (Cth)</i>, to require lights which may cause confusion, distraction, or glare to pilots in the air to be extinguished or modified. Ground lights may cause confusion or distraction by reason of their colour, position, pattern or intensity of light emission above the horizontal plane.</p>	<p>5) The submission is noted</p>

SUBMISSION	COMMENT
20. Perth Airport Pty Ltd (cont'd)	
<p>As demonstrated in Attachment 4, the subject area falls within Zone D of Perth Airport's Lighting Intensity Control Zones. In Zone D the maximum intensity of light sources measured at 3 degrees above the horizontal must not exceed 50 candelas.</p> <p>6) SUMMARY</p> <p>Given the above assessment there is no objection to the strategy in principle, however Perth Airport has strong objection to the placement of any residential natured land uses in the discussed areas due to severe aircraft noise Implications. Perth Airport would like to thank you for the opportunity to comment on this application.</p>	<p>6) The submission is noted</p>
21. State Heritage Office	
<p>1) The following comments are made on behalf of the State Heritage Office:</p> <ul style="list-style-type: none"> • The subject area contains <i>Clayton Farm</i> (Place No. 3839) and <i>Belle View</i> (Place No. 3836) which are both listed in the State Register of Heritage Places. • Future planning and zoning should consider the potential impacts on the identified heritage values of the Registered Heritage places, including the rural setting. • We note that there are ongoing discussions between our Office, the Shire and the applicant regarding the registered curtilage of <i>Belle View</i>. Any amendments to the curtilage may need to 	<p>1) Strategies for Precinct 1, Precinct 3 and Structure Plan 74 make specific provision for the protection of these heritage places.</p>

SUBMISSION	COMMENT
21. State Heritage Office (cont'd)	
<ul style="list-style-type: none"> • be reflected in future planning for the subject area. <p>2) The comments made in this letter are not statutory advice and are provided only to assist the determining authority in its decision.</p>	<p>2) The submission is noted</p>
22. Submitter No. 22	
<p>1) Please could you ensure that any estates developed along Helena Valley and Scott Street are more mindful of the street scape appearance and setback</p> <p>2) There have been multiple new housing estates developed and each appears to have had different policies in regards to the development fronting Helena Valley Road.</p> <p>3) Given the discussion about widening Helena Valley road within the "Draft Helena Valley Urban Expansion Strategy" there needs to be greater set back of the estates to allow the following;</p> <p>Footpath Bike path Tree planting and development of a buffer of trees and plants to the road.</p> <p>4) There has been inconsistent development of the street scape along Helena Valley/ Scott Street and the latest estate under the power lines looks terrible. The vacant land under the power lines has</p>	<p>1) Refer to 19(1)</p> <p>2) The submission is noted</p> <p>3) Refer to 11(2) and 19(1)</p> <p>4) Refer to 11(2)</p>

SUBMISSION	COMMENT
22. Submitter No. 22 (cont'd)	
<p>not been developed. The only landscaping in front of this new estate has been the planting of trees at intervals. This is inadequate and looks cheap.</p> <p>5) Could you please ensure that future housing estates are provided with a consistent road landscaping aesthetic? Proper set back to screen the housing estates from the road.</p> <p>This is to ensure that the natural beauty of the area is not diminished. We want the housing estates to fit into the landscape and not stand out "like a sore thumb".</p> <p>6) Additionally the new estates should have some commitment to the improvement of the Helena River foreshore. All the developments appear to ignore the potential of the Helena River that is at the back of the housing developments.</p> <p>7) Please ensure consistent landscaping and setback from the roads of new housing estates along Helena Valley Road and Scott Street. The aim to ensure housing estate are able to merge into the landscape. This requires adequate setback of land for planting of trees and shrubs.</p>	<p>5) Refer to 11(2) and 19(1)</p> <p>6) Refer to 13(1)</p> <p>7) Refer to 11(2) and 19(1)</p>

SUBMISSION	COMMENT
23. Submitter No. 23	
<p>1) I reside at and am the last lot that could be considered for possible inclusion into the draft Proposed Precinct 6. Due to the flood plain on properties West. While I am happy to excise 3 or 4 lots of the rear of the property, or possibly the whole property, as stated, It is unlikely that a one off situation in zoning would be feasible.</p> <p>Should the adjoining owners (3 properties East) be interested. I would be happy to be included.</p>	<p>1) The Draft Helena Valley Land Use Study identified the three easternmost properties in Precinct 1 for Residential Investigation.</p> <p>They were excluded from the further urban investigation in the Draft Strategy to preserve rural amenity, create a rural buffer between properties north of Katharine Street and in response to flood risk within the precinct.</p> <p>However, these three properties are comparatively unconstrained by flood risk. The strategy for Precinct 1 has therefore been amended to include these properties for urban investigation, subject to an appropriate interface with adjoining properties.</p>
24. Department of Fire and Emergency Services	
<p>1) The Department of Fire and Emergency Services (DFES) provides the following comments with regard to <i>State Planning Policy 3.7 Planning in Bushfire Prone Areas</i> (SPP 3.7) and the <i>Guidelines for Planning in Bushfire Prone Areas</i> (Guidelines).</p> <p>Higher level consideration of bushfire risk is one of the most effective means of preventing inappropriate development in bushfire prone areas. Given the Strategy will coordinate the future development of the Helena Valley it is vital an assessment of any bushfire hazard issues arising from the proposals within the Strategy is undertaken.</p>	<p>1) A Bushfire Hazard Level Assessment (Shire's Bushfire Hazard Special Control Area) was used to inform the Strategy.</p>

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<p>Level (BHL) assessment should be included within or as stand-alone document that informs the Strategy.</p> <p>It is critical at this level of the planning process to connect the spatial understanding of the bushfire threat with strategic decisions about intensification of land use to reduce the vulnerability of people, property and infrastructure to the threat of bushfire. An understanding of the bushfire hazard provides for the identification of opportunities and constraints for the areas proposed for land use intensification. These areas can then be evaluated against each other, as well as each element of the bushfire protection criteria, to highlight the locations where it is unlikely compliance to the criteria can be achieved.</p> <p>2) Considerations for the Decision Maker</p> <p>General Comments</p> <ul style="list-style-type: none"> • Significant portions of the Strategy are designated as bushfire prone on the Map of Bush Fire Prone Areas and therefore trigger the application of provisions of SPP 3.7. • At this strategic level, it is acknowledged that bushfire management is likely to be only one consideration of the decision maker in determining the suitability of the land for proposed intensification. However, this emphasises the need for an understanding of what the bushfire risks are, so an informed decision can be made as to 	<p>2) The Shire's Special Control Area for Bushfire Hazard contains bushfire hazard level mapping which applies in addition to that under the Local Planning Scheme (LPS) Amendment Regulations 2015 and is therefore considered contemporary.</p>

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<p>the suitability of areas for expansion or intensification of land use.</p> <ul style="list-style-type: none"> It is acknowledged that the Shire have previously identified within their Local Planning Strategy those areas considered to have a 'Moderate' or 'Extreme' bushfire hazard level, as determined in accordance with Bush Fire Hazard Assessment Procedures set out by Planning for Bush Fire Protection (2001). Whilst this information should not be disregarded, the draft Strategy provides an opportunity to update this information to reflect the methodology for assessing bushfire hazard as per the current Guidelines. This will align the draft Strategy with the provisions of SPP 3.7 and ensure that legacy bushfire hazard Issues are identified and adequately addressed. <p>3) Policy Objective and Measures</p> <p>Policy Measure 6.3 of SPP 3.7 applies to this proposal, and states:</p> <p><i>Any strategic planning proposal to which policy measure 6.2 applies is to be accompanied by the following information prepared in accordance with the Guidelines:</i></p> <p>(a) (i) <i>the results of a BHL assessment determining the applicable hazard level(s) across the subject land, In accordance with the methodology set out in the Guidelines. BHL</i></p>	<p>3) Refer to 24(2)</p>

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<p><i>assessments should be prepared by an accredited Bushfire Planning Practitioner; or</i></p> <p><i>(ii) where the lot layout of the proposal is known, a BAL Contour Map to determine the indicative acceptable BAL ratings across the subject site, in accordance with the Guidelines. The BAL Contour Map should be prepared by an accredited Bushfire Planning Practitioner; and</i></p> <p><i>(b) the identification of any bushfire hazard issues arising from the relevant assessment; and</i></p> <p><i>(c) clear demonstration that compliance with the bushfire protection criteria in the Guidelines can be achieved in subsequent planning stages.</i></p> <p>4). Bushfire Hazard Level (BHL) assessment</p> <p>a) A BHL assessment provides a 'broad brush' means of determining the potential intensity of a bushfire for an area. This assessment assists in determining the suitability of land contained within strategic planning proposals for future subdivision and development. It is a pre-development tool used to inform decision making at subsequent planning stages to ensure a holistic understanding of the bushfire risk.</p> <p>b) A BHL assessment should be prepared for all areas identified for land use intensification within the Strategy that are designated as bushfire prone.</p>	<p>4) Refer to 24(2)</p>

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<p>This assessment can be a stand-alone document that informs the Strategy, or can form part of the strategy document itself.</p> <p>c) It is also an opportunity to understand the bushfire risk for existing developed areas, and if found to be 'extreme' bushfire protection measures that will help to reduce this risk (including improved vehicular access and egress; increased hazard separation; improved water infrastructure; implementation of fire management strategies and vegetation management) should be identified.</p> <p>c) Appendix Two of the Guidelines outlines the methodology for undertaking a BHL assessment.</p> <p>d) Required outcomes of the assessment are to:</p> <ul style="list-style-type: none"> • identify areas of low or moderate BHL that are most suitable for land use intensification; • improve bushfire risk and develop strategies for existing settlements/areas of extreme BHL; • identify vegetated areas with high conservation values, including nature or conservation reserves where clearing would not be supported; • evaluate the appropriateness of areas identified for expansion (town site) or intensification of land use; 	

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<ul style="list-style-type: none"> • identify improvements required to the broader road network to ensure that vehicular access and egress is available and safe during a bushfire event; <p>5) Opportunities and Constraints Assessment</p> <p>(a) An opportunities/constraints assessment should address issues related to the bushfire protection criteria that have arisen following the BHL assessment, including:</p> <p>Element 1: Location</p> <p>Key Considerations</p> <ul style="list-style-type: none"> • Consider the landscape context of the proposal, including the type and extent of vegetation, topography (particularly land with slopes of >10 degrees), areas of possible fire-runs and evacuation options, • Identify areas which represent an extreme bushfire risk that cannot be managed and should not be supported for development. Areas most suitable for land use intensification are where the bushfire hazard is low or moderate, • Identify conservation areas including TEC, Bush Forever, nature reserves or national parks that may constrain a location, • Identify areas that would require clearing to achieve an appropriate BAL rating, 	<p>5) Refer to 24(2)</p>

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<ul style="list-style-type: none"> • Identify vulnerable and high risk land uses, and critical infrastructure. <p>Element 2: Siting and Design</p> <p>Key Considerations</p> <ul style="list-style-type: none"> • Apply appropriate density codes (or lot sizes) large enough to accommodate Asset Protection Zones (APZs) if required, • Identify interfaces between development and bushfire prone vegetation which may require increased setbacks to achieve an appropriate BAL rating (in accordance with AS3959). <p>Element 3: Vehicular Access</p> <p>Key Considerations</p> <ul style="list-style-type: none"> • Consider the wider road network and identify any limitations to the provision of multiple access routes both at the local and district levels. • Identify vehicular access routes that provide safe access and egress to two different destinations, • Identify opportunities to improve access and egress for existing development including incorporating emergency access ways and fire service access routes where no alternative exists. <p>Element 4: Water</p> <p>Key Considerations</p>	

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<ul style="list-style-type: none"> • In reticulated areas, highlight locations of hydrants • and existing water infrastructure, In non-reticulated areas, it will be necessary to demonstrate the availability of alternative water supplies for firefighting purposes. <p>(b) It is critical at this level of the planning process that the work undertaken to determine the bushfire hazard is connected spatially within the Strategy and linked to the suitability of land for further intensification.</p> <p>6) Bushfire Protection Criteria Matrix</p> <p>Given the BHL assessment is being prepared to support and inform a wider strategic planning document, with multiple development or investigation areas being considered, the assessment may provide a comparison of the areas. In particular, it should consider the likelihood that development in an individual area may or may not comply with the bushfire protection criteria.</p> <p>This can be in the form of a matrix and provide a qualitative assessment identifying if it is considered that the areas proposed for intensification of land use are likely, possibly or unlikely to meet the criteria. It should recognise that compliance may be subject to the subsequent stages of the planning process.</p>	<p>6) Refer to 24(2)</p>

SUBMISSION	COMMENT
24. Department of Fire and Emergency Services (cont'd)	
<p>7) Recommendation</p> <p>DFES advice is to seek a BHL assessment that identifies opportunities and constraints for land use intensification, and the ability to achieve compliance with the bushfire protection criteria, to Inform bushfire risk management measures for the Strategy. This will help to ensure that all recommendations within the report avoid any increase in the threat of bushfire to people, property and infrastructure. The assessment should demonstrate to the fullest extent possible how compliance with the bushfire protection criteria can be achieved at subsequent stages of the planning process.</p>	<p>7) Refer to 24(2)</p>
25. Submitter No. 25	
<p>1) Open space: The current plan does not seem to accommodate consolidated public open spaces and playing fields. Typically there has been a fragmented approach to public open spaces. If this approach is to continue, then at least some 'pocket parks' should be allowed for so that there are smaller neighbourhood play areas. This is particularly important as development density increases.</p> <p>2) Bike paths: The recent development along Helena Valley Road was a wasted opportunity to install decent commuter, separated bike paths alongside this important carriageway. Whilst we appreciate the dollars per kilometre cost, early planning of integrated bike paths is essential. Separated bike paths (i.e.</p>	<p>1) Precinct 11 makes provision for district recreation grounds and the Helena River foreshore is identified for Public Open Space.</p> <p>2) Refer to 11(2) and 15(2)</p>

SUBMISSION	COMMENT
25. Submitter No. 25 (cont'd)	
<p>alongside but safely separated from motor vehicle traffic) are the best way to encourage commuters out of their car, and provide a safe cycling environment for children and occasional cyclists. Connection of Helena Valley to activity centres such as the new Boya community hub, and to Midland shopping precincts and the Midland Railway Station should be planned in at the earliest stage. This will not only allow for more cycling opportunities, but allow teenagers (too young to drive) who may hold part-time jobs in the Midland area a safe way to travel to and from their place of employment. The bike paths / bridle trails could also be extended to Bellevue (zone 4 of the precinct plan) as part of the current WAPC subdivision to join with the existing bridle trails/bike paths to give bicycle tourism access to the hills.</p> <p>3) Bridle trails: Horses are often ridden in the Helena Valley area, often along footpaths and across public open spaces. Riders often cross from old Helena Valley to the newer Helena Valley estates and ride to and from the shopping areas. Such activities should be encouraged by planning routes for horses to be ridden safely throughout the precinct.</p> <p>4) River reserve: The Helena River represents an important environmental feature that runs through Helena Valley. We support the creation of a public reserve along Helena River. We also feel that a pathway alongside the river for recreational use is one</p>	<p>3) Refer to 11(2) and 15(2)</p> <p>4) Refer to 25(1)</p>

SUBMISSION	COMMENT
25. Submitter No. 25 (cont'd)	
<p>way of activating the reserve and connecting residents with the Helena River. The development work on the north side of the river (Bellevue Farm) and the planned pathways could be extended the full length by crossing over the existing footbridge and run along the south side, joining up with the path on Helena Valley Road. This would give a long loop path along the river through Helena Valley and Bellevue.</p> <p>5) Roadways: We note there are plans to widen Helena Valley road to four lanes for the western most section. However, this appears to be quite old-fashioned planning, simply encourages motor vehicle use, and creates additional hazards at the round-a-bouts. It may be better to have more extensive slip roads, bus embayments, and separated cycle paths. A four lane road would be one of the only four lane roads in the area (the other being Great Eastern Highway Bypass) and seems quite unnecessary. It also would be four lanes to nowhere, as the adjoining Bushmead Road (the continuation of Helena Valley Road as it crosses over Roe Highway) is two lanes. We oppose a four lane construction in this area. The current intersection of Helena Valley Road and Midland Road is difficult to negotiate during peak traffic times (sight lines for motorists waiting to exit Midland Road and turn right on to Helena Valley Road are restricted due to the bridge over Roe Highway) and may become more of a hazard as residential</p>	<p>5) Refer to 11(2)</p>

SUBMISSION	COMMENT
25. Submitter No. 25 (cont'd)	
<p>expansion and traffic movement's increase. This intersection will require some careful thought.</p> <p>6) Parking. As long term residents of Helena Valley Estate, we notice one of the poor outcomes from more recent subdivisions (both west and east of the original Helena Valley Estate development) is that the small lot sizes, fence-to-fence housing, and very narrow 'verges' results in limited on-site parking and subsequently residents tend to park their vehicles on the footpaths outside their homes. This creates a hazard for pedestrians who have to frequently walk on the road as they move around the parked vehicles. It creates hazards as the streetscape is not clear and we have witnessed many near misses as children pop out between cars and are almost run down by motorists. Older residents who rely on mobility scooters also have great difficulty navigating their way through the more cluttered neighbourhoods. From a visual point of view, the streetscape is cluttered with cars parked haphazardly on verges and footpaths. From an environmental point of view, there is limited room for street trees, which are often damaged by vehicles parked on the verges, or removed by residents to make room for vehicles. There must be a better way to plan for vehicle parking, and footpath access.</p> <p>7) Building: Encourage multi-storey residential development (e.g. terrace style homes) in order to minimise building footprint on blocks and allow for</p>	<p>6) Precinct strategies refined to make specific provision for on-street parking to be considered in structure plan design and refer to 19(1).</p> <p>8) Refer to 19(2)</p>

SUBMISSION	COMMENT
25. Submitter No. 25 (cont'd)	
<p>residential tree planning and backyard space. Minimise fence to fence housing development (building envelopes?). Better built form planning allows for better environmental outcomes by allowing for greening of the suburb, less reliance on mechanical cooling and heating and reduced energy use (in line with the Shire's climate change policies), and better social outcomes.</p> <p>8) Zoning: Residential areas should have allowances for medical facilities, childcare facilities and other related 'residential' services. Historically, people who have purchased residential blocks have later opposed such services being located in their vicinity and planning for such facilities would reduce neighbourhood opposition to such future services and reduce the impact on Shire planning resources dealing with such opposition. The Helena Valley Primary School appears to be zoned residential on your map.</p> <p>9) Heritage: Clayton Farm (Clayton Road, Helena Valley) was established in the 1850's with construction of Victorian / Georgian style buildings in the early 1860's. This farm should remain protected and free from subdivision.</p> <p>10) Flight paths: ANEF should guide development away from flight paths. As technology improves, the Perth Airport is concentrating flights along a narrower path which results in higher frequency of flights over some</p>	<p>8) Refer to 19(2)</p> <p>9) Refer to 21(1)</p> <p>10) Refer to 20(2)</p>

SUBMISSION	COMMENT
25. Submitter No. 25 (cont'd)	
<p>areas. Due to the health impacts of noise, residential development alongside flight path areas should be discouraged.</p>	
26. Submitter No. 26	
<p>1) Our property is on the corner of ... giving us two road frontages, scheme water and it backs onto a number of properties along Helena Valley Rd.</p> <p>2) The size of our property ... is 2 hectares and as mentioned it backs onto a number of Helena Valley Rd Properties that are currently approx 1 hectare in size.</p> <p>3) Our property and the owners of the other two that run behind the Helena Valley Rd properties (numbers) have all expressed a desire to be considered in the Helena Valley Urban Expansion strategy for rezoning to allow for subdivision of our properties to at least the 1 hectare size blocks).</p> <p>4) The Northern boundary of these properties that backs onto the Helena Valley Rd properties boundary does not have a great deal of mature vegetation, is fairly flat contour wise and we believe that changes as described would not affect the rural feel of the land in question.</p> <p>5) Further to that the original building envelope for was on this lower North/Eastern area of the 2 hectares before approval was given to move it to the higher area near ...</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p> <p>3) Consideration of these properties for urban growth is not supported due to fire risk, vegetation classified as Local Natural Area, erosion of desirable amenity aspects and topography.</p> <p>4) The submission is noted</p> <p>5) The submission is noted</p>

SUBMISSION	COMMENT
26. Submitter No. 26 (cont'd)	
<p>This proposal would also allow for consideration to be given to utilising the Northern boundary of the 3 blocks in question and the Helena Valley Rd properties as increased access; if the HVUES being considered is implemented; and the eventual subdividing of the Helena valley Rd Properties.</p> <p>6) This would also increase the access for fire and emergency planning in an area that adjoins the residential and open space land.</p> <p>7) Our interest in this proposal is to allow for better use of the mostly unused sparsely vegetated portion of the land that is almost level with the Helena valley Rd properties and it also allows us the opportunity to assist our children in acquiring land with a rural feel yet close to amenities and transport.</p>	<p>6) The submission is noted</p> <p>7) The submission is noted</p>
27. Submitter No. 27	
<p>1) The first point we would like to make is personal and extremely important from our perspective.</p> <p>2) Despite having to wait for months whilst our planning approval went through all the hoops, we eventually purchased this property 17 years ago and knew that this would be our home for life. What drew us to this property was the rural lifestyle, the sense of place, the natural environment with access to a river and the privacy on the river frontage without losing community values</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>3) Considering the proposed walkway along the river and the loss of all the determining factors influencing our choice to purchase, we have strong objections to the proposed purchase and rezoning of the Helena River to parks and recreation as we will not only lose all privacy from our home, we will lose a large portion of our property and we will lose our sense of space and sense of place. Concepts that are so strongly promoted and upheld in the Shire's Strategic Plan 2026 and Environmental Management Plan 2012 - 2022. The shire can't keep reiterating ideals such as "Sense of place", "Amenity of the area" and "Rural lifestyle" only to take it away whenever it suits them.</p> <p>4) Upon purchase of our property several restrictions were placed on the property, including restricting development or livestock on the 100 year floodplain and not to compromise the amenity of the area. Our property is long and narrow and in some sections, the amount of land we would be left with would not be viable or cost effective to maintain or manage for fire risk which is what we currently do at great expense.</p> <p>5) We have been managing the riparian zone of the Helena River for many years by ourselves and with the help of the Helena River Catchment Group which we have been actively involved with for years. There is no evidence that the shire or any other agency could manage it better than we have as there has been little interest to date in local reserves.</p>	<p>3) Refer to 15(4). The reservation of the Helena River foreshore as Crown land is considered an appropriate method to protect significant environments, cultural features and space for recreation for future generations which is commensurate with enhancing a sense of space and place in the Shire.</p> <p>4) The submission is noted</p> <p>5) Refer to 13(1)</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>6) We are also not convinced that the shire can afford the cost of compensating landowners for reclaiming land along the river for parks and recreation. In estimating the value of the range of losses we would incur, considering the environmental works already completed, future management, loss of privacy costs and loss of lifestyle with the unsavoury threat of increases in crime such as burglaries and arson.</p> <p>Where will these funds come from? Ratepayers such as ourselves will be the biggest losers. Our suggestion is in the interest of conservation and to not develop the riparian area as proposed!</p> <p>7) The Helena River is a nature corridor and introducing people/dogs and other activities would serve as a deterrent to fauna displacing animals that have traditionally used this strip for millennia. The development will effectively destroy an ecosystem.</p> <p>Increases in density and subdivision particularly near the river should be avoided as it is not in keeping with the amenity of the area and it does not conform to:</p> <ul style="list-style-type: none"> • Shire of Mundaring's Strategic Plan 2026 particularly Objective 2 – 3.1.3 • Shire's Environmental Management Plan 2012-2022 – inappropriate development and subdivision and Water Actions 6.14 to limit clearing of vegetation along watercourse and create adequate buffer zones • Shire's Local Climate Change Adaptation Action Plan 	<p>6) Refer to 13(1) and 15(4)</p> <p>7) Refer to 13(1) and 15(4)</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>– High priority 3 Watercourse damage and loss; to ensure the shire’s planning and development activities create a positive impact on the watercourse</p> <ul style="list-style-type: none"> • LPS 4 Local Planning Strategy – Section 7.4 Helena Valley 5.3 – Bush Forever sites that fall on private land are protected from inappropriate subdivision and development that would disturb or adversely impact on ecological values. <p>8) The Helena Valley private estates and the Bushmead development have already more than catered for residents preferring an urban environment. The Shire should protect the rural properties for the benefit of future residents and generations as not all will want to live in medium to high density housing. Why move to or live in the Shire of Mundaring?</p> <ul style="list-style-type: none"> • Urban heat island effects detrimental to the liveability of highly developed suburbs • Urban Forest Management Plan – does the shire have one and recognise the impact of removing trees on the health and social wellbeing of the residents • Loss of existing vegetation and mature habitat trees will impact the survival and health of local native fauna populations, particularly Carnaby’s and Forest Red tailed cockatoos. Hollows for this species takes 100 years or more to form. Replanting with Chinese elms or London plane trees is not a suitable 	<p>8) The Draft North-East Sub-Regional Planning Frameworks recognise that the Shire will continue to experience population pressures which must be managed. The Strategy has as one of its core components the protection of vegetation. Refer to Submissions 11 & 14.</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>replacement.</p> <ul style="list-style-type: none"> • Lack of services such as public transport and schools already exists in Helena Valley, not likely to be improved as the government has failed to address this for the current population. <p>9) Reserve 39094 should be retained for conservation purposes as it is a unique area of cultural and environmental importance and is ranked 33 out of 100 on the shire's list of reserves with a high biodiversity status. I had previously drafted a management plan and conducted vegetation surveys in the reserve, which I have previously submitted to the shire.</p> <p>Common catch phrases that arise from the Shire's strategic and environmental plans, include:</p> <p>Shire of Mundaring – A sense of space and a sense of place</p> <p>An environment that provides the lifestyle and sense of place that the community values</p> <p>Community needs are to be considered in planning for the future</p> <p>Without compromising the amenity of the area (The Boya Community centre has already destroyed the village amenity by introducing an imposing concrete structure where there were healthy trees lining an oval)</p>	<p>9) Refer to 13(1) and 27(3)</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>Committed to protect, manage and enhance the community's environment</p> <p>Prevent loss of identity and attractiveness of the area Is the shire committed to these statements? The Helena Valley Urban Expansion Strategy mentions some but seems to blatantly contradict these very values that the Shire portrays in its environmental and strategic plans and policies.</p> <p>Further points are noted below and included in the draft as sticky notes.</p> <p>10) Page 1</p> <ul style="list-style-type: none"> • How was the environment and amenity protected with the development of Helena Valley Private Estates? • HVUES goals are opposing – Our aspiration as a land owner is to have privacy and semi-rural lifestyle with low traffic. • Increasing population and human activity will increase the likelihood of fire. Refer to DFES Urban Bushfire Threat Analysis tool • Urban growth erodes our peri urban amenity irreversibly • What risk are you mitigating? reducing Fire potential by removing vegetation increasing fire potential by increasing human activity, increasing Crime rate and anti-social behaviour by 	<p>10)</p> <p>The subdivision known as the Helena Valley Private estate included the ceding of land around the Helena River as foreshore reserve.</p> <p>The Strategy aims to balance diverse community aspirations.</p> <p>Refer to Submission 24</p> <p>Refer to 26(3)</p> <p>Development can result in funding for infrastructure e.g. emergency accesses which mitigates existing fire risks.</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>increasing population in urban heat islands, increasing traffic accidents by increasing volume on roads with a younger demographic on roads ill equipped for the volume and no foot path on Helena valley road east of Leawood Cr, decreasing ecosystem by destroying habitat and nature corridors and increasing pollution from car exhausts that settles in the valley when the wind isn't strong enough to blow it over the scarp</p> <p>11) Page 2</p> <ul style="list-style-type: none"> • What activity Centre? What utilities? We don't have gas or deep sewerage. What community infrastructure? Is the Boya community hub classed as activity Centre and community infrastructure? It isn't open yet and has destroyed the amenity of the area. Apart from a bus service, midland train station is 10 minutes away. How about a foot path so my daughter can walk safely along an already busy Clayton road to get her bus to school? This is what I would call infrastructure. • What urban form is environmentally sustainable? You would have to go to Singapore to see this. • the easement on our property is supposed to be maintained by the shire yet they have only performed maintenance once at our request. It has not been monitored nor inspected. Why would I think that the 	<p>11)</p> <p>The activity centre referred to in the excerpt is Midland.</p> <p>The report states that the study area is in proximity to utilities and services. As development occurs, these services are extended.</p> <p>Refer to 11(2)</p> <p>Higher residential densities with a mixture of commercial and other uses are considered environmentally sustainable urban forms.</p> <p>Refer to 13(1)</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>shire is more capable than me to manage an environmental asset or infrastructure? All developmental works are not bound by AS4970 which clearly demonstrates the Shires reluctance to preserve trees as “Green Infrastructure” to which they are regarded by other shires as.</p> <ul style="list-style-type: none"> • refer to DFES Urban bushfire threat analysis. Increasing human activity can increase bushfire potential • how will the Scott St and Great Eastern highway intersection and Clayton road east be modified to cater for the extra traffic created as a result of urban infill? Is there any net benefit in creating 4 lanes on Helena valley road when bottlenecks such as the bridge on Scott St and Bushmead Rd will clearly limit traffic flow? • How will urbanization address fragmented landownership? Does it really have to? <p>12) Page 3</p> <ul style="list-style-type: none"> • We don't want growth • Although it is a first step involving nominal risk to the shire it is of great risk to landowners prior to the release of the plan 	<p>Refer to Submission 24</p> <p>Refer to 11(2). The Strategy has been modified to clarify a four lane bridge over Roe Highway.</p> <p>In the case of Precinct 5, rezoning would support the arrangement of lots into land suitable for future subdivision.</p> <p>12) There are diverse views regarding the desirability of growth in Helena Valley. The risk being referred to is that posed by preparing a District Structure Plan at significant cost without certainty that the location can be considered for urban growth under the Shire's and State's planning frameworks (Local Planning Strategy and Draft North-East Sub-Regional Planning Framework).</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>13) Page 4</p> <ul style="list-style-type: none"> • Why not limit the urban form to areas that provide a logical extension to areas of green fields? Wouldn't this strategy be embracing sustainability? • Why not provide free workshops for landowners to educate in water conservation? • What is employment land and where is the location of employment land in Helena Valley? • Please describe location and types of finite basic raw materials in Helena valley? <p>14) Page 5</p> <ul style="list-style-type: none"> • How has this principle been applied in the development opposite the lifestyle village on Helena valley Rd or the Boya hub? It hasn't! So how serious is the shire in adhering to this? Careful not to erode the credibility of what you say by what you do! • How did the pressure of tourism demands affect the truffle festival? <p>15) Page 6</p> <ul style="list-style-type: none"> • Some buffer may not be enough buffer! Once the buffer has been reduced and developed, it is too late to reverse and ecosystems could be impacted forever 	<p>13) The excerpt being referred to is from the Draft North-East Sub-Regional Planning Framework. Questions regarding its content are best directed to the WAPC. The Strategy makes provision for commercial land in Precincts 9 and 11</p> <p>The relevant part of this excerpt is identifying land uses for industrial and public purpose sites through the staging and sequencing of land. Refer to Submission 5.</p> <p>14) It is unclear from the submission which principle is being referred to.</p> <p>It is unclear from the submission what relevance tourism pressure from the Truffle Festival has on the Strategy.</p> <p>15) The submission is noted</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>16) Page 9</p> <ul style="list-style-type: none"> • District level structure plan might seem like a lot of money but consider the cost and irreversible impact should the planning prove to be inappropriate in the future <p>17) Page 12</p> <ul style="list-style-type: none"> • Shouldn't this include not developing the riparian area for a walk trail? Sounds contradictory. This is supposed to be a nature corridor and the best way to deter nature is to introduce humans • What is the projected value of this tourism weighed against the impact to the ecosystem and the loss of privacy and compensation for the land that would have to be purchased? • I look forward to a foot path for Clayton road and better storm water management so my block doesn't flood. <p>18) Page 13</p> <ul style="list-style-type: none"> • This document apparently contradicts its own policies regarding management of the riparian area so in my opinion it wouldn't be that hard to appeal. • Considering the proposed walkway along the river, shouldn't DPAW and the Swan river trust be consulted if the report is truly comprehensive? Or don't you want to hear what they may say? 	<p>16) The submission is noted</p> <p>17) It is unclear from the submissions which section of the Council report is being referred to. Nevertheless, trails in nature corridors reduce the likelihood of cyclists, horse riders and walkers will create their own paths.</p> <p>Refer to 15(b)</p> <p>Refer to 11(2)</p> <p>18) The 'appeal' being referred to are those capable of being lodged with the State Administrative Tribunal.</p> <p>The Draft Strategy was referred to the Department of Parks and Wildlife for comment.</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>19) Page 14</p> <ul style="list-style-type: none"> This intersection is already dangerous and as a commercial operation I avoid turning right onto the highway from Scott Street. This increases my journey time. With more development this intersection will become more dangerous well before the intersection is upgraded if indeed it can be upgraded? Safety needs to be improved now! To have increased traffic on the road extending journey times will not support my business activities. <p>20) Page 15</p> <ul style="list-style-type: none"> The map is useless without street names or datum. It is drawn to be difficult to interpret! All riparian areas are environmentally sensitive! Not just east of Fyfe St. All endemic vegetation along a river is significant. Our property is designated a 100 year floodplain but it appears a walkway is still proposed! <p>21) Page 16</p> <ul style="list-style-type: none"> I strongly disagree. MSC had the opportunity to do this when the CSIRO sold the block and subdivided. Why wasn't this done then? Second and third environmental points contradicts first point. The new development on Helena valley road will change this demography. Why isn't this foreseen? 	<p>19) Refer to 11(1)</p> <p>20)</p> <p>Attachment 3 of that Council report contains a map with street names.</p> <p>The submission is noted</p> <p>The submission is noted</p> <p>21)</p> <p>Page 16 of the Council report does not contain information related to the former CSIRO site.</p> <p>Refer to 27(3)</p> <p>The submission is noted</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>We don't want another Stratton!</p> <ul style="list-style-type: none"> • Protects views of significance - What about the view into my pool area from people walking on the walkway approx. 30m away with public access to the river? • Is this an excuse for more block clearing and more gutter to gutter development? <p>22) Page 17</p> <ul style="list-style-type: none"> • Improve stormwater management by MSC. • Should have considered this before permitting development. • Not likely to happen in my location or many others. We don't have access to deep sewerage, mains gas and there is little stormwater management on my side of the street. • How will the erection of these towers be in keeping with the amenity of the area? Will you erect a white picket fence around them as in the new estate? • Clayton road or Clayton Street? Get it right please! It is obvious that the author doesn't live here. • Point 2 contradicts point 1. We strongly disagree with the procuring of land along the river <p>23) Page 18</p> <ul style="list-style-type: none"> • Market driven factors are usually not environmentally sustainable! 	<p>“Views of significance” as used in this context relate to, for example, view of the hills and to/from the Helena River rather than one private property to another.</p> <p>It is unclear from the submission which part of the Council report is being referred to.</p> <p>22) Utilities are provided by developers as development occurs.</p> <p>The Draft Strategy does not contemplate installation of power pylons.</p> <p>The submission is noted</p> <p>Refer to 27(3) 23)</p> <p>The submission is noted</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<ul style="list-style-type: none"> • If the assumptions have changed then the figures could mislead and should not be included. Get the correct figures through new study based on current assumptions before presenting them. • Scenario 2 - There will still be a bottleneck at the Scott St and GE Hwy intersection only now taking traffic through residential zones. <p>24) Page 19</p> <ul style="list-style-type: none"> • Scenario 6 - By not permitting right into Scott street will increase traffic on Stuart St. Prohibiting right onto GE Hwy will reduce the non-residential traffic coming from GE Hwy bypass using this as a shortcut and reduce the likelihood of accident at this intersection however there will be a significant increase in traffic on Clayton road which is not suited to high volumes and would be very difficult to expand in a commensurate period of time. • Scenario 7 - alternatively make Stirling Crescent 4 lanes between the bypass and Bushmead Roads. <p>25) Page 20</p> <ul style="list-style-type: none"> • Implementation should include a social and an environmental impact assessment • SPP 3.6 standard of living , mobility and lifestyle choices of a community will all downgrade as development occurs 	<p>Refer to 11(2)</p> <p>Refer to 11(2)</p> <p>24) Refer to 11(2)</p> <p>25) Consultation provides an assessment of social impact. Further consultation and environmental impact assessments are undertaken at subsequent planning stages. It is not the intention of the Strategy to diminish amenity.</p>

SUBMISSION	COMMENT
27. Submitter No. 27 (cont'd)	
<p>26) Page 22</p> <ul style="list-style-type: none"> • Has the survey from precinct 10 been included? And why not? • We are currently managing the Helena river riparian area and easement better than the shire would at no charge to the shire. Will we be compensated for this if we are forced to sell? • Why weren't the other 5 precincts included in the workshops? 	<p>26) The survey precincts are different to the precincts shown on the Precinct Plan. The survey precincts covered larger areas to ensure a critical mass of participants.</p>
28. Submitter No. 28	
<p>1) My wife and I have lived at 4130 Helena Valley Road for 37 years and wish to be able to subdivide the property into two halves.</p> <p>2) The reasons for this are:</p> <ul style="list-style-type: none"> • We both like the area and the place we live but as we are ageing (both being beyond retirement age) we find the care and maintenance is becoming difficult. • Maintenance of the block is expensive at a time in our lives when we do not have the income or funds available for this. • Our block is 3.5663 ha and is just below (0.4337ha) the 4 ha (9.88 acre) size which would have enabled it to be split in two. • The eastern boundary of our block is on the 	<p>1) The submission is noted</p> <p>2) Refer to 26(3)</p>

SUBMISSION	COMMENT
28. Submitter No. 28 (cont'd)	
<p>Gooseberry hill national park and dividing it in two would not create any significant impact on the landscape amenity of the locality i.e. the marginally smaller lot/block (just 0.54 acres less than the 4.98 acres that would result from a 9.88 acre lot being split in two--approved under the current zoning) would not have any discernible negative impact on the landscape as the adjoining national park has extensive bushland.</p> <ul style="list-style-type: none"> • Our block appears to be zoned RR4, whilst we are surrounded by RR1 and RR2 blocks --which maintain the landscape buffer required in the Town planning Strategy • We wish to remain on our block as it is close to amenities (New community Centre /Library), local shops, the new Midland Hospital, the larger commercial/retail centre of Midland, and the airport. <p>3) Being able to divide the property in two would allow us to remain in the area as we would be able to cope with the smaller block size.</p>	<p>3) The submission is noted</p>
29. Submitter No. 29	
<p>1) Introduction</p> <p>I wish to submit my comments to the Draft Helena Valley Urban Expansion Strategy in relation to a property owned by myself;) currently holding a zoning as Rural Residential and with the recommendation in</p>	<p>1) Refer to 26(3). The submitter may wish to consider making an application for an ancillary dwelling.</p>

SUBMISSION	COMMENT
29. Submitter No. 29 (cont'd)	
<p>the Draft Helena Valley Urban Expansion Strategy that it be placed into Precinct 8 which allows for “No changes should be made to the current zoning,”</p> <p>I have owned this property for in excess of 40 years and while it became impossible for my husband and I to build on the land, it was our intention to keep it for our children/grandchildren imagining that given time, the one parcel of land could be split to allow each of our children to own a share</p> <p>It is with a deep sense of disappointment that I have discovered that if this recommendation is carried forward that it will be in place for the next 30 years making any future plans for our family impossible.</p> <p>2) My Request for Change to; Precinct Plan – Draft Helena Valley Urban Expansion Strategy</p> <p>On studying the diagram outlining the Precinct Boundaries, I notice that the boundary between Precinct 11 and Precinct 8 cuts through the western boundary of my land, but on the other side of Helena Valley Road, Precinct 11 continues along until it aligns with the eastern boundary of my neighbour’s property (No 4130). This meaning that my property and my neighbours are the only two along that stretch of Helena Valley Road which will not be included in Precinct 11 and have the opportunity to improve our properties. It is understandable as both these</p>	<p>2) Precinct 8 boundary runs along the western property boundary of the subject property.</p>

SUBMISSION	COMMENT
29. Submitter No. 29 (cont'd)	
<p>properties are quite unique and I am in full agreement that very careful considerations be taken before any development takes place, but I believe that the conditions outlined for Precinct 11 allow for these issues to be addressed in such a manner as to satisfy all of the accountability concerns of Council.</p> <p>Precinct 11 Guidelines allow for the development of land, but not without 'comprehensive precinct planning', giving Council full control over whatever eventuates. A change in the boundary line for Precinct 11 to include ... and ... would still provide Council with full control and does not leave these two property owners with no hope of any future development of their properties.</p> <p>3) Justification</p> <p>Throughout the text of the 'Helena Valley Urban Expansion Strategy', there are many elements which are cited which would automatically apply to a development of these properties; those concerned with the preservation of natural features, envelopes for building sites, no fencing, building designs to suit the topography, colours to suit the environment, limited removal of vegetation etc. As well as those mentioned there are many materials and house designs available now which are specifically made and designed for use in 'fire prone areas', these along with solar energy, rain water tanks and sprinkler systems would all come into the consultative process to ensure</p>	<p>3) The submission is noted</p>

SUBMISSION	COMMENT
29. Submitter No. 29 (cont'd)	
<p>beautiful bush-land and mindless cutting down of old trees in our suburbs.</p> <p>With this in mind, I totally agree with the concept of protection for vulnerable areas, and support the recommendation that this property does not lend itself to a blanket rezoning.</p> <p>5) CONCLUSION</p> <p>From the content of my submission, it is evident that I am not just interested in subdividing my land to make a large fortune. I have held this land in excess of 40 years with the intention that it would be passed on to my family and that they would have the opportunity to enjoy and benefit from this beautiful piece of land. To make this equitable and viable, keeping it as oneparcel is impossibility, and unfortunately it will mean the land will pass out of my family without any of us ever having had the chance to live there.</p> <p>I therefore ask Council to consider my request for a change to the Boundary Line between Precinct 8 and Precinct 11 to include both ... and ... The land is perfect for a small group of families and with the right consultation and planning, would provide a beautiful rural lifestyle, so close to a major city and amenities, and be completely in line with the issues we face in Western Australia of a 'growing population'.</p>	
30. Submitter No. 30	
1) I am writing in response to the Draft of the HVUES. My	1) The submission is noted

SUBMISSION	COMMENT
30. Submitter No. 30 (cont'd)	
<p>comments are about the sequential staging of the road network Scenarios. They are mostly questions for the Shire to consider, and for my own information.</p> <p>2) Scenario 7. Roe Highway link to northern side of Helena Valley Road.</p> <ul style="list-style-type: none"> • The Cardno traffic Report 2015 reports that this scenario will worsen conditions at Helena Valley Road There is already Clayton Road access to Roe Highway. It is less than 1 km from the proposed link in this Scenario and is relatively under utilised. • Considering the potential population growth across to Maida Vale would a link south of Helena Valley be more appropriate for traffic flow and funding for the Shire? <p>...together with an extension of the GEH bypass across to Midland Rd?</p> <p>3) Scenario 3. - North-south link from Katherine Street to Helena Valley Road.</p> <p>Traffic moves in both directions. Traffic from the new Bushmead Estate and beyond, and Helena Valley and beyond will also cross to Katherine Street to access Clayton Road, east and west. Roe Highway and GEH.</p> <p>- Would this also require Katherine Street to be upgraded to meet an increase in traffic needs from proposed R30 urbanisation on this road?</p>	<p>2) Refer to 11(2)</p> <p>Ridge Hill Road connects to Maida Vale. However, a strategy for Precinct 6 is to provide a road through to Bushmead/Hazelmere which connects with Midland Road.</p> <p>This connection is not supported by the state government.</p> <p>3) Refer to 11(2)</p>

SUBMISSION	COMMENT
30. Submitter No. 30 (cont'd)	
<p>- If Scenario 3 is combined with Scenario 4 -the Farrell Rd extension from Clayton to GEH.</p> <p>...would it be more cost effective do both at once?</p> <p>...to create a straight through through fare for traffic from Darlington and Boya from Marriot St.? .. and make better use of the Clayton St/ Roe Highway link?</p> <p>...and provide a safer alternative for traffic turning east than at the Scott Street/GEH intersection? (sec scenario 6 below)</p> <p>Scenario 2. Samson Street extension across the Helena River.</p> <p>Concerns about traffic safety on Katherine street is mentioned more than once on the Landowner Aspiration survey .The Cardno Traffic Report states that the set speed limits on Katherine, Frederick, Scott and Helena Valley Roads are exceeded by 20%-50%. The Crash Data indicates that the majority of crashes are the result of rear ending. To my knowledge the speed limit through residential areas, whether signed or not, is 50klh. I also note the discrepancy between the Cardno Traffic Report's stated traffic volume on a two lane road and the Main Roads Hierarchy. Cardno states Vehicles per day is exceeded when it reaches over 3600 Vehicles Per Day and the Main Roads Hierarchy states an indicative traffic volume on a Local Distributor road is 6000VPD.</p> <ul style="list-style-type: none"> • Would traffic congestion occur at both the Katherine 	

SUBMISSION	COMMENT
30. Submitter No. 30 (cont'd)	
<p>St end and become a black spot where it intersects on a sharp bend at Helena Valley Road?</p> <p>4) Scenario 6. Scott Street Great Eastern Highway(GEH) intersection restricted to left-in left-out (LILO)</p> <p>The Cardno Report considers the impacts LILO and does not recommend it, and a tunnel for traffic going east may create further congestion when traffic merges with the single left hand lane carrying heavy vehicles up Great Eastern Highway. It may also create a hazard when traffic emerges onto GEH nearby at Innamincka and Old York Roads.</p> <p>The Shire President, David Lavell, Hills Gazette. 27/1/17, states that the HVUES. while planning for growth, will make sure the whole suburb develops in a 'co-ordinated and sustainable way' to 'meet the needs of current and future residents.' The area bordered by the Hills to the east, the Shire's boundary to the south and major highways to the north and west is already the established residential areas of Greenmount, Koongamia and Helena Valley. Cars and heavy and articulated vehicles shortcut through these suburbs to and from this intersection and Midland & Bushmead Roads This intersection needs to be the first priority as it is a dangerous intersection, a major funding issue, and will have further effect on traffic volumes through these suburbs with the urbanisation of Mundaring. Stoneville and Parkerville.</p> <p>Dare I suggest closing this intersection altogether? It</p>	<p>4) Refer to 11(2). Various scenarios, including closure of the Scott Street/Great Eastern Highway intersection, have been discussed previously. However, the re-routing of traffic to local roads creates problems elsewhere in the network.</p>

SUBMISSION	COMMENT
30. Submitter No. 30 (cont'd)	
<p>would restrict non local traffic along Scott Street from a proposed extension of the commercial development to the new Community Hub/ Library. And provide safe crossing for pedestrians and cyclists in this area in the future. It would also ease congestion on the Scott Street/ Helena Valley Road/ Ridgehill Road intersections, and lower traffic volumes for all other scenarios. I use this intersection myself to travel to Mundaring town site and beyond so I know the difficulties of turning here. I also know its closure may not be popular in the short term.</p> <p>Might a long term view see that closing this intersection will prevent many combinations of traffic problems; line of sight, accidents, flow, as well as negative effects on local residents.</p> <p>5) There is No Scenario for comment on the widening of the Helena Valley Local Distributor Road through to east and west of Torquata Road. This is not mentioned in Study Area except at Precinct 12. as are scenarios 6 & 7. The upgrade of Helena Valley Road is only listed as an improvement on page C.82. of the draft HVUES. And to follow when triggered by traffic growth plus development.</p> <p>Except as a priority at the multiple intersections in Precinct 12, will conditions worsen for flow and accidents as traffic moves from four lanes down to two on sections with a piecemeal approach to widening the road through the residential area?</p>	<p>5) Refer to 11(2)</p>

SUBMISSION	COMMENT
30. Submitter No. 30 (cont'd)	
<ul style="list-style-type: none"> - Will the Shire update a traffic report once the triggers of Scenarios 3, 6, or 7 are implemented? - Will 2021-2026 be the years to implement 3, 6 or 7? <p>Is Scott Street also expected to be upgraded?</p> <p>According to Mundaring Shire's desire for Balanced Development 2016-2026, priority is given to closer attention to traffic studies, and improved safety on road, cycle and foot paths. Twenty to fifty cyclists a day ride east and west on Helena Valley Road and along Scott Street to Marriott and Ridgehill Roads. In Helena Valley an increasing number of school children and older residents cross over Helena Valley Road to and from Broz Lake, the playground and river Reserve on one side and to the supermarket, chemist and bus stops on the other. I cannot imagine how a future upgrade to Scott Street and Helena Valley Road, including bus stopping lanes on both sides to improve traffic flow, cycle and pedestrian paths on both sides, plus a median strip for safe crossing would fit in the width available. Especially without removing the established native trees on Helena Valley Road.</p> <p>Kadina Brook lies from the Helena River across to the base of Gooseberry Hill. At present it is fenced as a Local Natural Area to the edge of Helena Valley Road. Its flora is programmed for retention, maintenance and rehabilitation. Crested pigeons, black cockatoos, wrens, magpies, parrots and galahs nest locally.</p>	

SUBMISSION	COMMENT
30. Submitter No. 30 (cont'd)	
<p>Egrets and ducks with their ducklings wander across the road between Torquata Boulevard and Kadina Brook from autumn to spring.</p> <ul style="list-style-type: none"> • How will all these ecological features be maintained? <p>6) The Landowner Aspiration pages in the advertised HVUES show that too much traffic and noise are mentioned most of the time. Greenmount, Bellevue. Koongamia and Helena Valley is on the outer edge of ANEF 25 which does not mean there is no air traffic noise. Should the plan to divert rail freight to the west of Helena Valley go ahead it will increase the noise which is already heard from its present location at Bellevue twice as far away. And if the Bushmead Estate plan for a metrolink spur along the southern Mundaring Boundary is adopted, together with an increase in heavy vehicle use on Helena Valley Road if it is upgraded to a Distributor Road, the noise levels on the mental health of the current residents will surely take its toll.</p> <p>- Will there be a survey of the community's response to the specific repercussions of widening the road including reference to noise and diesel pollution levels on the outdoor living spaces of residential properties backing onto the Helena Valley Road between Kadina Brook and Lomandra Road?</p> <p>7) What I like about Helena Valley is its sense of place,</p>	<p>6) Refer to 11(2) and 20(2). Should urban growth occur, proposals will be assessed against State Planning Policy 5.4 – Road and Rail Transport Noise and Freight Considerations in Land Use Planning.</p> <p>7) The submission is noted</p>

SUBMISSION	COMMENT
30. Submitter No. 30 (cont'd)	
<p>connected both to the environment and services in Midland. I like that it is a quiet place with its sense of semirural space for walking and cycling. I like the curving Helena Valley Road, the wide verges, the established trees and birdlife. My aspiration for the four suburbs I've mentioned is to maintain the brand of Mundaring Shire as a place with a sense of space.</p> <p>Here is my list of priorities for the staging of the HVUES...</p> <ul style="list-style-type: none"> • Sequence future traffic and residential surveys for major road upgrades with regard to the impact of creating a balance between the positive aspects of growth with the negative consequences to the livability, safety, aesthetic and environmental amenity of the present community along Scott Street and Helena Valley Road. In particular regard to alteration of the Scott Street/GEH intersection/scenario 6. • Upgrade Katherine Street to meet the needs for scenarios 2,3,4,5 & 6. • Scenario 3 & 4 proceed at the same time with regard to funding and Scenario 6. • A link South of Helena Valley Road to Roe Highway in preference to scenario 7. • Avoid the traffic dangers of a piecemeal approach to changes on Helena Valley Road. 	

SUBMISSION	COMMENT
31. Friends of Pioneer Park	
<p>1) We are choosing to comment on this proposal as residents interested in the environment and town planning generally.</p> <p>2) Decisions taken in devising the HVUES will have far reaching implications on any future planning in the Shire so it is essential that the Shire retain control of the process and implementation of the strategy.</p> <p>3) Environment</p> <ul style="list-style-type: none"> • Is the proposed road joining Katherine and HV roads to go through the designated recreational land? • Join disconnected recreational and other reserves to create wildlife corridors • Soil, gravel used in road widening and construction must be free of weed seeds • Enlarge riparian zones around all watercourses and plan for future flooding as climate change will cause more severe weather events, not only drying • Introduce and enforce a regeneration plan and ongoing council maintenance using local endemic species for reserves and water courses • Plan for soil acidification in future works including lower water table (of Garret Rd gas pipeline) • Public access to waterways including major feeder creeks as well as rive-should be by raised boardwalk 	<p>1) The submission is noted</p> <p>2) The submission is noted</p> <p>3) Yes.</p> <p>Refer to 15(4)</p> <p>Comment referred to Shire's Infrastructure Services for investigation. Refer to submission 18</p> <p>Refer to 13(1)</p> <p>Planning for Acid Sulfate Soils planning is a standard planning requirement. Refer to 13(1)</p>

SUBMISSION	COMMENT
31. Friends of Pioneer Park (cont'd)	
<ul style="list-style-type: none"> • Strictly enforce cat and dog bylaws to protect fauna <p>4) Social and economic/infrastructure</p> <ul style="list-style-type: none"> • Provide high density public and private housing in mix • Plan for building/extension of public schools • Enforce sustainable (6 star standard at least) in all buildings, include greywater design, Increased waste water disposal (sewage) be built into land cost. • No wholesale removal of trees/native vegetation be permitted • Include bike/walking lanes on all roads to access the Midland CBD and industrial areas. • Ensure that frequent, accessible public transport is provided • Hydrology study be required before any building/road development • Suitable land be identified and set aside for a comprehensive aged care facility <p>5) Overall it is a good strategy if not left to developers to control the planning processes and environmental protection is the overarching policy.</p>	<p>The submission is noted</p> <p>4) Refer to submission 10 and 19(2)</p> <p>The Strategy makes specific provision for tree retention and planting. Refer to 11(2)</p> <p>Refer to submission 6 and 11 Hydrological studies are a standard planning requirement.</p> <p>Precinct 5 makes provision for extending the existing Park Home Park. An aged care facility (Regis Greenmount) provides specialised aged care in proximity.</p> <p>The submission is noted</p>

SUBMISSION	COMMENT
32. Submitter No. 32	
<p>1) I refer to the Draft Helena Valley Urban Expansion Strategy and write on behalf of my parents, of, Helena Valley, Western Australia, 6056.</p> <p>My parents endorse the Draft Proposal for Urban Expansion in Helena Valley and support the view of the Shire of Mundaring.</p>	<p>1) The submission is noted</p>
33. City of Swan	
<p>1) The City of Swan understands that the Strategy aims to plan for future urban growth in Helena Valley in a way which seeks to accommodate a growing population in a manner which protects the environment and amenity, improves and provides new infrastructure, and responds to fire risk and landowner aspirations.</p> <p>2) Helena Valley has been identified as one such growth area in the Shire of Mundaring's Local Planning Strategy.</p> <p>Whilst the City of Swan supports the vision of the Strategy in principle, it has some issues relating to the proposed road network and upgrades presented in the Strategy. These issues are summarised as follows:</p> <p>a) The Strategy proposes a number of new roads and road upgrades including:</p> <ul style="list-style-type: none"> • Upgrading Helena Valley Road to four lanes; • Establish connection between Helena Valley 	<p>1) The submission is noted</p> <p>2) the submission is noted</p>

SUBMISSION	COMMENT
33. City of Swan	
<p>Road and Katherine Street;</p> <ul style="list-style-type: none"> • Upgrade Scott Street; and <p>Establish connections over Helena River.</p> <p>3) Whilst the City understands the need for the road upgrades, these upgrades will however, have considerable impact on the road network between the City of Swan and the Shire of Mundaring:</p> <ul style="list-style-type: none"> • Upgrade Helena Valley Road to 4 lanes from the bridge (linking to Bushmead Road) to about Lakes Drive will make the route into Midland very attractive but would create a bottleneck effect at the bridge, then long both Military Road (current traffic counts 11,000vpd) and Bushmead Road (current traffic counts 8,000vpd). It is likely that Military Road may be removed as a result of the realignment of the freight rail line, and this will mean that all the above traffic will be transferred onto Bushmead Road (20,000vpd). This would require Bushmead Road to be upgraded to a 4-lane road in order to cater for 20,000vpd (this is only current counts and not even taking consideration of the future traffic increase). Whilst the road reserve is probably wide enough for the upgrade, there are significant utility Infrastructure within the Bushmead Road reserve which may somehow limit the ability for upgrading the road. 	<p>3) Refer to 11(2). Strategy modified to clarify bridge widening to four lanes required.</p>

SUBMISSION	COMMENT
33. City of Swan	
<ul style="list-style-type: none"> • It must be pointed out that upgrading Helena Valley Road without upgrading the bridge will be meaningless as it will not solve the traffic congestion issue given the bridge will act as a bottleneck. Therefore, the bridge should be identified for an upgrade (widening to 4 lanes) as part of the Helena Valley Urban Expansion Strategy. In order to address the imminent congestion issue, so that the funding for the bridge upgrade can be considered by the State government or through other appropriate funding mechanism. • Establishing connections between Helena Valley and Katherine Street will add more traffic onto Helena Valley Road, which further necessitates the need for upgrading the bridge. This again, emphasises the importance for the Strategy to identify the bridge upgrade as a project item being included into its recommendations. The City is happy to work with the Shire of Mundaring in terms of seeking appropriate funding methods for the construction of the bridge. <p>4) There are some inaccurate information in the Strategy which need to be corrected:</p> <ul style="list-style-type: none"> • "Midland Activity Centre Structure Plan" shown on Notation Number 9 of the Context Plan in 	<p>4) The Building Height Plan was intentionally included to describe the intensity of development occurring in proximity to the Strategy area.</p>

SUBMISSION	COMMENT
33. City of Swan	
<ul style="list-style-type: none"> Helena Valley Urban Expansion Strategy, Is actually the Building Height Plan, not the actual Structure Plan (land use plan). It would be more appropriate to show the land use plan rather than the Building Height Plan in the Strategy. 	
34. Submitter No. 34	
<p>1) The current sub divisions in the Helena Valley are very disjointed.</p> <p>What we would like to see is better planning for housing that incorporates existing mature tree canopies kept with a 30 mt buffer all around, keep existing waterways and wetlands, road ways to be wider, better access to properties and to stop parking on footpaths.</p> <p>Currently in Allamanda Gate and Melita Drive cars barely fit on drive ways as they are very short, (this will promote safer streets for all concerned.)</p> <p>2) Greater care in planning more expansive POS facilities, requiring covered play area's and public toilet facilities, there appear to be none, in any of the parks in Helena Valley.</p> <p>3) Helena Valley Road is in desperate need of a foot path, bicycle path, widening of the actual road and sufficient lighting, it is becoming extremely dangerous, trucks and cars use this road as a bypass road from Great Eastern Highway and Scott street it is only a matter of time before we have a catastrophic accident.</p>	<p>1) Refer to 15(4) and 19(1)</p> <p>2) Refer to 25(1). Referred to Infrastructure Services as advice.</p> <p>3) Refer to 11(2)</p>

SUBMISSION	COMMENT
34. Submitter No. 34 (cont'd)	
<p>4) With Helena Valley expanding in the future years to come infrastructure is unavoidable, what Mundaring Shire can do is stipulate to developers what is required by their planning consultants, to keep the Hills life style way of life.</p> <p>5) Suggest bigger block sizes, they have bigger frontage, bigger driveways, wider streets with more tree canopies incorporated, POS facilities to be greater than 10% make it 50%. Developers can obtain higher prices.</p> <p>6) Housing estates in Helena Valley will be growing at a fast rate and we need to be prepared for future generations, schools can they facilitate the growing population, is it time for Helena Valley to have its own High School?</p> <p>7) WAPC Liveable Neighbourhood Manual states urban development should enhance quality of life, give the sense of community interaction, encourage healthily lifestyle, enjoy and connect with nature and environmental values.</p> <p>I am sure Mundaring Shire can achieve this.</p>	<p>4) Refer to 15(2)</p> <p>5) Provision for larger lots is made in Precincts 1, 7, 8 and 10</p> <p>6) Refer to 10(4)</p> <p>7) The submission is noted</p>
35. Submitter No. 35	
<p>1) I am a 23 year old student who has lived in Helena Valley all my life, on my parent's property.</p> <p>2) Helena Valley is somewhere where I would like to start my own family. The proposed HVUES I think will only</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
35. Submitter No. 35 (cont'd)	
<p>benefit the area and create a stronger community and adding more growth and competition for small business and bring people to the hills.</p> <p>3) I want to see more people venture the short distance out of the busy city and see what the hills have to offer especially Helena Valley. You have 100% of my support for the HVUES.</p> <p>4) I would also like to comment on the Boya Community centre which has recently opened, great job I intend on spending many days using this facility in the future.</p>	<p>3) The submission is noted</p> <p>4) The submission is noted</p>
36. Submitter No. 36	
<p>1) Thank you for the opportunity to comment on the Draft Helena Valley Urban Expansion Strategy (HVUES). Some aspects of the proposal are of concern to us. Comment numbers refer to the numbers on the proposal Precinct Plan.</p> <p>2) Upgrade Helena Valley Road We feel that it would be a shame to widen Helena Valley Road and so lose the trees that shield houses on either side from the road. This, of course applies only to the two original Cedar Woods developments and perhaps to the Life Style Village; other developments are not screened from the road. When the original Cedar Woods development was approved, the purpose of the wide easement with large trees was</p>	<p>1) The submission is noted</p> <p>2) Refer to 19(1) and 31(4)</p>

SUBMISSION	COMMENT
36. Submitter No. 36 (cont'd)	
<p>to try to maintain the semi-rural ambience of the area - "The Gateway to the Hills". It should be noted that several of the houses on the south side of the road have gates that open onto the easement</p> <p>3) Development Zone - mixture of medium density residential and commercial</p> <p>The wording of this and the placement of (8) suggests to us that given the two large blocks in the zone, the Council are hoping to attract a Westfields or similar. While we would not object to medium density residential development to the west of Scott Street south of Clayton Road and south of Helena Valley Road, we would object to the development of a large supermarket complex in the zone. We can understand that the intersection of an upgraded Scott Street and a four lane Helena Valley Road would be attractive to a Coles, Woolworths, Aldi and fast food outlets, however, perhaps the Shire of Mundaring should consider residents' reasons for living in Helena Valley. If our suspicions are correct, perhaps the Shire could consider a shopping centre on a bit of council land in, for example, Darlington.</p> <p>4) Upgrade Scott Street</p> <p>Assuming that Helena Valley Road is upgraded to 4 lanes then surely Scott Street should also be upgraded to 4 lanes. A better alternative might be to install traffic calming devices on Scott Street at the roundabout intersection with Clayton Road and a roundabout at</p>	<p>3) It is not the intention of the Strategy to attract a particular commercial enterprise. Commercial mix will be informed by the Shire's Local Commercial Strategy which is currently under review. Finalisation of the Local Commercial Strategy has been incorporated into the Implementation Checklist. A strategy related to Precinct 9 is to ensure a high standard of urban design.</p> <p>4) Refer to 11(2)</p>

SUBMISSION	COMMENT
36. Submitter No. 36 (cont'd)	
<p>the intersection of Scott Street with Helena Valley Road. The idea of such a roundabout was previously mooted but rejected by the Shire of Mundaring on a cost basis.</p> <p>5) Limited Rural Subdivision This should maintain a minimum block size of say 1.25 Ha and preclude any commercial or industrial usage.</p> <p>6) Establish Public Reserve around the Helena River A good suggestion in principle, however, who will maintain the reserve? and how would it be separated from adjoining properties? Is this the old Bushland Forever scheme? As residents of property adjacent to the river, we can tell you that, with the years of drought and the lack of water flow within the river, many of the large old river gums (<i>Eucalyptus rudis</i>) drop branches that may weigh well over a tonne. This happens without warning. Who will be responsible for damage to adjacent property, accidental injury or death from such happenings? What compensation will be offered to landowners for the resumption of their land for the "Public Reserve"?</p> <p>7) Establish Connections Over the Helena River Within the Helena Valley area there were at least 4 crossing points other than the Scott Street Bridge, of the Helena River. We understand that access and</p>	<p>5) Retaining 1.25 hectare lot sizes in Precinct 9 would undermine the growth strategies in this and surrounding precincts and is not supported.</p> <p>6) Refer to 13(1)</p> <p>7) Refer to 11(2)</p>

SUBMISSION	COMMENT
36. Submitter No. 36 (cont'd)	
<p>egress to and from the south side of the river to the east of Helena Valley Primary School is non-existent and that this may pose a real threat to fire fighters and residents of the three houses at the eastern end of Helena Valley Road. There is, however, a fjord allowing access between Helena Valley Road and Victor Road, near the old picnic ground and below the Pipe Head Dam but it is now closed and part of the dam complex. This should be reopened as it would be, in our opinion; a safer and less costly alternative to bridging the river at Fyfe Street We do not understand the reason for proposing bridging the river at Samson Street. It is a quiet street with, as we understand, horse agistment properties. Opening it up to through traffic does not make sense to us.</p>	
37. Shire of Kalamunda	
<p>1) The Helena Valley Urban Expansion Strategy (HVUES) identifies future urban growth in Helena Valley and its surrounding suburbs within the Shire of Mundaring (SoM). The HVUES aims to accommodate for a growing population in a way that safeguards the environment and amenity, improves and delivers new infrastructure, and responds to fire risk and landowner ambitions.</p> <p>2) Helena Valley is in close proximity to the northern boundary of the Shire of Kalamunda (SoK) at Maida Vale and Gooseberry Hill National Park. To access Helena Valley from the SoK, Midland Road and Ridge Hill Road provide the most direct routes. Helena Valley is situated approximately 6km from the</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
37. Shire of Kalamunda (cont'd)	
<p>Kalamunda district centre, 3km from High Wycombe neighbourhood centre (Kalamunda Road), 8km from the Forrestfield district centre and 5.5km from the proposed new train station and district centre at Forrestfield North. The Maida Vale area, situated closest to Helena Valley Is zoned as residential 2.5 (rural residential) and Gooseberry Hill National Park is zoned Parks and Recreation under the Metropolitan Region Scheme (MRS). There are also Bush Forever sites located in close proximity and the area is considered as bushfire prone.</p> <p>3) The SoK is planning for an additional 20,000 people by 2031 as outlined in the SoK Local Planning Strategy 2010. The Maida Vale area located adjacent to Midland Road, has not been Identified as an investigation area for potential further expansion by the Local Planning Strategy and therefore in the foreseeable future will likely remain as rural residential.</p> <p>4) Major Consideration Traffic The increased density identified in the HVUES will impact on traffic within the area, its surrounds and the connecting roads. Those roads within the HVUES that will serve as major links for residents traveling to and from the SoK include:</p> <ul style="list-style-type: none"> • Scott Street • Helena Valley Road • Ridge Hill Road • Clayton Street 	<p>3) The submission is noted</p> <p>4) Refer to 11(2)</p>

SUBMISSION	COMMENT
37. Shire of Kalamunda (cont'd)	
<p>The HVUES will also Impact on the following local roads, Other Regional Roads and Primary Regional Roads located within the SoK:</p> <ul style="list-style-type: none"> • Midland Road • Kalamunda Road • Roe Highway • Ridge Hill Road • Gooseberry Hill Road • Railway Road <p>Traffic and transportation studies that will support future subdivision and development need to consider increased traffic movements for the broader region and should foreshadow any required or future road upgrades as a result of increased density or urban expansion areas.</p> <p>5) Schools</p> <p>Helena Valley is well serviced by primary schools (P.S), with Helena Valley P.S and Clayton View P.S in the immediate locality. Within the SoK, Gooseberry Hill P.S, Maida Vale P.S and Mary's Mount P.S may provide attractive alternatives. High Schools (H.S) in Kalamunda may service Helena Valley to a greater extent. Swan View H.S (SoM) and Governor Stirling H.S (City of Swan (CoS)) are the closest public high schools at 4km and 5.5km respectively. Kalamunda H.S may serve as an alternative at 6.8km with specialist school programs. The closest private high schools to Helena Valley are La Salle College (CoS)</p>	<p>5) Refer to 10(4)</p>

SUBMISSION	COMMENT
37. Shire of Kalamunda (cont'd)	
<p>5.5km and Guildford Grammar (CoS) 5.6km. Mazenod College 9.5km away may serve as an attractive alternative as an all-boys private high school and St Brigid's College 8.5km is the closest all-girls high school, both located within the SoK. There are already established school bus systems servicing the Helena Valley area via Helena Valley Road and Midland Road into Kalamunda and Lesmurdie. To summarise, an increase in population in Helena Valley may place further demand on schools within the SoK and increase traffic around the schools and the feeding roads, particular between 7am-9am and 2pm-4pm.</p> <p>6) Business</p> <p>With the Kalamunda district centre and neighbourhood centres in High Wycombe in close proximity to Helena Valley it would be expected that local businesses would benefit from additional customers. In addition to this, SoK attractions such as the Bickley Valley wine region, Zig Zag, Lesmurdie Falls and outdoor recreation activities may see increased popularity. Some of Kalamunda's key events such as the Kalamunda Show, Night Markets, Spring Festival, Bickley Harvest Festival and Zig Zag Festival may also be attractive for Helena Valley residents to attend.</p> <p>7) Employment</p> <p>The North-East Sub-Regional Structure Plan has identified that the sub-region will be at 75% employment self-sufficient by 2031 from 63% currently. This will see further employment within</p>	<p>6) The submission is noted</p> <p>7) The submission is noted</p>

SUBMISSION	COMMENT
37. Shire of Kalamunda (cont'd)	
<p>SoK from localities such as Helena Valley. Locations likely to cater for a portion of employment for residents in Helena Valley will include the Forrestfield and Kalamunda district centres, High Wycombe and Maida Vale neighbourhood centres, the Forrestfield Industrial Area and future Forrestfield North district centre. HVUES is planned to provide mixed use development and an activity centre which would cater for some of the SoK residents' employment and convenience needs.</p> <p>8) Forrestfield Railway Station</p> <p>The future Forrestfield Railway Satiation will provide a transportation option for Helena Valley residents to access the airport. It may also serve as an alternative to the existing Midland Station for accessing the CBD despite Midland being closer; 4.4km compared to 5.5km. Forrestfield Station could be attractive as it may prove to be less congested and a shorter trip to the city. Only 3 stops are proposed between Forrestfield and Bayswater, which is less than the 6 stops which exist between Midland and Bayswater, making train travel time shorter on the Forrestfield line. With Forrestfield Train Station possibly serving as a major transport facility for Helena Valley residents, suitable parking for the station and an appropriate bus route that links the Forrestfield Station to Helena Valley are major transportation considerations.</p>	<p>8) The submission is noted</p>

SUBMISSION	COMMENT
37. Shire of Kalamunda (cont'd)	
<p>9) Planning Outcomes The HVUES is consistent with the North-East Sub-Regional Structure Plan and the SoK Local Planning Strategy objective to provide housing for Increasing populations. This is done through urban consolidation and higher densities as Identified in these documents. Helena Valley forms part of the foothills and Darling Range and will need to be consistent with the character of this region and have consideration for the natural environment and water sources with particular emphasis on the Helena River.</p> <p>10) Bushfire Helena Valley Is bordered by Gooseberry Hill National Park to the south-east. This national park is large with dense vegetation and any development in Helena Valley will have to have due regard for bushfire threat. Bushfire management plans will be essential for any subdivision and development that occurs in this area.</p> <p>11) Community Facilities The SoK faces significant pressures to accommodate for an ageing population, which is a significant percentage of the Kalamunda community. An extension to Park Home in Helena Valley provides an opportunity to alleviate some of the aged accommodation pressures from the SoK. Other aged care and aging in place strategies should be identified in the context of the region's aging population.</p> <p>12) Recommendations / conclusions:</p> <ul style="list-style-type: none"> • Ensure future development and subdivision proposals consider increased traffic movements In the broader 	<p>9) Refer to 11(2)</p> <p>10) Refer to submission 24</p> <p>11) Refer to submission 31(4)</p> <p>12) Refer to 11(2) and 31(4)</p>

SUBMISSION	COMMENT
37. Shire of Kalamunda (cont'd)	
<p>region and foreshadow any required road upgrades as a result of increased density or urban expansion areas. Particular attention should be given to Helena Valley Road requiring upgrade to four lanes.</p> <ul style="list-style-type: none"> • Consideration should also be given to the development of a Road Hierarchy Plan that clearly designates the role of specific roads and their characteristics, including speed limits. • Identify the impacts the proposed HVUES will have on existing infrastructure within the SoK. • The Inclusion of a strategy to address congestion issues if present on existing road corridors by investigating a range of traffic management measures. • Review the accessibility of employment, leisure and social activities by providing transport facilities and infrastructure that cater for both private and public transport and identify interim measures that will be undertaken to manage existing traffic flow during the development phase. • Continue on-going dialogue with the Department of Education to ensure the suitable provision of education facilities in the broader locality. • Continue on-going dialogue with the Department of Transport and Public Transport Authority to ensure Helena Valley residents are provided with suitable bus feeder and connecting services to make best use of state government infrastructure investment in the future station in Forrestfield. 	<p>Refer to 11(2)</p> <p>Refer to 15(2)</p> <p>Refer to submission 11 and 14</p> <p>Refer to 10(4)</p> <p>Refer to 11(2)</p>

SUBMISSION	COMMENT
37. Shire of Kalamunda (cont'd)	
<ul style="list-style-type: none"> • Ensure future development maintains the character and amenity of the broader foothills and Darling Range region through the development of suitable design and public realm guidelines. • Maintain bushfire and emergency management planning as a key consideration in the land use planning process. • Identify strategies and development opportunities for aging in place and aged cared establishments. 	<p>Maintaining amenity is a key consideration of the Strategy.</p> <p>Refer to submission 24</p> <p>Refer to submission 31(4)</p>
38. Submitter No. 38	
<ol style="list-style-type: none"> 1) I understand that my property is located in Precinct 8 where development is not foreseen. It is referred to in the HVUES as fire prone, as is most of the hills area, especially those areas bordering national parks and along the river valleys. 2) I moved to the area because of the amenity offered by the peaceful natural environment and the abundance of wildlife here. (Annual cocky counts have Carnabys roosting along the Helena River.) 3) I can see a minor benefit in re-establishing a restricted, possibly gated, connection across the river at Fyfe Street for emergency vehicle use, but oppose it being used as a general thoroughfare. It is not logical to draw traffic closer to the national park or safe to direct it past the primary school. It does not alleviate access issues further east. 	<ol style="list-style-type: none"> 1) The submission is noted 2) The submission is noted 3) Refer to 11(2)

SUBMISSION	COMMENT
38. Submitter No. 38 (cont'd)	
4) I am concerned that anything other than emergency access at Fyfe Street/Helena River will impact detrimentally on the natural amenity of the immediate area.	4) Refer to 11(2)
39. Darlington Ratepayers & Residents Association	
<p>1) The draft strategy has been considered by the DRRA committee and was discussed at the DRRA community meeting held on 7th February 2017.</p> <p>2) In general, whilst the strategy will not directly impact on Darlington there are some overall comments and observations which are pertinent.</p> <p>3) Environment - It is noted that the Shire is aware of the need to protect wildlife, watercourses and the wetlands DRRA considers these are vital considerations. The Helena River and Its floodplain must be protected.</p> <p>4) Built environment - with the planned expansion of housing developments, the provision of public open spaces which allow for recreational activities and do not put pressure on other facilities in the area is important. This means more than just wide footpaths and verges connecting the development stages but must include areas large enough for sporting activities, particularly junior football and cricket.</p> <p>5) Cyclist safety - with increasing use of Helena Valley Rd, the safety of cyclists needs to be considered with provision of a cyclist lane or separate paths.</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p> <p>3) The submission is noted</p> <p>4) Precinct 11 makes provision for district recreation grounds.</p> <p>5) Refer to 11(2)</p>

SUBMISSION	COMMENT
39. Darlington Ratepayers & Residents Association (cont'd)	
<p>6) Road upgrades - It is appreciated that road infrastructure will need upgrading to meet Increases In vehicle use and the proposed direct access to Roe Highway and widening Helena Valley Road at the western end are sensible solutions to cater for traffic to Midland and parts west. The concern is that by upgrading Scott Street, traffic from the east will use Ryecroft/Glen/Victor Roads or Darlington/Coulston Roads as shortcuts and put unsustainable pressure on Darlington's narrow winding roads. Traffic volume has increased noticeably in the last decade and there is considerable concern for the safety of children at Helena Junior School on Ryecroft Road.</p> <p>We look forward to advice on how the draft strategy will develop.</p>	<p>6) Refer to 11(2)</p>
40. Submitter No. 40	
<p>1) We live, and are owners in an “over 55’s” development in, Helena Valley. The side boundary of this property abuts a small amount of grassed POS which in turn abuts Helena Valley Road. This development was approved by Council in approximately 2012/2013. The property boundary is some 25 metres from the current Helena Valley Road carriageway.</p> <p>2) We strongly disagree that this road requires widening to four lanes. Living alongside Helena Valley Road we are very well aware of the amount of traffic using the road. The only relatively busy times in the day are in</p>	<p>1) The submission is noted</p> <p>2) Refer to 11(2)</p>

SUBMISSION	COMMENT
40. Submitter No. 40 (cont'd)	
<p>the early morning and late afternoon, however the traffic is never banked up and flows easily. During the middle of the day and on weekends traffic using this road could be described as fairly minimal.</p> <p>3) It has been noted that the Traffic Management Study uses a map dated 2013 which show the areas west of Allamanda Gate, south-east of Bohemia Place, south-east of Torquata Boulevard and the area used by the Helena Valley Lifestyle Village as being undeveloped. The traffic counts, however, were undertaken in 2015 when all these areas had in fact been mostly developed. Has the recommendation to widen Helena Valley Road, using the 2015 traffic count been made on the false assumption that these areas have yet to be developed?</p> <p>4) Some of the traffic utilising Helena Valley Road is that which cuts through from Great Eastern Highway to Midland Road or the Great Eastern Highway bypass which is accessible via Stirling Crescent. This has been the case recently where heavy vehicles (trucks carrying soil for the earthworks at the Cedar Woods Bushmead development in Midland Road) have been short cutting from Great Eastern Highway, down Scott Street and Helena Valley Road instead of using Great Eastern and Roe Highways. Heavy vehicles should be encouraged to use the major highways which were built to carry such traffic and should be discouraged from using secondary roads.</p>	<p>3) Refer to 11(2)</p> <p>4) The Shire has limited capacity to manage road users.</p>

SUBMISSION	COMMENT
40. Submitter No. 40 (cont'd)	
<p>5) In respect to the proposals to provide road links to Katharine Street to enhance emergency access to this area, it would seem more appropriate to us, and indeed, be much more cost effective to construct a link (somewhere south-east of the lifestyle village) from Helena Valley Road to Midland Road. Apart from eliminating the need for very expensive bridge work, such a link would provide access to Kalamunda Road and Roe Highway and would also take some pressure off Helena Valley Road.</p> <p>6) We are further concerned that widening of Helena Valley Road to four lanes would result in the destruction of a number of mature trees (which are sadly lacking in new small lot subdivisions).</p> <p>7) We, of course are also concerned about the possibility of the carriageway being moved closer to our residence. Should Helena Valley Road be upgraded to four lanes whilst we reside here, we would be seeking to have either a landscaped earth bund or sound wall erected between the new carriageway and our northern boundary.</p> <p>Thank you for the opportunity to have input into this Strategy.</p>	<p>5) Refer to 11(2) and 30(2)</p> <p>6) Refer to 19(1) and 31(4)</p> <p>7) Refer to 30(6)</p>

SUBMISSION	COMMENT
41. Submitter No. 41	
<p>1) We are residents of Fyfe Street in Helena Valley, which falls in Precinct 10 of the plan. We have lived in Fyfe Street for 31 years and proposals for this Precinct will most directly affect our lifestyle. We are also concerned about plans for the greater Helena Valley area, as these could impact on what most residents enjoy about living here.</p> <ul style="list-style-type: none"> • Precinct 10. We are in favour of limited rural subdivision in this area. For landowners who wish to remain in the area, but find looking after a large block too difficult as they get older, this would be an attractive alternative to moving out of the area. Block size minimum could be 2 acres to keep the area rural in nature and preclude any commercial or industrial use. Care will need to be taken with future development of the old CSIRO block at 1710 Clayton Road to make sure the usage is in keeping with the essentially rural nature of the area. • Precinct 9. We are completely opposed to having commercial zoning in Precinct 9. The Helena Valley area is already well-serviced for supermarkets and other retail outlets in the 	<p>1) Refer to 11(2), 13(1) and 15(2). It should be noted that the existing commercial premises (coffee shop, confectioners etc) are considered a key aspect of desirable amenity. Refer also to Submission 11 and 14.</p>

SUBMISSION	COMMENT
41. Submitter No. 41 (cont'd)	
<p>Helena Valley Estate, which is a couple of minutes away, and also in Koongamia, Swan View and Midland. Commercial development will completely destroy the village-like feel of the area, which is extremely important to the local ratepayers. Currently, local residents, passing cyclists and visitors to the area enjoy stopping for coffee and food at the cafes and looking at a rural scene. It would completely destroy the ambience of the area if this was all shops and commercial premises. Locals and visitors may as well be in the shopping centre in High Wycombe, a soul-destroying experience. No-one has come to live in the older part of Helena Valley to be next to, or look at a shopping complex. If the Shire has been persuaded by lobbying businesses that a supermarket / retail complex is needed in the area perhaps expanding the Koongamia shopping area would be better. There would be no destruction of our Helena Valley rural environment at that location.</p> <p>Also, commercial development in Precinct 9 cannot be compatible with the Idea of rural public space along the river. Surely run off into the river from commercial premises would be an issue, given that even the small, local coffee shop (viz. "Sweets and Treats") was not allowed to have a</p>	

SUBMISSION	COMMENT
41. Submitter No. 41 (cont'd)	
<p>dishwasher, apparently because of proximity to the Helena River.</p> <p>The Helena Valley Primary School in the area means traffic is already heavy at certain times of the day and if commercial premises operate in the area the traffic will be extremely congested and also make the area very noisy.</p> <ul style="list-style-type: none"> Public Reserve along the Helena River. <p>Any establishment of a Public Reserve along the Helena River needs to be accompanied by a plan on how the Reserve will be managed. In Fyfe Street the residents have spent considerable time and money working individually and as a group to rid the river and banks of introduced weeds such as blackberry and bamboo, as well as planting native species to re-habilitate the river banks. Areas which are already Public Reserves are very poorly maintained and are largely inaccessible due to choking with blackberry and other weeds. Why would land be set aside for a Public Reserve if the public cannot use it? If river front land is resumed by the Shire, landowners will have no incentive to maintain the river frontage. If this is not a Shire responsibility then plans need to be obtained from the relevant government authority on how this area will be managed.</p>	

SUBMISSION	COMMENT
41. Submitter No. 41 (cont'd)	
<p>As landowners in Fyfe Street we would also like to know if the planned Public Reserve goes to the east of where Fyfe Street meets the river. This is not shown on the map as Public Reserve. Does the proposal for Public Reserve along the river mean the resumption of private land without compensation? Please note that opposite our property, and several others in the street, is the Beelu National Park. Surely there is no need for more public space on the western side of the river.</p> <ul style="list-style-type: none"> • Bridge over Helena River at Fyfe Street We are opposed to having a bridge over the river at the end of Fyfe Street, as this will increase the amount of traffic using Fyfe Street (a one lane road) and increase the noise. We already get occasional drivers using the straight street for revving their cars and doing burn-outs up the street and this will be worse if it is a through road. A more suitable place to link the northern and southern sides of the Helena River would be from Victor Road where it turns east, south of the Clayton Road intersection. • Upgrading Helena Valley to Four Lanes. We do not support widening Helena Valley Road to four lanes. The current road size appears to adequately carry the amount of cars using it and if 	

SUBMISSION	COMMENT
41. Submitter No. 41 (cont'd)	
<p>better public transport was in place it could cater for any increased population. In the area of the Helena Valley Estate the HVUES plan would mean the destruction of a significant amount of native trees, which were retained in the original subdivision (c. 1980/1990s) to keep the semi-rural ambiance of the area.</p> <p>2) As a general comment on the whole idea of urban expansion in Helena Valley, we feel there is no point expanding the urban footprint without increasing the public transport system in the area.</p> <p>The sub-standard public transport which services Helena Valley currently means most people are reliant on their cars to go everywhere. This means the Shire puts In evermore bitumen (widening and increasing the number of roads) to service more and more cars.</p> <p>We are totally opposed to the constant urban expansion which is encroaching on the rural lifestyle of the Valley. Rural lifestyle choice appears to be valued in other parts of the Shire, for example Darlington and Parkerville where residents are not subjected to ever increasing urban density and commercial developments, but not in Helena Valley. Why should residents in Helena Valley be at the thin edge of the wedge of urban/commercial expansion and have their lifestyle destroyed? In our time living</p>	<p>2) Refer to submission 11 and 14</p>

SUBMISSION	COMMENT
41. Submitter No. 41 (cont'd)	
<p>here we have seen what has happened in Hazelmere, where the Swan Shire rezoned to allow trucking yards which have destroyed a large area of the foothill wetlands. These wetlands can never be restored.</p>	
42. Submitter No. 42	
<p>1) I am writing to voice my concerns regarding the Draft Helena Valley Urban Expansion Strategy. As a resident of Helena Valley I can find several issues with the proposal for consideration.</p> <p>2) We bought in Helena Valley to enjoy a rural lifestyle close to amenities, something that is increasingly rare as Perth is forced into higher and higher levels of urban expansion. Firstly, I'd like to dispute the idea that future generations want to live in crowded housing estates. I want my children and grandchildren to be able to choose a rural lifestyle in a convenient location, without having to live an hour away from the CBD. To say that "large, traditional housing" is "at odds with...future needs of residents" (Helena Valley Land Use Study, 2013) is subjective and purely speculative. Future residents want the same things we want today and future residents will equally want a choice of large blocks with a rural outlook close to town. If the HVUES goes ahead more than half of the large, rural blocks in Helena Valley will be lost. We have already catered for</p>	<p>1) The submission is noted</p> <p>2) Refer to 27(3) and 34(5)</p>

SUBMISSION	COMMENT
42. Submitter No. 42 (cont'd)	
<p>higher density housing needs with the existing multiple estates that continue to carve up our last vestiges of farmland and it is my strong opinion that we have enough of this “product” for now and for the future. The proposal to subdivide the last vestiges of rural land in Helena Valley is strongly contradictory to the Mundaring Shire’s own phrase included in Strategic and Environmental Plans that the Shire is “committed to protect, manage and enhance the community’s environment” and to “prevent loss of identity and attractiveness”. We’d very much like these statements to be honoured when talking about my environment and the environment my family have chosen to live in within the Shire of Mundaring. The Draft HVUES Plan is completely at odds with these statements.</p> <p>3) Urban Heat Island Effect is a well-known and much studied phenomenon whereby higher urban densities result in higher daytime and night time temperatures, especially during summer. This is due to not only the loss of vegetation that occurs but also the use of dark building materials and dark roads acting as a heat trap. It will be very hard to undo the damage done by the existing Helena Valley subdivisions, however we can endeavour to protect the last of the rural vegetation in the remaining areas of Helena Valley in order to mitigate this effect. This is critically important in a future that looks to be much hotter than the present and surely one that needs consideration if</p>	<p>3) Refer to 31(4)</p>

SUBMISSION	COMMENT
42. Submitter No. 42 (cont'd)	
<p>the Shire does indeed take its Climate Change Adaptation Action Plan seriously. Most of the currently rural land in the Draft HVUES is cited a being recommended for “medium density housing”, which will result in considerable loss of large established tree cover and amplified urban heat island effect along with numerous other negative social and environmental impacts.</p> <p>4) Helena Valley is home to a large number of old and established Marri, Jarrah and white gum trees (Wandoo, Lemon Scented gum, Flooded gum to name a few). At our home, families of white-tailed and red-tailed black cockatoos, both of which have numbers in decline, regularly visit us and our large Marri trees. The Red-tailed black cockatoo is at risk of extinction. It seems ridiculous that communities across the state are trying to save these species by revegetating areas for them when we already have suitable and preferred habitat only to bulldoze it for housing! I cannot make this point strongly enough. We have chosen a lifestyle where we value living alongside such rare and magnificent flora and fauna, the loss of which would have a significant impact on this suburb. Once we have chosen to destroy it, we cannot get it back.</p> <p>5) The widening of Helena Valley Road as proposed would result in the loss of countless mature, healthy gum trees that are currently providing food for native animal life, serving roles in temperature regulation</p>	<p>4) Refer to 13(1) and 31(4)</p> <p>5) Refer to 1(2), 13(1) and 19(1)</p>

SUBMISSION	COMMENT
42. Submitter No. 42 (cont'd)	
<p>(with some mitigation of the urban heat island effect) and improving the mental health of the residents who walk, cycle and drive this scenic route. I do not believe this widening should occur. Aside from losing countless irreplaceable trees which as discussed increases heat and impacts wildlife habitat, the resultant bottle neck of traffic at the Scott St / Ridge Hill Rd intersections and Bushmead at the other end would negate the purpose of the road widening altogether. Improving public transport and cycle routes to focus on public need is a far more appropriate course of action and in keeping with commitments to ease traffic congestion and climate change concerns of the future. This applies not only to the road widening but also to the prospect of rezoning any currently rural land to urban</p> <p>6) Services are another major issue with the Urban Expansion Plan. As stated in the Helena Valley Land Use Study (2013, p. 23), "The Department of Education has advised that there are no plans for major school capacity improvements or new school sites..." Of course the Education Department did state this was "unless any major increase in residential population..." occurred. According to your report, the residential population of Helena Valley has already doubled and yet this doesn't constitute grounds for any school improvements. Three years ago when I tried to</p>	<p>6) Refer to submission 10</p>

SUBMISSION	COMMENT
42. Submitter No. 42 (cont'd)	
<p>get my children into our closest public High School, Kalamunda, I was denied access as we are out of the school intake zone. The principal advised me the intake zone had been changed due to the school being unable to accommodate the growing numbers of students in expanding suburbs like Helena Valley. So in fact, the Education Department's solution to rising school intake numbers due to urban expansion is just to change the local school intake areas and remove choice from families about which public school is the most suitable for their child rather than to actually do any school capacity improvements. If you require proof of this I took this matter to Hon Michelle Roberts MP who tabled it in parliament for me but was unable to elicit a change in the rules. I have absolutely no faith that the Government will provide an increase in services to match the increase in population as suggested, as they have already proven incapable in this matter. The reality is that money needs to be spent on services such as footpaths, school upgrades and bus services NOW, not after another massive growth in population.</p> <p>7) Finally, and most significantly for my own property, the proposed recapturing of land surrounding the Helena River is completely at odds with maintaining the rural lifestyle we moved here to enjoy. As landowners with Helena river frontage, we have developed our homes</p>	<p>7) Refer to 13(1), 15(4) and 27(3)</p>

SUBMISSION	COMMENT
42. Submitter No. 42 (cont'd)	
<p>around the fact that no one can see into them from the 'river' side. We have no blinds or curtains, which allows us to maintain the rural outlook, as they have not been needed for privacy. We have our entertaining area of our house facing the 'River' side of our property. In 30+ years our house has never been broken in to because of the inability to see it from the road. All that is likely to change if you can walk easily down the River side and see directly into our entire property. This would have significant impact to the liveability of our house for us. Introducing people to a private access way away from sight of the road to dozens of houses is very likely to push up crime in the area. To reiterate, we bought here specifically for the rural, secluded lifestyle it affords. In addition, an over 20 metre drop not far from the back of our house down to the river line means without considerable earthworks and retaining the construction of any sort of pathway would be absolutely impossible (without putting it in the active floodplain, which rises to a height of 1.2 metres covering our lower fence every year). It's likely there would be significant maintenance costs associated with a pathway that spends 2 months of every year under water, unless it is to be built metres off the ground. It seems the notion to open up the River land to public use goes hand in hand with the desire to develop the properties along each side into yet more urban housing estates.</p>	

SUBMISSION	COMMENT
42. Submitter No. 42 (cont'd)	
<p>8) We did not buy our property to reap financial rewards of subdivision, nor will we are open to financial incentives to surrender our land and we are not alone in this sentiment. As the Mundaring Shire itself acknowledges, it offers “A sense of space and a sense of place”, I am not sure how Urban Expansion fits in with that vision but for us it offers neither place nor space.</p> <p>9) Finally, the Shire Council, as elected representatives for the public, have an obligation not only to act on behalf of what the current population wants and feels, but also to act upon the best interests for the native wildlife, and generations to come who will live in a much more unstable world than the one we have known. It may feel progressive to throw around buzz words like ‘urban expansion’ and ‘sustainable settlement’, however in the future, true progressive thinking will be measured by those who managed to retain their communities and not sell out the misguided notion that growth equals progress. True progression is maintaining liveable communities and suburbs with all the features that made them liveable in the first place. True progression is not being hoodwinked into believing that every suburb needs an urban makeover so that all we are left with is thousands of carbon copy suburbs that have no redeeming features and nothing left of themselves that made them truly great. The Shire itself seems to recognise this with use of</p>	<p>8) Refer to 15(4) and 27(3)</p> <p>9) The submission is noted</p>

SUBMISSION	COMMENT
42. Submitter No. 42 (cont'd)	
<p>phrases such as “committed to protect, manage and enhance the community’s environment”. I would like the Shire to truly reflect on the word protect in this context and continue to actually be committed to doing just that. I’d like to conclude with a quote that I hope will convey my feelings on this matter “We do not inherit the earth from our ancestors; we borrow it from our children.”</p>	
43. Submitter No. 43	
<ol style="list-style-type: none"> 1) I like the plan, and can see a logical reason behind all parts of the plan. 2) However I 100% do not support the access bridge over the river planned to connect to Samson Road. 3) Currently building a house on Lomandra Road and if the access bridge goes in I am concerned that one day it will become a road for vehicles. Also if this bridge will have access for pedestrians I am concern that it will bring undesirable people to our street and may increase crime levels. 	<ol style="list-style-type: none"> 1) The submission is noted 2) Refer to 11(2) and 15(2) 3) The submission is noted
44. Submitter No. 44	
<ol style="list-style-type: none"> 1) I have lived on Clayton Farm and in Helena Valley for 45 years. 2) I have seen the gradual urban infill and agree that the design and planning of the Helena Valley area has been carried out in a well-planned way so as to retain 	<ol style="list-style-type: none"> 1) The submission is noted 2) The submission is noted

SUBMISSION	COMMENT
44. Submitter No. 44 (cont'd)	
<p>the semi-rural feel and character of such a lovely area of the Mundaring Shire.</p> <p>3) With the newly constructed Community centre and library a beautifully designed and constructed centre for all to use in the area, such a facility will be of great benefit to new residents moving to the area when the urban expansion is approved.</p> <p>I am TOTALLY in favour of urban expansion in Helena Valley.</p>	<p>3) The submission is noted</p>
45. Submitter No. 45	
<p>1) We have concerns specifically over the identification of a bridge over the river at Fyfe Street for vehicular traffic.</p> <p>Whilst we appreciate that the reason is only for emergency purposes, our discussion concluded that there is no reasonable chance of preventing use by a wide range of others with the establishment of a permanent river crossing.</p> <p>During our meeting, I expressed a number of concerns, and these are:</p> <p>2) A previous footbridge that was damaged in a storm some 30+ years ago saw an elimination of theft, trespassing and vandalism to the properties that immediately border the river at Fyfe Street,</p>	<p>1) Refer to 11(2) and 15(2). It should be noted that Fyfe Street road reserve crosses the Helena River. A new reserve would not be required to facilitate the connection should the crossing be required.</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
45. Submitter No. 45 (cont'd)	
<p>and further up the street - our property and the at were subject to theft and vandalism whilst there was an established crossing.</p> <p>3) Moving forward 30 years, there is a consistent and willful use of unregistered off-road bikes on Helena Valley Road, and frequently these attempts to cross the river to find it is impossible, and roars off with excessive noise levels. A permanent trafficable crossing will establish a route for illegal and noisy activity, which is a public nuisance and one that the Police find difficult to bring under control. Establishment of another escape route will have a detrimental impact to their work and the amenity, cause nuisance and increase threat and noise.</p> <p>4) Our house was built in 1924, and is very close to the road, unlike other properties that are set well back from the boundary. The introduction of a thoroughfare will have a significantly detrimental impact on our quality of life as there is no reasonable distance from our house to the road where proposed traffic will pass. This will result in substantial noise and some vibration due to proximity to the road.</p> <p>5) The designation of Fyfe Street as a rural landscape area means the residents of Fyfe Street have enjoyed a semi-rural lifestyle. Many</p>	<p>3) Refer to 40(4)</p> <p>4) The submission is noted</p> <p>5) Refer to 40(4)</p>

SUBMISSION	COMMENT
45. Submitter No. 45 (cont'd)	
<p>of the current owners, including us purchased the properties because of the peace, solitude and tranquility that this part of the Shire offers. To materially change this will alter the nature of this space and provide a 'short cut'⁷ to Helena Valley Road for people and include the use of this as a rat-run. As residents, the entire street is very speed aware, however non-residents who's Sat Nav thinks traversing the river is possible come speeding down the road, well above the speed limit. If the road is trafficable to Helena Valley Road, the introduction of a bridge will increase the chances of a very nasty accident, possibly fatal with the prevalence of animals and families with small children.</p> <p>6) As a pocket of the Shire that represents the tranquility and lifestyle that is increasingly disappearing (and should be preserved), it seems nonsensical to eliminate this amenity for the sake of a river crossing that can be achieved in different ways.</p> <p>We understand there is a fjord further up the river towards the dam that can be reinstated both cost effectively and provide the access required, in addition to the Scott Street bridge and other proposed crossings over the river.</p>	<p>6) Refer to 11(2)</p>

SUBMISSION	COMMENT
45. Submitter No. 45 (cont'd)	
<p>7) We implore the council to respect the countryside, value the unique amenity on Fyfe Street, avoid placing residents in the threatening situation of theft and vandalism, avoid a rat-run for traffic and prevent introducing an escape route for illegal motorbikes by removing the proposed river crossing from Fyfe Street.</p> <p>I hope that our views are considered with merit and seriousness; however I would like the opportunity to meet with you if there is any aspect that will not be accommodated.</p>	<p>7) The submission is noted</p>
46. Submitter No. 46	
<p>1) I would like to make a statement in regard to the development of Helena Valley.</p> <p>2) I have read the HVUES plans and note that Helena Valley Rd will be made into four lanes in an attempt to relieve the traffic in Scott St.</p> <p>3) The development in Area 13 will be medium to high density and this too will increase traffic.</p> <p>4) Helena Valley Rd beyond the Helena Valley Primary School must not be tampered with, the Fyfe Rd Bridge must not be re-built or the road to Clayton St because Helena valley Road is truly pristine, regularly used and enjoyed by walkers, bike riders and equestrians.</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p> <p>3) The submission is noted</p> <p>4) Refer to 11(2) and 15(2). It should be noted that infrastructure upgrades are not only intended to accommodate traffic but to make existing unsafe accesses safe – for example, in the event of a bushfire and for cyclists/pedestrians.</p>

SUBMISSION	COMMENT
46. Submitter No. 46 (cont'd)	
Please leave this section of the original Helena Valley heritage alone.	
47. Submitter No. 47	
<p>1) We represent Helena Valley Residential Resorts Pty Ltd (Helena Valley Resorts) and have prepared this submission in response to the Shire's invitation to comment on the Draft Helena Valley Urban Expansion Strategy (the Strategy). Helena Valley Resorts own and operates the Helena Valley Lifestyle Village on Lot 104 Helena Valley Road, Helena Valley. Helena Valley Resorts also own Lot 55, for which a Scheme Amendment to be included in a Special Use Zone for a Park Home Park has been approved. An application for development approval for an extension of the Lifestyle Village over Lot 55 is now being progressed.</p> <p>2) The existing Helena Valley Lifestyle Village which operates under a Park Home Park use provides an innovative way to furnish an affordable housing option for active over 45s in the Shire of Mundaring. Since the original approval was granted to the Lifestyle Village in 2011, Helena Valley Resorts has been overwhelmed with interest for this type of accommodation, providing evidence of the level</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p>

SUBMISSION	COMMENT
47. Submitter No. 47 (cont'd)	
<p>of demand for this form of affordable housing. There has also been interest expressed by a large number of enquiries regarding managed care opportunities (within the capacity of a Park Home Park development) to cater for people who may need a level of assistance as they age but do not need or want aged care.</p> <p>4) Given this high level of demand, the possibility for the further expansion of Helena Valley Lifestyle Village should be provided for and we have appreciated Council's support to date. For this reason, we support the Strategy due to the opportunities it provides for the further expansion of the Lifestyle Village and the provision of diverse and affordable housing in the area to correspond with the expected burgeoning population and changing demographic profiles.</p> <p>5) Background</p> <p>The area within which the Helena Valley Urban expansion is contained is predominantly zoned Rural under the Metropolitan Region Scheme (MRS) and the Shire of Mundaring's Local Planning No 4 (LPS4). It contains two unconnected residential cells (which do not form part of the expansion study area) and has not been identified by the Draft North-East Sub-Regional Planning Framework (the Framework), part of Perth and Peel @3.5 million Draft suite of documents, for future urban expansion.</p> <p>Despite this fact it has been documented (by id population forecasters) that the demand for dwellings</p>	<p>4) The submission is noted</p> <p>5) The submission is noted</p>

SUBMISSION	COMMENT
47. Submitter No. 47 (cont'd)	
<p>in the Shire of Mundaring was forecast to increase by approximately 33% between 2011 and 2031. It is notable that within this projected population increase the Helena Valley/Boya area has been identified by population forecasters as one of the areas within the Shire of Mundaring most in need of new dwellings. It is also notable that the projected population increase for the retirement age cohort is a sizable 51% of the total projected increase within the Shire of Mundaring. The need for new dwellings in the subject area is therefore apparent as is the need for a diverse housing stock with affordable and accessible dwelling options to accommodate an ageing population.</p> <p>Moreover, the WAPC in its latest strategic documents has directed local governments should plan ahead to provide for increases in the housing stock to accommodate the forecast population increases. At a local level, the Shire of Mundaring's Local Planning Strategy reiterates this need, and has identified the Helena Valley area as a future growth area given its proximity to Perth and Peel and the consequential accessibility of jobs, goods and services. This will reduce the need for car travel and provide positive economic and environmental impacts to facilitate sustainable growth. A further argument for accommodating urban growth in this area has been the change in the ANEF contour lines in recent years reducing the total area within the >25 ANEF contour.</p>	

SUBMISSION	COMMENT
47. Submitter No. 47 (cont'd)	
<p>This makes the area suitable for rezoning to "Urban" under the Metropolitan Region Scheme (MRS) to accommodate residential uses with LPS4.</p> <p>Despite the fact that the study area has not been identified for urban expansion by the WAPC's Framework, the Shire of Mundaring's Local Planning Strategy has been instrumental in identifying the need for higher residential densities in land north and south of Helena Valley Road between the two existing areas of MRS Urban zoned land. It is understood that the Shire has expressed its concerns to the WAPC and the Minister for Planning regarding this discrepancy, requesting that the Framework be amended to designate the study area as suitable for "Urban Investigation".</p> <p>6) The Draft Helena Valley Urban Expansion Strategy The Draft Helena Valley Urban Expansion Strategy divides the study area into 12 precincts. For the purpose of this submission, we wish to make comment on Precinct 5 and Precinct 6. The Helena Valley Lifestyle Village is located within Precinct 5.</p> <p>7) <u>Precinct 5:</u> The strategy for Precinct 5 recommends: <i>...investigation of rezoning to Urban under the Metropolitan Region Scheme and Special Use (Park Home Park) under Local Planning Scheme</i></p>	<p>6) The submission is noted</p> <p>7) The submission is noted</p>

SUBMISSION	COMMENT
47. Submitter No. 47 (cont'd)	
<p><i>No. 4 to accommodate population growth for aged persons, connect services on Helena Valley Road and contribute towards district infrastructure costs.</i></p> <p><i>Extension of the existing Park Home Park is a logical "rounding off" of the existing Park Home Parks and would provide for a diversity of dwellings types. Park Home Park design is well suited to protecting existing stands of trees. The amalgamation of all properties within the precinct is likely if rezoning is approved. This can be beneficial for future subdivision in that it provides a single parcel of land with a single owner rather than fragmented ownership and tenure boundaries.</i></p> <p>We strongly support this recommendation as it provides opportunities for expansion into Nos. 2500 and 2540 Helena Valley Road to the south-east. In the event that Helena Valley Resorts seek to expand into these sites to the south-east, there are opportunities for the Lifestyle Village to introduce a separate managed care component whereby clients typically over 65 years of age are provided with opportunities to 'age in place'. Helena Valley Resorts have been inundated with enquiries for this type of managed care product and are currently looking at options for accommodating these residents in a managed Lifestyle Village model. Such a model, while not providing for aged care services, would facilitate aged</p>	

SUBMISSION	COMMENT
47. Submitter No. 47 (cont'd)	
<p>living by providing for a broader range of accessible facilities on site (such as a hairdresser, nurse and regular doctor's visits) to reduce the need for residents to travel out of the Lifestyle Village for regular appointments. Helena Valley Resorts intends to discuss options for a managed care model in further detail with Shire officers as the need arises. We wish to foreshadow this intent to Council, however given a discrete managed care component would operate under the purview of a Park Home Park classification, we are not suggesting any word changes to the precinct statement unless Council consider such would be appropriate.</p> <p>8) <u>Precinct 6:</u> Helena Valley Resorts also support the proposed development potential of portion of Precinct 6 to the south east of the existing Lifestyle Village. We do however seek some additions to be provided to the wording of the precinct statement to provide the opportunity for a Lifestyle Village to also be a development option over this land. The Shire has recognised that the Precinct 6 land is subject to a number of constraints including Bush Forever and the presence of large trees and seeks to have these elements protected. The land is also characterised by steep undulating topography and contains two creek lines and due to these natural features, Council</p>	<p>8) The designation of specific R-Codes within the strategies is considered overly prescriptive for a high level planning strategy. Specific R-Code designations have been removed from the Strategy and replaced with:</p> <ul style="list-style-type: none"> • “Low Density Residential Development”; • “Medium Density Residential Development”; and • “High Density Residential Development”. <p>Each of these terms have been defined in the Strategy.</p> <p>Relative to Precinct 6, the wording has been amended accordingly.</p>

SUBMISSION	COMMENT
47. Submitter No. 47 (cont'd)	
<p>has expressed its desire for any development to minimise earthworks.</p> <p>The Shire is already aware that a Lifestyle Village model of tenure is a superior model to protect and enhance vegetation and existing trees, as evidenced in the existing Lifestyle Village. The lightweight construction and flexible road patterns also means that development can take place with minimal earthworks on steep and undulating sites. Consequently, we consider that No. 2670 Helena Valley Road (Precinct 6) is ideal to consider for a Lifestyle Village as a further development option and seek that the strategy reflects that option in addition to the other development options listed. This could provide further opportunities for the expansion of the existing Lifestyle Village to the south-east given the growth in demand for this form of affordable housing for an ageing population is likely to continue into the future.</p> <p>9) Helena Valley Lifestyle Village</p> <p>Helena Valley Lifestyle Village has enjoyed great popularity within the Shire of Mundaring due to its distinctive and sustainable housing format within which affordable dwellings are provided within an active and secure village atmosphere with a strong sense of community. The facility caters for the over 45s and provides a wide variety of leisure and</p>	<p>9) The submission is noted</p>

SUBMISSION	COMMENT
47. Submitter No. 47 (cont'd)	
<p>recreational facilities which cater for many of its residents' needs within its boundaries. Residents can therefore enjoy an active social life and are less dependent on travel by car for this purpose. Moreover, the Village's proximity to Perth and Midland to access further goods and services and the availability of Village buses for this purpose further decrease car dependency. A reduction in car transport will in turn reduce carbon emissions and traffic congestion, therefore providing obvious economic and environmental benefits.</p> <p>10) Conclusion</p> <p>We strongly support the Strategy and its aims to limit Greenfield development to areas which provide a logical extension of urban form while placing greater emphasis on affordable housing, urban infill and increased residential density to accommodate projected population growth. The opportunity to extend Helena Valley Lifestyle Village in the future would enable Helena Valley Resorts to continue to provide and expand affordable housing for an ageing population in an environmentally sustainable manner.</p>	<p>10) The submission is noted</p>
48. Submitter No. 48	
<p>1) As a resident of Helena Valley, I am concerned that recent urbanization of housing along Helena Valley Road does not have enough margin of vegetation between houses and Helena Valley Road.</p>	<p>1) Refer to 19(1) and 31(4). Vegetation buffers need to be considered in conjunction with bushfire risk management.</p>

SUBMISSION	COMMENT
48. Submitter No. 48 (cont'd)	
<p>With regards to future housing along Helena Valley Road could a dense vegetation margin of 20 to 30 metres be considered?</p> <p>The original margin of vegetation of the original Helena Valley Estate development was ideal.</p> <p>I was originally attracted to Helena Valley some 20 years and the tree line in this margin was one of the reasons we loved it as it was.</p> <p>I would appreciate it if you could give consideration to this.</p>	
49. Submitter No. 49	
<p>1) As a resident living in the most easterly house on Helena Valley Rd, I would like to make the following comments:</p> <ul style="list-style-type: none"> • As a general rule I understand the need to plan for and accommodate the growing population of Perth/WA and I do agree that MSC needs to be prepared to take its fair share of new housing. I also appreciate the idea that the Council is trying to be proactive in having a framework for assessing future planning applications. • I feel that in the current estates on Helena Valley Rd we have seen possibly the worst and the best examples of new development. The Lifestyle village has achieved a great compromise in small lot development along with 	<p>1) The submission is noted</p>

SUBMISSION	COMMENT
49. Submitter No. 49 (cont'd)	
<p>maintaining trees and vegetation and fitting into the contours of the site. However, the two new estates (opposite and besides) are examples of the worst development, strip mined, 100% vegetation clearing, awful – such estates should never be allowed again in the MSC</p> <ul style="list-style-type: none"> • With regards to amenities in the shire, I love the new Boya Hub (although completely don't understand why it is called Boya when it is in HV?) and my kids use the library a lot so it is great. The Greenmount hall and Library were a disgrace and should have been knocked over many years ago. I believe that there is scope to allow the blocks of land to the South between it and the Scott St shops on both sides of Scott St through to Helena Valley Rd to be transformed into a vibrant mini village. I feel there is a desperate need for a sewerage solution in that area and this should be a priority in any planning. A restaurant and small bar/bistro would bring so much vibrancy to the area • I also feel that the rezoning of the "Precinct 11" area makes sense; albeit I feel that within that precinct there should be heavier zoning immediately adjacent the existing shops and then less intense zonings at the periphery. 	<p>Refer to 19(2)</p>

SUBMISSION	COMMENT
49. Submitter No. 49 (cont'd)	
<ul style="list-style-type: none"> • Precinct 9 – I agree with council recommendations and feel this should include provision for increased small commercial development. • Fyfe St Bridge – as a home owner who might benefit from the use of such a bridge in an emergency I have some fondness for the idea BUT in reality the cost and the social/traffic issues that I think such a bridge would bring are not worth it. Much better that such money be used to upgrade the Scott St Bridge to dual lane and to address the significant traffic hazards at the Scott St roundabout and the Scott St/HV Rd intersection. • Samson St bridge – again I see little need for this • Katherine St (West end) future connection – I can see some merit in this but it would have to be done in a way that meant the road had slow traffic on it not high speed through traffic • The whole area is short of an indoor sports facility which I think is missing off the plan altogether – Mundaring rec centre is not a practical location for a very large % of the ratepayers in the Shire who now reside in the Western end of the Shire. • I like the idea of at least some limited river 	<p>The submission is noted</p> <p>Refer to 11(2)</p> <p>Refer to 11(2)</p> <p>Refer to 11(2)</p> <p>Refer to 25(1)</p> <p>Refer to 13(1)</p>

SUBMISSION	COMMENT
49. Submitter No. 49 (cont'd)	
<p>foreshore trails from Scott St through to the Bellevue Farm with bike and pedestrian access as long as these are well maintained. Perhaps some of the funds being spent on a small part of the garden maintenance around the original HV estate could be more fairly diverted to this.</p> <ul style="list-style-type: none"> • Finally – Helena Valley Rd definitely needs significant upgrade and safety improvement. A roundabout at Midland and HV Rd is urgently needed. I have already separately asked that the private school buses that are stopping on HV Rd in the non-pull in PTA stop at corner of Torquata be warned not to and fined if necessary as they create danger and increased traffic congestion. At the end of the day moving to a dual lane road is probably the best solution but it will bring with increased daily traffic down Scott St from GE Hwy as driver seek to circumvent the Roe Hwy/GE Hwy and Roe Hwy/Bypass intersections and this should be at the forefront of the mind in any planning. <p>Again thank you for the chance to comment and I look forward to seeing the final approved plan.</p>	<p>Refer to 11(2)</p>

SUBMISSION	COMMENT
50. Submitter No. 50	
<p>1) OVERVIEW Development History</p> <p>The original MSC concept plan (1985-1993) for Helena Valley was based on independent settlement nodes surrounded by semi-rural buffer zones containing the various landscape assets of the area.</p> <p>The crucial part of this strategy was the reduction in densities as development advanced east towards the foothills and scarp. This enabled preservation of the scenic landscape quality of the valley both natural and manmade.</p> <p>The HVUES seems to have reversed that concept recommending densities up to R60 at the eastern end of the valley.</p> <p>In the mid 1980's the visual resource assessments by the then WA State Planning authority had identified Helena Valley as having a high level of landscape significance worthy of preservation. In the late 1980's the Helena Valley community was engaged in a six year legal battle with the WA State Government in an attempt to achieve appropriate and sustainable development, contextual with the landscape and the unique social and physical character of the area.</p> <p>In the 1990's denser urban development was forced on the community by the then Minister of Planning, David Smith. MSCs and the senior planning officer's vision for this area was replaced with a doctrine based</p>	<p>1) Refer to 3(7) and 31(4)</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>on achieving certain housing densities across the Perth metro area irrespective of the impact on landscape or community. Several years after the development was completed Smith was reported as saying he was <i>'disappointed with the outcome of the development'</i>.</p> <p>Subsequent councils and councillors have since supported poor and inappropriate urban development in an easterly expansion along the valley based on an increased density philosophy, (which doubled in later subdivisions from R15 to R30), The suggestion of affordable housing by developers, along with a substantial increase to the rate base for the MSC, was a convincing argument. The outcome was a visually uninspiring, treeless heat sink urban landscape with small lots and large houses</p> <p>2) Timing for public comment. It is unfortunate that the HVUES was advertised over the Christmas new year, closing January 9, later extended to February 9. A period when most people are extremely busy with end of year work commitments and when many people are away on summer holidays. This strategy has been widely used with many public comment periods both at local and state government level.</p> <p>3) The Visual Presentation. Most of the affected landowners! have talked with</p>	<p>2) The Draft Strategy was advertised for 109 days. The timing of the advertising corresponded with Council's resolution at the meeting of 9 August 2016.</p> <p>3) The Strategy has been combined into a separate document.</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>have had difficulty understanding the HVUES. The documents are in many ways contradictory and confusing to the average landowner.</p> <p>Precinct and Strategy summaries would have been clearer on separate maps with notes detailing the proposed densities on the Precinct plans rather than having to endlessly cross reference between plans and script.</p> <p>4) Precinct Plan - Development example photos</p> <p>A number of the medium and high density example photos contained in the strategy document appear to have been carefully selected segments of much larger projects suggesting <i>resort style developments</i> surrounded by scenic lakes and tall trees, all located in flat landscapes. Many of the precinct sites proposed for development are on sloping site. We already have recent examples of medium density housing in Helena Valley on sloping sites; unfortunately they were not represented in this document for obvious reasons. Fringe urban development in the Perth region has become a visual blight on the landscape. We have an opportunity in Helena Valley to do something better.</p> <p>5) Precinct development strategies</p> <p>Most of the strategies in the HVUES are based on reduced lot sizes to conform with the R30/ R60</p>	<p>4) The density examples were selected to demonstrate that residential development does not necessitate wholesale destruction of the environment. Given that Helena Valley foreshore is intended to be a central element of development, it was considered appropriate to include photos next to vegetation/water bodies. However, exact representations of housing typologies intended for Helena Valley are not common in Perth. Therefore, close examples were used.</p> <p>5) The WAPC set R30 as an approximate density benchmark for new residential development.</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>dwelling per hectare benchmark doctrine espoused by the State Planning Authority. This level of density is inappropriate in a number of precincts identified for development. Precincts 3, 4, 7, 9 and 11 contain areas of significant landscape value, areas of dense native vegetation and floodplain all requiring sympathetic development densities.</p> <p>6) Decreasing lot size and increasing house size</p> <p>With the decreasing lot size comes the ever increasing house size leaving no room for trees which means a substantial and long lasting reduction in suburban tree cover together with host of other fundamental environmental and micro climatic issues.</p> <p><i>'Domestic backyards have an ecological junction and importance that goes beyond the interests of the individual household.</i></p> <p><i>The interaction of trees, plants and water is important in helping to make a more pleasant microclimate, especially in hot and dry Australia</i></p> <p><i>The reduction in width between dwellings makes natural ventilation very difficult. The narrowness of the gaps between the houses prevents airflow around them, creating heat-island effects.</i></p> <p><i>Prevailing winds skim over the roofs without exerting</i></p>	<p>6) Refer to 3(7), 19(2), 27(3), 31(4) and 36(6)</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p><i>enough air pressure within the gaps to create natural ventilation. The problem is exacerbated by exhaust from air conditioners and by the use of dark-coloured roofs which absorb, rather than reflect, the heat. All this results in an unpleasant milieu around the house and increased electricity consumption for the residents. The reduction in permeable surface areas increases stormwater run-off, which means increased costs for concrete stormwater drains, not just within any development but also for other communities downstream' What has happened to the Australian backyard? - Tony Hall 2016</i></p> <p>This statement identifies exactly what has occurred in the latest Helena Valley urban developments. Without adequate sustainable development controls and guidelines developers and market forces can dictate the subdivision outcome to a large degree. Numerous other local councils have strict development controls to maintain the character and amenity of the area so why hasn't MSC?</p> <p>Higher density means more profit to the developer and an increased rate base to the Council. Rezoning while opposed by many due to the negative social and physical impacts will be supported by those people wishing to make a profit on their land. Many people buy into an area with the singular aim of land speculation with no intention of becoming part of or contributing to the</p>	

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>local community. It may therefore be impossible to make an accurate assessment of the public response to the HVUES if landowners are only interested in making profit from a rezone.</p> <p>7) Development rationale?</p> <p>The rationale for some of the proposed increase in lot density within the HVUES as stated is to fund associated infrastructure. The South Ward has been subjected to the bulk of new urban development within the shire and one of the development aims seems to be about increasing the rate base to finance questionable shire projects and the ever increasing MSC staff costs (30% blow out over the last 5 years with the draft budget suggesting a further 4.5% increase in 2017). Rational planning and sustainable development seems to take second place.</p> <p>The New Boya Community Hub meeting rooms and library is an example. Why do we even need a Library when most people now access books digitally and online? Did we really need another inadequately serviced, high cost facility such as this at a project budget of \$7.5 million and a building cost around \$4,500/sqm? (More than double what it cost to build a school library in the hills area.)</p> <p>What was a scenic, low scale and pleasant pedestrian edge between the roadway and the oval with 15 substantial eucalyptus trees, abundant shade and a</p>	<p>7) Refer to 3(7)</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>distinct axis and vista to the oval and along Scott Street has been replaced by an aluminium clad 'site bite' confronting pedestrians and the street scape with concrete block retaining walls, bitumen vehicle access ramps, vehicle guard rails and service access doors. It embraces no regional context or sense of place. The building has no identity or context within the hills. <i>It could be a Bingo hall, a Tavern or even a Call Centre</i></p> <p>Are the same people making this sort of decision going to be involved in the decision making process re the HVUE?</p> <p>What is needed is a methodology that preserves the sense of place, the unique social physical and natural environment of this area. Shire councillors that actually represent their community and have sufficient expertise in the area of good design and planning are essential.</p> <p>8) COMMENTS ON SOME OF THE INDIVIDUAL PRECINCTS AND THE ASSOCIATED STRATEGY SUMMARIES.</p> <p>PRECINCT 7</p> <p>Support for the recommendations in general. There are significant watercourses, landscape features, vegetation areas and Western Power easements in this area that need addressing in any planning study.</p>	<p>8) The submission is noted</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>Parks and Recreation ceding for Bush Forever areas is crucial.</p> <p>9) PRECINCT 8</p> <p>The recommendation for no rezoning in this area is supported PRECINCT 9</p> <p>Lots West of Scott Street along the south side of Helena River</p> <p>District recreation grounds have been identified on the HVUES in Strategy summary No 4 at the extreme western end of the study area.</p> <p>The 3 Lots west of Scott Street adjoining the Helena River have a large part of the northern end of the land in a flood plain zone. Residential development in this area would therefore be difficult and expensive.</p> <p>Given the small contour intervals of these lower areas it would seem logical to consider the land for future recreation grounds with appropriate residential development along Helena Valley Road. The cost of establishing additional recreation areas in this area would be significantly less than the area suggested and much closer to the population centres of Boya and Helena Valley.</p>	<p>9) Refer to 18(3).</p> <p>The district recreation grounds identified in Precinct 12 are for land already zoned Parks and Recreation Reserve (and would therefore not require purchase) and would avoid district traffic being drawn into the heart of Helena Valley near to the Scott Street shops.</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>10) PRECINCT 11</p> <p>A statement relating to Helena Valley contained in the Draft North-East Sub Regional Planning Framework says:-</p> <p><i>The abundance of trees in the 'hills' landscape is an important component of the 'tree change' lifestyle which attracts people to the area. Future development within the sub-region will need to have careful consideration of these attributes and also address bushfire risks... The challenge will be to integrate or create design responses to existing environmental and landscape features (such as significant slopes, wetlands, distinctive vegetation and view corridors) at more detailed planning stages to maintain Helena Valley's sense of place.</i></p> <p><i>A key environmental attribute that attracts population growth in the sub-region is the hills landscape, with its string of traditional low-density rural settlements set in undulating agricultural areas with a substantial number of large remnant trees and pockets of orchards and other more intensive rural pursuits. These areas will be subject to additional pressure to meet residential, recreation and tourism demands, while the increased risk of bushfire in a drying climate also needs to be considered'</i></p> <p>The HVUES identifies this precinct as an area suitable for rezoning to Urban Deferred.</p>	<p>10) The submission is noted</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>11) Land South of Helena Valley Road</p> <p>Suggesting a rezone to urban deferred in this area is contradictory to some of the statements made in the Draft North-East Sub Regional Planning Framework and indicates little understanding of the topography particularly along the south and eastern edge of the precinct adjoining Maguire Road which comprises the eastern face of Ridge Hill.</p> <p>This area consists of steep undulating tree covered terrain unsuitable for higher urban density. Providing additional infrastructure to this area (deep sewerage etc) would not be cost effective due to the significant granite underlay.</p> <p>The eastern precinct boundary abuts a dense woodland uphill slope and is dangerously exposed to bush fires driven along the valley in the predominately easterly summer winds. Bush fires burning in a northerly direction from the Zig Zag have also penetrated this area. In 1984, 1987, 1994 and 2003 significant bush fires burnt to these boundaries and destroyed property.</p> <p>The fire risk boundaries identified on the Issues plan are not correct as bush fires have burnt up to the eastern side of Maguire and Ridge Hill Road</p> <p>The area between Maguire Road and Ridge hill road has similar steep terrain. Increased density would</p>	<p>11) Refer to 19(2)</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>require extensive fill and earthwork retention to accommodate suitable building sites, inappropriate in a landscape that dominates the edge of the ridge hill scarp interface.</p> <p>The spectacular vista east across the valley from Ridge Hill Road should be regarded as an integral and important part of the natural foothills visual landscape. Higher density housing raised on landfill platforms with the potential for two storey buildings would seriously impact this view unless strict development controls were enforced. The only reasonably level area in this part of the precinct is the site occupied by the Helena Valley Primary school.</p> <p>12) Land North of Helena Valley Road</p> <p>The lots abutting Scott Street consist primarily of low key retail outlets that conform to both the scale and context of the area. While limited expansion is possible to the south along Scott Street any further eastern expansion of this retail/commercial hub would impact on a significant tree covered landscape. Southern expansion would impact on the Helena River foreshore environment.</p> <p>Why would this current retail hub need expanding when a substantial retail development exists approx 2km to the west and a second commercial hub 2.5km to the west?</p>	<p>12) Refer to 19(2)</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>It is unclear what a <i>higher quality of urban design</i> refers to in the report. If the recently completed urban development west of Scott Street is an example then the whole strategy needs revising as this type of development would destroy both the character and scale of this quiet and heavily tree covered corner of the precinct in and around The Crescent. To suggest R30 and R60 development in this area indicates a complete misunderstanding of the existing landscape and built environment and its capacity to accommodate such densities without completely destroying the character of the area. Do the people making these decisions ever visit the sites they propose for rezoning or is it just a Google Earth exercise in 2D, with Street view?</p> <p>Lots to the Northern end of the precinct along the Helena River are subject to flooding, they contain a dense canopy of flooded river gum and form a significant part of the river landscape, virtually untouched due primarily to private ownership over the past 40 years. The larger lots to the eastern edge are a significant part of the rural landscape of this area. Due to the steep falls to the river much of the land is unsuitable for development. The suggestion of an increase in housing density along the river rural landscape might be considered as ecological and visual vandalism.</p>	

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>13) HVUES STRATEGIES</p> <p>Strategy 11 - The Helena River Public Reserves</p> <p>From 1985 to 1996 I was a community representative on 3 separate Helena River Foreshore Studies. Retaining the river foreshore in private ownership (with assistance from government authorities for environmental controls) was considered the most cost effective solution for foreshore protection. The concept has been successful over the past 25years</p> <p>Subdivision of one of the larger lots along the river foreshore in the late 1990's invoked a 30m resumption east of Fyfe Street. The outcome was as expected with no environmental upkeep of the resumed land by the state government. Weed and rubbish control became the responsibility of local landowners and environmental groups concerned about the river. This is still the case today where landowners spend considerable time, effort and money clearing noxious weeds and addressing fire safety issues by the removal of the constant falling tree limbs.</p> <p>Although it may be appropriate to develop reserve areas adjacent to the new residential developments 300m downstream of the Scott Street bridge that have substantially cleared land up to the river's edge, it is not a workable or safe concept 300m downstream and anywhere east of the Scott Street bridge for the following reasons:-</p>	<p>13) Refer to 13(1)</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<ul style="list-style-type: none"> • This area is densely wooded with large 100 year old flooded gums or widow makers' as they are referred to. The trees constantly drop branches weighing up to 2 tons. MSC would need to carry out a full risk assessment analysis before considering this strategy and be aware of the potential liability to the public if access is granted along the river foreshore. • The river is subject to flash flooding in winter and spring with fast moving currents and dangerous debris. Again potential liability issues. • The river banks are treacherous, steep and are prone to collapse in many areas. <p style="margin-left: 40px;">In summer months the river is completely dry and a nesting ground for Tiger, Dugite and Gwardar snakes.</p> • Over the past decade the Water Authority has reduced the amount of water released from the Pipe head dam during summer months that helped to maintain the biodiversity of this river system. The river is no more than an open dry drain from October to June. The 3 species of fish, long neck turtles, indigenous river rats, fresh water marron and sacred kingfishers that were in abundance in 1980 in various year round pools within the river system have all disappeared. 	

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<ul style="list-style-type: none"> Due to the close tree canopy the area is subject to severe fires. A canopy fire travelled 1.4km in half an hour in a strong easterly summer wind in 1984 and burnt up to the Scott Street bridge damaging the bridge pylons. It took 5 years for the landscape to recover. <p>Uncontrolled access to the rear of current rural/residential zoned properties where such reserves occurs becomes a serious issue resulting in rubbish dumping, theft and deliberately lit fires. Access by the ever increasing number of trail and quad bikes without registration plates becomes impossible to police.</p> <p>14) Strategy 12 - Establish connections over the Helena River at Fyfe Street.</p> <p>The Strategic infrastructure plan indicates an emergency access from Fyfe Street to Helena Valley Road.</p> <p>This strategy is impractical for a number of reasons</p> <ul style="list-style-type: none"> The environmental impact of a vehicle bridge in this location would have serious impact on the existing river and foreshore. The strategy is in conflict with all other statement relating to the protection and preservation of this unique and fragile environment. <p>Several 80 year old flooded river gums would require removal to accommodate even a</p>	<p>14) Refer to 11(2), 13(1), 15(2) and 40(4)</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>pedestrian bridge. Many more would need removal to facilitate a safe crossing due to falling branches and the potential fire risk.</p> <ul style="list-style-type: none"> • Helena Valley road services only 4 houses east of the Fyfe Street reserve. • It is only 700m to a fire safety station area adjacent the Helena Valley Primary School from the proposed Fyfe Street crossing. There are a further 3 exit options within 300m of the school. • Anyone escaping from the east would not attempt a river crossing and travel an extra 2km to safety particularly in an easterly wind driven fire front. Residents of Fyfe Street would take the shortest and safest exit routes west via Clayton Road not Helena Valley Road. • The Helena River environment is the most likely fire path due to the dense river gum canopy. Of the major bush fires experienced over the last 30 years 70% have burnt along the river. Placing an emergency access over the river therefore does not make any sense. • The cost of constructing a traffic bridge in this area would be substantial given the extensive earthworks and road upgrading required. I would estimate at least \$1 million for a fire safe vehicle crossing. Surely this money could be better spent on upgrades to the existing MSC and volunteer 	

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>firefighting equipment.</p> <ul style="list-style-type: none"> • Unlicensed trail and quad bike riders are becoming an increasing problem in the foothills. Most of them are now accessing the Regional Park, bridle and walking tracks via Helena Valley Road. The current one way access at least provides an opportunity for the DPAW rangers and police to apprehend these people. Providing an additional crossing point to Helena Valley Road from the North will create additional issues for residents already in conflict with these individuals. • There are significant water and fibre optic services crossing the Helena river at the end of Fyfe Street. • Together with numerous other property owners along the Helena River I am totally opposed to the proposals outlined for Precinct 11 and the associated strategies 11 and 12 <p>15) CONCLUSION</p> <p>Most of the strategies in the HVUES are based on ever declining lot sizes to conform with the R30 to R60 dwellings per hectare benchmark doctrine espoused by the State Planning Authority. As previously, stated this is all based on the misguided assumption that the significant natural landscapes of the foothills can accommodate the same form of urban development that is built on the coastal sand</p>	<p>15) The submission is noted</p>

SUBMISSION	COMMENT
50. Submitter No. 50 (cont'd)	
<p>plain. This level of density is inappropriate in a number of precincts identified for development.</p> <p>Precincts 4, 7, 9 and 11 contain areas of significant landscape value, areas of dense native vegetation and floodplain all requiring sympathetic development densities.</p> <p>R30 and R60 densities are completely out of place in these landscapes. At the recent public meeting it was quite evident that the planning staff was of the opinion that R30 and R60 densities would eventually be forced on the community by the WA planning authority. Why do we even need a public comment period if the decisions have already been made or are we all just living in an alternate Trump democracy full of alternate facts.</p>	
51. Submitter No. 51	
<p>1) I would like to write to express my support for the draft HVUES.</p> <p>I believe the expansion in this area is reasonable and to be expected. The improvements to services in the area noted in the report, namely H.V. road, Scott St and bus services would be a requirement given the scale of the expansion.</p>	1) The submission is noted
52. Submitter No. 52	
1) The purpose of this letter is to make a submission relating to the 'Draft Helena Valley Urban Expansion	1) Refer to 55(4)

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
Strategy' (HVUES). This submission is made by BH Planning on behalf of its clients:	
<p>For the purpose of clarity, our clients fully support the identification of and development of urban expansion land generally encouraged by the Draft HVUES. Our clients are concerned, however, their respective urban expansion land holdings are identified for low residential densities within the Draft HVUES despite being capable of medium density, and having fewer constraints to urban development than other areas which ore proposed for medium density housing.</p> <p>A detailed response to the Draft HVUES is set-out under the following headings.</p> <p>2) LAND AFFECTED BY DRAFT HVUES</p> <p>Our clients are the registered proprietors of the following properties within the Draft HVUES:</p> <p>.....</p> <p>For the purpose of this submission, the above lots are described as the subject sites.</p> <p>It is clear the owners ore directly affected by the recommendations of the Draft HVEUS and as such, this submission should be given serious consideration and appropriate weight by the Shire of Mundaring.</p>	<p>2) The submission is noted</p>

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<p>3) HOW AFFECTED</p> <p>All of the subject sites are located within Precinct 7 of the Draft HVUES. Strategy Summary 1A on the Precinct Plan describes Precinct 7 as being suitable for 'low Density Residential'. The Draft HVUES identifies the land immediately surrounding the subject sites as follows:</p> <p>West - Precinct 6 - R60 (Medium Density): North - Precinct 4 - R40 (Medium Density): South-East - Precinct 8 - Lifestyle lots: and North-East - Precinct 9 - Commercial/High and Medium Densities.</p> <p>The accompanying text of the Draft HVUES (refer Attachment 6 - August 2016 OCM) describes the suggested density for Precinct 7 (comprising the subject sites) is R1O (generally 1000m² in area). The report describes the Precinct as follows:</p> <p><i>"R1O lots could provide for a diverse housing stock within the study area and may provide for lot configuration which releases currently land-locked parcels. Larger lot sizes may also be suitable to address power easements and infrastructure transecting the subject properties and bushfire risk mitigation to/from the Bush Forever sites in the upland areas."</i></p>	<p>3) The submission is noted</p>

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<p>It is clear the subject sites are identified as having significantly lesser development potential than the surrounding land. The owners of the subject sites are concerned by the 'low density' designation within the Strategy, and have instructed BH Planning to make a submission against the recommendations of the Draft HVUES.</p> <p>4) REQUEST TO MODIFY DRAFT</p> <p>Both our clients and BH Planning consider the low-density designation on the subject site is not commensurate with the subject sites' capability to support medium density development. Moreover, the low density designation is inconsistent with the medium density potential of the surrounding land despite having few constraints to development. Discussion of the merits of the land is provided the following headings.</p> <p>5) CAPABILITY TO SUPPORT MEDIUM DENSITY DEVELOPMENT</p>	<p>4) The purpose of the strategy for Precinct 7 is to provide for a mixture of residential densities in the district and provide a transition zone between Precinct 6 and 9.</p> <p>However, in providing a transition zone, it is sensible to provide for a mixture of low and medium residential densities.</p> <p>The Strategy has therefore been modified to allow for consideration of low and medium residential densities subject to a structure plan being prepared over the subject properties.</p> <p>High residential densities are not supported in Precinct 7 as these are planned for Precinct 11, being in closer proximity to existing/proposed commercial land and public facilities.</p> <p>5) Refer to 52(4)</p>

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<ul style="list-style-type: none"> • The subject site can support medium density development given: • The land is immediately adjacent to Helena Valley Road which acts as the primary local distributor road servicing the broader residential areas; • The land is not affected by Bush Forever • A limited portion of the land is affected by Bushfire Risk; • None of the land is affected by wetland/flood prone area: and • The size and shape of each lot allows for further subdivision. <p>The Shire's assertion that the power line easements limit further subdivision is incorrect. There are numerous examples within the Perth Metropolitan Area, including the adjacent residential subdivision, demonstrating how detailed subdivision design can overcome potential design limitations through:</p> <p>Accommodating public open space (POS) within the powerline easements:</p> <p>Designing roads within the powerline easements; and incorporating the powerline easement within the rear of proposed lots.</p> <p>Equally, the Shire's assertion that some of the land is constrained as it is land-locked is also incorrect. A well-considered subdivision design will readily</p>	

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<p>overcome historical lot configuration and allow land to be effectively developed once incorporated within an overall subdivision plan.</p> <p>In broad terms. BH Planning does not believe the subject site should simply be dismissed as a future medium density area as it has some perceived constraints. The type of constraints identified by the Shire are prevalent in many future urban areas and are easily overcome with careful, considered and innovative subdivision design.</p> <p>6) COMMENSURATE WITH ADJOINING LAND</p> <p>BH Planning has reviewed each of the precincts identified by the Draft HVUES. In most instances, other precincts are constrained by a range of factors, including:</p> <ul style="list-style-type: none"> • Bushfire; • Bush Forever; and • Topography/landscape protection. <p>Having read the accompanying report to the Draft HVUES, the Shire anticipates many of the above issues will be resolved through the preparation of a structure plan. That is, the constrained areas will be set aside in structure plans as reserves, incorporated within larger lots and/a designed with larger lots which provide landscape protection.</p> <p>Each of these issues, in the opinion of BH Planning,</p>	<p>6) Refer to 52(4)</p>

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<p>are more consequential constraints compared to the constraints affecting the subject sites. Specifically, the perceived constraints of the subject sites relate more to lot configuration rather than physical issues, such as bushfire, topography and remnant vegetation. Physical constraints will be made difficult to resolve compared to the perceived issues associated with the subject sites which is:</p> <ul style="list-style-type: none"> • Adjacent to Helena Valley Road; • Adjacent to services; • Positioned on the high side of the road which is beneficial for sewerage flow; and • Generally flat and clear from remnant vegetation. <p>Given the above. the subject sites should be afforded the some designation under the Draft HVUES as the adjoining land, being medium density residential, as any perceived constraints can be easily remedy through the preparation of a structure plan.</p> <p>7) PREJUDICE FUTURE DEVELOPMENT</p> <p>Regardless of the designation under the Draft HVUES. it is broadly accepted the land will ultimately be identified as being suitable for medium density under future (longer term) strategic plans given a number of key factors:</p> <ul style="list-style-type: none"> • Its location (close to Perth and Midland): • It being surrounded by medium density; and 	<p>7) Refer to 52(4)</p>

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<ul style="list-style-type: none"> The sites being close to services. <p>There are numerous examples within the Perth Metropolitan Area of constrained land being re-classified in subsequent land-use strategies given the constraints were removed and/or it was identified the constraints were not prohibitive, and could be resolved by detailed planning. In this instance, BH Planning considers the land is not constrained as the Shire believes.</p> <p>The risk for the Shire is the development of the subject sites for R10 will effectively prejudice the land being ultimately redeveloped for higher density when the perceived constraints are resolved/removed. Rather than simply down-code the subject sites due to perceived constraints, it would be prudent for the Shire to identify the land for medium density and allow an appropriate structure plan to remedy the perceived constraints. In doing so, the Shire will not unnecessarily prejudice the future development of the land for an appropriate medium density designation.</p> <p>8) LIFESTYLE LOTS</p> <p>Our clients are uncertain why the subject site would be identified as being suitable for lifestyle lots. The subject site will not realise a significant number of lifestyle lots if developed at the R10 coding yet be</p>	<p>8) Refer to 34(5). The purpose of retaining lifestyle lots is both in response to constraints and to preserve elements of amenity.</p>

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<p>surrounded by principally medium density housing.</p> <p>The Shire's designation of the subject sites for low density within a larger urbanised area appears to be a simplistic solution to resolve relatively innocuous constraints which are readily resolved.</p> <p>Of greater consequence is the retention of significant areas of the Darling Scarp (including Boya. Helena Valley and Greenmount) as lifestyle lots. Our clients do not understand the need to retain a small number of lifestyle lots in an area which will effectively be a near fully urbanised area whist the majority of the Shire of Mundaring is already developed with lifestyle lots within the Scarp.</p> <p>It is the view of BH Planning that on appropriate structure plan will allow the load to be developed for medium density as per all of the neighbouring land. In doing so. the Shire will not establish an unnecessary enclave of lifestyle lots within an unconstrained urbanised area.</p> <p>9) SUMMARY</p> <p>This submission has been prepared by BH Planning on behalf of landowners within Precinct 7 of the Draft HVUES which is presently being advertised for public comment. This submission has identified that the low-density designation of the land appears to have resulted from perceived lot configuration</p>	<p>9) Refer to 52(4)</p>

SUBMISSION	COMMENT
52. Submitter No. 52 (cont'd)	
<p>constraints which, in the opinion of BH Planning and its clients, can be resolved through the preparation of a structure plan.</p> <p>It is requested the Draft HVUES is amended to include the subject sites within a medium density precinct with the expectation of a structure plan being prepared.</p> <p>BH Planning wishes to address the Council and/or Committee when this matter is considered by the Shire. If is requested we are notified of the Council and/or Committee dates to allow us to make a deputation accordingly.</p>	
53. Helena Valley Estate Residents Association	
<ol style="list-style-type: none"> 1) The Helena Valley Estate Residents Association wishes to make the following points in regard to the Helena Valley Urban Expansion Strategy. 2) The HVERA is not opposed to more urban development of HV provided it is done in a manner that enhances the beauty and amenity of the valley. 3) We strongly support the Strategy for a coordinated approach to the future development of Helena Valley. The feeling of HV residents expressed at our meetings is that the current disjointed approach that has been the characteristic of development here in 	<ol style="list-style-type: none"> 1) The submission is noted 2) The submission is noted 3) Refer to 3(7)

SUBMISSION	COMMENT
53. Helena Valley Estate Residents Association	
<p>recent years has been the result of too much eagerness on behalf of the Shire of Mundaring to develop the valley in order to increase the Shire's rate base. This new plan by the Shire creates the opportunity to correct its past mistakes.</p> <p>3) The Helena Valley environment is in a fairly degraded state at present.</p> <p>Almost none of the existing rural properties are utilised for agriculture or horticulture and the plan presents an opportunity to restore the valley to a high standard that protects and beautifies the river and increases the biodiversity and amenity of the valley environs. The HVERA considers the south side of Helena Valley Road would be best developed before the river side as it would have less impact on the character of the valley.</p> <p>4) The HVERA offers the following comments in respect to the strategy summary for the various precincts on the Draft Precinct Plan.</p> <ul style="list-style-type: none"> • Upgrade Helena Valley Road to Four (4) lanes. - This strategy is supported, with additional points that a Footpath (for which the HVERA has requested to be considered by the Shire for Capital funding over the past two years) is urgently required from 	<p>3) Market forces generally determine the rate at which development occurs. While the Strategy could require development to be staged, this may ultimately hinder the market's ability to achieve efficiencies in property development (e.g. connecting utilities) which are then passed to the user and wider community. This element of the submission is not supported.</p> <p>4)</p> <p>Refer to 11(2),</p>

SUBMISSION	COMMENT
53. Helena Valley Estate Residents Association	
<p>Allamanda Gate to Midland Road and the Helena Valley Road/Midland Road intersection is quite dangerous and requires a strategy to deal with future congestion</p> <ul style="list-style-type: none"> • Establish connection between Helena Valley Road and Katherine Street. - There are reservations about this strategy because most of the road will need to be built across the Helena Valley floodplain. • Development zone at the entrance to the valley, Precinct 12. - HVERA would support medium density residential, but not, commercial/light industry. This is the entrance to the suburb and any development needs to be in keeping with the character of the valley. The industrialization of Hazelmere already reflects poorly on the suburb and every effort should be made to keep it to the other side of Roe Highway. This suggestion is a poor fit for the valley. • Establish district recreation grounds. - This strategy is supported, particularly as the land is not fit for any other purpose being a former clay pit for the brickworks. This clay pit was around 600 metres long and 250 metres wide making it probably the deepest and the largest in the State. There is little 	<p>Any river crossings will require the necessary environmental approvals.</p> <p>The commercial/light industrial investigation area would only relate to that part of Precinct 12 within the >25 Australian Noise Exposure Forecast where residential development cannot be considered under SPP 5.1</p> <p>The submission is noted</p>

SUBMISSION	COMMENT
53. Helena Valley Estate Residents Association	
<p>practical use for this land other than playing fields. This area would be ideal for recreation grounds.</p> <ul style="list-style-type: none"> • Retain rural lifestyle lots, Precinct 1. - This strategy is supported. These lots include areas of floodplain and the areas suitable for building already have homes built on them. • Medium Density Residential, Precinct 2. - This strategy is only partially supported. The HVERA believes a strategy to avoid development on any land below the 15 metre contour along the river valley should be supported and much of the land in this precinct is below that contour. • Medium Density Residential and Heritage Protection, Precinct 3 - Protection of as much of Clayton Farm is supported as is the development of land above the 15 meter contour within this precinct. • Development Zone - Mixture of medium density residential and commercial, Precinct 9. - This strategy is only partially supported with the 15 metre contour being a limiting factor. This area is a key focus in the valley and every effort should be made to enhance and beautify this precinct. 	<p>The submission is noted</p> <p>Refer to 8(5) and 18(3)</p> <p>The submission is noted</p> <p>Refer to 8(5), 18(3) and 27(3)</p>

SUBMISSION	COMMENT
53. Helena Valley Estate Residents Association	
<ul style="list-style-type: none"> • Upgrade Scott Street - This strategy is supported, with the inclusion that the Scott Street/Helena Valley Road intersection be given urgent attention because of congestion. • Limited Rural Subdivision, Precinct 10. - This strategy is supported, provided the 15 meter contour is taken into consideration. Part of this precinct is floodplain. • Establish public reserve around Helena River. - This strategy is strongly supported particularly as it offers an opportunity to clean the river up, re-establish vegetation and build footpaths etc. Public access to this area will be an excellent community enhancement for the valley. • Establish connections over Helena River. - This strategy is supported. There are few options for access out of the valley if Scott Street is blocked for any reason and bridges on both the Fyfe Street and Sampson Street will be very useful particularly in times of fire. • Development Zone - mixture of medium/high residential density and commercial development - subject to comprehensive precinct planning, Precinct 13. There are reservations about the 	<p>The submission is noted</p> <p>Refer to 8(5) and 18(3)</p> <p>The submission is noted. Refer to 13(1)</p> <p>The submission is noted</p> <p>The submission is noted. The inclusion of a strategy for comprehensive precinct planning was in recognition of the various complexities involved in urban infill. Refer to 27(11) and Submission 10.</p>

SUBMISSION	COMMENT
53. Helena Valley Estate Residents Association	
<p>practicality of the strategy for this area. Almost all every land parcel is already built on and to sewer and redevelop the area would be costly and difficult. The Primary School is adequate now but, constrained for by space for future growth</p> <p>The homes in Atoifi Gardens and on the adjacent area of the Crescent were recently built of a high standard and it seems a bit late to consider rezoning them at this time.</p> <ul style="list-style-type: none"> • Low Density Residential, Precinct 7 - This strategy is supported. • Mixture of Rural Lifestyle, medium density residential and public reserve. This strategy is supported. • Extend Park Home, Precinct 5. - This strategy is supported. • Medium Density Residential, Precinct 4. - this strategy has limited support, with the 15 metre contour considered a restraint. The HVERA would also suggest that any blocks along Helena Valley Road be of a larger size (R2) to retain the character of the valley. We suggest that they should be a similar in size to the original existing blocks on Riverdale Road and Lakeside Drive that back onto Helena Valley Road. This would 	<p>Refer to 52(4)</p> <p>The submission is noted</p> <p>The submission is noted</p> <p>Strategy modified to include recommendation for lower density residential character lots fronting Helena Valley Road with a possible medium density offset behind.</p>

SUBMISSION	COMMENT
53. Helena Valley Estate Residents Association (cont'd)	
be the preference of the HVERA.	
54. Submitter No. 54 (cont'd)	
<p>1) As landholders at the western end of Helena Valley, we support the expansion of housing development along the eastern section of Helena Valley Road.</p> <p>With the increase in numbers of residents it will bring benefits to all other people living in the area. There will be an incentive for better public transport as well as increased support for businesses in the Scott Street vicinity. With the new library nearing completion, we believe it is logical to continue the housing to connect with the existing housing closer to Scott Street.</p>	1) The submission is noted
55. Submitter No. 55	
<p>1) The following is in response to the Daft HVUES issued by the Shire for public comment.</p> <p>I am a resident at, within Precinct 7 of the study area.</p> <p>2) Firstly I would like to commend the Shire on the comprehensive draft report, and am encouraged by its content and the due consideration of wide ranging planning aspects. I support most of the aspects proposed.</p> <p>3) I fully support the expansion of the urban boundary to include Helena Valley, which has changed significantly in the ten years that I have lived there. The retention of</p>	<p>1) The submission is noted</p> <p>2) The submission is noted</p> <p>3) The submission is noted</p>

SUBMISSION	COMMENT
55. Submitter No. 55 (cont'd)	
<p>the Rural zoning is of little relevance following recent residential subdivisions, especially on Helena Valley Rd. The original estate sought to retain a rural ambience with wide verges and large lots backing onto Helena Valley Rd, however this has now been overridden by the suburban visage of recent developments.</p> <p>4) Whilst I support the urban expansion, I question the limitation placed on Precinct 7 to low density zoning. The perceived limitations of topography, infrastructure and vegetation may well be overcome with a comprehensive structure plan that will resolve these issues. The area of Precinct 7 immediately fronting Helena Valley Rd is just as suitable for medium to high density housing as are the other adjoining precincts, and the current urbanised area of The Crescent and Maguire Rd nearby, and should be given the versatility for a range of housing options.</p> <p>5) Lower density may well be the best outcome for a portion of Precinct 7; however that should be allowed to evolve as more detailed planning is done following the adoption of the urban expansion. The zoning of Precinct 7 as medium to high density will provide for continuity & uniformity of housing options west of Ridgehill Rd & Scott St.</p> <p>I support the higher urban densities and commercial precinct proposed for the areas closer to, and along, Scott St. These will provide a hub for the expanding</p>	<p>4) Refer to 52(4)</p> <p>5) Refer to 52(4)</p>

SUBMISSION	COMMENT
55. Submitter No. 55 (cont'd)	
<p>population within Helena Valley, and will be well supported by traffic passing through to Perth & Midland from the surrounding suburbs (Boya, Bellevue, Koongamia, Darlington, Greenmount, Gooseberry Hill & Kalamunda). The proposed zoning is sympathetic with the refurbishment of the Library and community centre at Helena Valley Oval.</p> <p>I encourage the Shire to continue with representation to the Department of Planning to include Helena Valley in the North-Eastern Sub-Regional Planning Framework. In light of recent residential developments in Helena Valley, its exclusion is indefensible especially in light of the government urban infill policy.</p> <p>Helena Valley is a very desirable location, and the urban expansion is well placed to take advantage, geographically & demographically, of its proximity to the commercial, medical & educational facilities available in Midland, and the significant nearby transport routes (Roe Hwy & Great Eastern Hwy).</p> <p>I look forward to the progression of the HVUES.</p>	
56. Submitter No. 56	
<p>1) I would like to provide a submission. I live on and are in support of sensible residential development throughout the area.</p> <p>2) Ideally a nice a landscaped zone around the development will keep with the rural feel of the area.</p>	<p>1) The submission is noted</p> <p>2) Refer to 19(1) and 27(3)</p>

SUBMISSION	COMMENT
56. Submitter No. 56 (cont'd)	
<p>I'm not concerned about block sizes.</p> <p>3) I think the proposal for a 4 lane upgrade of Helena Valley Rd is not necessary, and instead we should be encouraging less road users. Living on Scott St I know firsthand how busy this road is and would love to see a reduction of traffic along it, particularly trucks. they roar down the hill and now that the Boya community Hub is open it is a genuine safety issue with increased pedestrians and children in the area.</p> <p>4) I support the upgrade to the Scott St/ Great Eastern Hwy intersection, however I think reducing the westbound traffic to one lane is a mistake and will cause unneeded congestion, especially when the large oversize tracks come down the hill.</p> <p>5) I also like (too see?) the Samson St upgrade and the cycle paths on Helena Valley Rd, as there are a lot of cyclists using the roads.</p>	<p>3) Refer to 11(2)</p> <p>4) Refer to 11(2)</p> <p>5) The submission is noted</p>
57. Department of Health	
<p>The DOH provides the following comments:</p> <p>1) <i>Water Supply and Wastewater Disposal</i></p> <p>All developments are required to connect to scheme water and reticulated sewerage (if available) as required by the <i>Government Sewerage Policy - Perth Metropolitan Region</i>.</p> <p>The strategy should advise that approval is required for any on-site waste water treatment process and in</p>	<p>1) Included in References</p>

SUBMISSION	COMMENT
57. Department of Health (cont'd)	
<p>particular reference DOH publications as appropriate. On- site waste water requirements will impact on lot size determinations and density.</p> <p>2) Public Health Impacts DOH has a document on '<i>Evidence supporting the creation of environments that encourage healthy active living</i>' which may assist you with planning elements related to this strategy.</p> <p>The Strategy should note and incorporate appropriate separation distances in accordance with the EPA Environmental Assessment Guideline (EAG) 3 '<i>Guidance for the Assessment of Environmental Factors No. 3 - Separation Distances between Industrial and Sensitive Land Uses</i>'.</p> <p>3) You should also acknowledge the DOH's <i>Guidelines for the Separation of Agricultural and Residential Land Use</i> as a means to help avoid conflict and potential adverse health effects and nuisance impacts from chemical use, dust and other rural pursuits.</p> <p>4) The Shire of Mundaring should also use this opportunity to minimise potential negative impacts of the increased/mixed density development such as noise, odour, light and other lifestyle activities. To minimise adverse impacts on the residential component, the Shire of Mundaring could consider incorporation of additional sound proofing / insulation, double glazing on windows, or design aspects related</p>	<p>2) Included in References</p> <p>3) Included in References</p> <p>4) Relevant Australian Standards apply.</p>

SUBMISSION	COMMENT
57. Department of Health (cont'd)	
<p>to location of air conditioning units and other appropriate building/construction measures.</p> <p>5) Strategy Content</p> <p>It is noted within the strategy, that good public health is not specifically recognised as part of the vision or aim. Good public health outcomes require good planning strategies. The aim of the strategy should include a direct reference to 'enhancing the public health of the community' (or words to that effect).</p>	<p>5) The submission is noted</p>
58. Submitter No. 58	
<p>1) I am against the proposal of urban expansion We purchased in Helena valley for the country feel also making Helena Valley Road 4 lanes is not needed</p>	<p>1) Refer to 11(2). The Strategy aims to reconcile accommodating a growing population with preservation and enhancement of desirable amenity aspects.</p>
59. Submitter No. 59	
<p>1) I have only been made aware of this issue in the last few days and don't believe this was advertised well enough to ensure all residents were made aware of the major redevelopment proposed.</p> <p>2) I am against this redevelopment as I believe it will ruin everything that everyone loves about Helena valley and living within the shire of Mundaring, it will become another over developed suburb which is not what we were sold when you brought here. I walk my two young sons to daycare most days and find it hard</p>	<p>1) Refer to 50(2)</p> <p>2) Refer to 11(2)</p>

SUBMISSION	COMMENT
59. Submitter No. 59 (cont'd)	
<p>enough to cross the road as is let alone once its dueled and made into a thorough way for the rest of the hills area to make rat runs to Midland.</p> <p>3) We do not have the school facilities to cater for the growth of Bush Mead let alone developing housing all the way along Helena Valley road and Clayton Road.</p> <p>4) I understand the need for urban development maybe changing medium density housing the low density may help keep the rural feel to the area as the mass infill of housing is going to bring our house prices down and ruin the feel of the area.</p>	<p>3) Refer to submission 10</p> <p>4) Refer to 34(5)</p>
60. Submitter No. 60	
<p>1) I will be commenting on the area or Precinct I live within, which is Precinct 5 in the RPS Land use study, and Precinct 11, I believe, in the Shires draft proposal.</p> <p>2) How did the land use study's recommendation of; " N/A (no further urban expansion recommended within precinct)" suddenly become "Development Zone - mixture of medium/ high residential density and commercial development • subject to comprehensive precinct planning"</p> <p>3) Can I ask how you can justify this extreme dismissal of</p>	<p>1) Precinct 5 in the RPS Land Use Study relates to Rural Residential land around Ridge Hill Road and Fyfe Street. Precinct 11 in the Draft Strategy relates primarily to existing Residential zoned land.</p> <p>2) Refer to 60(1)</p> <p>3) Refer to 60(1)</p>

SUBMISSION	COMMENT
60. Submitter No. 60 (cont'd)	
<p>the study you commissioned?!?</p> <p>Here is what the Land Use Study has to say about this region;</p> <p>Precinct 5 - Helena Valley Road East</p> <p>Description:</p> <p>The Helena Valley Road East precinct comprises all rural residential land to the western extent of the study area generally east of properties on Ridge Hill Road and east of Scott Street. The precinct also includes land north of the Helena River accessed via Clayton Road and Fyfe Street.</p> <p>Key Elements:</p> <p>The Helena Valley Road East precinct is characterised by steeper sloping rural lifestyle properties and encompasses areas of significant bushland, together with several rural orchard properties around Fyfe Street to the northeast. The precinct offers a high degree of rural bushland amenity with its undulating topography and view corridors. The precinct abuts Beelu National Park. The upper extent of the Helena River dissects the precinct running east-west. Access to the precinct is via Scott Street from the north, or from the south via Ridge Hill Road. A smaller number of small holdings are accessed via Clayton Road and Fyfe Street.</p>	

SUBMISSION	COMMENT
60. Submitter No. 60 (cont'd)	
<p>Key Considerations:</p> <p>No further intensification of land use is identified for Precinct 5, reflecting both the physical nature of the precinct, the important natural character of the landholdings, and the need to protect further fragmentation of the small rural holdings.</p> <p>The conservation and enhancement of natural assets including the Helena River and floodplain/flood fringe environs, Bush Forever Area No. 215 and identified Conservation Priority Areas.</p> <p>4) NO FURTHER INTENSIFICATION OF LAND USE!</p> <p>This is the clear recommendation for an area the shire has deemed suitable for much intensification.</p> <p>Some of the small properties in this area are the most sought after in the suburb, due to the natural assets of the region, extraordinary views, and natural character of the current holdings. A lot of these owners are very much against the idea that this area will increase in density and I do not think that at any point you would be able to gather a sizeable enough portion of land to build the kind of unified and genteel estate the planners were discussing at the meeting the other night. It would only lead to disconnected and ugly subdivisions. I think the only people who agree with you on this proposal are those who have been sitting on land just waiting for the day they can subdivide,</p>	<p>4) Refer to 60(1)</p>

SUBMISSION	COMMENT
60. Submitter No. 60 (cont'd)	
<p>move out themselves and never have to be the ones to deal with or experience the aftermath.</p> <p>5) Does the shire have any interest in retaining a good reputation for the suburb of Helena Valley? Or are they satisfied with it having a similar renown to Koongamia, Swan View or Ellenbrook?</p> <p>Living in the hills is a privilege, and has always been about loving the land and the trees and the natural environment. We mostly gave up sewerage systems and scheme water and cope and understand the bushfire risk. The Idyllic nature of the Perth Hills is a part of Perth itself. It is a tourist region, and an area of great natural beauty.</p> <p>6) With this proposed development people won't look around and think what a beautiful place to live it is, they'll notice the remnant lots, and the leftover surrounding bushland areas and think, "You got rid of that to do that?"</p> <p>I do not understand the tiny lot sizes with houses that take up so much room on the block there is no room for a garden left. Their walls are less than the width of a human from their neighbours wall. There is no room to grow the greenery required to cool the suburb down in summer. There is no room for proper front or back yards for children to play, and they are then forced to play in the street, or not at all. The streets are narrow and the driveways don't have enough room for the number of cars the household has. Surely apartment</p>	<p>5) The submission is noted</p> <p>6) Refer to 19(2). The Strategy recommends that Precinct 11 be subject to comprehensive precinct planning and consultation to ensure that any development which occurs has been informed by the community's interests and architectural expertise.</p>

SUBMISSION	COMMENT
60. Submitter No. 60 (cont'd)	
<p>style living with large communal garden/pool and recreation areas is a better option for those individuals that cannot see the importance of gardens.</p> <p>There is a sadness for me in this style of housing and ifs because it lacks a sense of Australia and Itcertainly lacks a sense of Western Australia.</p> <p>7) Why wasn't there any consideration of following suit with White Gum Valley's One Planet Living community?</p> <p>Surely such a plan would be much more closely linked to the ethos of the Perth Hills environs and beliefs, and contain the higher density that is apparently so wanted by the Mundaring Shire, and it would be a unified development, not this disparate and ununified solution., unless you have a proposition for evicting a whole stack of landowners so you can build something aesthetically pleasing? It would be something ahead of its time, new and forward thinking, not the staid same old, same old way of thinking that has seen countless thousands of hectares flattened for urban wastelands that hold very little future value.</p>	<p>7) Refer to 60(6)</p>

SUBMISSION	COMMENT
61. Submitter No. 61	
<p>1) Introduction</p> <p>This report has been produced at the request of the landowner) in relation to the Draft Helena Valley Urban Expansion Strategy (HVUES) currently being advertised by the Shire of Mundaring. The subject site is currently excluded from the HVUES, but is located directly adjacent to 'Precinct 10' on the northern side of Clayton Road. This report is intended to provide planning support and justification for the subject site to be included within boundaries of the HVUES.</p>	<p>1) The submission is noted</p>
<p>2) Site Details</p> <ul style="list-style-type: none"> • Scheme - Shire of Mundaring Local Planning Scheme No. 4 • Local Scheme Zoning - Rural Residential • Density Coding – RR2 • Lot Area - 30,567m² • Frontage – 251.56m • Orientation – Southern Frontage <p>3) Site Description</p> <ul style="list-style-type: none"> • The lot enjoys views over Helena Valley. • There is no reticulated sewer present or easements impacting lot. • The lot is within a bushfire prone area and has an extreme bush fire rating. 	<p>2) The submission is noted</p> <p>3) The submission is noted</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<ul style="list-style-type: none"> • The side and rear lot boundaries abut lots zoned 'Parks and Recreation' under the Metropolitan Region Scheme (MRS). • Rural residential zoned lots, which are featured within Precinct 10 of the HVUES, are immediately south of the lot. These are similar in nature to the subject site. Existing site improvements include two (2) dwellings and a tennis court within the rear, eastern portion of the site. • More than half of the lot area has a 'Protection' Local Natural Area designation in accordance with the provisions of LPS 4. <p>4) Site Analysis</p> <p>The site analysis below assists in determining how a development will be designed.</p> <p>General</p> <ul style="list-style-type: none"> • The sites major strength is its proximity to Clayton Road and views available to the adjoining 'Parks and Recreation' reserved lots to the North (Boya Quarry Reserve), and of Helena Valley and • 	<p>4) Pursuant to clause 6.5.17 of LPS 4, vehicular access is required to be assessed as inadequate by appropriate experts before subdivision not otherwise in accordance with LPS 4 can be considered. The applicant, acting on behalf of the owner, is not a bushfire planning and design accredited practitioner and is therefore not considered qualified to make an assessment regarding access.</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>Gooseberry Hill National Park to the south;</p> <ul style="list-style-type: none"> • Subdivision of the lot can improve emergency vehicle access to the MRS 'Parks and Recreation' reserves to the North and to adjacent Lot 49 (No. 2055) Clayton Road; • Properties to the south currently share the same Rural Residential zoning and RR2 density coding; and • Existing access to the area behind the subject site and the adjacent lots is via the northern tip of approach road or the access point near the electricity distribution facility off Victor Road which is some 3km's apart. This proposal would enhance access for emergency vehicles, helping to effectively half the travel distance and making access to these blocks quicker, easier and safer for all involved. <p>Opportunities and Threats</p> <p>5) Opportunity and Strengths</p> <ul style="list-style-type: none"> • The site is in close proximity to existing areas featuring R5 coded lots (Boya North West with only a one lot separation and Darlington North East); • Subdivision of the lot can readily contribute to the HVUES as it is adjacent to Precinct 10 along Clayton Road/Katharine Street, which spans across the current northern boundary of the HVUES area; • There is an ability to enhance bush fire safety within 	<p>5) Refer to 61(4)</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>The area through improving emergency vehicle access to surrounding lots. The ability to provide enhanced emergency vehicle access would put less pressure on Clayton Road, and provide more opportunities for vehicles to flee bushfires (especially from lots to be included within the HVUES to the south) through Clayton Road In the event of a bushfire emergency;</p> <ul style="list-style-type: none"> • The subject site has a relatively large lot area; • Local Government open to the idea of including the lot within the HVUES; • Less prone to flooding compared to southern lots closer to Helena River; • No flooding risks have been identified within the site or nearby lots, as per the Helena Valley Land Use Study (HVLUS) Report; and • No Acid Sulphate Soil Risks identified in nearby lots In HVLUS Report; • Significant opportunity to harness northern light and receive favourable winter sun for private open spaces and outdoor living areas; and • The lot has access to views on all sides. <p>6) Threats and Constraints</p> <ul style="list-style-type: none"> • We understand that the subject lot was Initially excluded from the strategy for the following reasons: 	<p>6) The submission is noted</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<ul style="list-style-type: none"> o Environmental protection <ul style="list-style-type: none"> ■ Existing water course ■ Local Natural Areas within site (Level: Protection) ■ Sloped topography ■ Effluent waste disposal • o Fire Risks - Extreme Bush Fire rating. • Irregular lot shape; • The need to provide reticulated sewer to support higher density residential development; • The subject lot was not included within the boundary of the HVLUS Report investigation area; • The HVLUS Report depicts a Registered Aboriginal Heritage Site (a trail) through the middle of the lot. <p>6) Relevant Scheme extracts Part 4 – Zones and the Use of Land 4.2.2 (a) – (d) 7.4 Heritage Assessment 5.7.5 Watercourse Protection 5.7.5 (a) – (c) 5.7.6 Stormwater Drainage 5.7.6.1 (a) & (b) & 5.7.6.2 5.7.12 Vegetation Protection</p>	<p>6) The submission is noted</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>5.7.12.1, 5.7.12.2 & 5.7.12.3 (a) – (o) & 5.7.12.4 5.7.13 Local Natural Areas 5.7.13.2 & 5.7.13.3 6.5 Bushfire Hazard 6.5.17 & 6.5.18</p> <p><i>rezoning, structure planning, subdivision and development should respond to fire risk, seek to protect existing trees, retain (as much as practicable) the natural topography and Integrate with adjoining rezoning, structure planning, subdivision and development. Subdivision should also ensure Parks and Recreation reservation is ceded around the Helena River foreshore and vegetation identified as Bush Forever.</i></p> <p>Reasons mentioned previously appear to be rationale of the HVUES specifying that Precinct 10 is to involve limited rural subdivision.</p> <p>However, C80. of the Council Report also lists the following high level strategic planning issue which is of great relevance to the subject site:</p> <ul style="list-style-type: none"> • <i>Avoiding bushfire prone areas or seeking to mitigate risks if rezoning/development in a bushfire prone areas would deliver strategic benefits;</i> <p>This is highly relevant to the Bushfire Area Access Strategy, which outlines the Shire's high priority for enhancing bushfire safety. Importantly, our office is</p>	<p>The submission is noted</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>new developments, ensure adequate vehicular access to/from and within bushfire prone areas, both for escape by residents and for access by emergency vehicles, particularly firefighting appliances</p> <ul style="list-style-type: none"> • Conduct an audit of the adequacy of vehicular access/egress in bushfire prone areas throughout the Shire • Use the audit referred to in the point above to prepare a strategy for improving access/egress identified as inadequate and progressively implement that strategy, which may involve actions including: <ul style="list-style-type: none"> - construction of new roads - opening of closed roads - widening of existing roads - removal of barriers within road reserves • Adopt a position that the Shire values, and places strong emphasis on, the protection of vegetation for environmental and aesthetic reasons, but where there is a conflict between vegetation protection and bushfire safety, Council will make decisions having regard to bushfire safety objectives <p>9) Risk Identification</p> <p>The below extract of the BAAS notes the following three levels in relation to access improvement areas:</p>	<p>10) The submission is noted</p>

SUBMISSION	COMMENT									
61. Submitter No. 61 (cont'd)										
<ul style="list-style-type: none"> • Conduct an audit of the adequacy of vehicular access/egress in bushfire prone areas throughout the Shire • Use the audit referred to in the point above to prepare a strategy for improving access/egress identified as inadequate and progressively implement that strategy, which may involve actions including: <ul style="list-style-type: none"> - construction of new roads - opening of closed roads - widening of existing roads - removal of barriers within road reserves • Adopt a position that the Shire values, and places strong emphasis on, the protection of vegetation for environmental and aesthetic reasons, but where there is a conflict between vegetation protection and bushfire safety, Council will make decisions having regard to bushfire safety objectives <p>10) Risk Identification</p> <p>The below extract of the BAAS notes the following three levels in relation to access improvement areas:</p> <table border="1"> <tbody> <tr> <td>Simple Road Restriction</td> <td>Low cost implementation, no land administration issues, signage</td> <td>0 remaining, signage only to be resolved</td> </tr> <tr> <td>Road Connections not Formalised</td> <td>Capital works required, no land administration issues</td> <td>30 remaining</td> </tr> <tr> <td>Public Road Reserves with Only One Entry Point</td> <td>Capital works impractical and/or cost prohibitive; or Significant land tenure limitation issues (eg. land acquisition/transfer/easements)</td> <td>66 remaining</td> </tr> </tbody> </table>	Simple Road Restriction	Low cost implementation, no land administration issues, signage	0 remaining, signage only to be resolved	Road Connections not Formalised	Capital works required, no land administration issues	30 remaining	Public Road Reserves with Only One Entry Point	Capital works impractical and/or cost prohibitive; or Significant land tenure limitation issues (eg. land acquisition/transfer/easements)	66 remaining	<p>11) The submission is noted</p>
Simple Road Restriction	Low cost implementation, no land administration issues, signage	0 remaining, signage only to be resolved								
Road Connections not Formalised	Capital works required, no land administration issues	30 remaining								
Public Road Reserves with Only One Entry Point	Capital works impractical and/or cost prohibitive; or Significant land tenure limitation issues (eg. land acquisition/transfer/easements)	66 remaining								

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>access improvements. It states the following in this regard:</p> <p><i>The following criteria focus on the potential 'Likelihood' of a catastrophic event.</i></p> <p><i>Assess the Access Difficulties /Entrapment</i></p> <ul style="list-style-type: none"> • <i>Number of residents potentially exposed?</i> • <i>Road hierarchy (e.g. Strategically Important Road / Local/Access way)?</i> • <i>High Risk Land Use Types (traffic generated/evacuation alternatives e.g. stay in place)?</i> • <i>Extent of Surrounding Bushfire Risk (Moderate / Extreme) / Threat from multiple directions?</i> • <i>Topography? (Steep topography affects the speed of bushfire front, the ease of evacuation and bushfire fighting capability)</i> • <i>Recent subdivision which has resulted in an increased population density (and an incomplete works bond has been provided);</i> • <i>Measure of likelihood (1 -S)</i> 	

SUBMISSION			COMMENT
61. Submitter No. 61 (cont'd)			
		Consequence	Catastrophic
		Likelihood	5
Almost Certain	5	EXTREME (25)	
Likely	4	EXTREME (20)	
Possible	3	HIGH (15)	
Unlikely	2	HIGH (10)	
Rare	1	MEDIUM (5)	
<p>13) Risk Treatment</p> <p>The following criteria are to be applied in relation to risk treatment options, as discussed within this section of the BAAS.</p> <p><u>1. Assess Risk Treatment Options</u></p> <ul style="list-style-type: none"> • <i>Absolute compliance with Public Road Standard Guidelines and Guidelines? Cost? Benefit?</i> • <i>Staged response options? Cost? Benefit?</i> • <i>Alternative 'Acceptable Solution' responses? Cost? Benefit?</i> 			<p>14) The submission is noted</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<ul style="list-style-type: none"> o <i>Environmental Impacts?</i> o <i>Social impact?</i> o <i>Ongoing maintenance/management costs?</i> • <i>Implementation challenges? Tenure / Costing considerations</i> • <i>Interim risk mitigation actions? Cost? Benefit?</i> • <i>Consultation outcomes? (Where undertaken)</i> <p>The priority for bushfire safety is also reinforced by this statement featured in this section:</p> <p><i>...amenity is a secondary consideration relative to preserving life and allowing for safe evacuation in the event of a bushfire.</i></p> <p>14)Implementation</p> <p>In relation to subdivision proposals, the following is noted:</p> <p><i>In some cases, landowners/developers must fund the upgrading of roads and access ways to realise subdivision potential and fulfil conditions of subdivision approval. These improvements may relate to upgrades or improvements to thoroughfares identified as a priority within this Strategy. Depending on the scale of the subdivision, the contribution could be the full amount or a portion of the total works. It may be that the Shire's schedule may not align with</i></p>	<p>15) The submission is noted</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p><i>landowners/developer immediate expectation, resulting in a private subdivision unable to be finalised for some time.</i></p> <p><i>Developers/landowners who cannot proceed with subdivision due to there being unsatisfactory road access or no constructed public road available to proposed lots have the following options:</i></p> <ul style="list-style-type: none"> <i>a) Postpone the subdivision until the Shire upgrades/constructs the road according to the schedule specified; or</i> <i>b) Contribute to the full cost of constructing the road and associated infrastructure. (Note, this may be the normal expectation where no road reserve exists in accordance with WAPC Development Control Policy 1.1); or</i> <i>c) Commit to providing a financial contribution to the Shire and seek approval (via the Risk Management Committee) to elevate its priority within the Shire's works schedule.</i> <p>The above matters in relation to the Bushfire Area Access Strategy will be addressed in due course, should Council agree to include the subject sites integration into the boundary of the HVUES.</p>	

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>15)Matters to be considered for subdivision potential</p> <p>The following matters have been identified by the Shire (at this juncture) as being of considerable importance in their considering for any subdivision potential or for integration into the HVUES boundary.</p> <p>16) Emergency Vehicle Access</p> <p>We understand that the proposal should prioritise enhancing emergency vehicle access, as has been reflected in the subdivision concept plan (Refer Appendix 1). Enhancing emergency vehicle access is considered key in allowing of the existing lot to be subdivided and in order to be included within the HVUES, given that it was initially dismissed in the Draft Precinct Plan, primarily due to environmental reasons as discussed previously.</p> <p>Notwithstanding, subdivision of the lot provides considerable potential to enhance bushfire safety throughout the locality as it allows emergency vehicles to access areas of more challenging topography. This would also increase the likelihood that Clayton Road could be used as a means for other vehicles within Precinct 10 (and those other residents to the south-east) to flee a bushfire via additional exit route in an emergency situation.</p>	<p>16) The submission is noted</p> <p>17) Refer to 61(4)</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>17) Watercourse</p> <p>Aerial images of the site do not appear to depict any streams running through the site. However this is an existing water body, which appears to be a remnant man-made which is only filled seasonally during the winter months.</p> <p>18) Local Natural Area</p> <p>Although the current lot features Local Natural Areas with a 'Protection' Level over a portion of the lot, on the other hand there is also a large portion of the site which remains outside of this Local Natural Area designation. The potential for Local Natural Area vegetation loss is also less than that of site at Lot 46 (No. 1940) Clayton Road, which is Included within the HVUES.</p> <p>Furthermore, it is important to consider the BAAS, and Clause 6.5.17 of LPS 4, which indicates support for subdivision of lots otherwise not permitted to do so, provided that it results in increased bushfire safety for adjoining and surrounding lots. Under the context table (Part 3.1) of the BAAS, reference is made to the Local Planning Strategy as follows:</p>	<p>18) The submission is noted</p> <p>19) The LNA associated with 1940 (Lot 46) Clayton Road relates to the vegetation fringing the Helena River. The Strategy related to this precinct is to create a reserve around the Helena River so as to provide public recreation/conservation in the district i.e. there is a strategic benefit to subdivision pursuant to clause 5.9.1.4 of LPS 4.</p>

SUBMISSION	COMMENT
<p>61. Submitter No. 61 (cont'd)</p> <p><i>...where there is a conflict between vegetation protection and bushfire safety, Council will make decisions having regard to bushfire safety objectives</i></p> <p>Accordingly in this manner, adequately addressing bushfire safety objectives will compensate for any loss of vegetation resulting from clearing, which we note is a central feature of the proposed HVUES.</p> <p>19)Sloping Topography</p> <p>While it is acknowledged that the site experiences a sloping topography, the topographical nature of the subject site actually affords greater bushfire protection in this case, as fire travels slower downhill compared to uphill with Clayton Road forming a good barrier on the southern side of the site.</p> <p>Subdivision and incorporation of the subject lot into the HVUES would further be beneficial as it would enable emergency vehicles to access otherwise difficult to reach areas, and provide an alternate means for emergency services to access the other R5 coded residential area North West of the site, in addition to the planned medium density residential developments further West, as envisioned within the HVUES.</p> <p>In any case, the topography of the site does not vary anymore compared to lots to the south included within the HVUES, particularly Lots 45, 46, and 47 Clayton</p>	<p>20) Refer to 61(4)</p>

SUBMISSION		COMMENT	
61. Submitter No. 61 (cont'd)			
Current Zone	Rural Residential		
Density Coding	RR1		
Plot ratio area	10,000m ²		
	Lots	Average Lot Size	
Max. Yield	3	10,189m ²	
Recommended Yield	2	15,283.5m ²	
<p>Should it be supported, the inclusion of the subject lot within Precinct 10 of the HVUES, which intends to permit limited subdivision and encourage a Rural Residential character, would mean that the maximum lot yield would most likely correspond with that of the existing 'Rural Residential' (RR1). From discussions with technical staff, we understand that lots of this nature should aim to achieve a minimum size of 3 hectare per site. This is reflected on the enclosed Subdivision Concept Plan.</p> <p>Nevertheless, we understand that the lot yield permitted would be highly dependent upon the extent to which access of emergency vehicles is provided in relation to the adjoining / surrounding lots. Accordingly the design of the subdivision plan is crucial in determining the full potential lot yield of the site.</p> <p>A well designed subdivision plan, along with increased investment in infrastructure to ensure HVLUS, HVUES, and bushfire safety objectives are met, could potentially enable an amendment for a rezoning of the site to R2 in line with the R-Codes, which yield the creation of 5-6 lots. This however, would be highly</p>			

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>unlikely to be supported by the Shire given the challenges outlined previously.</p> <p>22)Likely Conditions of Approval</p> <p>Similar developments recently approved by the Shire have included the following conditions of approval. The Shire's Subdivision Clearance Applications Information sheet specifies the following conditions of approval for subdivisions:</p> <p>Any other documentation relating to the approved Local Government conditions of subdivision must be supplied with the application for clearance, regardless of such information having been previously supplied to the Shire and may include but not limited to:</p> <ul style="list-style-type: none"> • <i>Diagram of Survey showing full details of all lots, road reserves, easements (temporary & permanent) reserves, & where necessary clearance between new boundary & existing structures; and existing on site effluent disposal system (site, type & location);</i> • <i>Geotechnical report, Hydrological report, Urban Water Management Plan;</i> • <i>Completion of any Deeds, Agreements or Legal documents required;</i> • <i>Payment of appropriate fees and/or bonds;</i> <ul style="list-style-type: none"> o <i>Supervision Fees - A nonrefundable fee shall be paid to Council based on the percentage shown</i> 	<p>22) Refer to 61(4)</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p><i>below of the value of all road and drainage works. 1.5% where the works are also designed and supervised by a suitably qualified Civil Engineer,</i></p> <ul style="list-style-type: none"> <i>o Maintenance Bond - A refundable maintenance bond shall be 5% of the cost of the works and shall be lodged with Council for the duration of the 12 month maintenance period.</i> <i>• All as constructed information (drainage in 'D' spec/earth works) Connections or silt pits within the property are to have depth, location by measurement from boundaries provided. This is especially required for lots less than 450sq/m;</i> <i>• Consulting Engineer's Certification that all works have been completed in accordance with the approved plans and specifications;</i> <i>• Any other documentation or information relating to the development of the land via subdivision to support future intended development;</i> <i>• Landscaping/Revegetation Plan & Bond/ Public Open Space Contribution</i> <p><i>Decommissioning of onsite effluent disposal systems to include:-</i></p> <ul style="list-style-type: none"> <i>• Pump out certificate from licensed septic waste disposal company</i> <i>• o Details of decommissioning undertaken by who</i> 	

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<ul style="list-style-type: none"> • <i>Landscaping/Revegetation Plan & Bond/Public Open Space Contribution;</i> • <i>Statutory Declaration stating that decommissioning has been undertaken (when other documentation is not available)</i> • <i>Retaining walls and fencing completed where necessary with certification and building licence;</i> • <i>Compliant test results for all lot filling and pavement layers where applicable;</i> • <i>Documentary evidence that arrangements have been made with Western Power for the provision of street light, if not already installed;</i> • <i>Documentary evident that arrangements have been made with the Water Corporation;</i> • <i>Fire Management Plan & Fire breaks;</i> • <i>Approval from other authorities e.g. Main Roads WA.</i> • <i>Location of building envelopes, if required.</i> <p>Due to the unique circumstances of the site, the lot is likely to require further conditions pertaining to the following matters:</p> <ul style="list-style-type: none"> a) A Fire Management Plan; b) Fire Protection Australia (FBA) Accreditation at Level 2 or 3; 	

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>c) Prior to the approval of a Development Plan, an Aboriginal Heritage Survey must be prepared in accordance with the Aboriginal Heritage Act 2972 and Department of Indigenous Affairs guidelines;</p> <p>d) Relevant Bushfire Attack level Assessments.</p> <p>The following conditions would also most likely apply</p> <ul style="list-style-type: none"> • All building works to be carried out under this planning approval are required to be contained within the boundaries of the current subject lot; and • The issue of a building permit prior to the commencement of any on-site works. <p>Although it has been determined that two lots would be the most likely outcome in the event of subdivision, if permitted, three lots would be preferred in this case. We understand however that this determination will ultimately depend on whether the Shire deems that subdivision concept plan (or similar design) has been able to adequately address all the matters to include the site with the HVUES boundary.</p> <p>24) Summary</p> <p>This report has investigated the potential for the subject lot to be incorporated into the HVUES and in due course, permitted to be subdivided into smaller lots (of around 10,000m²). We believe that the subject site is suitable for this given all the matters previously</p>	<p>24) The submission is noted</p>

SUBMISSION	COMMENT
61. Submitter No. 61 (cont'd)	
<p>noted for its exclusion are able to be addressed through appropriate site management (i.e. implementing a BMP and improving emergency vehicle access). In light of this, we ask that the Shire consider the merits of Including the subject site (Lot 105, No. 2055 Clayton Road, Boya) to be within the HVUES boundary for the reasons outlined in the preceding sections of this report. (See below)</p>	

FORMSCAPE

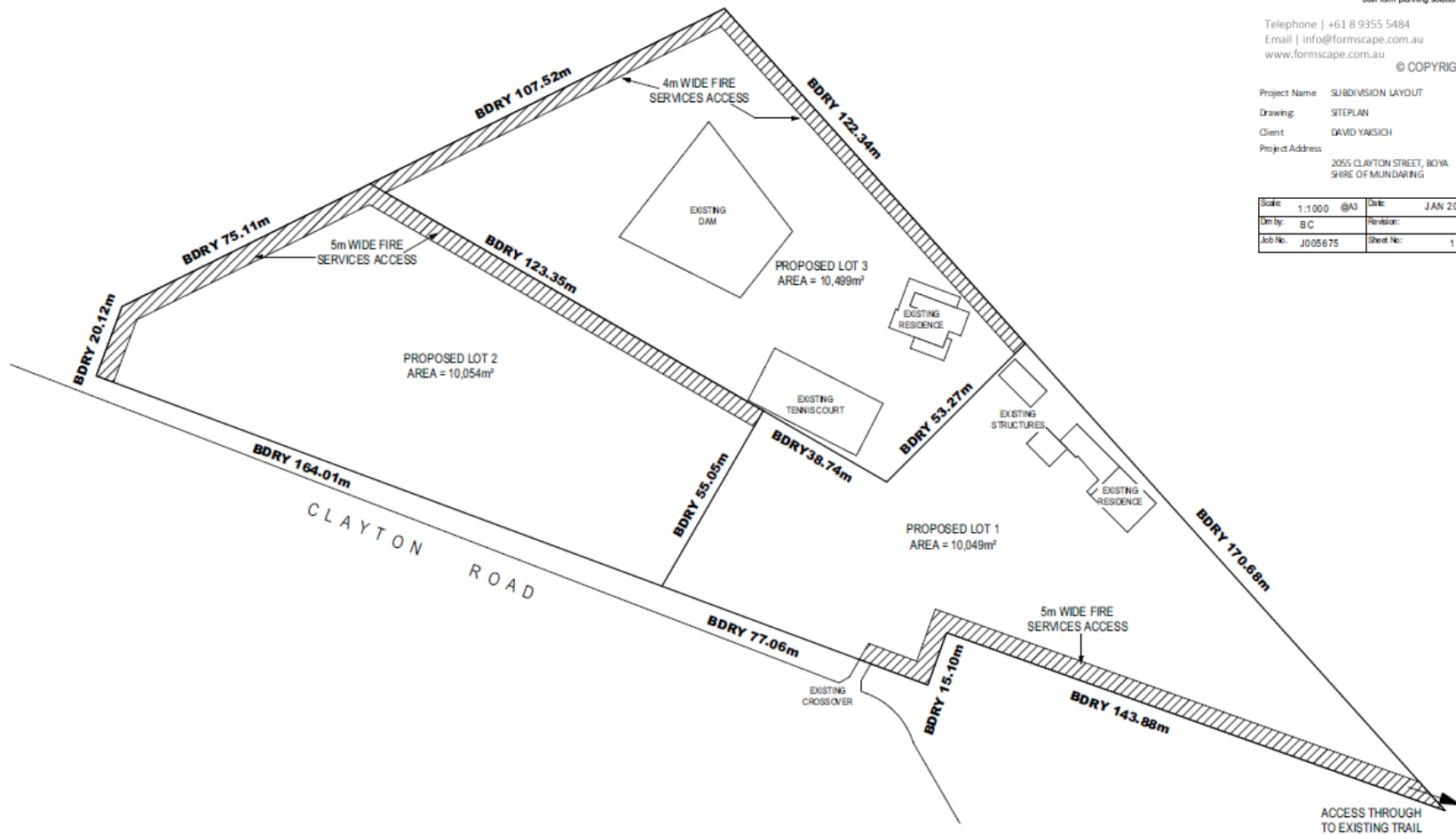
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Project Name: SUBDIVISION LAYOUT
 Drawing: SITEPLAN
 Client: DAVID YAKSICH
 Project Address: 2055 CLAYTON STREET, BOYA
 SHIRE OF MUNDARING

Scale:	1:1000	@A3	Date:	JAN 2017
Drawn by:	BC		Revision:	B
Job No.:	J005675		Sheet No.:	1 of 1



1. SITE PLAN
1:1000

NOTES
 THIS DRAWING MUST BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATION, REPORTS, CONTRACTS AND DRAWINGS.

62. Submitter No. 62

1) Thanks Chris, it was good to meet both you & Angus in person & put a face to the name.

I really appreciate the time & effort both of you put in, both in attending the Monday 6th February night meeting in Helena Valley, as well to explain things better. I know you both have other places that you would much rather be, so a big thank you from me. I found your information to be both reassuring & encouraging in the proactive approach that the shire is taking in this matter, as compared to being reactive to the state government's demands.

2) I moved to this area years ago because at the time it was a lovely, quiet, green rural area. We were advised at the time by the Mundaring Shire would not be allowed to be subdivided in this area. That is obviously not the case anymore but I don't see why this area needs to be turned into a carbon copy of every other

1) The submission is noted

2) The Strategy has been modified to provide a stronger vision.

SUBMISSION	COMMENT
62. Submitter No. 62 (cont'd)	
<p>estate suburb, that dominates our modern landscape. I understand that many newer people to this area have also moved here for the rural feel & outlook, with large lovely trees etc. Is there any possible way that we can make Helena Valley stand out for the best possible reasons, like it has in the past? And move forward with more than just more vehicles in mind?</p> <p>3) It seems that not only am I likely to have the horrible prospect of having a 4 lane road extension right outside my property & to the west of me, bringing yet more ongoing traffic noise, pollution & rubbish to this area, as well as hoons but it would also mean the revolting process of the road widening construction, no doubt taking quite some months, if not years. Obviously no one wants to live next to a 4 lane road if they have a better option available, which I currently do & would obviously like to keep it that way. To have that imposed upon you after living in the area for years is even more unsavoury.</p> <p>4) Given that possibility I would not be happy with the idea of having part of my property forcefully taken from me to build an extension nightmare. I would like to point out that the people who would benefit most from the proposed road widening would not have that same road monstrosity right outside their door or property, 24 /7, they would be at home in their lovely homes, with only a quiet, single lane road in & out their estate. While I understand that I am only 1 person in this area,</p>	<p>3) Refer to 11(2)</p> <p>4) Refer to 15(4) – compulsory acquisition is not contemplated by the Strategy.</p>

SUBMISSION	COMMENT
62. Submitter No. 62 (cont'd)	
<p>I feel that we need to be setting an example of a very high standard of managing our local area, to best benefit the people who actually live in the area. The increased health risks are also publicly known & by no means enticing, which would put further strain on our local families & the health systems.</p> <p>5) While I understand this may require some out of the box thinking, I believe we have the resources available to do just that & that you are the right men for the job.</p> <p>6) I believe that a lot of the traffic travelling along Helena Valley Rd isn't from this local area, they are travelling along here to get to the Bypass, instead of travelling through Midland to get onto Roe Hwy. I believe that a full traffic flow testing, survey & investigation needs to be done to work out where the vehicles are coming from, including through Darlington & Koongamia off Great Eastern Highway. I believe that we are already experiencing a large influx of vehicles on every week day from Great Eastern Highway, given that Scott St is apparently at full capacity now. Many heavy vehicles are travelling at great speeds down Scott St from early in the morning, to later in the afternoons. I would like to see access off Great Eastern highway into Scott St stopped permanently, which would reduce outside traffic access into the local area. While I appreciate that people living further east have the right to access main roads, I don't believe we should be catering for their needs as a priority, when they have ready access</p>	<p>5) The submission is noted.</p> <p>6) Refer to 11(2) and 40(4)</p>

SUBMISSION	COMMENT
62. Submitter No. 62 (cont'd)	
<p>to other main road options, as compared to Helena Valley residents.</p> <p>7) I would also not like to see Helena Valley Road widened just to cater for peak hour traffic, 5 days a week. I would like to see the traffic speed limit reduced along Helena Valley Rd, so that everyone gets the idea that they need to slow down to keep the roads safe for everyone in this area, especially as they head into more built up areas. I believe this would discourage some undesirable road users from using this area as regularly, since they are able to travel on other roads at greater speeds.</p> <p>8) I would suggest that much of the busy week day traffic that we experience along Helena Valley Road would not necessarily equate to an increase in local business activity, so therefore not benefitting the local area in any way, shape or form but leaving us the problems to deal with.</p> <p>9) Further, there are also a number of large heavy vehicles that are travelling through this area, which is clearly for business purposes & not necessarily for local housing development or support for established local businesses. I was always under the impression that this was not supposed to happen through these types of areas, again that is what large main roads are for.</p>	<p>7) Referred to the Shire's Infrastructure Services as advice.</p> <p>8) The submission is noted</p> <p>9) Refer to 40(4)</p>

SUBMISSION	COMMENT
62. Submitter No. 62 (cont'd)	
<p>10) I believe that by widening Helena Valley Road, these problems will only get worse, inviting even bigger trucks, with heavier loads, making it even more unsafe for the locals & clogging up our local suburban access way, which would detract from our lovely lifestyle. Not to mention the numbers of trees that would likely need to be killed to widen the road, further reducing our local green spaces. Instead, I believe we need to channel those types of undesirable vehicles out of the area, by making those road users use the appropriate mainarterial roads.</p>	<p>10) Refer to 40(4)</p>
<p>11) Surely we should be focusing on the traffic from this area & making trucks & other large transport vehicles go on more suitable roads? Instead, I would like to see Helena Valley Road beautified & upkept as it is supposed to be currently but is not. That way Helena Valley Road would stand out for the right reason, as the lovely western entrance into the Mundaring Shire. People would want to slow down to be able to enjoy the drive home, destressing as they go. With a slower speed limit it would encourage people to slow down & enjoy their drive through their beautiful neighbourhood. This would also increase local pride in the area that they live in, which would be good for the area & maybe discourage littering along the road.</p>	<p>11) Refer to 19(1) and 40(4)</p>
<p>12) I would also like to see bike traffic & walking traffic channelled to the potential Helena River beautification</p>	<p>12) Refer to 11(2) and 13(1)</p>

SUBMISSION	COMMENT
62. Submitter No. 62 (cont'd)	
<p>& enhancement area, to join up with the Perth Bike track, which would make it much safer for bike riders of all ages, as well as lovely recreational area to be used 7 days a week. This would also increase the available public open space in the area, as well as preserving local trees & local native animal habitat, which would further enhance the area in general.</p> <p>13) I would also like to see the tract of land between the Mundaring Shire & Swan Shire put to good use as public open space. While I appreciate this is a huge task of getting 2 shires to agree with each other, I believe the benefits would out way the short term problems.</p> <p>13) I would like to see all types of traffic to be directed to the potential Bellevue Train Station, which would offer people an alternative to driving into work, further reducing the need for a wider road & increased pollution & problems etc. This would reduce carbon emissions & reduce our reliance on private vehicle ownership in this area, as well as give people options that we currently do not have in this area.</p> <p>14) I believe there would be a greater opportunity to get public bus services from the Midland Train Station to come through Helena Valley, while also servicing Boya & Koongamia, as well as Bellevue & back to Midland if there was a train station at Bellevue, as another option to parking at Midland Train Station.</p>	<p>13) Implementation Milestones modified to require investigation of recreational use for subject land.</p> <p>13) Refer to 11(2)</p> <p>14) Refer to submissions 11 and 14</p> <p>15) Refer to 11(2)</p>

SUBMISSION	COMMENT
<p>62. Submitter No. 62 (cont'd)</p> <p>15) It would also seem that there is also a proposed road to be put in at the back of my property to connect Helena Valley Rd to Katherine St. How lucky am I that I will have planes overhead, vehicles to the south of me on 4 lanes, vehicles to the north & west of me & lots more people in the general area, including a public open space to the north east of me & a potential subdivided property to the east of me! So basically I will be surrounded by residential mess one way or the other?! Is there no other access path option further east for the potential playing fields? Especially given that that is where most of the players & families will be coming from.</p> <p>16) Like many people at the meeting, I am concerned by the potential smaller block size of new developments in the area. However, personally I would not object to a small No of properties near other current shops or the new Boya Hub & library that had lower level shops, with upstairs housing. If carried out tastefully, these types of combined housing & business options can be very useful in the community. I have seen this type of combined housing in many areas, both here in Australia & overseas & found them to be a very practical solution.</p> <p>17) I would like to thank the Mundaring Shire for this opportunity in having my say & feeling that I will be heard with an open mind.</p>	<p>16) The submission is noted</p> <p>17) The submission is noted</p>

SUBMISSION	COMMENT
62. Submitter No. 62 (cont'd)	
<p>18) I omitted to add in my submission that it would be great to had a bus stop pull off lane outside the Helena Valley IGA shopping centre, naturally without the need to remove those lovely large native trees further to the west of there. There is already a bus pull off lane further west on the same part of the road before the roundabout, so surprising that there wasn't a bus stop added in previously outside the shopping centre, especially given that it the busier of the two stops.</p> <p>There is also a bus pull off lane on the other side of Helena Valley Rd, near the entrance to Lakeside Drive, so again surprising that the busiest bus stop in that area is not a pull off area already.</p> <p>Needless to say that it is frustrating sitting behind a pulled over bus, especially when there is already room for half a vehicle to overtake it & drivers can't safely overtake because of the wide brick paved median strip. In the past I have seen on occasions large 4wd vehicles half climbing the median strip to overtake the pulled up bus, which I would imagine could potentially damage the brick paved area, which could become a danger for pedestrians.</p> <p>There was also a time a few years ago when all vehicles travelling west on Helena Valley Rd were forced to go onto the wrong side of the road after a bus broke down at that bus stop, which obviously caused chaos at the time, for some time, as well as a heightened risk to everyone in the area, both in vehicles, as well as pedestrians.</p>	<p>18) Refer to 11(2) and referred to the Shire's Infrastructure Services as advice.</p>

SUBMISSION	COMMENT
62. Submitter No. 62 (cont'd)	
<p>Naturally having a bus stop pull off lane there would allow the traffic to keep flowing at all times, especially as some vehicles have only just travelled onto Helena Valley Rd from the south side of the road & are already forced to stop for a pulled over bus. Of course this would be much worse in the morning peak hour, where it becomes a bottle neck there, even for a few minutes but that does not help anyone's stresslevels first thing in the morning.</p> <p>There is plenty of road verge area to have a bus pull off lane & still have the all-weather bus stop covered area too, as well as the lovely large trees. Or alternatively reduce the median strip & still have the pull over lane going from west to east to access the south side of Helena Valley Road & the shopping centre. I believe that by moving the bus stop area further back from the road towards the shopping centre, that it would encourage more people to use the low wall, especially students to place their school bags onto it, instead of on the footpath which obviously blocks the path of pedestrians, forcing them to go around onto the grass, thus defeating the purpose of having a footpath there for pedestrians. Needless to say that keeping both young & older people alike, as well as people walking their dogs etc away from the road is a good idea thereby improving public safety in the area.</p>	

SUBMISSION	COMMENT
63. Save the Wildlife Lake and Wetlands Committee	
<p>1) Objective should be satisfaction for all concerned with various facilities, services and inspiration for the future of Helena Valley. After speaking to hundreds of residents most of whom were very vocal about the previous housing estates, all very discontented, about what they had been promised in their housing estates and what they were given.</p> <p>2) Mundaring shire should be forceful in the planning process, if developers maintain certain areas will be retained, trees, wetlands and lakes left this should not change. WAPC in this capacity should support the local shire as they know what the residents want. Every housing estate in Helena Valley has had discontentment and a petition drawn up against it. It appears the resident's requests have never been granted.</p> <p>SP 71 plan is a classic example, in Helena Valley, 4 petitions have been submitted and is still ongoing to the Premier, Ombudsman and Environmental Committee. The vision of this committee and residents is to provide safe haven for wild animals, their breeding habitat, sustain the trees, plants, and protect the lake, respect ecological processes of the wetlands and the Helena Valley River.</p> <p>(Carabeen Ave Lake and wetlands has its own wonderful ecosystem and provides excellent breeding habitat teaming with life. WAPC should be looking at their own liveable neighbourhood manual and provide</p>	<p>1) The submission is noted</p> <p>2) Refer to 13(1), 15(4) and 18(3)</p>

SUBMISSION	COMMENT
63. Save the Wildlife Lake and Wetlands Committee (cont'd)	
<p>protection for this wonderful habitat. 884 residents requested that this "Sanctuary" be retained.)</p> <p>2) Future for Helena Valley Protect unique locations in Helena Valley. Protect tree canopies, future planning should be, concern for the preservation of mature shade trees and the natural coolness they provide in our hot climate as well as habitat for native animals. Ensure the residents and their opinions are listened to, they live in the area and know what is needed. Keep the Hills lifestyle, bigger blocks, better road systems and parking facilities. Future housing estates should retain the rural lots, in keeping with the hills lifestyle, especially along Helena Valley road, medium density housing minimum 500sqmt blocks and should have wider frontage, better car parking facilities with winding roads, to stop traffic racing through estates. Increased high density housing impacts negatively on people's psychological and social wellbeing. Residents have moved to Helena Valley because of its "semi-rural" atmosphere and any further high density housing erodes this amenity. When planning new estates careful consideration should be given to restoration process and must be carried out and completed by developer as a</p>	<p>2) Refer to 11(2), 13(1), 19(2), 21(1), 27(3), 31(4) and 34(5)</p>

SUBMISSION	COMMENT
63. Save the Wildlife Lake and Wetlands Committee (cont'd)	
<p>prerequisite. More attention given to entrances of estates, roundabout for road access, shade trees and bushes to be planted down centre and at entrance roads to enhance the aesthetics of the estate.</p> <p>Generous percentage of POS, residents want 50%. Abundant shade trees, seating, covered playground for children with exercise equipment for adults should be standard requirement for any new housing development. All playground equipment needs to have shade sails for protection for our children, with toilet facilities being provided, we have none in Helena Valley estates.</p> <p>Helena Valley road has to be widened with separate footpaths, lighting, new bus shelters with concrete floors and pathways. Bicycle paths for the safety of all concerned, speed limit should be amended to 60km.</p> <p>Two way access to and from the estates for bushfire protection, should a bushfire occur we would be totally cut off and unable to exit any of the estates. Helena Valley road barely copes with traffic at present and it is only going to get worse. Katherine Street and old Midland road could be incorporated as exit roads. Establish another road connection over river as an exit road for bushfire crisis.</p> <p>The community also needs more transport connections.</p> <p>Helena Valley River foreshore with 30mt buffer, to be</p>	

SUBMISSION	COMMENT
63. Save the Wildlife Lake and Wetlands Committee (cont'd)	
<p>upgraded at cost by developer, for any new housing estates is strongly supported, public access should be provided with footpaths along the riverbank for all to enjoy.</p> <p>The future for Helena Valley needs to be more environmentally friendly, adopt biodiversity strategy and natural assets-Local Natural Areas for future subdivisions. Careful consideration to mature tree canopies that they are not decimated as in previous housing estates, the fall of the land, existing waterways, wetlands and wildlife protected.</p>	
64. Main Roads Western Australia	
<p>1) Main Roads would like to firstly comment that the documentation is quite convoluted and does not make for easy reading.</p> <p>A general review of the Traffic and Land Use Study raises a few immediate concerns:</p> <p>2) The suggestion in section 6 that the 'maximum capacity of a two lane road is 3,600 cars per hour' is considered overly optimistic. Such figures are more likely to be seen on a high standard free flow road such as a freeway.</p> <p>3) Whilst informal discussions were had between officers from Main Roads and Council in relation to the Great Eastern Highway / Scott Street intersection, It needs to be recognised that alternative access via Clayton Road and/or Helena Valley Road to Military Road</p>	<p>1) The submission is noted</p> <p>2) Refer to 11(2)</p> <p>3) The submission is noted</p>

SUBMISSION	COMMENT
64. Main Roads Western Australia (cont'd)	
<p>needs to be pursued and improved, in order to take 'local traffic' away from Great Eastern Highway.</p> <p>4) Main Roads cannot support the reduction of the west bound carriageway of Great Eastern Highway in the vicinity of Scott Street to a single lane as shown in figure 6.1 'simple concept sketch of recommended intersection improvement: Scott Street / GEH'. To do so would severely impact traffic flow and the intent of the highway. This proposal is considered to be impractical, inappropriate and ill considered.</p> <p>5) Main Roads is not supportive of the further intensification of this area until it can be clearly demonstrated that the traffic demands generated in the area can be safely and efficiently accommodated. The information presented does little to convince that this is possible.</p>	<p>4) Refer to 11(2)</p> <p>5) Refer to 11(2)</p>
65. Metropolitan Redevelopment Authority	
<p>1) The MRA appreciates being kept informed on the future planning for Helena Valley, given its proximity to the MRA's Midland Redevelopment Area, and wishes to advise the Shire that it raises no objection to the draft strategy.</p>	<p>1) The submission is noted</p>
66. Submitter No. 66 Taliska Securities	
<p>1) I write in respect to Lot 801 (formerly Lot 800) Wilkins St also known as 1100 Katherine St which lies in</p>	<p>1) The submission is noted</p>

SUBMISSION	COMMENT
66. Taliska Securities (cont'd)	
<p>Precinct 12 within your planning area.</p> <p>I have reviewed the documents supplied in your letter of 27th March 2017 and comment as follows:</p> <p>2) We support the extension of the train to (and through) the indicative Bellevue station. We believe that this would allow for an increase in the density or zoning allowed in proximity to the new station.</p> <p>The rural land component of our Lot should be included as planned urban under the MRS for which our Amendment is pending, and Development under your local planning scheme. This realizing that your draft document was prepared prior to the changes to the ANEF for that area. Thus the draft HVUES proposed extent of the urban zone as shown in attachment 6 to report 10.2 is supported. This would require that the zoning should be changed such that the ANEF contours match that allowed under SPP 5.1.</p> <p>To this end, the plans throughout the document should show the flood prone areas in line with the current MRS zoning. Those same flood prone areas may also be updated for other areas of the floodway to account for the most recently released study which defines the Helena river peak flood volumes which are now</p>	<p>2) Modify Strategy to make provision for high density residential development in proximity to future Bellevue train station and refer to 8(5) and 20(2)</p>

SUBMISSION	COMMENT
66. Taliska Securities (cont'd)	
<p>thought to be generally one half (119 m³/sec) of the historical volumes of 224m³/sec. See swan-helena-flood study developed through the EMRC.</p> <p>3) We also support the establishment of Parks & Recreation along the Helena River as we are doing although the 30 meter buffer as mentioned in the documents needs to be judiciously applied along the alignment of the river bed, rather than simply a blanket ban of buffer zone along the high water mark. Formal flora and fauna surveys of buffer zone areas would seem an unnecessarily time consuming and costly approach that should be avoided.</p> <p>4) We support the pedestrian & cycle access to the Helena River and related connections to existing networks. Indeed we are planning to build a network of paths within our landholding generally linking through to the Roe Highway Bridge and it would seem unfortunate if these were not linked to external networks. As we are meeting the cost of our internal path network we would not support “developer contributions” toward the cost of interconnecting links.</p> <p>Roadway connection between Katherine to the proposed regional recreation ground and on to Helena Valley Road needs further consideration although the Strategic Infrastructure plan document shows a</p>	<p>3) The extent of foreshore is often determined by a combination of flood prone area mapping an assessment of the prevailing flora - refer to 8(5)</p> <p>4) Refer to 11(2).</p>

SUBMISSION	COMMENT
66. Taliska Securities (cont'd)	
<p>possible link that may be viable. Note that the existing stockbridge over the Helena River is not sufficiently wide to support two way traffic. As above we would not support developer contributions to such an initiative and also note that the subject land is effectively in the hands of the State.</p>	
67. Office of the Environmental Protection Authority	
<p>1) The Office of the Environmental Protection Authority (OEPA) notes that the HVUES has not been included in the Western Australian Planning Commission's (WAPC) draft North-East Sub-regional Planning Framework (draft Framework) for the <i>Perth and Peel @3.5million</i>. It is understood that the Shire of Mundaring has requested that the draft Framework be amended to ensure consistency with the Shire of Mundaring Local Planning Strategy.</p> <p>The OEPA has reviewed the HVUES and provides the following broad comments recognising it is not part of the draft framework.</p>	<p>1) The submission is noted</p>

SUBMISSION	COMMENT
67. Office of the Environmental Protection Authority (cont'd)	
<p>2) Regionally Significant Natural Areas and representation of vegetation complexes</p> <p>Bush Forever is the primary mechanism for implementing the State Government's commitment to conserve regionally significant bushland and associated wetlands in Perth. Bush Forever aims to protect at least 10% of the original extent of each vegetation complex (defined by Hedde et.al. 1980) on the Swan Coastal Plain portion of the Perth Metropolitan Region.</p> <p>There are two Bush Forever (BF) sites (215 and 216) located within the HVUES. Bush Forever site 215 is described as the Helena River, Helena Valley. Portion A of BF site 215 is existing Parks and Recreation Reservation in the Metropolitan Region Scheme (MRS). Portion B of BF site 215 is zoned 'Rural' in the MRS and is identified to be a constrained area for development purposes in the Bush Forever recommendations. Bush Forever site 216 is described as the Adelaide Crescent Bushland, Helena Valley. Portion A of the site is noted to be proposed for Parks and Recreation Reserve under Appropriate flora, vegetation and fauna assessments/surveys are to be undertaken to assess and identify the values of existing vegetation and habitat within the HVUES. These assessments/surveys will provide information of where retention of native vegetation should occur.</p>	<p>2) The submission is noted</p>

SUBMISSION	COMMENT
68. Submitter No. 68	
<p>1) Thank you for the opportunity to comment on the Draft Helena Valley Urban Expansion Strategy (HVUES). As residents of Fyfe Street in Helena Valley, we have lived in Fyfe Street for 15 years and proposals for this Precinct will most directly affect our lifestyle. We are also concerned about plans for the greater Helena Valley area, as these could impact on what most residents enjoy about living here.</p> <p>In that time, the Shire has proven to be at best, fairly negligent in its duties to maintain and manage its obligations to residents in Helena Valley in terms of landscaping, parklands and general housekeeping of roadways and footpaths. At its worst it has proven to be total incapable of resourcing, implementing and maintaining development plans in its own right</p> <p>We would have major concerns that the strategy outlined will not fully service the interests of the residents or that the Shire is capable of fulfilling its obligations under the plan.</p> <p>Some of the more detailed aspects of the proposal that are of concern to us are as follows. Comment numbers refer to the numbers on the proposal Precinct Plan.</p>	<p>1) The submission is noted</p>
<p>2) Upgrade Helena Valley Road The strategy concerning widening Helena Valley Road would appear to be appropriate except that the Shire has such a poor record of developing and maintain</p>	<p>2) Refer to 11(2)</p>

SUBMISSION	COMMENT
<p>68. Submitter No. 68</p> <p>any form of landscaping, tree replacement or screening that would not be appropriate to allow this to occur without some detailed vision of how the roadwork's and landscaping would be provided and an undertaking of the Shire to use some of the additional revenue gained through the subdivisions to be put back into the community. Of particular concern is the inability of the Shire to maintain verges along most of the roads in the area within fire safety levels which exposes residents to additional dangers in summer and potentially blocks the roads as major escape routes. This strategy is not supported.</p>	
<p>3) Development Zone - mixture of medium density residential and commercial</p> <p>While we would not object to medium density residential development to the west of Scott Street south of Clayton Road and south of Helena Valley Road, we would object to the development of a large supermarket complex in the zone. The Shire of Mundaring should consider the impact of additional traffic particularly at the intersections of Scott and Helena Valley roads and the impact this will have on residents' reasons for living in Helena Valley. If our suspicions are correct, perhaps the Shire could consider a shopping centre on a bit of council land in, for example, Darlington.</p>	<p>3) Refer to 11(2) & 36(6)</p>

SUBMISSION	COMMENT
68. Submitter No. 68	
<p>4) Upgrade Scott Street</p> <p>We do not support any increase to the existing commercial zoning in Precinct 9. We are fortunate the Helena Valley area is already well-serviced for supermarkets and other retail outlets in the Helena Valley Estate. In addition shopping zones in Koongamia, Swan View and Midland are only a couple of minutes away. Further commercial development will completely destroy the village-like feel of the area, which is extremely important to the local ratepayers. Currently, local residents, passing cyclists and visitors to the area enjoy stopping for coffee and food at the cafes and looking at a rural scene. It would completely destroy the ambience of the area if this was further developed with more shops and commercial premises.</p> <p>The proposal to upgrade Scott Street would impact on the greater traffic flow using the intersection and add significantly to the level of vehicular traffic in peak hours. There has already be a substantial increase in the level of traffic from the Great Eastern Highway using this route to circumvent traffic issues on the Roe Highway /Bypass intersection. When this is compounded with additional vehicular traffic accessing the shopping centre and children going to and from school, means this could be a Black Spot waiting to happen.</p>	<p>4) Refer to 11(2) and 36(6)</p>

SUBMISSION	COMMENT
68. Submitter No. 68	
<p>A roundabout at the intersection of Scott Street with Helena Valley Road would assist the already high usage of the intersection and aid the safe use by all traffic. The idea of such a roundabout was previously mooted but rejected by the Shire of Mundaring on a cost basis but should be revisited.</p> <p>To connect Helena Valley Road, Scott Street and Katherine Street as a major access route would be a disaster for local residents who have to live along these road and use this area on a daily basis.</p> <p>5) Limited Rural Subdivision</p> <p>While we are not in favour of limited rural subdivision in this area, we recognise that, for our neighbours who wish to remain in the area, how difficult it becomes to look after a large block too difficult as they get older, and some level of reduction in block sizes would be an attractive alternative to moving out of the area.</p> <p>It is noted that special consideration has been given to the future development of the old CSIRO block at 1710 Clayton Road. We believe it is essential to make sure the usage is in keeping with the rural residence nature of the area and should not be available for commercial purpose. If by reducing the overall block size into more manageable resident blocks will support this approach, we would be in favour of this.</p> <p>We believe if limited subdivision is approved, block size minimum could be 2 acres, to keep the area rural</p>	<p>5) The submission is noted</p>

SUBMISSION	COMMENT
68. Submitter No. 68	
<p>in nature and preclude any commercial or industrial use.</p> <p>6) Establish Public Reserve around the Helena River</p> <p>A good suggestion in principle, however, as noted in item (1) the Shire has almost no record of providing maintenance or assistance in this area, who will maintain the reserve? and how would it be separated from adjoining properties? As residents of property adjacent to the river, we have seen that, with the years of drought and the lack of water flow within the river, many of the large old river gums (<i>Eucalyptus rudis</i>) are now dying off and dropping into the river or losing branches (many of which weigh well over a tonne). This happens without warning. We have already suffered regular damage to fence lines on the property, and the potential for accidental injury or death from such happenings is increasing. As residents of Fyfe Street we have spent considerable time and money working individually, and as a group, to rid the river and banks of introduced weeds such as blackberry and bamboo, as well as planting native species to re-habilitate the river banks.</p> <p>Areas which are already Public Reserves are very poorly maintained and are largely inaccessible due to choking with blackberry and other weeds. It is unclear how this land would be set aside for a Public Reserve if the public cannot use it? If river front land is</p>	<p>6) Refer to 13(1) and 15(4)</p>

SUBMISSION	COMMENT
68. Submitter No. 68	
<p>resumed by the Shire, landowners will have no incentive to maintain the river frontage, yet be face with a significant bushfire hazard to their own properties in future years from lack of maintenance.</p> <p>If this responsibility is transferred to the Swan River Trust and not a Shire responsibility then plans need to be obtained from the relevant authority on how this area will be managed. In addition we are not offering to donate any land to create a Public Reserve and would seek compensation for any affected landowners for the resumption of their land for the "Public Reserve"?</p> <p>This strategy is not supported.</p> <p>7) Establish Connections Over the Helena River</p> <p>Within the Helena Valley area there were at least 4 crossing points other than the Scott Street Bridge, of the Helena River. We understand that access and egress to and from the south side of the river to the east of Helena Valley Primary School is non-existent and that this may pose a real threat to fire fighters and residents of the houses at the eastern end of Helena Valley Road. There is, however, a ford allowing access between Helena Valley Road and Victor Road, near the old picnic ground and below the Pipe Head Dam but it is now closed and part of the dam complex. This should be reopened</p>	<p>7) Refer to 11(2) and 15(2)</p>

SUBMISSION	COMMENT
68. Submitter No. 68	
<p>as it would be, in our opinion, a safer and less costly alternative to bridging the river at Fyfe Street</p> <p>The strategy to put a bridge (whether vehicular or pedestrian) over the river at Fyfe Street is not supported.</p> <p>Given the concerns stated initially in this response regarding the existing poor performance of the Shire in managing its current responsibilities, in Helena Valley, we do not support further urban expansion which is encroaching on the rural lifestyle of the Valley. With the development of the Bushmead estate, providing new residential space, we believe that there should now be a limit on further development within the Helena Valley area. Rural lifestyle choice appears to be valued in other parts of the Shire, for example Darlington and Parkerville, where residents are not subjected to ever increasing urban density and commercial developments, and should certainly be considered a valuable commodity in Helena Valley when compared to inner city living.</p>	
69. Department of Parks and Wildlife	
<p>1) The department supports the Shire's approach to a planned, sequenced development to prevent ad hoc urban infill. Support is also given for the Strategy's emphasis on the protection of remnant trees throughout the urbanisation process, the protection</p>	<p>1) The Context Plan will be refined to differentiate the Helena River from the foreshore reserve.</p> <p>Consideration was given to including an assessment of all relevant WAPC policies within the Draft Helena Valley Urban</p>

Expansion Strategy.

However, the Local Planning Strategy contains a detailed examination and application of the state's policy framework – including State Planning Policy 2.10 and its relationship to Helena Valley.

It was considered unnecessary to repeat sections of the Local Planning Strategy within the Draft Helena Valley Urban Expansion Strategy.

A requirement to consider offsets for clearing associated with infrastructure upgrades has been included in the requirement for an Infrastructure Plan.

The recreation grounds are identified over an area formerly used as landfill. There is no guarantee that the work required to establish/maintain recreation grounds in this location will have a detrimental environmental impact. Since the subject land is reserved Parks and Recreation under the Metropolitan Region Scheme, there are sufficient legislative controls already in place to ensure that any works respond appropriately to the environment.

SUBMISSION	COMMENT
69. Department of Parks and Wildlife (cont'd)	
<p>and reservation of Bush Forever sites, and the protection and reservation of conservation category and resource enhancement category wetlands with appropriate buffers. While the department understands that the strategy is not intended to go into detail regarding the requirements for urban infill, it is recommended that the Shire further address some key areas in order to build certainty with landowners and potential developers of what will be expected. This comment particularly relates to the following areas:</p> <ul style="list-style-type: none"> • The <i>Draft Helena Valley Urban Expansion Strategy - Context Plan</i> should identify the Helena River. It currently shows the Parks and Recreation reserve adjacent to the river but having the river identified would provide better context. • State Planning Policy 2.10 Swan-Canning River System needs to be considered as part of the Strategic Planning Background. The WAPC, Parks and Wildlife and local governments are responsible for the effective planning and management of land use and development within and adjacent to the Swan River Trust management area - which extends into the HVUES. • Discuss the opportunity to provide offsets for areas that may be disturbed or cleared through the upgrade of Scott Street and proposed road connecting Helena Valley Road with Katherine 	

SUBMISSION	COMMENT
69. Department of Parks and Wildlife (cont'd)	
<p>Street.</p> <ul style="list-style-type: none"> Establish that future subdivisions will be required to connect to reticulated sewerage in accordance with the Draft Government Sewerage Policy 2016 (to be finalised in 2017) Acknowledge that the establishment of district recreation grounds will be planned and managed with the understanding that there are sensitive environmental assets (Helena River, Bush Forever, remnant vegetation) that will be affected by the establishment and management of turfed areas and that vegetated buffers will be incorporated into their design. <p>2) Precinct Plan</p> <p>Within Precinct 6 there is a significant area identified as Bush Forever that should be clearly identified in the precinct plan map to ensure future development is designed in such a way that the need for clearing for bushfire protection requirements within this area is avoided.</p> <p>The department supports the stance that future subdivisions should ensure Parks and Recreation reservation is ceded on the Helena River foreshore. Parks and Wildlife's Rivers and Estuaries Division should be consulted when determining appropriate widths of this reserve.</p> <p>Lots 52, 53, 54, 55, 69 Helena Valley Road are currently included within Precinct 9, and Lot 70 Helena Valley Rd is in Precinct 7. These lots contain remnant vegetation that will require further investigation to determine whether</p>	<p>2) The purpose of the precinct plan map is to identify each precinct within the study area rather than identify the various environmental features requiring protection. The Precinct 6 strategy contains provisions for the identification and protection of the Bush Forever site.</p> <p>Refer to 13(1)</p> <p>Provision for environmental investigations to be undertaken prior to subdivision/development are contained within the Precinct 9 strategy.</p>

SUBMISSION	COMMENT
69. Department of Parks and Wildlife (cont'd)	
<p>Threatened Ecological Communities, threatened flora and threatened fauna are present before committing them to further subdivision and development. Given the remnant vegetation contained within these lots and their proximity to further remnant vegetation in the adjoining Precinct 8, the department recommends they be added to the adjoining Precinct 8 and protected from further development.</p> <p>3) Proposed bridge locations</p> <p>The Strategy presents two options for bridge locations across the Helena River. The proposed Fyfe St crossing is not supported by the department due to the potential impact on existing environmental values. The remnant riparian vegetation buffer is relatively wide at this point and the overstorey of flooded gum (<i>Eucalyptus rudis</i>) and swamp paperbark (<i>Melaleuca rfiaphtophylla</i>) is in good condition, with good habitat value for arboreal species. The Helena River Catchment Group has been working in this area and there are few very invasive weeds present in the understorey. There is also good natural regeneration of juvenile overstorey species.</p> <p>The extension of Samson St over the Helena river is the preferred option as the understorey at this location is very degraded, with the range of invasive species including fig, watsonia and some blackberry.</p>	<p>3) Refer to 11(2). The need for emergency access in a fire prone area must be considered alongside environmental issues.</p>

SUBMISSION	COMMENT
69. Department of Parks and Wildlife (cont'd)	
<p>4) Preliminary results from foreshore assessment of the Helena River</p> <p>Parks and Wildlife's Rivers and Estuaries Division recently completed an assessment of the river bank and riparian vegetation condition of the Helena River from Mundaring Weir downstream to its confluence with the Swan River.</p> <p>The section of the river covered by the <i>Draft Helena Valley Urban Expansion Strategy</i> was assessed in October 2016. Historic clearing and grazing has occurred throughout much of the area and in most areas downstream of Scott Street only a narrow band of riparian vegetation remains. Despite this, the area still contains ecological values that require protection, including fish and other aquatic fauna habitat in river pools and a connected overstorey of flooded gum (<i>Eucalyptus rudis</i>) and swamp paperbark (<i>Melaleuca raphiophylla</i>) that provide nesting and feeding resources for many bird species and other arboreal fauna. Community amenity and current and potential social value of the river is high.</p> <p>The foreshore was split into segments based on vegetation structure, bank type and land tenure.</p> <p>Vegetation was mostly found to be in average condition throughout the HVUES area. Bank stability was generally average from Victor Road to Scott Street good through the section from Scott Street to the Katharine Street footbridge, then average from Katharine Street to Roe Highway. However, the</p>	<p>4) The opportunity to restore the Helena River and foreshore is noted. Refer to 13(1)</p>

SUBMISSION	COMMENT
69. Department of Parks and Wildlife (cont'd)	
<p>foreshore was found to be deteriorating in condition, mostly due to continued weed invasion and pressures from adjacent private property including water extraction, some stock and vehicle access to the banks.</p> <p>Erosion and large deposits were found in the segment immediately west of Victor Road through human disturbance; some natural embayment retreat is located on a bend near Clayton Street east of Fyfe Street, and exposed tree roots occur in the segment immediately east of Victor Road (i.e. in the far eastern end of the area covered by the strategy).</p> <p>Trampling by humans and stock, and grazing by stock was found in the segment immediately west of Victor Road. Some native vegetation loss through erosion was also occurring in this segment.</p> <p>Vehicles were accessing the riverbank in the segments immediately east and west of Victor Road, and are a potential vector for weed spread, soil compaction and removal of native understorey.</p> <p>Grazing by stock was visible in the segment within Lot 799 Katharine Street although Parks and Wildlife staff were only able to view this area from access points as it is in private ownership, and therefore were not able to assess the full impact from grazing on bank stability.</p>	

SUBMISSION	COMMENT
69. Department of Parks and Wildlife (cont'd)	
<p>Displacement of native vegetation by weeds was a significant issue through the HVUES area. All segments had 'extensive' weed cover. The weedy understorey was much thicker and included more invasive species in the section from Scott Street downstream to the Katharine Street footbridge. Most prolific species in this area include Brazilian pepper, fig, blackberry and watsonia. Few watsonia plants were found upstream of Scott Street which is likely to be largely due to the efforts of the Helena River Catchment Group.</p> <p>Weed species which are currently establishing and have the potential to be widespread are a priority for removal, and include buckthorn (<i>Rhamnus alaternus</i>), arum lily (<i>Zantedeschia aethbpica</i>) and cotton bush (<i>Gomphocarpus fruticosus</i>).</p> <p>There is high potential for the understorey to be planted with local species between Victor Road and Scott Street without a great deal of financial investment, reducing the risk of bank erosion and improving habitat value and visual aesthetics.</p> <p>Erosion control was recommended for the two segments at the eastern end of the HVUES area, with the use of coir logging, matting and native revegetation. Repair of an existing fence and water quality management was also recommended for Lot 799 Katharine Street. A report of the assessment is currently being compiled and will be available in the coming months.</p>	



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