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# ATTACHMENTS

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**Development and Infrastructure Services Committee**

**12 April 2017**

6.00pm

City of Albany Council Chambers

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## Council Policy

# **Asset Management Policy**

## REPORT ITEM DIS017 REFERS

<b>Document Approval</b>			
<b>Document Development Officer:</b>		<b>Document Owner:</b> <i>(Member of EMT)</i>	
Manager Engineering Services		Executive Director Works & Services	
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<b>Document Revision History</b>			
<b>Version</b>	<b>Author</b>	<b>Version Description</b>	<b>Date Completed</b>
1.0	Manager City Assets	Adoption Reference: OCM 16/06/2009 Resolution 13.2.1.	16/06/2009
2.0	Asset & Finance Coordinator	Reviewed by Asset Management Working Group Endorsed by Executive Management Team. Adoption Reference: OCM 19/03/2013 Resolution 5.1. Synergy Reference: NP1331769.	19/03/2013
2.1	Team Leader Asset Management	Fully reviewed by Team Leader Asset Management to meet IOS55000 approved by AMWG. Endorsed by EMT. Prepared for Council Committee review and approval.	16/08/2016
2.2	Team Leader Asset Management	Reviewed by Manage Governance & Risk. Prepared for Council Committee review and approval.	03/02/2017

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# REPORT ITEM DIS017 REFERS

## Objective

1. The objective of this policy is to ensure that Asset Management is embedded in the organisation and is recognised as a substantive corporate function. A recognised asset management culture will enable the City of Albany (the City) to deliver services through infrastructure assets in an equitable and sustainable way.
2. This policy supports compliance with the State Government's Integrated Planning & Reporting Framework, the principles in the International Infrastructure Management Manual and ISO 55000 series for Asset Management.

## Policy Statement

3. The City of Albany is committed to implementing a coordinated and integrated approach to asset management by:
  - a. Defining the City's asset management objectives.
  - b. Through the establishment of a platform for service delivery.
  - c. Providing a framework that enables the Asset Management Strategy and Plans to be produced.
  - d. Supporting a 'whole of life' and 'whole of organisation' approach to asset management.
4. **Key outcomes:** Council, all directorates and the assets team shall commit to the following outcomes:
  - a. A Strategic Asset Management Framework that is consistent with ISO 55000 series: including this policy, strategy and plans.
  - b. Adherence to laws, legislation and regulations in the way assets are managed.
  - c. A structure for clarity of asset ownership, management and responsibility for key functions.
  - d. Support a multi-disciplinary asset team with the skills and resources to implement the Asset Management Framework and achieve the outcomes of this policy.
  - e. Ongoing reporting on asset management performance and improvements.
  - f. Asset management principles shall be included in Councillor and staff inductions.
  - g. Council will endeavour to make informed decisions in relation to service delivery considering the following:
    - Whole of life cost of delivering services
    - Potential non-asset solutions for delivering services
    - Rationalising under-utilised assets through disposal or change of function
  - h. Develop, maintain and regularly review Asset Management Plans for the following asset classes:
    - Buildings
    - Transport (Roads, Kerbing, Carparks)
    - Pathways
    - Stormwater
    - Reserves

## REPORT ITEM DIS017 REFERS

- i. Asset Management Plans will form part of the City's day to day business practices and clearly link to asset class strategies, risk management of critical assets, maintenance plans and the long term financial plan.
- j. Project Management and associated funding applications shall be based on the evaluation of alternatives with consideration of lifecycle costs, risks and benefits.
- k. Additional maintenance and operating costs from new or upgrade projects shall be extrapolated into annual operational budgets to ensure consistent service levels.
- l. Strong liaison between Development Services and Assets to ensure sustainable outcomes with new developments.

### 5. Responsibility and Reporting:

- a. **Council** – is responsible for leading good asset management practices and supporting a whole of life and whole of organisation culture. Council is responsible for ensuring that resources are allocated to achieve the objectives of this policy. Council is responsible for communicating to the community the benefits of good asset management principles.
- b. **Chief Executive Officer (CEO)** – is responsible for leading and supporting the implementation of good asset management practice across the organisation. By encouraging communication and cooperation across directorates and driving the strategic vision of Council. To ensure Council are kept informed of asset management objectives, initiatives and improvements.
- c. **Executive Management Team (EMT)** – is responsible for leading and supporting the implementation of good asset management practice across the organisation. The EMT shall show leadership by example in cross directorate information sharing, removing barriers and applying asset management principles in decision making. EMT shall ensure the responsible use of resources based on criteria consistent with Strategic Planning documents.
- d. **All Directors** – are responsible for ensuring that asset owners and asset owners are supported with strategic and operational planning. Projects under their control follow lifecycle principles and as constructed specifications are provided.
- e. **Asset Owners** – are responsible for the strategic planning and corporate risks associated with the service the asset is supporting. The asset owner engages with the community, encourages internal collaboration and information sharing and generally support the broad principles of asset management. Asset owners will have substantial input into the long term capital planning of the service.
- f. **Asset Managers** – are usually the facility manager, operations manager, or leasing manager of an asset or asset group. They are responsible for the day to day operations of the facility and shall have a detailed knowledge of the asset. Asset managers will have input into annual budgets and be consulted on the impacts of capital works plans.
- g. **Asset Management Working Group (AMWG)** – the Asset Management Working Group is responsible for ensuring that Council's Asset Management Strategy is achieved and that Asset Management Plans are prepared, reviewed and monitored in line with this policy. The AMWG is also driver for implementation and ongoing development of Asset Management Plans. The group is to be a conduit for knowledge, communication and technical support for the whole organisation. It shall provide tactical input into projects, leasing, finance and strategic planning. The AMWG is required to report to the Executive Management Team on all matters relating to Asset Management.

## REPORT ITEM DIS017 REFERS

- h. **Executive Director Works & Services** – is responsible for resource allocations associated with achieving Council’s Asset Management outcomes. The EDWS is an advocate for non-discretionary renewal and maintenance budget allocations in line with adopted Asset Management Plans. The EDWS reports to the CEO in relation to Asset Management resource allocation.
- i. **Team Leader Asset Management** – is responsible for leading asset management practices across the organisation through promotion, education and support. Chairing and facilitating the AMWG to drive continuous improvement in asset management and identifying any barriers to the implementation of the Asset Management Strategy and Plans.
- j. **Asset Management Team** – is responsible for the provision of a central pool of technical skills and asset management knowledge in support of the City’s objectives.

### Scope

6. This policy relates to the management of all fixed assets on City of Albany owned, managed or leased land. This policy excludes the management of mobile plant, light fleet and non-fixed assets.

### Legislative and Strategic Context

7. The following Acts and Regulations provide the broad framework within which the policy operates:
  - a. Local Government Act 1995
  - b. Local Government (Administration) Regulation 1996
8. Community Strategic Plan and Corporate Business Plan:

<b>Community Strategic Plan links</b> <i>(NB: more detailed links are included in the Corporate Business Plan)</i>	
<b>2. Clean, Green &amp; Sustainable</b>	2.2 To maintain and renew city assets in a sustainable manner

### Review Position and Date

9. This policy is to be reviewed by Council every two years, or earlier if Council considers it necessary.

### Associated Documents

- Community Strategic Plan
- Corporate Business Plan
- Asset Management Strategy
- Asset Management Plans
- Asset Management Working Group Terms of Reference
- Long Term Financial Plan





**CITY OF ALBANY**  
**LOCAL PLANNING SCHEME NO. 1**  
**AMENDMENT NO. 17**

**SCHEME AMENDMENT REQUEST**

107 (Lot 36) Catalina Road, Lange

“Public use: Government”

To

“Future Urban”

**April 2017**

**PLANNING AND DEVELOPMENT ACT 2005**

**RESOLUTION DECIDING**

**TO AMEND A LOCAL PLANNING SCHEME**

**CITY OF ALBANY**

**LOCAL PLANNING SCHEME NO. 1**

**AMENDMENT NO.17**

RESOLVED that the Council, in pursuance of Section 75 of the Planning and Development Act 2005, amend the above Local Planning Scheme by:

1. Rezoning 107 (Lot 36) Catalina Road, Lange from 'Public use: Government' Local Scheme Reserve to the 'Future Urban' zone; and
2. Amending the Scheme Map accordingly.

The Amendment is basic under the provisions of the Planning and Development (Local Planning Schemes) Regulations 2015 for the following reasons:

- The amendment is consistent with the Albany Local Planning Strategy.
- The amendment would have minimal impact on land in the scheme area that is not the subject of the amendment;
- As per 34 (g) of the Planning and Development (Local Planning Schemes) Regulations 2015, the amendment is consistent with the surrounding zonings under the adopted Yakamia Structure Plan; and
- The amendment to the scheme map is consistent with the Yakamia Structure Plan that has been approved under the scheme for the land to which the amendment relates. The Yakamia Structure Plan states:
  - *If in future the 'Public Use' designated portion of Lot 36 is not required for a substation, residential development at the R30 density may be supported as an alternative.*

Dated this 26 day of April 2017

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CHIEF EXECUTIVE OFFICER

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Figure 2: Local Planning Scheme Map

### APPENDICES

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**1.0. INTRODUCTION**

This amendment proposes to amend the City of Albany *Local Planning Scheme No. 1* (LPS) by rezoning 107 (Lot 36) Catalina Road, Lange (herein referred to as the ‘subject site’) from ‘Public use: Government’ Local Scheme Reserve to the ‘Future Urban’ zone.

The intent of this Scheme Amendment is to enable the subject site to be developed in accordance with the land use and development provisions applicable to the ‘Future Urban’ zone.

It is therefore respectfully requested that Council support initiation of this Amendment to *Local Planning Scheme No. 1*.

**1.1 Location, Area and Ownership**

The subject site is identified as 107 (Lot 36) Catalina Road, Lange (Figure 1 – Structure Plan map), with a total land area of 9.4144 hectares.

The subject site is owned by the Electricity Networks Corporation (trading as and herein referred to as Western Power) and is contained in Certificate of Title Vol. 2055 Fol. 297 (refer appendix 2), located on the corner of Catalina Road and Lockheed Road.

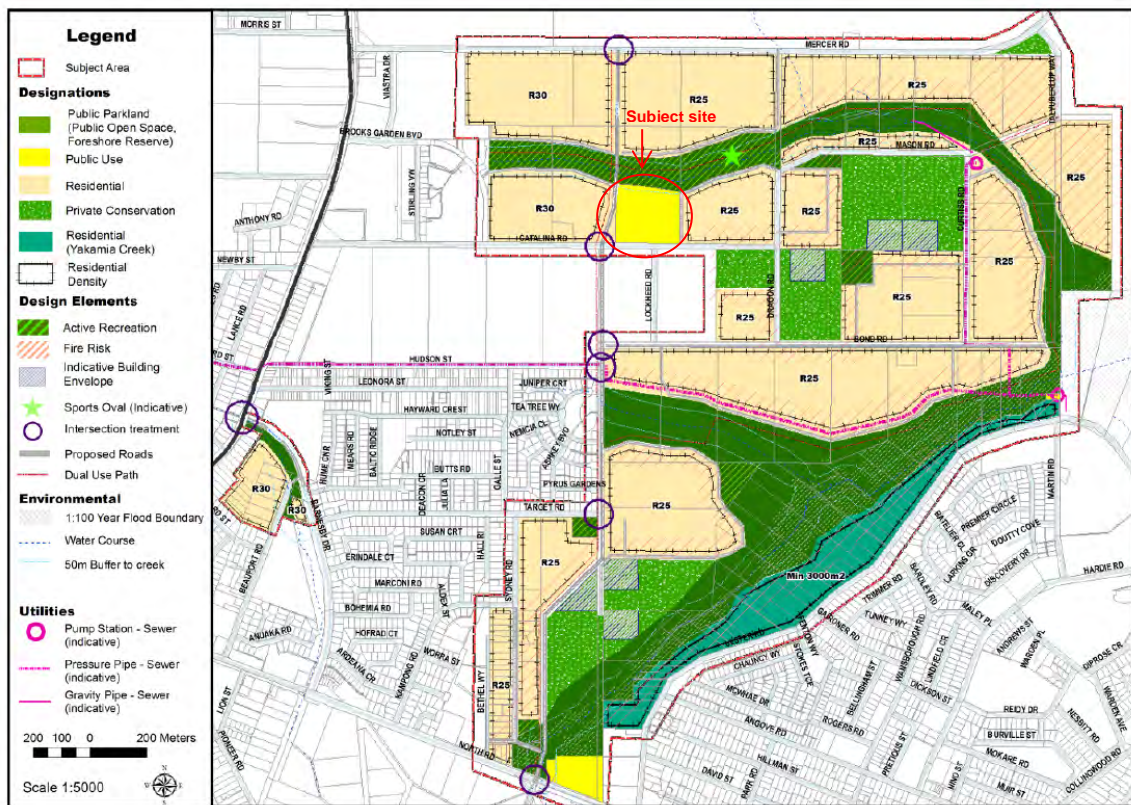


Figure 1 – Structure Plan Map (City of Albany) – Subject Site in yellow adjacent to Residential

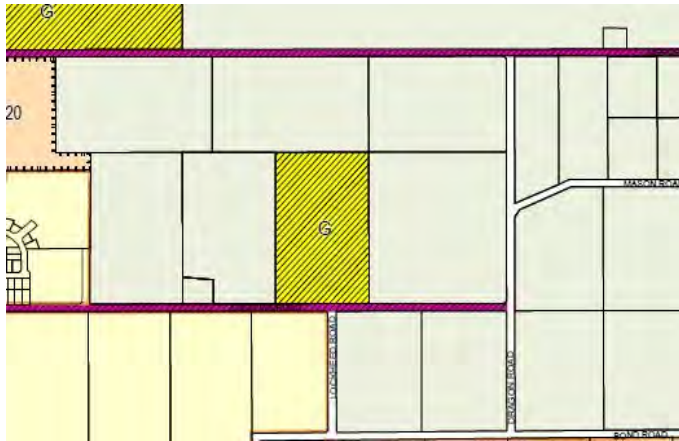


Figure 2 – Local Planning Scheme Map (City of Albany) – Subject Site in yellow

## 2.0. PHYSICAL CONTEXT

### 2.1 Land Use

The subject site is predominantly cleared of vegetation and is used for grazing of cows and sheep with several sheds located on the southern portion of the lot. Centrally located on the subject site are two water bodies entirely contained on Lot 36.

### 2.2 Topography

The southern portion of the site is predominately flat, whilst there is a slight incline towards the northern end.

### 2.3 Utilities and Services

The site is not currently serviced.

## 3.0. PLANNING CONTEXT

### 3.1 City of Albany - Local Planning Scheme No. 1 (2014)

Clause 1.6 “Aims of the Scheme” of LPS1 includes the following aims:

- “(a) Implement the findings of the Albany Local Planning Strategy (ALPS) within the City.*
- “(k) Provide for increased population growth within the City by establishing controls for the co-ordinated planning and development of land to be used for residential purposes allowing for complimentary uses to provide a range of services to meet the needs of the local residents.*

*(m) Respond to the changing needs of the City through the provision of social, administrative and land use initiatives which support the retention and growth of rural townsites, the urban population and advance sustainable land use practices.*

*(o) Promote opportunities for new and value-added industries and businesses, particularly those industrial and business activities that create synergies with existing activities.”*

The rezoning of the subject site to ‘Future Urban’ is consistent with the intent and objectives of the Scheme.

### 3.2 Albany Local Planning Strategy

The Strategic Planning Objectives of the Albany Local Planning Strategy (ALPS) that are applicable to the subject site include:

- *Facilitate and manage sustainable growth for the urban area in the City of Albany;*
- *Support the consolidation of serviced urban areas and facilitate staged fully serviced urban frontal development;*
- *Support urban infill development based on compatibility of land uses and infrastructure capacity; and*
- *Protect future fully serviced urban areas from inappropriate land uses, subdivision and development.*

Rezoning the subject site to ‘Future Urban’ with an applicable density code of ‘R30’ is consistent with the objectives of the Strategy.

## **4.0. PROPOSED AMENDMENT**

It is proposed by way of Council’s initiation of a Scheme Amendment to Local Planning Scheme No. 1 to rezone 107 (Lot 36) Catalina Road, Lange from ‘Public use: Government’ to ‘Future Urban’. It is the expectation of Western Power that the Structure Plan will be updated accordingly to ‘Residential’, with an applicable density code of ‘R30’.

## **5.0. CONCLUSION**

It is considered that the proposed Scheme Amendment is well justified in the context of the current State planning framework, overarching Scheme objectives and local context.

In summary, the rezoning of the subject site is supported as:

- The subject site forms part of the Regional Centre of Albany which is experiencing strong growth and demand for additional housing lots;
- The land is capable of being developed and fully serviced;
- The land is in single ownership, facilitating ease of development, and will integrate with the surrounding area; and
- Adherence of the proposal to the planning policies and strategies of the City of Albany and the Western Australian Government.

It is therefore respectfully requested that the City of Albany resolve to initiate and adopt this Scheme Amendment and forward to the Western Australian Planning Commission and Hon Minister for Planning for consideration and approval.

**PLANNING AND DEVELOPMENT ACT 2005**

**CITY OF ALBANY**

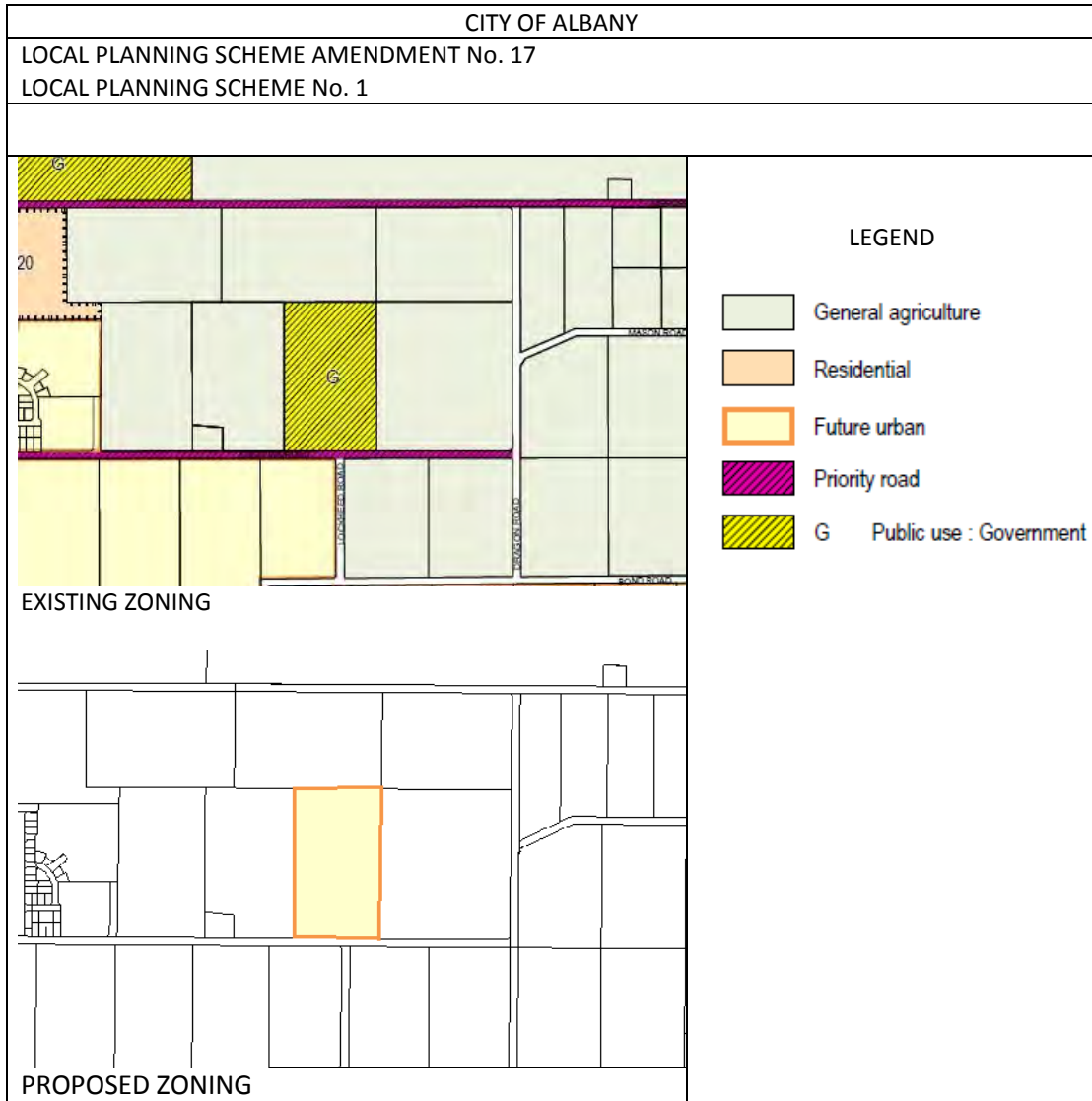
**TOWN LOCAL PLANNING SCHEME NO.1**

**AMENDMENT NO.17**

The City of Albany under and by virtue of the powers conferred upon it in that behalf by the Planning and Development Act 2005 hereby amends the above local planning scheme by:

1. Rezoning 107 (Lot 36) Catalina Road, Lange from 'Public use: Government' Local Scheme Reserve to the 'Future Urban' zone; and
2. Amending the Scheme Map accordingly.





**ADOPTION**

Adopted by resolution of the Council of the City of Albany at the Meeting of the Council held on the 13 day of December 2016.

.....

MAYOR

.....

CHIEF EXECUTIVE OFFICER

Recommended/Submitted for Approval

.....

DELEGATED UNDER S.16 OF  
THE PD ACT 2005

DATE.....

Approval Granted

.....

MINISTER FOR PLANNING

DATE.....

APPENDIX 1

Copy of Certificate of Title

184K  
Perth Batch  
K529336



WESTERN AUSTRALIA



REGISTER NUMBER <b>36/D73451</b>	
DUPLICATE EDITION <b>4</b>	DATE DUPLICATE ISSUED <b>1/4/2008</b>
VOLUME <b>2055</b>	FOLIO <b>297</b>

**DUPLICATE CERTIFICATE OF TITLE**  
UNDER THE TRANSFER OF LAND ACT 1893

The person described in the first schedule is the registered proprietor of an estate in fee simple in the land described below subject to the reservations, conditions and depth limit contained in the original grant (if a grant issued) and to the limitations, interests, encumbrances and notifications shown in the second schedule.

*R Roberts*  
REGISTRAR OF TITLES



**LAND DESCRIPTION:**  
LOT 36 ON DIAGRAM 73451

**REGISTERED PROPRIETOR:**  
(FIRST SCHEDULE)  
ELECTRICITY NETWORKS CORPORATION OF 363-365 WELLINGTON STREET, PERTH  
(T K529336) REGISTERED 7 MARCH 2008

**LIMITATIONS, INTERESTS, ENCUMBRANCES AND NOTIFICATIONS:**  
(SECOND SCHEDULE)

Warning: A current search of the certificate of title held in electronic form should be obtained before dealing on this land.  
Lot as described in the land description may be a lot or location.

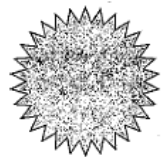
-----END OF DUPLICATE CERTIFICATE OF TITLE-----

**STATEMENTS:**

The statements set out below are not intended to be nor should they be relied on as substitutes for inspection of the land and the relevant documents or for local government, legal, surveying or other professional advice.

SKETCH OF LAND: 2055-297 (36/D73451).  
 PREVIOUS TITLE: 1801-39.  
 PROPERTY STREET ADDRESS: 107 CATALINA RD, LANGE.  
 LOCAL GOVERNMENT AREA: CITY OF ALBANY.

*Yakamia SS (Albany 2)  
Pm/3/SS 337 (37A) 41*



# CITY OF ALBANY

## LOCAL PLANNING SCHEME No. 1

### AMENDMENT No. 27

**MINISTER FOR PLANNING**

**PROPOSAL TO AMEND A LOCAL PLANNING SCHEME**

LOCAL AUTHORITY:	<b>CITY OF ALBANY</b>
DESCRIPTION OF LOCAL PLANNING SCHEME:	<b>LOCAL PLANNING SCHEME No. 1</b>
TYPE OF SCHEME:	<b>DISTRICT SCHEME</b>
SERIAL No. OF AMENDMENT:	<b>AMENDMENT No. 27</b>

**PROPOSAL:**

- i. To transfer Lots 84, 85, 86 and portion of Lots 87 & 98 Home, Harding & Frenchman Bay Roads Robinson from Rural Residential Zone 29 within Schedule 14 to Rural Residential Zone 43.
- ii. To modify existing and introduce new Special Provisions and reference the Frenchman Bay, Harding & Home Roads Local Structure Plan within Schedule 14 Rural Residential Zone 43.

**LOCAL PLANNING SCHEME No. 1**

**AMENDMENT No. 27**

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3. EXECUTION

# REPORT ITEM DIS021 REFERS

PLANNING AND DEVELOPMENT ACT 2005

## RESOLUTION TO PREPARE AMENDMENT TO LOCAL PLANNING SCHEME

CITY OF ALBANY

LOCAL PLANNING SCHEME No. 1

DISTRICT SCHEME

AMENDMENT No. 27

RESOLVED that the local government pursuant to Section 72 of the *Planning and Development Act 2005*, amend the above Local Planning Scheme by:

- i. Transferring Lots 84, 85, 86 and portion of Lots 87 & 98 Home, Harding & Frenchman Bay Roads Robinson from Rural Residential Zone 29 within Schedule 14 to Rural Residential Zone 43.
- ii. Modify existing and introduce new Special Provisions and reference the Frenchman Bay, Harding & Home Roads Local Structure Plan within Schedule 14 Rural Residential Zone 43.

The amendment is a Standard Amendment under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* for the following reasons.

- It is an amendment relating to a zone or reserve that is consistent with the objectives identified in the scheme for that zone or reserve;
- It is an amendment that is consistent with a local planning strategy for the scheme that has been endorsed by the Commission;
- It is an amendment that would have minimal impact on land in the scheme area that is not the subject of the amendment; and
- It is an amendment that does not result in any significant environmental, social, economic or governance impacts on land in the scheme area.

Dated this \_\_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_  
CHIEF EXECUTIVE OFFICER

**CITY OF ALBANY**

**LOCAL PLANNING SCHEME No. 1**

**AMENDMENT No. 27**

**ADDITIONS TO  
RURAL RESIDENTIAL ZONE No. 43  
HOME & HARDING ROAD PRECINCT**

**PLANNING REPORT**



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**APPENDIX B:** EXISTING PROVISIONS & SUBDIVISION GUIDE PLAN FOR LPS No. 1 RR43

**APPENDIX C:** BUSHFIRE ATTACK LEVEL ASSESSMENT & NOTES – BIODIVERSE SOLUTIONS PTY LTD

## 1. INTRODUCTION

It is proposed to transfer Lots 84, 85 & 86, as well as the Rural Residential zoned portions of Lots 87 & 98 Home & Harding Roads, Robinson, from Rural Residential Zone Area 29 to Area 43.

It is also proposed to make reference to a Local Structure Plan which covers the subject land and to modify a number of existing provisions to cater for the subdivision, development and ongoing use of the land.

With the exception of the areas of Lots 87 & 98 zoned Residential, the land forms a discrete precinct in the southern portion of the City of Albany's existing Rural Residential Zone No. 29.

The purpose of the amendment is:

- a) To enable the subdivision of 5 existing lots, into 14 lots, with a minimum lot size of 1 hectare; and
- b) To consistently reflect land use compatibility within the Priority 3 water source protection area.

Water Source Protection areas exist within Albany to establish compatible land uses. Three priority areas exist. The Priority 1 area exists to generally not permit development, the Priority 2 area exists to support development subject to limitations and the Priority 3 area exists over land where water supply sources need to co-exist with other land uses such as residential and commercial.

The Priority 2 and 3 areas exist over the Rural Residential No. 29 zone. The Priority 3 area exists over the Rural Residential No. 43 zone.

The transfer of lots zoned Rural Residential No. 29 and within the Priority 3 area, to the Rural Residential No. 43 zone, is a consistent reflection of land use compatibility for the Priority 3 area.

In accordance with the Draft Government Sewerage Policy, exemptions to the mandatory requirement for connection to reticulated sewerage may be considered for subdivision proposals for the creation of lots greater than one hectare in Priority 3 public drinking water source areas in rural residential/rural living zones.

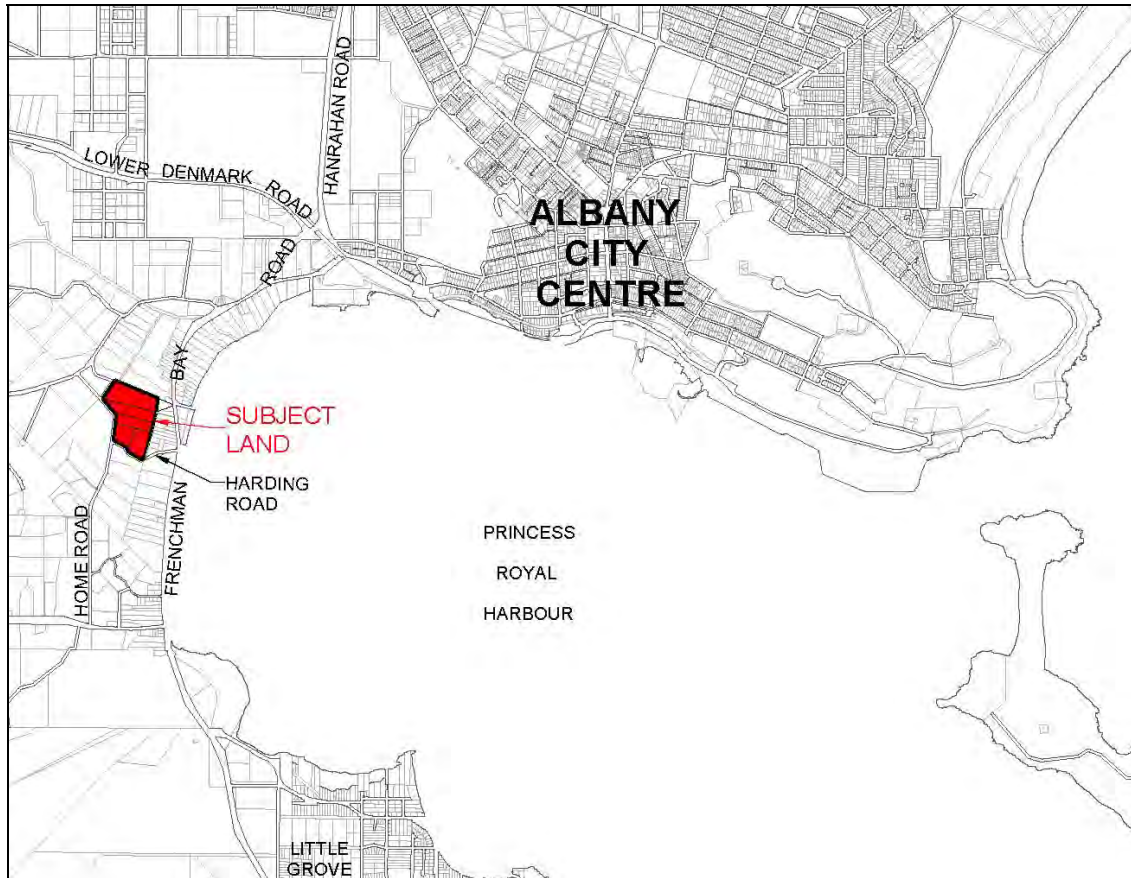
This proposal has been foreshadowed by the Albany Local Planning Strategy, strongly supporting more efficient use of existing zoned land and the Local Planning Scheme, requiring the preparation and adoption of a Structure Plan prior to the intensification of development, as well as background liaison with both Council and the Department for Planning.

This document supports and should be read with the Frenchman Bay, Harding & Home Roads Local Structure Plan and Map.

## 2. BACKGROUND

### 2.1 Location, Area & Zoning

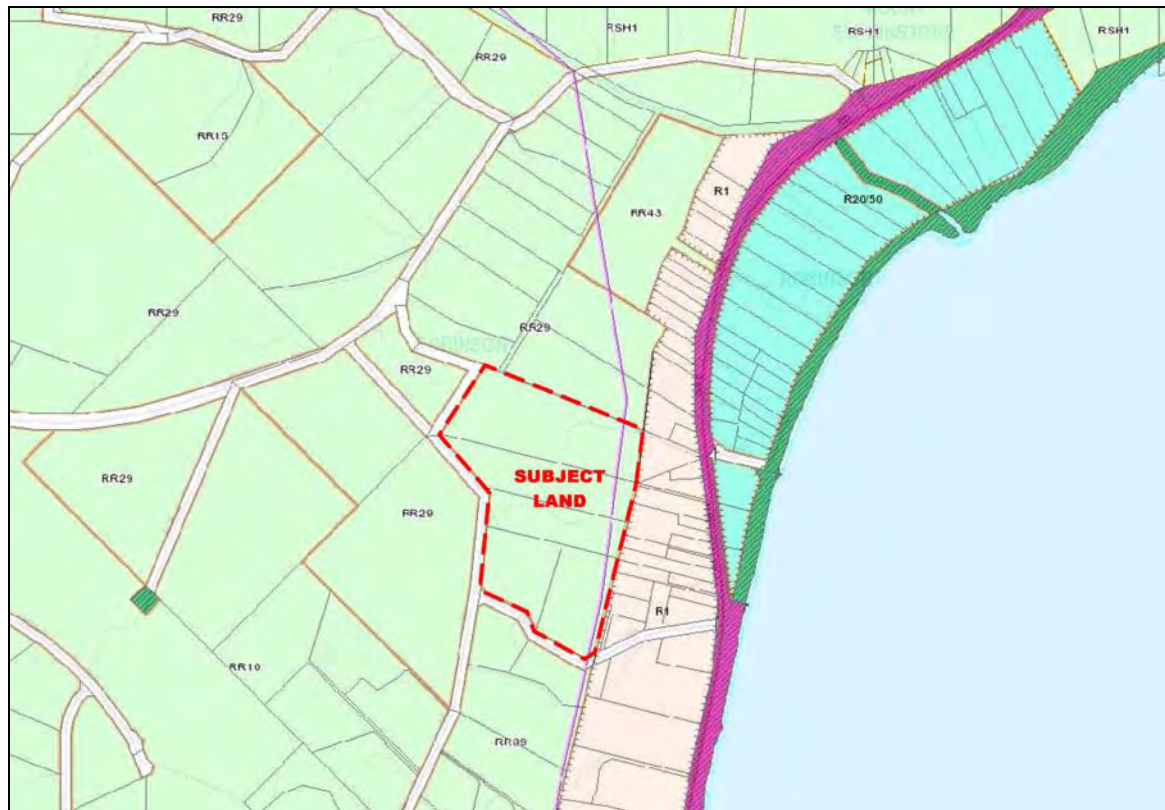
The precinct is located some 5.5km south west of the Albany City Centre and is accessed via Princess Royal Drive and Frenchman Bay Road.



Location Plan

Lot No.:	Lot Size:	Lot Access:
84	2.7363ha	Harding Road
85	2.0187ha	Harding & Home Roads
86	2.2085ha	Home Road
87	2.9078ha	Frenchman Bay & Home Roads
98	5.4802ha	Frenchman Bay & Home Roads

Apart from the area of Lot 98 fronting Frenchman Bay Road and the Lot 87 access leg, the land is zoned Rural Residential and is included in Area 29 of Local Planning Scheme No. 1. It is surrounded by existing Special Rural development (north and west), unsewered residential to the east and further east, the Princess Royal Harbour Foreshore (parks and recreation reserve). Currently there is no Local Structure Plan covering the Subject Land.



Extract from LPS 1 Scheme Map

## 2.2 Site Description

Land Assessment Pty Ltd has completed a land capability and geotechnical investigation of the subject land (see Appendix A). It describes the site as follows:

*The land contains a mixture of cleared and vegetated areas and there is a residence on each of the five existing lots. There are no significant rural pursuits although portions of lots 85 and 98 are used for stabling and exercise of horses, and the eastern part of lot 98 is subject to grazing by goats.*

*As parts of the subject land are located on relatively low-lying terrain inland from Princess Royal Harbour, environmental assessment of the land needs to consider its capability to support on-site disposal of domestic effluent and wastewater, and to address the potential for further development to be affected by any Acid Sulfate Soil conditions.*

The assessment found that none of the three vegetation types represented in the pockets on site occur at less than 30% of their pre clearing extent and none of the areas would require any significant to create additional house sites or access ways. Soils, site conditions, land capability, acid sulfate and other issues are discussed further in this report and in Appendix A.

### **2.3 Surrounding Land Use and Zoning**

Immediately north of the subject land, Rural Residential Areas 29 & 43 continue and support lots down to 1ha in area. To the north east fronting Frenchman Bay Road are residential lots down to 2000m<sup>2</sup> in area. LPS1 has revised the minimum lot size in this area to 8500m<sup>2</sup>. To the south is Rural Residential Area 39 with a minimum lot size of 1ha. To the south west is the Almore Park Rural Residential Estate. Almore Park, being within the Priority 2 area of the South Coast Groundwater Reserve, has a minimum Rural Residential lot size of 2ha.

Further north is Rural Residential Area 43 comprising 1ha lots on land currently used for grazing and stables. This area, being located on the lower flats, has requirements for a finished floor level of 2.74m and more tightly controlled building envelopes. Also being located immediately adjacent to small scale market garden activities, this area includes a 50m setback requirement incorporating a 20m wide vegetation buffer. The Provisions and Subdivision Guide Plan relating to Rural Residential Area 43 are included as Appendix B.

The subject land is therefore amongst the last land in the area capable of being developed to Rural Residential standards given groundwater protection controls and the prevailing planning context.

### 3. PLANNING CONTEXT

The key planning documents that relate to the subject land are the Lower Great Southern Strategy, the City of Albany's Local Planning Strategy (ALPS) and Local Planning Scheme No. 1 (LPSNo.1).

The Lower Great Southern Strategy (2015 – Draft) is soon to replace the 2007 Strategy. This is a regional strategy identifying regional level objectives and directions. It includes relevant nominated actions to:

- Provide efficiency in development form and servicing settlements.
- Carefully manage essential natural resources, particularly water supplies and agricultural land.
- Appropriately zone sufficient land for urban development and a variety of housing types, in accord with endorsed local planning strategies.
- Recognise public drinking water source areas in local planning strategies and protect them where appropriate in local planning schemes.

The strategy also notes that encouraging the provision of a range of residential living environments is a clear planning objective and that the location and amount of rural living land is to be determined through the Local Planning Strategy process.

The Albany Local Planning Strategy identifies the land within a Rural Residential and Residential R1 precinct and shows the land as suitable for accommodating some re-subdivision to provide more efficient and sustainable development.

Local Planning Scheme No. 1 identifies the land as "Rural Residential" and notes in cl4.2.17, the objectives to:

- “(a) Create small rural land holdings for residents who wish to enjoy a residential lifestyle within a rural landscape and environment; and*
- (b) Provide for residential and limited incidental land uses which—*
  - (i) Are compatible with the preservation and protection of environmentally sensitive areas such as remnant vegetation and groundwater protection areas;*
  - (ii) Do not visually detract from the landscape and the visual amenity of the locality;*
  - (iii) Allow for uses and developments that are fit for purpose and minimise any on-site or off-site impacts such as soil erosion, nutrient loss, drainage and potential land use conflicts; and*
  - (iv) Are located in close proximity to existing urban areas and can enjoy appropriate urban servicing to the lots including rubbish disposal, reticulated water, community facilities and fire infrastructure.”*

Along with these documents some context is provided by the recent creation of Rural Residential Area No. 39 immediately south of the subject land. This Rural Residential area accommodates and provides for the form of subdivision and development covered in the current proposal.

The area is within the Department of Water South Coast Groundwater Reserve with a Priority 3 Coding. This coding provides for subdivision to a minimum average of 1ha where land is zoned and appropriate landuse controls apply, capability is acceptable and the land, such as the subject land, is situated beyond any wellhead protection zones.

Clearly the zoning, context and the objective of the current zone not only provides for the proposed development but both local and state strategies encourage it on efficiency and sustainability grounds.

As the land is already correctly zoned, the 2015 Planning Regulations and LPS1 requires the preparation, adoption by Council and endorsement by the WA Planning Commission, of a Local Structure Plan Map and the inclusion of relevant subdivision, development and land management provisions. Pursuant to the 2015 Planning Regulations, the process to achieve this is via the “Standard Amendment” and Local Structure Plan process.

While this document addresses the Local Planning Scheme Amendment issues, it also covers background and issues relevant to the Frenchman Bay, Harding & Home Roads Local Structure Plan and as a result, both documents should be read together.

#### 4. SITE ASSESSMENT

Land Assessment Pty Ltd has completed a detailed assessment of the site for Rural Residential development. This is attached in Appendix A.

##### **Summary.**

*Subject to the proposed pattern of subdivision enabling positioning of building envelopes for all 'new' lots within areas of either high (green) or fair (yellow) capability, the subject land is capable of supporting additional subdivision to the lot sizes permissible for the relevant land use zoning categories under the planning scheme (City of Albany 2014).*

##### **On-site effluent disposal.**

*For the major portion of the subject land (elevated dunal areas) conventional on-site effluent disposal systems (septic tanks and leach drains) will be appropriate for unsewered rural residential lots.*

*Should the plan of subdivision result in building envelopes being positioned within lower-lying portions where alternative treatment units are required, setback distances (both vertical and horizontal) are applicable to land application areas for effluent disposal.*

*Specific setbacks, and the required area for land application of treated effluent, can vary according to the type of system (i.e. a soil absorption system such as leach drains with amended soil, or an irrigation system associated with an aerobic treatment unit, ATU) and according to the method of any irrigation (i.e. surface sprays or drippers, or subsoil drippers).*

##### **Acid Sulfate Soils.**

*A search has been conducted of the State Government's contaminated sites database by planners Ayton Baesjou, who report that there are no records of contaminated sites within the subject land.*

*Notwithstanding the absence of any need for deep excavation works associated with further subdivision and development of the land for rural-residential use, field survey observations and some laboratory testing of subsoil material within the estuarine plain portion, indicate acid sulfate soils are not present.*



### **Remnant Vegetation.**

*The proposed intensity of further subdivision should not require any significant clearing of the remaining native vegetation within the subject land.*

*Outside of the parkland cleared areas, where understorey species have been already been depleted, the more intact areas of remaining vegetation occur near the property fringes and are unlikely to be considered prospective sites for building envelopes given the proposed lot sizes.*

*Subject to site responsive subdivision design, the ALRS objective of protecting areas of remnant vegetation would not be compromised by the development proposal.*

### **Groundwater Protection.**

*The Local Planning Scheme (City of Albany 2014) takes into consideration the Water Source Protection Plan for the South Coast Water Reserve (Water and Rivers Commission 2001) via designation of a special control area which extends over most of the subject land.*

*Subject to the plan of subdivision responding to the land capability mapping through appropriate positioning of 'new' building envelopes, and the creation of lots of equal or greater size to those determined by the Water Source Protection Priority Code (P3 – with a possible minimum average of 1 ha), the proposed intensification of rural residential development in this area should not jeopardize groundwater protection.*

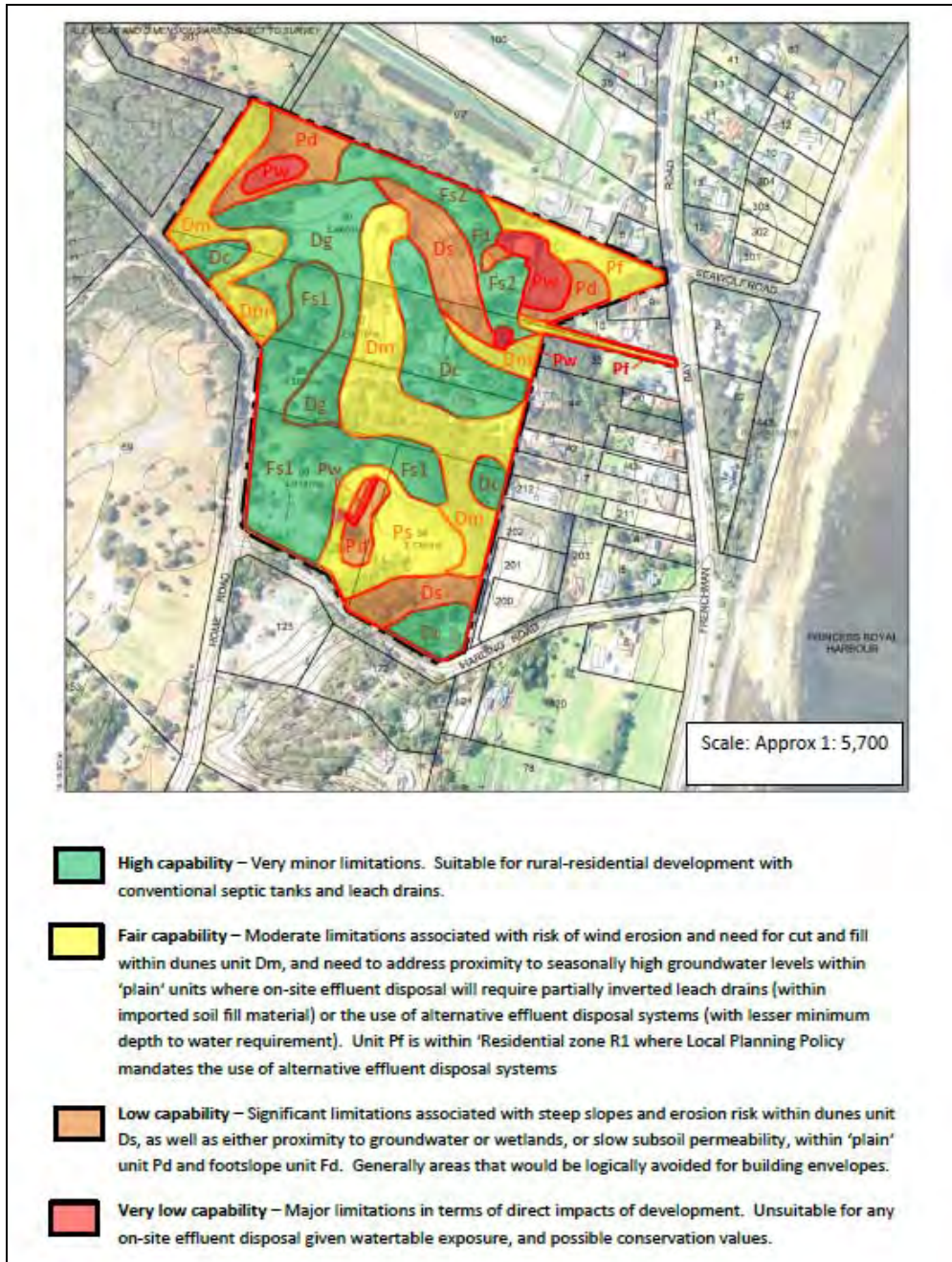
### **Surrounding Activities.**

A small scale market garden is located some 50m to 80m north of the subject land. In other areas of Rural Residential Area No. 43, this activity is provided with 50m setback incorporating a 20m wide vegetated buffer.

In relation to the subject land however, this activity is buffered by an existing tree line some 20m to 50m wide. Internal setbacks to the northern boundary of an additional 20m are also available. This brings total setbacks to 70m to 100m incorporating a 20m to 50m vegetated buffer; well in excess of the established standard.

**Land Capability.**

The Land Capability Plan prepared by Land Assessment Pty Ltd shows the outcomes of the detailed assessment as below:



From this it can be seen that each existing lot has substantial areas of acceptable capability showing fair or high capability. Effluent disposal systems will need to avoid areas shown as low and very low.

## **5. SERVICES AND INFRASTRUCTURE**

### **5.1 Roads & Access**

In terms of access, Lot 84 has access to Harding Road, Lot 85 to both Harding and Home Roads, Lot 86 to Home Road and both Lots 87 and 98 access both Home and Frenchman Bay Road. For Lot 87 this is an established 5m wide battle-axe leg/ driveway to Frenchman Bay Road and for Lot 98 this is a driveway within a frontage of 12m widening to 100m.

### **5.2 Potable Water Supply**

Reticulated water supplies are partially available in the locality.

### **5.3 Effluent Disposal**

Disposal of effluent on the properties and in the wider area is by way of on-site effluent disposal systems. Scheme sewer is not available.

In accord with the land assessment, new development will be required to utilise high performance nutrient retaining systems and Effluent Disposal Exclusion Areas will be identified over land with poor capability.

As noted previously, Department of Water Groundwater Protection Controls restrict effluent disposal density in this Rural Residential zone to 1 unit per 1ha average. This proposal will meet this requirement by ensuring this density is not exceeded and systems will be restricted to capable areas.

### **5.4 Power & Telecommunication**

The properties have access to power and telecommunication services which are partially underground.

### **5.5 Schools and Community Facilities**

Local, Neighbourhood and Regional services and facilities are readily accessible and available in the Albany City Centre some 5.5km by road to the north east.

## 6. PLANNING

Clause 5.5.13.3 of Local Planning Scheme No.1 requires a number of issues to be addressed. These include:

- Land Capability and suitability assessment;
- Protection and enhancement of the natural environment;
- Protection and enhancement of visual amenity;
- Provision of infrastructure and services;
- Impacts on adjacent land uses;
- Any potential for site contamination;
- Effluent disposal;
- Location of building envelopes, development exclusion areas;
- Preparation of a Subdivision Guide Plan for the subdivision showing proposed roads and connectivity between proposed /future and existing developments, lots, recreation areas, location of building envelopes, as relevant.

These issues are addressed in this report and on the attached Local Structure Plan.

### 6.1 Local Structure Plan – Lot Layout & Subdivision

The subdivision layout is shown for the lots overleaf on the Local Structure Plan Map. This plan is undergoing review and endorsement via a separate but complementary process. The plan will be applied at the time of subdivision along with the relevant Scheme No. 1 General Clauses and Special Provisions to guide that subdivision and the future development of and on the land.

### 6.2 Access

Existing accesses are utilised wherever possible. Regarding each lot:

Lot 84: One new crossover is required to Harding Road for the northern lot.

Lot 85: The new lot out of Lot 85 may make use of one of the existing crossovers to Home Road.

Lot 86: One new crossover is required for the new lot. With this noted, reciprocal access could be established over the existing driveway such that both lots effectively use the existing driveway and cross over and thus remove the need for new physical access to be constructed.

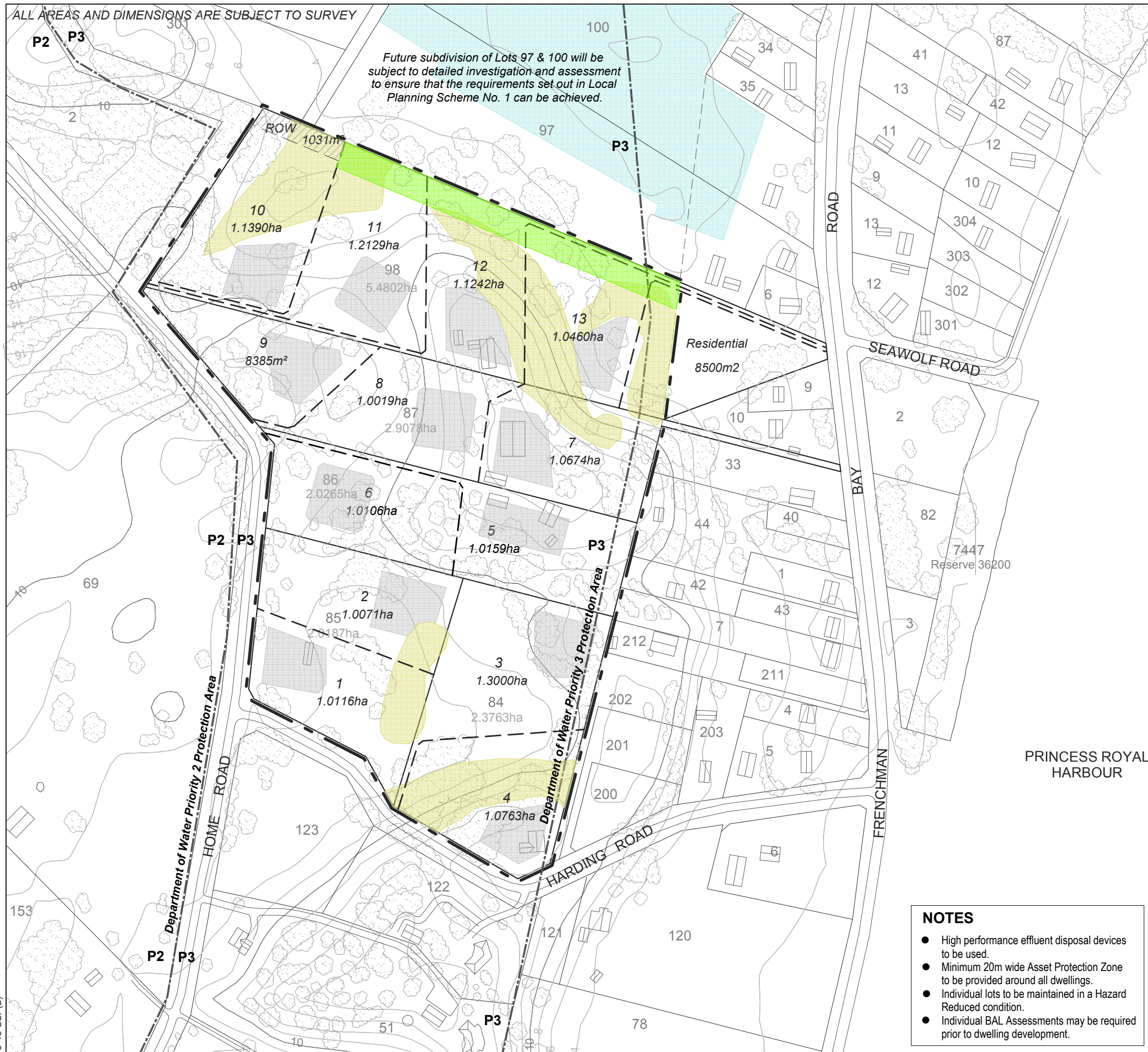
Lot 87: The existing dwelling retains the existing battle-axe to Frenchman Bay Road. There is also the option that the two new lots in the west may share the existing crossover to Home Road. No construction or visibility issues present.

Lot 98: The existing access on Frenchman Bay Road is retained as a battle-axe to serve the existing house lot and a lot to its east. The two western lots share an historic access to Home Road to the south west. A Right of Way may also be provided in the north western corner of the land to provide alternate access to Lot 97 north should it be required. In accord with Scheme Requirements for the Residential zone, a lot of 8500m<sup>2</sup> is shown over the land zoned Residential with direct frontage to Frenchman Bay Road.

# Local Structure Plan

Frenchman Bay,  
Home & Harding Roads  
Rural Residential Area 43

Lots 84, 85 Harding Road &  
Lots 86, Pt87 & Pt98 Home Road  
Robinson, City of Albany



**LEGEND**

- Subject Land
- Existing Lot Boundaries
- Proposed Lot Boundaries
- Existing Vegetation
- Existing Buildings
- Vegetated Agricultural Buffer
- Effluent Disposal Exclusion Area
- Market Garden
- Indicative Building Envelope Max 2000m<sup>2</sup>
- DoW Priority 2 Protection Area
- DoW Priority 3 Protection Area

Map Modification - 1a  
Map Creator - BQ/MRT  
Copyright - Aytou Baesjou Planning  
Sources - Landgate (Cadastral & Contours)  
Datum - AHD  
Contact - Aytou Baesjou Planning  
Disclaimer - Subject to Verification & Survey

ORIG A3  
SCALE 1:3000

0 15 30 45 60 75

- NOTES**
- High performance effluent disposal devices to be used.
  - Minimum 20m wide Asset Protection Zone to be provided around all dwellings.
  - Individual lots to be maintained in a Hazard Reduced condition.
  - Individual BAL Assessments may be required prior to dwelling development.

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Preference has been given to the continued use of existing and established crossovers. This provides that for the nine new lots only two new crossovers are required; both on the quiet local roads. With an allowance of approximately 5vpd per new lot, there will not be a significant impact on these existing access roads. Reciprocal rights of way are proposed over joint use battle-axe legs so as to minimise construction requirements and site disturbance.

The access to Frenchman Bay Road on Lots 87 & 98 allows for emergency access through to Home Road should it be required. In addition a Right of Way spur can be provided through to Lot 97 (offsite). This could provide alternate access for this lot should it be required if this land is considered for future development.

### **6.3 Landscape**

The existing landscape character is small lot semi rural in nature with a mix of rural residential, horse based activities and small scale vegetable production on the low lying flats. Development fronting Frenchman Bay Road is residential in nature and will remain unchanged.

The amendment proposal and the Local Structure Plan Map retains these landscape qualities by ensuring rural residential/special rural lot sizes are maintained and by ensuring that no new development will be exposed to Frenchman Bay Road but is screened behind existing development. Home Road will retain its established semi rural character.

### **6.4 Capability and Site Assessment**

A site and capability assessment is included within the Land Assessment Report (Appendix A). This assessment found minimal site constraints for the proposed limited rural residential development so long as development is confined to the capable and suitable areas shown, the setbacks to small scale vegetable production are retained and high performance onsite effluent disposal devices are utilised.

Each lot has access to capable and suitable house sites and is capable of supporting onsite effluent disposal. In accord with the findings of the Land Assessment report, areas of very low and low capability are shown as Development Exclusion.

In addition, the existing 50m – 80m vegetated setback to the small scale market garden will couple with the proposed 20m internal exclusion area to cater for development. This overall buffer significantly exceeds the standard applying in Rural Residential Area 43.

### **6.5 Servicing**

Each lot is independently developable and will therefore need to support its own access construction as well as electrical and telecommunications connections. Services and connections are available generally in the area with no need for trunk extension.

Site conditions, soil permeability and the extremely low density of development allow for the continued use of swale & infiltration based storm water management for driveway and structure runoff.

Some rationalisation of internal services may also be required where existing domestic services conflict with new internal boundaries.

## 6.6 Fire Assessment

A fire hazard assessment and fire management proposals are included as Appendix B and satisfy State Planning Policy 3.7. This assessment ranks hazards and outlines requirements to be included in the development.

Requirements include:

- Preparation and implementation of a Bushfire Management Plan/s as a condition of subdivision.
- Notification to landowners of fire safety issues and individual responsibilities per the Bushfire Management Plan/s.
- Maintaining lots in a fuel reduced condition.
- Installing and maintaining Asset Protection Zones.
- Dwelling construction to specified fire safe standards.
- Modified perimeter fire break requirements.
- Access to existing street fire hydrants.

## 6.7 Existing Provisions

Rural Residential Area 43 has existing provisions in Schedule 14 to the Scheme. The provisions relate to the LSP Map, outline permissible landuses, the location of buildings, effluent disposal, access, landowner notification and provision of the agricultural buffer.

The adequately provide for the development of the subject land, the existing provisions will need to be modified to:

- Reference the LSP Map covering the new lots.
- Provide for potable water supplies for the new lots in the conventional manner whilst retaining the specific requirements necessary for the low laying land in the existing section of Rural Residential Area 43.
- Correct references to access leg widths.
- Provide for the new Vegetated Agricultural Buffer.

## **7. CONCLUSION**

The Local Planning Scheme No. 1 Amendment and the Local Structure Plan Map proposal is a simple one providing for nine new lots within this contained & existing rural residential area.

The development of this structure plan and the limited resubdivision of the land is foreshadowed in the original zoning of the Rural Residential Area as well as efficiency and sustainability objectives within local and regional strategies. Planning satisfies cl 5.5.13.3k of the Scheme and provides for development already established and popular in the locality.

This is achieved whilst maintaining a low density of development and also providing for site sensitive development generally.

As a result, the proposal has clear merit and accords with the principals of orderly and proper planning.



## Appendix A

### **Land Capability Assessment**

RR 43 Home & Harding Road Precinct

Land Assessment Pty Ltd

# LAND CAPABILITY ASSESSMENT AND PRELIMINARY GEOTECHNICAL INVESTIGATION

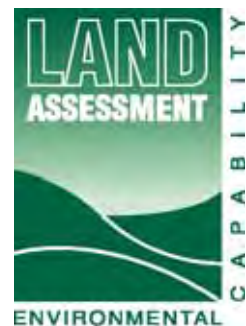
- Lots 84, 85 Harding Road &  
Lots 86, 87 & 98 Home Road,  
Robinson, City of Albany

Prepared for

**AYTON BAESJOU PLANNING**

by

**Land Assessment Pty Ltd**



LA Report No 1512  
11 January 2016

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- B ARVS Vegetation Unit Descriptions
- C Soil Profile Descriptions and Photographs
- D Acid Sulfate Test Results
- E Acid Sulfate Soils: Self-Assessment Form
- F Alternative Treatment Systems approved for use in WA

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## 1.0 INTRODUCTION

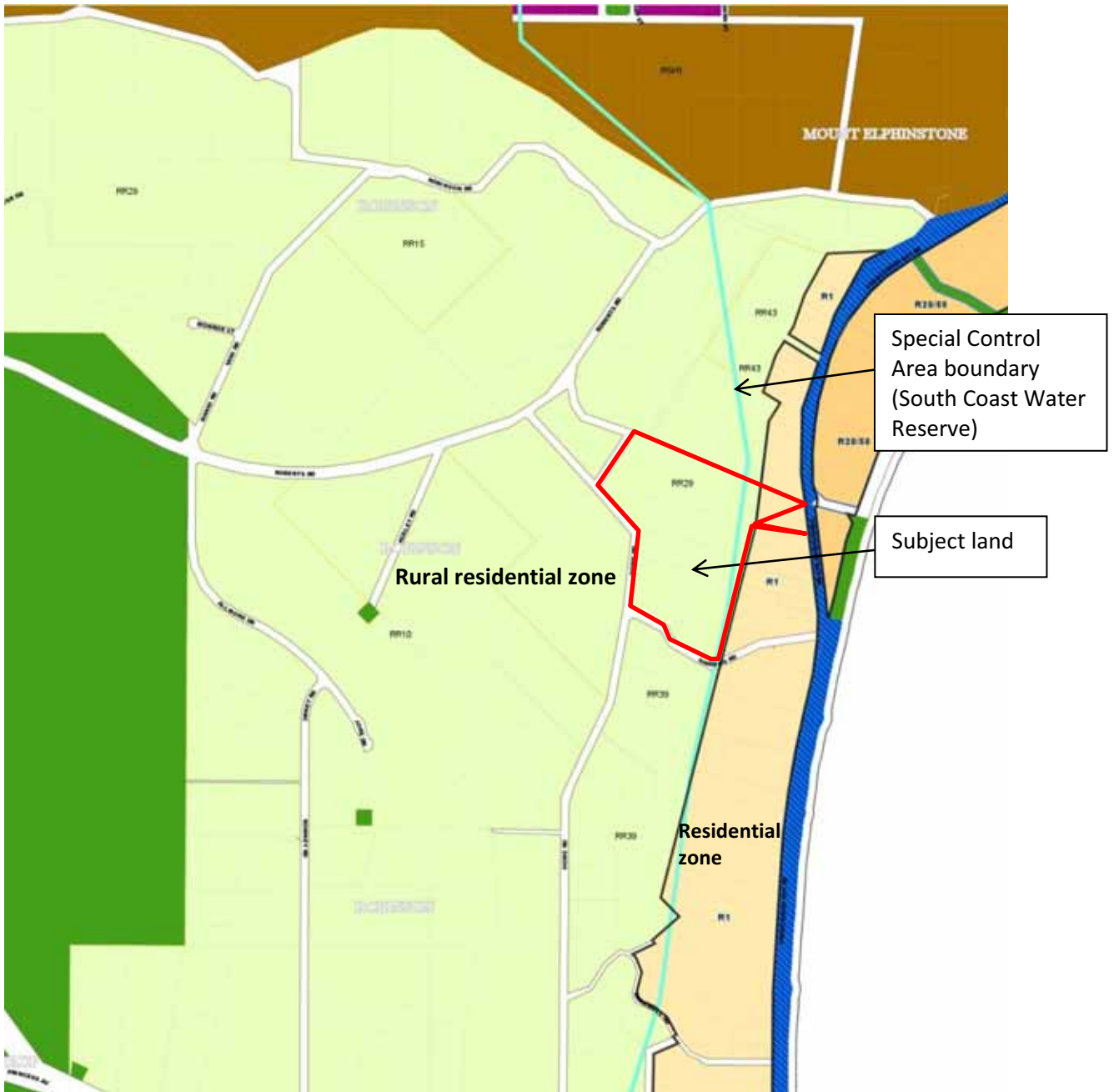
This report has been prepared at the request of Ayton Baesjou Planning to assist preparation of a Structure Plan for further subdivision of existing Lots 84, 85 Harding Road and Lots 86, 87 & 98 Home Road, within the Robinson locality of the City of Albany. Attachment A shows a base plan with site characteristics.

The subject land of approximately 15.3 ha is located on the southern side of Princess Royal Harbour, to the west of Frenchman Bay Road and approximately 3.5 km west-south-west of the Albany central business district. Figure 1 shows the study area is zoned 'Rural residential' (RR29) with the exception of the lower-lying eastern portion of Lot 98 and the battle-axe leg entrance to adjacent Lot 87, both of which are zoned 'Residential' (R1).

The land contains a mixture of cleared and vegetated areas and there is a residence on each of the five existing lots. There are no significant rural pursuits although portions of lots 85 and 98 are used for stabling and exercise of horses, and the eastern part of lot 98 is subject to grazing by goats.

As parts of the subject land are located on relatively low-lying terrain inland from Princess Royal Harbour, environmental assessment of the land needs to consider its capability to support on-site disposal of domestic effluent and wastewater, and to address the potential for further development to be affected by any Acid Sulfate Soil conditions.

FIGURE 1: LOCATION AND ZONING



**Source:** City of Albany Local Planning Scheme No 1 (District Scheme) Map 21.

## 2.0 POLICY CONTEXT

### 2.1 Local Planning Scheme (City of Albany 2014) and Policy

#### Rural Residential Zone (major portion)

It is understood from planners Ayton Baesjou that the possible minimum allowable average lot size within area RR29 is 1 ha. In relation to matters addressed by this report, relevant planning objectives for the Rural Residential Zone include;

*Provide for residential and limited incidental land uses which:*

- (i) Are compatible with the preservation and protection of environmentally sensitive areas such as remnant vegetation and groundwater protection areas;*
- (ii) Do not visually detract from the landscape and the visual amenity of the locality;*
- (iii) Allow for uses and developments that are fit for purpose and minimise any on-site or off-site impacts such as soil erosion, nutrient loss, drainage and potential land use conflicts.*

#### Residential Zone (minor portion)

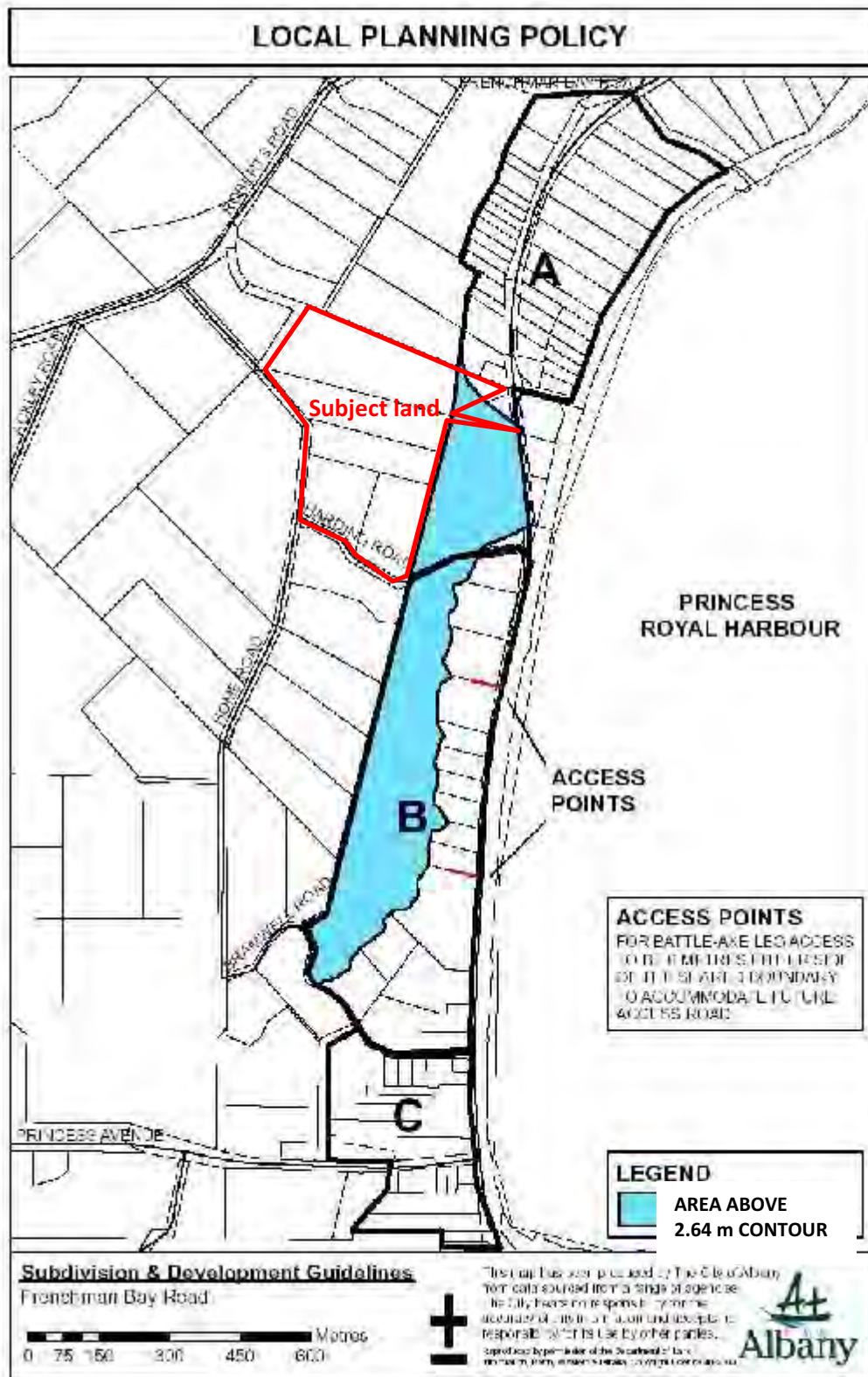
In relation to the Residential Zone portion encompassing the smaller eastern part of Lot 98, as well as the battle-axe entrance to adjacent Lot 87, it is understood from planners Ayton Baesjou that the minimum allowable lot size in this R1 designated area is 8500 sq m.

A Local Planning Policy for the Frenchman Bay Road Residential Development Area (City of Albany undated) addresses the effects of potential flooding or high ground water levels in this low lying area. It identifies this land as part of Precinct A with portions above and below a designated contour line at 2.64 m AHD (Figure 2).

The Local Planning Policy specifies that no subdivision proposals (within the Residential Zone) will be supported until such time as a conceptual local structure plan has been prepared for the portion of land above 2.64m AHD and, for the remaining lower lying area, until such time as infrastructure services (sewerage) have been extended to this locality.

For any subdivision of the Residential zoned land within the area above the 2.64m AHD contour, the policy also states that Council will require the resultant lots to utilise alternative effluent disposal systems, such as approved amended soil and/or aerobic systems.

FIGURE 2: FRENCHMAN BAY ROAD RESIDENTIAL DEVELOPMENT POLICY AREA



**Source:** City of Albany (undated) Policy - Frenchman Bay Road Residential Development Area



## 2.2 Local Planning Strategy (City of Albany 2010)

Rural residential zones are encompassed within a broad 'Rural Living' category where strategic objectives of Albany's Local Planning Strategy (ALPS) include

*"In the long term encourage the efficient use of existing rural living areas, based on land capability to maximise their development potential."*

The ALPS supports lot sizes from 1ha to 4ha in new Rural Residential areas subject to the provision of reticulated water and land capability analysis.

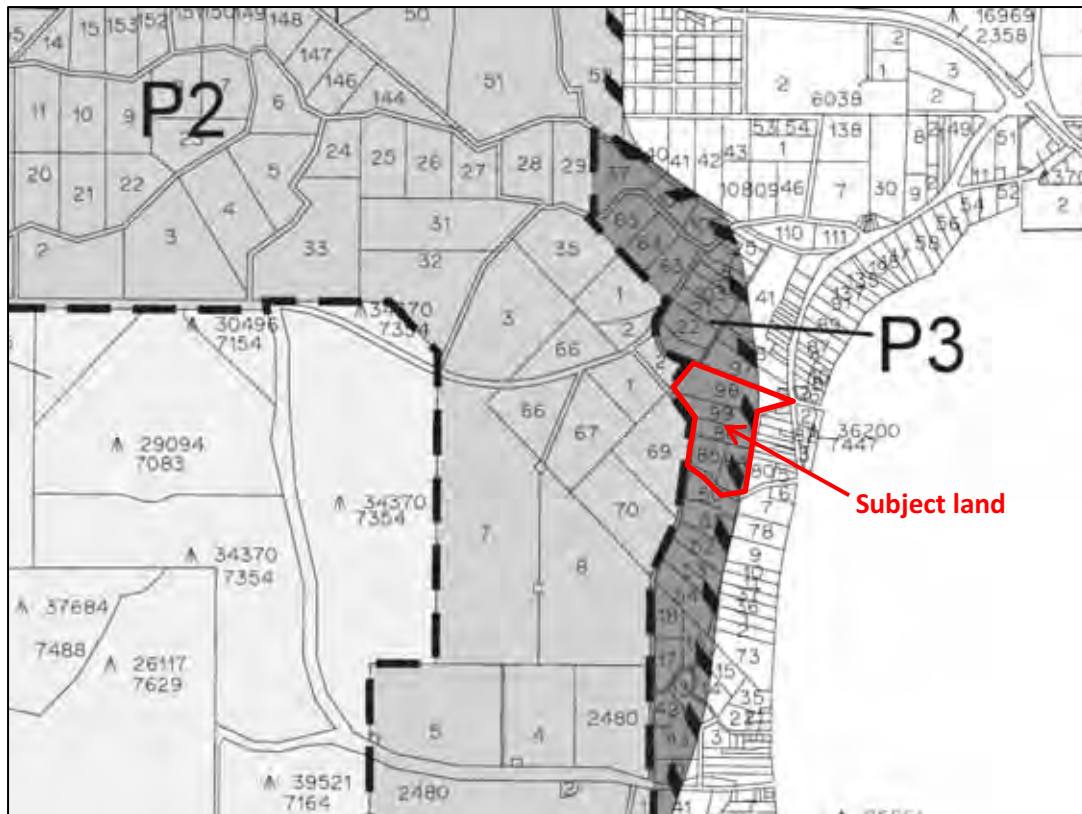
## 2.3 Special Control Area (South Coast Water Reserve)

As shown in Figure 1 the major part of the subject land is designated under the Local Planning Scheme as part of a Special Control Area (SCA) for the protection of public drinking water sources.

This particular SCA covers the South Coast Water Reserve, and the Planning Scheme reflects the objectives of the *South Coast Water Reserve and Limeburners Creek Catchment Area Water Source Protection Plan* (Water and Rivers Commission 2001) where the dominant 'rural-residential' portion of subject land is designated a Priority 3 (P3) category. The lesser 'residential' zoned area closest to Frenchman Bay Road is outside of the SCA (Figure 3).

Appendix 1 of the Water Source Protection Plan outlines the (now) Department of Water's guidelines on *Land Use Compatibility in Public Drinking Water Source Areas* (Department of Environment 2004). Under a P3 category, water supply sources need to co-exist with other land uses, and rural-residential subdivision to a lot size of between 1 and 2 hectares is considered 'compatible' with water source protection subject to the following conditions;

- *An average, rather than minimum, lot size may be accepted if the proponent can demonstrate that the water quality objectives of the source protection area are met, and caveats/memorials are placed on titles of specified blocks stating that further subdivision shall not occur.*
- *Lots should only be created where land capability assessment shows that effective on-site soakage of treated wastewater can be achieved. Conditions apply to siting of wastewater disposal systems in areas with poor land drainage and/ or a shallow depth to groundwater, animals are held or fertiliser is applied. Alternative wastewater treatment systems, where approved by the Department of Health, may be accepted with ongoing maintenance requirements.*

**FIGURE 3: RELEVANT PORTION OF WATER SOURCE PROTECTION PLAN**

**Source:** Water and Rivers Commission (2001) *South Coast Water Reserve and Limeburners Creek Catchment Area Water Source Protection Plan*

## 2.4 On-site Sewage Management

The following policies and guideline documents have been considered in relation to the capability of the subject land to support further un-sewered development;

- *Draft Country Sewerage Policy* (Government of Western Australia 1999 - as amended to 2003).
- *Code of Practice for Onsite Sewage Management* (Department of Health 2012) Consultation Draft November 2012
- *Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units (ATUs) Serving Single Households.* (Department of Health 2001).

These documents show the capability of land to accommodate an on-site effluent disposal system is influenced by a number of factors including system type, site drainage conditions, topography, soil depth, permeability, and depth to watertable.

Site requirements for on-site effluent disposal based on health criteria include the following specifications;

Gradient of the land - not to exceed one in five (i.e. not greater than 20% slope)

Site drainage – not subject to inundation or flooding at greater than once in 10 years

Depth to groundwater

- greater than 1.2 m from the underside of a wastewater disposal system prescribed under regulation 49 of the Regulations (*for example, leach drains associated with septic tanks*)
- as prescribed by Executive Director, Public Health for other approved wastewater disposal systems (*required separation from watertable varies with type and design of other approved systems – see DoH 2001 and DoH 2012 with the latter indicating a range 0.6 – 1.5 m is required above groundwater*).
- greater than 0.5 m from natural ground surface irrespective of type of system

Available area - unencumbered area of at least 150 m<sup>2</sup> required.

Soil depth - greater than 1.2 m depth to bedrock or impervious clay.

In addition to the requirements based on health criteria, the existing Government Sewerage Policy states; *the responsible authorities may require compliance with any special conditions of the (then) Department of Environment.*

The 'special conditions' based on environmental criteria relate to the protection of wetlands and watercourses, and are primarily expressed through setback distances as described in Appendix 2 of the *Draft Country Sewerage Policy* and reiterated in the City of Albany Local Planning Scheme (2014) as follows;

- Watercourses with permanent water – 50 metres;
- Seasonally flowing watercourses – 30 metres;
- Estuary or marine environment - 100 metres

The *Code of Practice for Onsite Sewage Management* (DoH 2012) also specifies setbacks from various types of effluent disposal systems for sub-soil or open drains as follows;

- Soil absorption systems (trenches, beds and mounds) – 6 metres;
- Dripper irrigation systems (associated with ATUs) - 3 metres
- Spray irrigation systems (associated with ATUs) - 6 metres.

Furthermore, in relation to dams or bores, the *Code of Practice for ATUs* (DoH 2001) specifies a 30 m setback where they are used or available for human or animal consumption. It has been assumed here that a 6 m setback is applicable where such water sources are precluded from human or animal consumption.

## 2.5 Acid Sulfate Soils

Acid sulfate soils (ASS) are wetland soils and unconsolidated sediments that contain iron sulfides which, when exposed to atmospheric oxygen in the presence of water, form sulfuric acid. This acid can mobilise or release heavy metals to the detriment of biota and built infrastructure in contact with drainage water.

ASS commonly occur in low-lying coastal lands such as marine or estuarine muds and sands that potentially underlie the surface soils within the eastern-most portion of the subject land. The City of Albany's *Local Planning Strategy* (2010) identifies lower lying portions of the Robinson locality as a high risk area.

The Western Australian Planning Commission's *Acid Sulfate Soils Planning Guidelines* (WAPC 2008) require a preliminary site assessment to be undertaken in 'at risk' areas, and wherever practicable to avoid disturbance of any subsequently identified acid sulfate soils. The potential for ASS is addressed in this report and an acid sulfate soils self-assessment form is included as Attachment E.

## 3.0 ENVIRONMENTAL SETTING

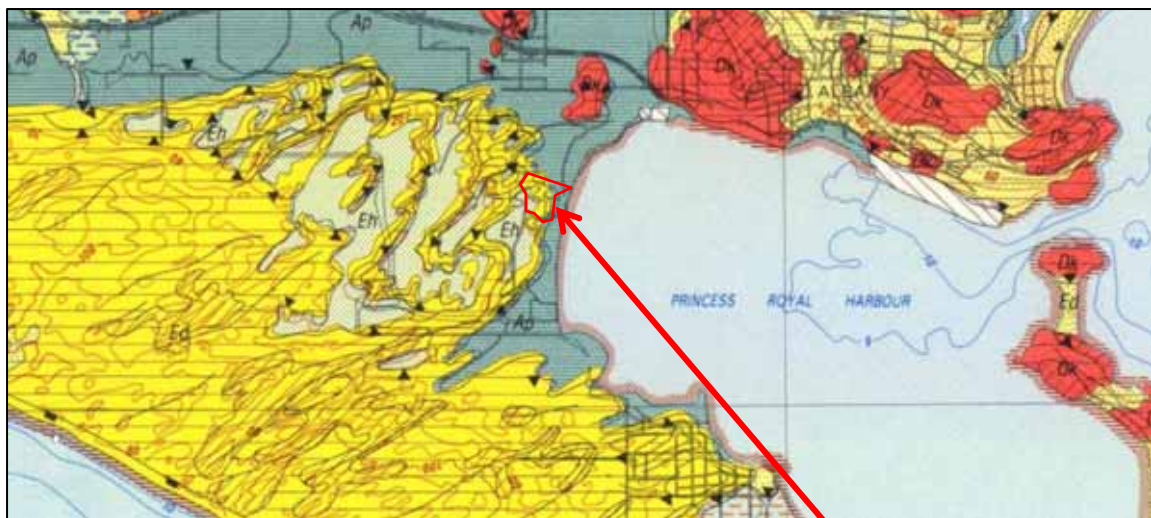
### 3.1 Geomorphology and Geology

The subject land predominantly encompasses an area of parabolic and nested parabolic dunes (and an associated deflation hollow) that extend over part of the estuarine plain fringing, and extending inland from, the western margins of Princess Royal Harbour (Figure 4).

The dunes are comprised of sands that are variably leached and have a core of calcareous limestone (aeolianite – LS<sub>4</sub>) which is pale yellowish brown in colour and weakly cemented.

The underlying estuarine plain is exposed in the north eastern portion of the subject land as well as in the deflation hollow to the south west. The estuarine plain is reported by the Geological Survey of Western Australia to be overlain by predominantly siliceous, white to pale grey, alluvial sand (S<sub>14</sub>) which, although being well drained (i.e. very permeable), is subject a high watertable and considered prone to flooding in part (Gozzard 1989).

**FIGURE 4: GEOMORPHOLOGY & ENVIRONMENTAL GEOLOGY MAPPING**



**GEOMORPHOLOGICAL CLASSIFICATION**

Ed	Parabolic and nested parabolic dunes, Quindakup Dune System	Ar	Estuarine beach ridges
Ed	Parabolic and nested parabolic dunes, Spearwood Dune System	At <sub>1-2</sub>	Estuarine terraces, where identified
Eh	Deflation hollow	Cs	Colluvial slope
Er	Relict foredunes	Dk	Granitic knolls, inselbergs and bornhardts
Ap	Estuarine/alluvial plain	Ds	Denudational slopes in Tertiary sediments

**Subject land**



**GEOLOGY CLASSIFICATION**

S<sub>14</sub> SAND – white to pale grey (Quaternary Alluvium)

LS<sub>4</sub> LIMESTONE – pale yellowish brown, weakly cemented (Quaternary dunes over estuarine deposits).

Sp<sub>1</sub> PEATY SAND – (Quaternary lake and swamp deposits)

Source: Gozzard (1989).

### 3.2 Acid Sulfate Soil Risk Mapping

Acid Sulfate Soil Risk Maps are available online through the Landgate's WA Atlas portal <https://www2.landgate.wa.gov.au/bmvf/app/waatlas/> Figure 5 shows the relevant portion of the Albany-Torbay map-sheet where the (former) Department of Environment and Conservation (DEC) has identified risk areas (in brown). The risk areas are based on the geomorphological classifications associated with the environmental geology mapping (Gozzard 1989) including the estuarine / alluvial plain areas (Ap in Figure 4).

**FIGURE 5: ACID SULFATE SOIL RISK MAPPING**

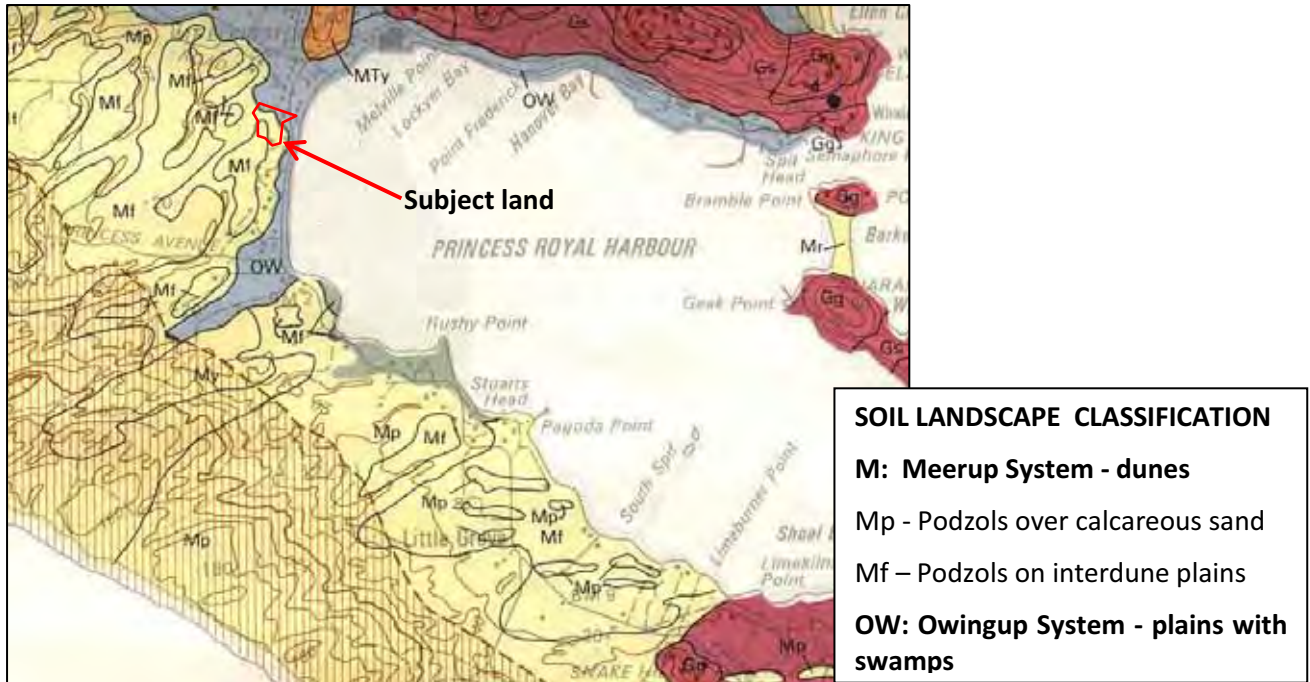


Source: Landgate WA Atlas recent online query.

### 3.3 Soil-landscape Mapping

CSIRO (Churchward et al 1988) have produced broad-scale mapping of the soils and landforms of the Albany region. This mapping has subsequently been incorporated into the soil-landscape mapping database of the Department of Agriculture and Food (DAFWA). Figure 6 shows the relevant portion, with the subject land forming part of the Meerup coastal dunes system, predominantly subsystem Mp which is described as; *Podzols over calcareous sand; banksia-bullich-yate woodland.*

\* Podzols are siliceous sands with leached (light coloured) sandy topsoil over a stronger coloured sandy subsoil. Calcareous sands have an appreciable calcium carbonate content.



**FIGURE 6: BROAD-SCALE SOIL LANDSCAPE MAPPING**

Source: Churchward et al 1988).

### 3.4 Vegetation

As shown in the aerial image within Attachment A, the subject land contains a mixture of cleared and vegetated areas. It occurs inland from the western edge of Princess Royal Harbour although no portion is within 100 m of that waterbody.

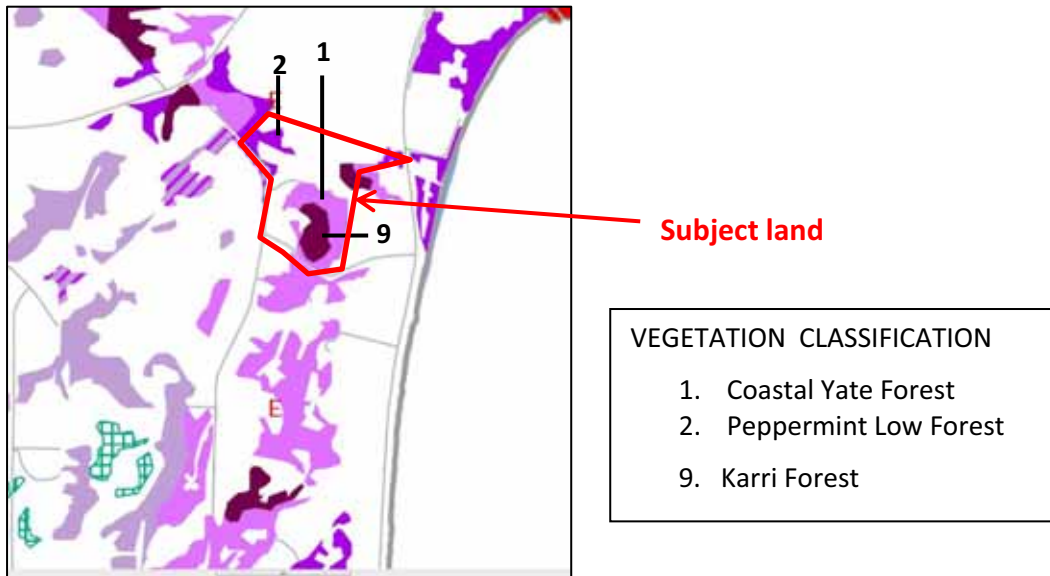
The extent and nature of the remaining vegetation within the subject land is also indicated in Figure 7 sourced from the Albany Regional Vegetation Survey, ARVS (Sandiford and Barrett 2010).

The ARVS mapping is relatively broad-scale and identifies most of the remaining vegetation within lots 84 – 86 as part of vegetation unit 1 (Coastal Yate Forest).

Vegetation unit 9 (Karri Forest) is shown as occurring on lower-lying terrain near the eastern end of Lot 87, and also within the deflation hollow in lots 84 and 85. In the latter area however examination of the aerial image in Attachment A shows that most of the Karri is no longer present.

Vegetation unit 2 (Peppermint Low Forest) is shown within the western portion of lot 98, and to a lesser extent within its central eastern portion.

Attachment B contains descriptions of each of these ARVS vegetation units.

**FIGURE 7: VEGETATION MAPPING**

Source: Sandiford and Barrett (2010).

Taking into account the known occurrences of these vegetation units (1, 2, and 9) within all types of reserves in the Albany region, only vegetation unit 9 (Karri Forest) might be considered in need of specific conservation measures.

Notwithstanding this, none of the three vegetation units occur at <30% of their pre-clearing extent, and further subdivision of the subject land in accordance with lot size allowed under its zoning category would not directly require any clearing of remnant vegetation to create additional house sites or property access ways.

### 3.5 Water Resources

#### Surface water

The subject land occurs inland from the margins of Princess Royal Harbour where the importance of protecting this waterbody from further addition of nutrients is recognised in both the Local Planning Scheme (City of Albany 2014) and the Albany Local Planning Strategy (City of Albany 2010) through the application of a general 100 m development setback.

As shown by the aerial image in Attachment A, all portions of the subject land occur at greater than 100 m from the margins of Princess Royal Harbour, and it contains no natural watercourses. A man-made drain does however run along the northern side of the entrance way into Lot 98 off Frenchman Bay Road. There are also a small number of wetland 'soaks' within Lots 98 and 85 that appear to have been excavated to facilitate earlier agricultural pursuits.



## Groundwater

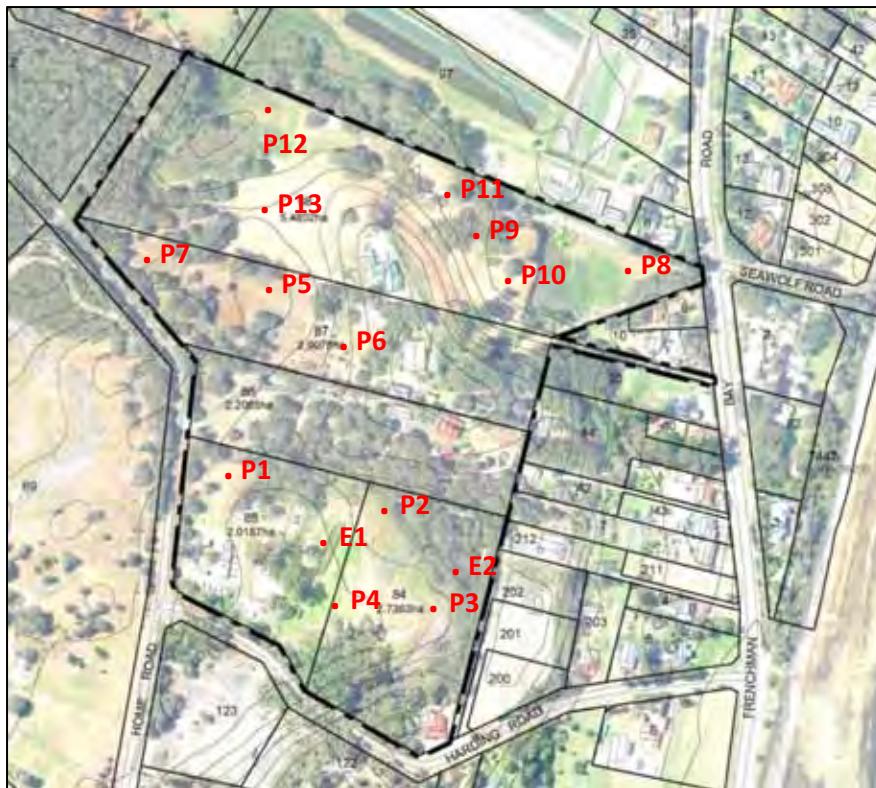
As part of Albany's water supply, groundwater is abstracted from borefields in the South Coast Water Reserve drawing from the Werillup Formation aquifer. The South Coast Water Reserve (Water and Rivers Commission 2001) encompasses most of the subject land which is part of the Priority 3 protection category for land-use planning purposes as discussed earlier in Section 2.3.

## 4.0 SITE ASSESSMENT

Given the broad scale of soil-landscape mapping depicted in Figure 6, some 'on-ground' variation can be expected in soil and landform conditions. Field observations are therefore required to determine the capability of the land to support unsewered development and the actual presence or otherwise of acid sulfate soil.

Site assessment was undertaken during December 7 – 9. In addition to site traverses and associated photography, the field work involved description and sampling of soils from thirteen machine - excavated pits and two existing exposed cuttings. Figure 8 shows the location of the soil sites over an aerial image.

**FIGURE 8: SOIL SITE LOCATIONS**



Soil profile descriptions and photographs are contained within Attachment C.

## 4.1 Land Unit Mapping

### Method

Soil and landform conditions within the subject land were surveyed in general accordance with the methodology outlined in Department of Agriculture and Food publications (van Gool et al 2005, Wells and King 1989). This involved examination of aerial photos followed by the field survey work during December.

The soils were classified in accordance with the WA Soil Group nomenclature (Schoknecht 2002) and consideration of the earlier Great Soil Group (Stace et al 1968) classification system used by Churchward et al (1988).

Site positions were recorded using a GPS unit and slope gradients were measured using a hand-held inclinometer correlated with the 2 m interval contour mapping shown on the base plan provided by Ayton Baesjou (refer Attachment A).

### Results

A site results summary is provided in Table 1. In combination with aerial photo observations, the soil profile conditions were used to refine and subdivide the broad-scale soil landscape mapping (Meerup Mp & Mf, and Owingup) into eleven component 'land units'.

The resulting more-detailed 'land unit' mapping, shown in Figure 9, depicts areas of more homogeneous landform and soil conditions compared to the earlier soil landscape mapping unit (Figure 6). It therefore provides a more accurate spatial framework on which to assess the capability of the land and the suitability of a subdivision design.

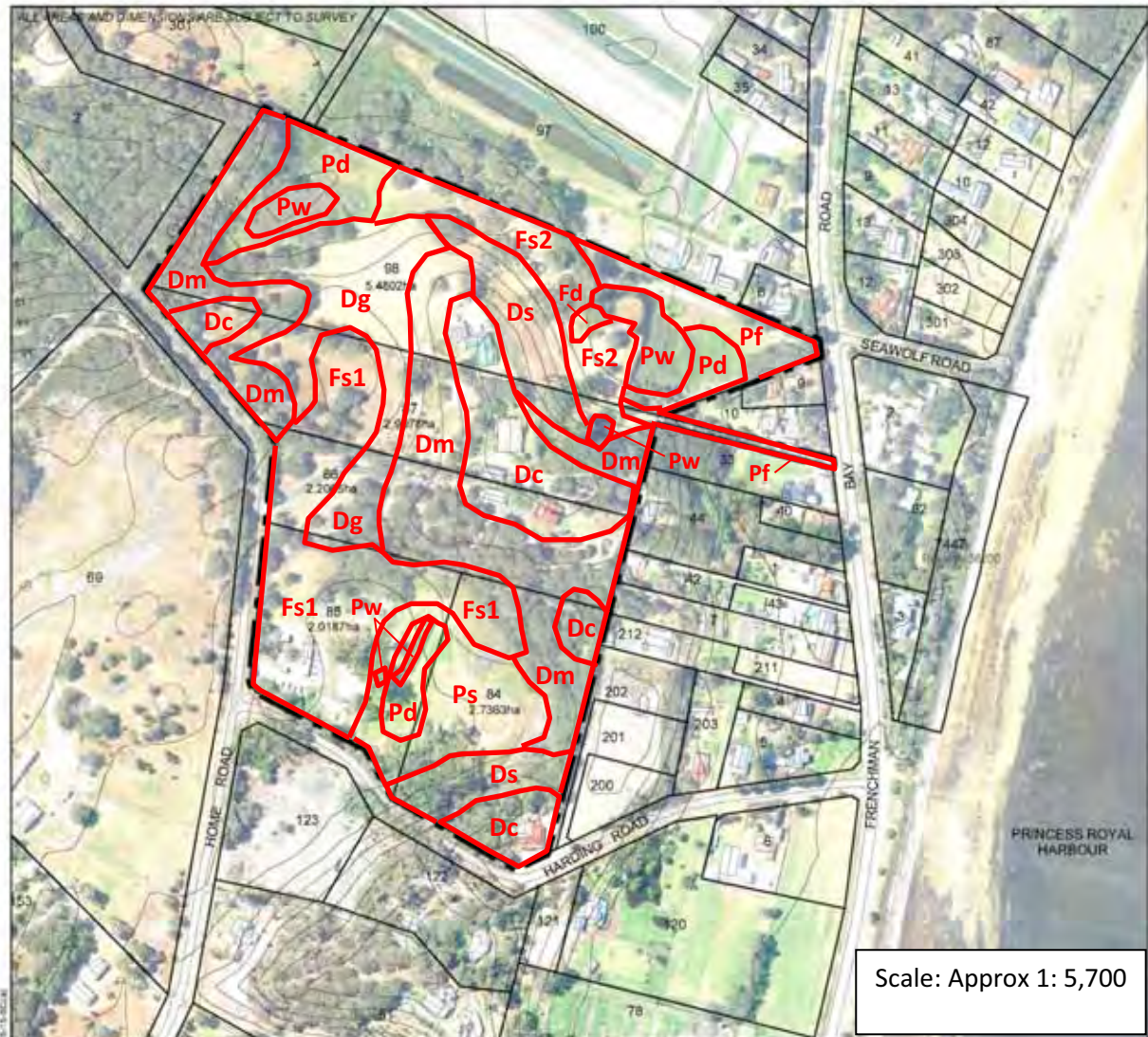
The land units are described in Table 2, and further appreciation of site conditions can be gained by reference to the property photographs which follow Table 2, and by reference to those accompanying the soil pit descriptions in Attachment C.

TABLE 1: SOIL SITE SUMMARY

Site *	Soil Classification**	Landform
P1	<b>Pale deep sand</b> (Podzol; deep siliceous sand).	Well drained, low sandy rise over interdunal flats.
P2	<b>Pale deep sand</b> (Podzol; deep siliceous sand).	Well drained sandplain at margin of interdunal flats or deflation basin.
P3	<b>Pale deep sand</b> (Podzol; calcareous at depth).	Moderately well drained depression within interdunal flat or deflation basin.
P4	<b>Alkaline grey shallow sandy duplex</b> (over calcareous sand).	Imperfectly drained interdunal flat or deflation basin.
P5	<b>Pale deep sand</b> (Podzol; deep siliceous sand).	Well drained interdunal depression.
P6	<b>Pale deep sand</b> (Podzol; calcareous at depth).	Rapidly drained sand dune (moderate sideslope).
P7	<b>Pale deep sand</b> (Podzol; deep siliceous sand).	Rapidly drained sand dune (gentle upper slope).
P8	<b>Disturbed land</b> (Semi-wet soil – siliceous sand mantled by loamy soil fill material)	Imperfectly drained estuarine plain with fill material.
P9	<b>Semi-wet soil</b> (calcareous organic loam over siliceous sand)	Imperfectly drained depression within sandplain margin or footslope area.
P10	<b>Pale deep sand</b> (Podzol; calcareous at depth).	Gently undulating, well drained sandplain margin or footslope area.
P11	<b>Pale deep sand</b> (Podzol; calcareous at depth).	Gently undulating, well drained sandplain margin or footslope area.
P12	<b>Alkaline grey deep sandy duplex</b> (over calcareous sand).	Imperfectly drained estuarine plain fringing wetland area.
P13	<b>Pale deep sand</b> (Podzol; deep siliceous sand).	Gently undulating upland surface of well drained dunes.
E1	<b>Alkaline grey shallow loamy duplex</b> (over calcareous sand).	Imperfectly drained interdunal flat or deflation basin.
E2	<b>Pale deep sand</b> (Podzol; calcareous at depth).	Rapidly drained sand dune (moderate sideslope).

\* Refer Figure 8 \*\* Classification in bold according to DAFWA system (Schoknecht 2002).

**FIGURE 9: LAND UNIT MAPPING**



**Abbreviated Legend – see also Table 2**

<b>Dunes</b>	
<b>Dc</b> Crests; pale deep sands.	<b>Dm</b> Moderate slopes; pale deep sands.
<b>Ds</b> Steep slopes; pale deep sands.	<b>Dg</b> Gentle slopes; pale deep sands.
<b>Footslopes (margins with plain)</b>	
<b>Fs1</b> Sandplain; pale deep sands (siliceous).	<b>Fd</b> Depression; semi-wet organic soil.
<b>Fs2</b> Sandplain; pale deep sands (subsoils calcareous).	
<b>Plains (estuarine plain and portions exposed within deflation basin)</b>	
<b>Ps</b> Pale deep sands (subsoils calcareous).	<b>Pd</b> Duplex soils with clayey marl / l'stone.
<b>Pf</b> Fill; semi-wet soil (loamy fill over sand).	<b>Pw</b> Wetland

TABLE 2. LAND UNIT DESCRIPTIONS

Unit	Description
<b>Dunes</b> – <i>Higher portions of the parabolic sand dunes of the Meerup system</i>	
<b>Dc</b>	Elevated crests with flat to gentle slopes (< 10 % gradient) and well drained pale deep sands. (Podzols - deep leached grey siliceous sand with yellowish brown sandy subsoil which may be calcareous at greater than 2m depth).
<b>Ds</b>	Steeply sloping dune areas (> 20 % gradient) with well drained pale deep sands similar to unit Dc.
<b>Dm</b>	Moderately sloping dune areas (10 - 20 % gradient) with well drained pale deep sands similar to unit Dc although subsoils may be calcareous at 1 – 2 m depth.
<b>Dg</b>	Gently sloping dune areas (3 – 10 % gradient) with well drained pale deep sands similar to unit Dc although subsoils may be calcareous at 1 – 2 m depth.
<b>Footslopes</b> - <i>Lower portions of the parabolic dunes and inter-dune sandplain of the Meerup system in proximity to adjacent areas of estuarine / alluvial plain.</i>	
<b>Fs1</b>	Well drained low sandy rises, inter-dune depressions or sandplain with pale deep sands (Podzols - deep grey siliceous sand with yellowish brown sandy subsoil)
<b>Fs2</b>	Gently undulating, well drained sandplain margin or footslope with pale deep sands similar to unit Fs1 although subsoils may be calcareous at 1 – 2 m depth.
<b>Fd</b>	Imperfectly drained depression within sandplain margin or footslope with semi-wet soil (calcareous organic loam over siliceous sand).
<b>Plains</b> – <i>Flat terrain forming part of the estuarine / alluvial plain (Owingup System) and including portions exposed by deflation hollows within the dunes (Meerup System).</i>	
<b>Ps</b>	Moderately well drained inter-dune flat or deflation basin with pale deep sands (Podzols - deep grey siliceous sand over a very weak iron-organic hardpan and calcareous yellowish brown sandy subsoil). Seasonally high groundwater levels likely to be at 1 – 2 m depth.
<b>Pf</b>	Imperfectly drained area of estuarine plain with semi-wet soil (siliceous sand mantled by loamy soil fill material). Seasonally high groundwater levels likely to be at 1 – 2 m depth.
<b>Pd</b>	Imperfectly drained area of deflation basin or estuarine plain with duplex soils (alkaline sandy or loamy surfaced duplex soils with clayey marl / limestone rubble subsoil layer over buried calcareous sand). Seasonally high groundwater levels likely to be at 1 – 2 m depth.
<b>Pw</b>	Wetland depressions and associated poor- very poorly drained wet soils.



Lot 98 – **Dg** gently undulating upland dune surface



Lot 97- Moderate slopes **Dm** and dune depression **Fs1**



Lot 98 – Peppermint low forest within moderately sloping dunes **Dm**



Lot 97 – **Ds** steep dune slope



Lot 98 –**Ds** leading to sandy footslopes **Fs2**



Lots 84 & 85 - **Ps** sandy deflation basin with wetland.



Lot 85 – Remnant area of Karri forest within unit **Ps**



Lot 98 – Plain unit **Pf** wetlands **Pw** and steep dunes **Ds**



Lot 98 – Wetland **Pw** within area of plain with duplex soils **Pd**.

## 4.2 Land Capability Assessment

'Land capability' is a term referring to the ability of land to support a proposed change in use with minimal risk of degradation to its soil and water resources. In this report, where the subject land is already zoned for rural-residential land use\* the capability assessment relates only to the ability of the land to accommodate on-site effluent disposal systems associated with more intensive subdivision of existing lots.

The assessment is expressed in accordance with the DAFWA's five class system (ranging from very high to very low capability) as described by van Gool et al (2005) and Wells and King (1989), and is based on the methodology outlined in those publications. Site requirements relating to soil depth, permeability, and separation from groundwater and surface waterbodies under the *Draft Country Sewerage Policy* (Gov't of Western Australia 1999) and the more recent Department of Health (2001 & 2012) *Code of Practice* documents are also considered.

Figure 10 provides a qualitative assessment of the capability of the subject land based on this approach. Four colour-coded categories are shown as follows;

### **Green - High capability** (land units Dc, Dg, Fs1 and Fs2)

- Very minor land use limitations and suitable for conventional on-site effluent disposal using septic tanks and leach drains.
- Free draining soils that are well elevated above water-table and deeper subsoil likely to have moderate nutrient retention ability (based on iron content and calcareousness) and these areas are generally not close to surface waterbodies.
- Within unit Fs2 consideration needs to be given adequate setback distance from nearby wetland areas.

### **Yellow - Fair capability** (land units Ps, Pf and Dm).

- Dunal areas (unit Dm) are suitable for conventional on-site effluent disposal using septic tanks and leach drains, although gradients require cut and fill activity and areas left devoid of vegetative cover are subject wind erosion risk.
- Areas of the estuarine plain and deflation basin are constrained for on-site effluent disposal due to proximity to the seasonally high watertable but this can be addressed through use of partially inverted leach drains (within imported soil fill material).
- Alternative effluent disposal systems (with lesser minimum depth to water requirement, and greater nutrient retention ability) can also be used. Within the R1 residential zoned portion of the subject land, Alternative Treatment Units are mandatory under the local planning policy (City of Albany - undated) for areas above 2.64 m AHD (such as unit Ps).

\* A minor portion of Lot 98 near Frenchman Bay Road is zoned Residential R1.

**Orange - Low capability** (land units Ds, Pd and Fd).

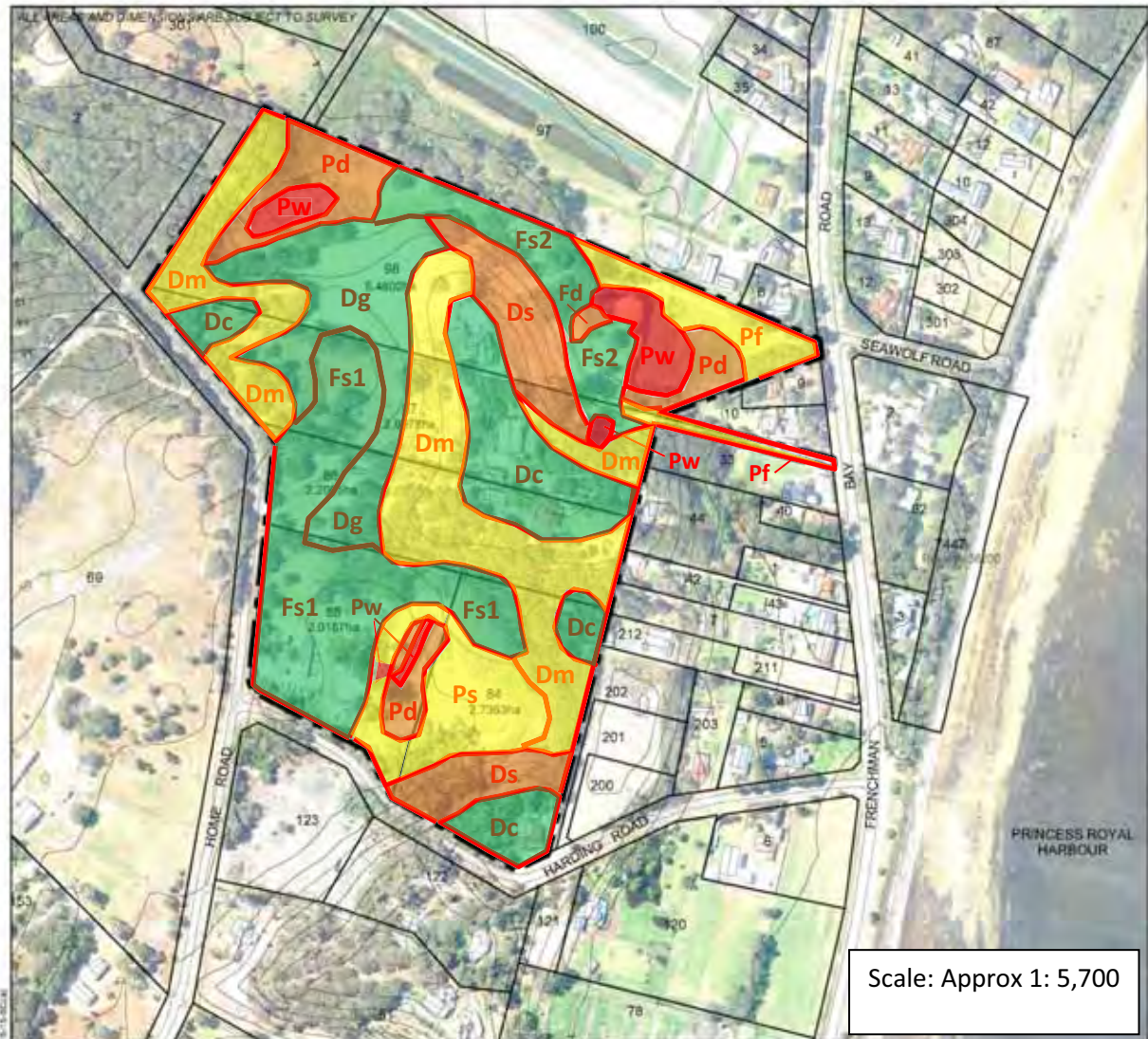
- Significant land use limitations.
- Dunal areas (Ds) are too steep for location of residences and associated on-site effluent disposal systems without significant engineering works, and areas left devoid of vegetative cover are subject to a high risk of slope instability and wind erosion.
- The duplex soil portions of the estuarine plain (Pd), and the organic soils within footslope depression area (Fd), are imperfectly drained and best avoided for on-site effluent disposal. Conventional septic tank systems would need fully inverted leach drains within imported soil fill material to achieve adequate separation from clayey subsoil within unit Pd.
- Setback requirements from nearby wetland areas also need to be considered for both Pd and Fd units, and their relatively limited extent suggests they would easily, and logically, be avoided when positioning building envelopes.
- If building envelope positioning is not able to be achieved outside of these areas (Pd and Fd), use of alternative treatment units should be mandatory.

**Red - Very low capability** (land unit Pw)

- Prohibitive land use limitations.
- Unsuitable for any form of on-site effluent disposal given the surface expression of the watertable and likely local conservation values.
- Underlying buried sediments of the estuarine plain potentially include acid sulfate soils which pose a risk to water quality if they are exposed through attempts to lower wetland watertable levels by drainage.
- Wetland areas (including excavated soaks) require a general 50 m minimum setback for conventional septic tank / leach drain systems, however this might be reduced to 30 m if alternative treatment units are used.
- Existing drains (such as the one along the northern side of the access route from Frenchman Bay Road into Lot 98) require a minimum 6 m setback in relation to positioning of any on-site effluent disposal systems within adjacent land units., (assuming that none of the water in such will be used for livestock consumption).



**FIGURE 10: LAND CAPABILITY ASSESSMENT**



- High capability** – Very minor limitations. Suitable for rural-residential development with conventional septic tanks and leach drains.
- Fair capability** – Moderate limitations associated with risk of wind erosion and need for cut and fill within dunes unit Dm, and need to address proximity to seasonally high groundwater levels within ‘plain’ units where on-site effluent disposal will require partially inverted leach drains (within imported soil fill material) or the use of alternative effluent disposal systems (with lesser minimum depth to water requirement). Unit Pf is within ‘Residential zone R1 where Local Planning Policy mandates the use of alternative effluent disposal systems
- Low capability** – Significant limitations associated with steep slopes and erosion risk within dunes unit Ds, as well as either proximity to groundwater or wetlands, or slow subsoil permeability, within ‘plain’ unit Pd and footslope unit Fd. Generally areas that would be logically avoided for building envelopes.
- Very low capability** – Major limitations in terms of direct impacts of development. Unsuitable for any on-site effluent disposal given watertable exposure, and possible conservation values.

### 4.3 Testing for Acid Sulfate Soil

Testing of soil pH (1:5 water) for most layers of soil at each of the 13 pit and 2 existing exposure sites is reported within the description in Attachment C and shows predominantly neutral to alkaline soil pH and calcareous subsoil which is not suggestive of acid sulfate soil conditions.

Should the proposed subdivision of the land create additional residences within the estuarine plain portion where watertable proximity is a limiting factor, this can be addressed through partially inverted leach drains (Ps) or mandatory use of alternative treatment systems (as required for unit Pf) rather than any form of additional site drainage.

Notwithstanding this, two subsoil areas were sampled for Acid Sulfate Soil testing by the ChemCentre of WA. (Site 8 within estuarine plain land unit Pf, and site 9 within footslope depression land unit Fd).

The SPOCAS (complete suspension peroxide oxidation combined acidity and sulfur) analysis method was used. This is a standardized set of procedures recommended by the (former) Department of Environment and Conservation for assessing the potential for an acid sulfate soil problem in sandy soils in Western Australia.

The results are contained in Attachments D and E and show the buried soils within unit Pf are within action guideline limits and have high excess acid neutralizing capacity. However the result for the smaller area of highly organic soil within unit Fd is less clear-cut as indicated by the email correspondence copied below;

#### Copy of Email Communication from Chemistry Centre

*The second sample (P9) was interesting. It appears to have a significant carbon content (black colour and sample tends to float on liquid). The **TPA is very high but is not supported by the sulphide sulphur content (Spos)**. Based on the Spos value a TPA of approximately 950 moles  $H^+$ /tonne would have been expected if all the sulphide was as  $FeS_2$ , a strongly acid producing sulfide. I **strongly suspect the additional acidity is due to the formation of organic acids from the oxidation of carbon/ carbon compounds**.*

*I feel this is supported by the pHox which at 3.4 is certainly acidic, but not as acidic as expected from the TPA value- organic acids tend to have higher pH values than mineral acids such as  $H_2SO_4$  as they do not readily produce hydrogen ions in solution. Non sulfidic acidity can also come from reactions of iron and manganese compounds in solution but there appeared to be very little iron or manganese in this sample. I believe it **unlikely that the non sulfidic acidity of this sample would be realized in practice** as the hydrogen peroxide oxidation used in the method is much more severe than aerial oxidation.*

It appears therefore that although the result for site 9 is not within the actionable guideline, it is considered likely to be the result of the oxidation of the atypically high soil organic matter content rather than an indication of acid sulphate soil conditions.

Notwithstanding the results which indicate Acid Sulfate Soils are not present beneath the subject land, it is relevant to point out that rural-residential development need not involve any form of deep excavation or drainage to expose or aerate previously buried waterlogged subsoils. Any impacts on the limited 'interesting area' of Fd / site 9 can also be easily avoided by appropriate positioning building envelopes.

## **5.0 CONCLUSIONS**

### **5.1 Capability of the land to support more intensive subdivision**

Figure 10 presents the results of land capability assessment for rural-residential development and provides a spatial framework for preparing a plan of subdivision that adequately responds to the nature and capability of the land.

Subject to the proposed pattern of subdivision enabling positioning of building envelopes for all 'new' lots within areas of either high (green) or fair (yellow) capability, the subject land is capable of supporting additional subdivision to the lot sizes permissible for the relevant land use zoning categories under the planning scheme (City of Albany 2014).

#### Comment in relation to on-site effluent disposal.

For the major portion of the subject land (elevated dunal areas) conventional on-site effluent disposal systems (septic tanks and leach drains) will be appropriate for unsewered rural residential lots.

Should the plan of subdivision result in building envelopes being positioned within lower-lying portions where alternative treatment units are required, setback distances (both vertical and horizontal) are applicable to land application areas for effluent disposal.

Specific setbacks, and the required area for land application of treated effluent, can vary according to the type of system (i.e. a soil absorption system such as leach drains with amended soil, or an irrigation system associated with an aerobic treatment unit, ATU) and according to the method of any irrigation (i.e. surface sprays or drippers, or subsoil drippers).

Attachment F provides a list of alternative treatment systems approved for use in Western Australia. Subject to landowner choice of type of system, installers can determine specific setback requirements (vertical and horizontal) through reference

to the manufacturer's specifications, and the Department of Health's Code of Practice documents (DoH 2001, 2012).

## **5.2 Potential for further development to be affected by Acid Sulfate Soil**

The Albany Local planning Strategy (City of Albany 2010) addresses acid sulphate soils as a land contamination issue and seeks to; *Ensure the suitability of land uses on existing or potential contaminated sites and require hazard reduction mechanisms to prevent harm to human health or the environment.*

A search has been conducted of the State Government's contaminated sites database by planners Ayton Baesjou, who report that there are no records of contaminated sites within the subject land.

Notwithstanding the absence of any need for deep excavation works associated with further subdivision and development of the land for rural-residential use, field survey observations and some laboratory testing of subsoil material within the estuarine plain portion, indicate acid sulfate soils are not present.

An acid sulfate soils self-assessment form is included here as Attachment E should it be considered necessary to refer this report to the Department of Environment Regulation in the context of assessing potential impacts of the proposed subdivision.

## **5.3 Protection of remnant vegetation**

The proposed intensity of further subdivision should not require any significant clearing of the remaining native vegetation within the subject land.

Outside of the parkland cleared areas, where understorey species have been already been depleted, the more intact areas of remaining vegetation occur near the property fringes and are unlikely to be considered prospective sites for building envelopes given the proposed lot sizes.

Subject to site responsive subdivision design, the ALRS objective of protecting areas of remnant vegetation would not be compromised by the development proposal.

## **5.4 Protection of groundwater**

The Local Planning Scheme (City of Albany 2014) takes into consideration the Water Source Protection Plan for the South Coast Water Reserve (Water and Rivers Commission 2001) via designation of a special control area which extends over most of the subject land.

Subject to the plan of subdivision responding to the land capability mapping through appropriate positioning of 'new' building envelopes, and the creation of lots of equal or greater size to those determined by the Water Source Protection Priority Code (P3 – with a possible minimum average of 1 ha), the proposed intensification of rural-residential development in this area should not jeopardize groundwater protection.

## 6.0 REFERENCES

Churchward H. M., McArthur W.M., Sewell P.L., and Bartle G. A. (1988) *Landforms and Soils of the South Coast and Hinterland, Western Australia: Northcliffe to Manypeaks*. CSIRO Division of Water Resources Divisional Report 88/1. April 1988.

City of Albany (2014) *City of Albany Local Planning Scheme No 1*. Initiated at the Ordinary Council Meeting dated 17 February 2009, and prepared by the Department of Planning - Gazettal Date: 28 April 2014

City of Albany (2010) *Albany Local Planning Strategy - Final Draft* adopted by Council 15 June 2010 and endorsed by WAPC on 26 August 2010.

*City of Albany (undated) City of Albany Policy - Frenchman Bay Road Residential Development Area*

Department of Agriculture and Food (2012) *Regional Soil Landscape Mapping – NRM Info* (Online) Available: <http://www.spatial.agric.wa.gov.au/slip>

Department of Environment (2004) *Land use compatibility in Public Drinking Water Source Areas* Water Quality Protection Note WQPN 25. July 2004.

Department of Health (2001) *Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units (ATUs) Serving Single Households*.

Department of Health (2012) *Code of Practice for Onsite Sewage Management Consultation Draft* November 2012

Government of Western Australia (1999) *Draft Country Sewerage Policy* – document endorsed by the Cabinet Committee on Waste Management and released for public comment by Environmental Health Service, Health Department of Western Australia Perth, Western Australia - as amended to 2003.

Government Printer (1985) *Bacteriolytic Treatment of Sewage and Disposal of Effluent and Liquid Waste Regulations*. Extract from Government Gazette (No 12) of 6 February 1985 - Health Act 1911.

Gozzard J. R. (1989) *Albany Part Sheets 2427 I, 2428 II, 2527 IV, & 2528 III, Environmental Geology Series*, Geological Survey of Western Australia.

Sandiford, E.M. and Barrett, S. (2010). *Albany Regional Vegetation Survey, Extent Type and Status*, A project funded by the Western Australian Planning Commission (EnviroPlanning “Integrating NRM into Land Use Planning” and State NRM Program), South Coast Natural Resource Management Inc. and City of Albany for the Department of Environment and Conservation. Unpublished report. Department of Environment and Conservation, Western Australia.

Schoknecht, N. (2002) *Soils Groups of Western Australia - a simple guide to the main soils of Western Australia. Edition 3.* Resource Management Technical Report 246. Agriculture Western Australia, Perth. June 2002.

Stace, H.C.T, Hubble, G.D., Brewer R, Northcote K.H., Sleeman J.R., Mulcahy M.J and Hallsworth, E.G. (1968) *A Handbook of Australian Soils* - published by Rellim Technical Publications, Glenside, South Australia, for the CSIRO and the International Society of Soil Science.

Standards Australia & Standards New Zealand (2012) - AS/NZS 1547:2012 - *On-site Domestic Wastewater Management* - published by SAI Global Limited under license from Standards Australia Limited, Sydney, N.S.W.

van Gool, D. Tille P, and Moore, G (2005) *Land Evaluation Standards for Land Resource Mapping. Guidelines for assessing land qualities and determining land capability in south-west Western Australia.* Resource Management Technical Report 298. Agriculture WA, Perth. December 2005.

Water and Rivers Commission (2001) *South Coast Water Reserve and Limeburners Creek Catchment Area Water Source Protection Plan.* Water and Rivers Commission Report WRP 44 2001.

Western Australian Planning Commission (2008) *Acid Sulfate Soils Planning Guidelines.*

Wells, M.R. and King, P.D. (1989) *Land Capability Assessment Methodology for Rural-Residential and Associated Agricultural Land Uses.* Land Resources Series No. 1. Western Australian Department of Agriculture, Perth.

**ATTACHMENT A**  
**SITE CHARACTERISTICS – BASE PLAN**

# SITE CHARACTERISTICS

Lots 84, 85 Harding Road &  
Lots 86, 87 & 98 Home Road  
Robinson, City of Albany

ALL AREAS AND DIMENSIONS ARE SUBJECT TO SURVEY



**LEGEND**

- Subject Land
- Existing Vegetation
- Existing Buildings

N

ORIG A3  
SCALE 1:3000

0 15 30 45 60 75



**ATTACHMENT B**  
**ARVS VEGETATION UNIT DESCRIPTIONS**

**1 Coastal Yate Woodland.**

**No. of relevés** 7 **Mean spp. richness** 11.7 **Area** 419 ha **% of Rem. Veg.** 0.9 **% in IUCN Reserve 1-IV** 21.4

**Description**

Coastal Yate Woodland is found along the coastal fringe in protected swales, slopes, crests and flats on grey sand. It is dominated by an upper canopy of *Eucalyptus cornuta* over a sparse secondary tree stratum of *Agonis flexuosa*. There is usually one shrub layer, a tall open scrub or open heath and common dominant shrubs include *Hibbertia furfuracea*, *Bossiaea linophylla* and *Spyridium globulosum*. Ground cover is frequently sparse and there is a high degree of variability in sedge dominance with *Desmocladius flexuosus* most common.

This unit is one of four units that equate to “Scrub heath on dunes” as mapped by Beard (1979), and described as “Peppermint Low Woodland and Scrub-heath”. The other units are Peppermint Low Forest (2), Coastal Heath (3) and Limestone Coastal Heath (4). This unit shares many species with Peppermint Low Forest (2), with which it merges, but differs in the absence of *Adenanthos sericeus* and presence of *Hibbertia furfuracea*. It is usually found in more protected and damper sites. In some areas this unit merges with Karri Forest (9).

**Comments**

Infestations of *\*Dipogon lignosus* (Dolichos Pea) and *\*Zantedeschia aethiopicum* (Arum Lily) were observed within this unit in the Little Grove and Robinson areas. This unit is largely restricted to coastal and near coastal consolidated dunes with occasional occurrences along near coastal drainage lines, though one site near Bornholm was recorded on a hill top. The distribution of dominant understorey species suggest that this unit reaches its eastern limit just east of the survey area (the eastern limit of *Hibbertia furfuracea* and *Hardenbergia comptoniana*) and it probably extends to the west along the coastal fringe of the Warren Botanical District. Direct comparison with units described in the Walpole region by Wardell-Johnson and Williams (1996) is difficult, though it is likely that this unit falls within their community group A4.

This unit is naturally restricted to the coastal fringe. The only other *Eucalyptus cornuta* dominated unit within the survey area, Unit 24, is restricted to granite outcrops.

**Floristic Summary**

Lifeform	%cover	Species
Trees 10-30m	S-M	<i>Eucalyptus cornuta</i>
Trees <10m	V	<i>Agonis flexuosa</i>
Shrubs >2m	M	<i>Hibbertia furfuracea</i> , <i>Bossiaea linophylla</i> , <i>Spyridium globulosum</i>
Shrubs 1-2m		<i>Leucopogon obovatus</i> , <i>Hibbertia cuneiformis</i> , <i>Pimelea clavata</i>
Shrubs <1m		<i>Tremandra stelligera</i> , <i>Rhagodia baccata</i>
Sedges/rushes	Nil -V	<i>Desmocladius flexuosus</i> , <i>Lepidosperma densiflora</i> , <i>Lepidosperma densiflora</i> forma proliferous, <i>Lepidosperma effusum</i> , <i>Lepidosperma effusum</i> forma small, <i>Lepidosperma gladiatum</i> , <i>Ficinia nodosa</i>
Herbs		<i>Billardiera fusiformis</i> , <i>Clematis pubescens</i> , <i>Stylidium adnatum</i> , <i>Opercularia hispidula</i> , <i>Hardenbergia comptoniana</i>
Grasses		<i>Tetrarrhena laevis</i>

**Key identifying Features**

- Canopy of *Eucalyptus cornuta* above *Agonis flexuosa* and shrubland dominated by *Hibbertia furfuracea*, *Bossiaea linophylla* and *Spyridium globulosum*.
- Coastal distribution on sand.

**Conservation species** None recorded

## 2 Peppermint Low Forest

**No. of relevés** 10 **Mean spp. richness** 10 **Area** 1232 ha **% of Rem. Veg.** 2.8 **% in IUCN Reserve 1-IV** 23.0

### Description

Peppermint Low Forest is restricted to the coastal dune system where it commonly occurs in swales and flats. A dense canopy of *Agonis flexuosa* (Peppermint) is characteristic of this unit with the structure varying from a closed heath on exposed coastal slopes to a low closed forest in swales with shrub species often sub or co-dominant in exposed areas. A tall shrubland of *Spyridium globulosum*, *Adenanthos sericeus*, *Bossiaea linophylla* and *Leucopogon obovatus* is usually present over an open or closed sedgeland with *Rhagodia baccata*, *Hardenbergia comptoniana* and *Clematis pubescens* common.

This unit forms a mosaic with Coastal Heath (3), Limestone Coastal Heath (5), Coastal *Banksia ilicifolia*/Peppermint Low Woodland (4) and Coastal Yate Woodland (1) and appears to be the climax of Coastal Heath (Beard 1979).

Three sub-units are described:

**2a Peppermint Low Forest** occurs on coastal dunes and swales and is described above.

**2b Peppermint/Eucalyptus megacarpa Low Forest** occurs along minor drainage lines on lower slopes of the coastal dunes. *Eucalyptus megacarpa* is co-dominant in the upper strata and *Lepidosperma effusum* and *Pteridium esculentum* are common.

**2c Peppermint Low Forest/Lepidosperma gladiatum Sedgeland** occurs in the swale behind the fore dune and occasionally in deep valleys on the inland dunes. *Lepidosperma gladiatum*, *Desmocladius flexuosus*, *Rhagodia baccata* and *Hardenbergia comptoniana* are prominent understorey species with *Hibbertia cuneiformis* and *Pimelea clavata* common shrubs.

### Comments

This unit also includes *Agonis flexuosa* thickets that have invaded other units. In the Little Grove and Big Grove area, *A. flexuosa* is invading what was once *Banksia littoralis*/Woodland *Melaleuca incana* Shrubland (44) as indicated by the dead and dying *Banksia littoralis* and the presence of scattered species indicative of winter wet areas such as *Villarsia parnassiifolia*, *Sphenotoma gracilis* and *Melaleuca incana* under dense canopies of *A. flexuosa*. This invasion suggests that a significant and prolonged lowering of the water table may have occurred. Anecdotal evidence indicates that large areas of Little Grove and Big Grove were more swampy forty to fifty years ago (T. Allen, pers. comm.).

Many infestations of *\*Acacia longifolia* were observed within this unit, particularly in the Little Grove area. *Agonis flexuosa* occurs as a lower tree stratum or as a co-dominant in a number units (1, 4, 9 and 10) and where this species occurs as stands over pasture, identification of the unit has been based on the nearest intact vegetation.

Peppermint Low Forest is common along the south west coastline though those with *Adenanthos sericeus* in the understorey (2a) are restricted to areas around Albany as this species only occurs from the Nullaki Peninsula to Waychinnicup with an outlying population at Warriup. *Eucalyptus megacarpa* and *Hardenbergia comptoniana* reach their eastern limit near Mt Manypeaks and Cheyne Beach respectively (DEC 2009).

### Floristic Summary

Lifeform	%cover	Species
Mallee/Tree <8m	M-D	<i>Agonis flexuosa</i> +/- <i>Eucalyptus megacarpa</i> , +/- <i>Hakea oleifolia</i>
Shrubs 1m to >2m	S	<i>Spyridium globulosum</i> , <i>Adenanthos sericeus</i> , <i>Bossiaea linophylla</i> , <i>Leucopogon obovatus</i> , <i>Hibbertia cuneiformis</i>
Shrubs 0.5-1m	V	<i>Rhagodia baccata</i>
Sedges/rushes	V-D	<i>Desmocladius flexuosus</i> , <i>Lepidosperma densiflora</i> forma proliferous, <i>Lepidosperma gladiatum</i> , <i>Lepidosperma effusum</i>
Herbs	V	<i>Hardenbergia comptoniana</i> , <i>Clematis pubescens</i> , <i>Opercularia hispidula</i> , <i>Billardiera fusiformis</i>

### Key identifying Features

- Thickets with *Agonis flexuosa* dominant or co-dominant.
- Occurs on sand in coastal areas

**Conservation species** None recorded

## 9 Karri Forest

**No. of relevés** 11 **Mean spp. richness** 10.6 **Area** 885 ha **% of Rem. Veg.** 2.0 **% in IUCN Reserve 1-IV** 1.6

### Description

Karri Forest is found in the southern and south western areas of the survey area with isolated pockets along the north-west boundary. It is distinguished by the dominance of *Eucalyptus diversicolor* (Karri) trees in the canopy. Three sub-units are described, differing in floristic composition, landform and soil type and distribution. However, two of these sub-units were poorly sampled and further survey is required to clarify floristic differences.

Sub-units:

**9a Coastal Karri Forest** is found in a scattered band on the flats and lower slopes north of the coastal hills from Goode Beach to Torbay Townsite, with isolated pockets occurring south of Manypeaks. It often occurs on grey sand often overlying limestone and typically it is an open forest, occasionally reaching > 30 m in height. *Eucalyptus cornuta* is often a sub-dominant canopy species and *Agonis flexuosa* forms an open secondary tree stratum. The understorey shrubs vary from a closed tall scrub on very moist sites to a tall open scrub or open heath over open sedgeland. Common species include *Chorilaena quercifolia*, *Trymalium odoratissimum*, *Thomasia solanacea*, *Hibbertia furfuracea*, *Bossiaea linophylla*, *Tremandra stelligera*, *Lepidosperma effusum*, *Ficinia nodosa*, *Gahnia sclerioides* and *Desmocladius flexuosus*. The climbers *Hardenbergia comptoniana*, *Clematis pubescens* and *Billardiera variifolia* are frequently prominent. This sub-unit often grades into *Eucalyptus cornuta* Open Forest on drier sites.

### 9b Karri Tall Open Forest

This sub-unit is found on the deep red Karri loams on the hills around Torbay, Bornholm and Torbay townsite. This unit was poorly sampled (1 relevé) and is differentiated from the Coastal Karri sub-unit by the presence and/or dominance of *Allocasuarina decussata* and/or *Acacia pentadenia* in the lower tree/upper shrub strata and the absence of *Thomasia solanacea* and *Templetonia retusa*. This sub-unit occasionally merges with sub-unit 9a on the lower slopes/flats of hills near Bornholm and Torbay townsite where colluvial sands occur. An unsurveyed pocket in the Goode Beach area also appears transitional with subunit 9a with *Acacia pentadenia* present (WA Herbarium records). Other common species include *Agonis flexuosa*, *Hibbertia furfuracea*, *Trymalium odoratissimum* and *Bossiaea linophylla*. This unit often occurs upslope of Marri/Jarra Forest/Peppermint Woodland (10) and appears to have close floristic affinities with Karri forests in the Denmark Walpole/Manjimup area with *Allocasuarina decussata* and *Acacia pentadenia* in the understorey.

### 9c Redmond Karri Forest

This sub-unit was recorded on the north west boundary of the survey area along a broad valley on skeletal soils overlying a very dark exposed lateritic rock. All areas had been recently burnt (2002) and post fire opportunistic species including *Rulingia corylifolia*, *Acacia pulchella* and *Opercularia hispidula* were dominant beneath a *Bossiaea linophylla* Tall Open Scrub. Other species present were *Leucopogon obovatus*, *Cyathochaeta avenacea*, *Ficinia nodosa*, *Opercularia hispidula*, *Pteridium esculentum*, *Xanthosia candida* and *Tetrarrhena laevis*.

### Comments

The Karri forests observed on several previously cleared remnants on the plains south of Manypeaks have regenerated well following fencing and the presence of *Chorilaena quercifolia* and *Templetonia retusa* suggest they belong to sub-unit 9a.

Karri forests are common throughout the Warren Botanical District with the eastern limit occurring on the slopes of Mt Manypeaks just east of the survey area. An outlying population occurs in the Porongurup Range north of the context area. The floristic similarity of Karri forests outside the study area to the sub-units recorded here has not been assessed. The occurrence of sub-unit 9c on skeletal dark lateritic soil may be unusual as Karri forests are typically found on deep loam or sand.

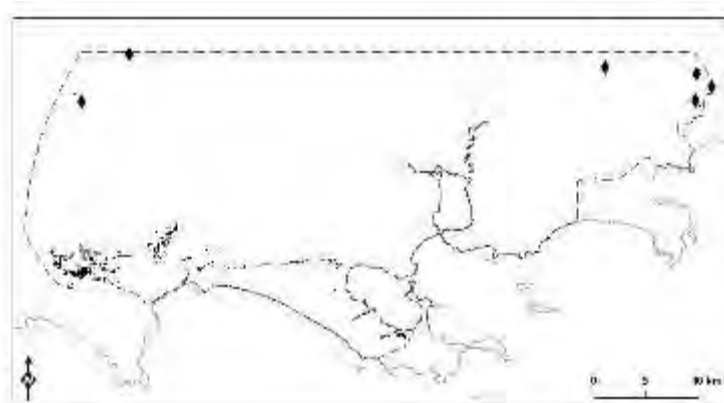
**Floristic Summary**

Lifeform	%cover	Species
Trees 10-30m	M	<i>Eucalyptus diversicolor</i> , <i>Eucalyptus cornuta</i>
Trees <10 m	V	<i>Agonis flexuosa</i> , <i>Allocasuarina decussata</i> , <i>Hakea oleifolia</i>
Shrubs >2m	S-M	<i>Trymalium odoratissimum</i> , <i>Chorilaena quercifolia</i> , <i>Thomasia solanacea</i> , <i>Hibbertia furfuracea</i> , <i>Bossiaea linophylla</i> , <i>Templetonia retusa</i> , <i>Acacia pentadenia</i> , <i>Rulingia corylifolia</i>
Shrubs <2m	V	<i>Acacia alata</i> , <i>Tremandra stelligera</i>
Sedges/rushes	V	<i>Lepidosperma effusum</i> , <i>Ficinia nodosa</i> , <i>Desmocladus flexuosus</i> , <i>Lepidosperma squamatum</i> , <i>Lepidosperma densiflora</i>
Herbs	V	<i>Opercularia hispidula</i> , <i>Hardenbergia comptoniana</i> , <i>Clematis pubescens</i> , <i>Billardiera variifolia</i> , <i>Lagenophora huegelii</i> , <i>Pteridium esculentum</i>
Grasses		<i>Tetrarrhena laevis</i> , <i>Poa porphyroclados</i> , <i>Microlaena stipoides</i>

**Key identifying Features**

- Canopy of *Eucalyptus diversicolor* (Karri).

**Conservation species** *Thomasia solanacea* P3, *Gahnia sclerioides* P3





**Unit 9 Karri Forest**

**ATTACHMENT C**  
**SOIL PROFILE DESCRIPTIONS AND**  
**PHOTOGRAPHS**



# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 1</b> <b>Lot 85 50 H 577015 m E; 6122659 m N</b>	<b>DAFWA Soil landscape mapping:</b> Meerup flats Mf	<b>Land unit: Fs1</b>										
	<b>Landform:</b> Well drained, low sandy rise (up to 6 % gradient) over interdunal flats.											
	<b>WA Soil Group:</b> <i>Pale deep sand</i> (Deep siliceous podzol)											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (cm)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0 – 45</td> <td>Very dark grey (10YR 3/1) <b>loamy sand</b>, dry; clear boundary to;</td> </tr> <tr> <td style="text-align: center;">45 - 90</td> <td>Dark grey (10YR 4/1) <b>sand</b>, dry; clear boundary to;</td> </tr> <tr> <td style="text-align: center;">90 - 140</td> <td>Light grey (10YR 7/1) <b>sand</b>, dry, neutral (pH 7.3), non-saline (ECe 60 mS/m) clear boundary to;</td> </tr> <tr> <td style="text-align: center;">140-180+</td> <td>Dark brown (7.5YR 3/3) fine <b>sand</b>, (very weak pan), dry, slightly acid (pH 6.2), non-saline (ECe 77 mS/m).</td> </tr> </tbody> </table>		Depth (cm)	Description	0 – 45	Very dark grey (10YR 3/1) <b>loamy sand</b> , dry; clear boundary to;	45 - 90	Dark grey (10YR 4/1) <b>sand</b> , dry; clear boundary to;	90 - 140	Light grey (10YR 7/1) <b>sand</b> , dry, neutral (pH 7.3), non-saline (ECe 60 mS/m) clear boundary to;	140-180+	Dark brown (7.5YR 3/3) fine <b>sand</b> , (very weak pan), dry, slightly acid (pH 6.2), non-saline (ECe 77 mS/m).	
Depth (cm)	Description											
0 – 45	Very dark grey (10YR 3/1) <b>loamy sand</b> , dry; clear boundary to;											
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90 - 140	Light grey (10YR 7/1) <b>sand</b> , dry, neutral (pH 7.3), non-saline (ECe 60 mS/m) clear boundary to;											
140-180+	Dark brown (7.5YR 3/3) fine <b>sand</b> , (very weak pan), dry, slightly acid (pH 6.2), non-saline (ECe 77 mS/m).											
<p><b>Indicative subsoil permeability and drainage class</b> (at leach drain depth): &gt; 3.0 m/d (Rapidly drained).  <b>Depth to water:</b> Not encountered, likely to be &gt; 3.5 m based on topography and geomorphology.</p> <p><b>Comment:</b> Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have limited nutrient retention ability but site is not close to water table or surface waterbodies).</p>												

# REPORT ITEM DIS021 REFERS



Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 2</b> <b>Lot 84</b> 50 H 577130 m E; 6122649 m N	<b>DAFWA Soil landscape mapping:</b> Meerup flats Mf	<b>Land unit: Fs1</b>										
		<b>Landform:</b> Well drained sandplain (< 2% gradient) at margin of interdunal flats or deflation basin.										
		<b>WA Soil Group:</b> <i>Pale deep sand</i> (Deep siliceous podzol)										
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (cm)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0 - 25</td> <td>Very dark grey (10YR 3/1) <b>loamy sand</b>, dry; clear boundary to;</td> </tr> <tr> <td style="text-align: center;">25 - 50</td> <td>Dark grey (10YR 4/1) <b>sand</b>, dry; clear boundary to;</td> </tr> <tr> <td style="text-align: center;">50 - 95</td> <td>Light grey (10YR 7/1) <b>sand</b>, dry, neutral (pH 7.3), non-saline (ECe 60 mS/m) clear boundary to;</td> </tr> <tr> <td style="text-align: center;">95 – 180+</td> <td>Dark brown (7.5YR 3/3) fine <b>sand</b>, dry.</td> </tr> </tbody> </table>	Depth (cm)	Description	0 - 25	Very dark grey (10YR 3/1) <b>loamy sand</b> , dry; clear boundary to;	25 - 50	Dark grey (10YR 4/1) <b>sand</b> , dry; clear boundary to;	50 - 95	Light grey (10YR 7/1) <b>sand</b> , dry, neutral (pH 7.3), non-saline (ECe 60 mS/m) clear boundary to;	95 – 180+	Dark brown (7.5YR 3/3) fine <b>sand</b> , dry.
Depth (cm)	Description											
0 - 25	Very dark grey (10YR 3/1) <b>loamy sand</b> , dry; clear boundary to;											
25 - 50	Dark grey (10YR 4/1) <b>sand</b> , dry; clear boundary to;											
50 - 95	Light grey (10YR 7/1) <b>sand</b> , dry, neutral (pH 7.3), non-saline (ECe 60 mS/m) clear boundary to;											
95 – 180+	Dark brown (7.5YR 3/3) fine <b>sand</b> , dry.											
<p><b>Indicative subsoil permeability and drainage class</b> (at leach drain depth): &gt; 3.0 m/d (Rapidly drained).  <b>Depth to water:</b> Not encountered, likely to be &gt; 2.5 m based on topography and geomorphology.</p> <p><b>Comment:</b> Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have moderate nutrient retention ability and site is not close to water table or surface waterbodies).</p>												



# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<p><b>Site Number: Pit 3</b>  <b>Lot 84</b> 50 H 577188 m E; 6122562 m N</p>	<p><b>DAFWA Soil landscape mapping:</b> Meerup flats Mf over Owingup flats OW</p>	<p><b>Land unit: Ps</b></p>												
		<p><b>Landform:</b> Moderately well drained depression within interdunal flat or deflation basin.</p>												
	<p><b>WA Soil Group: <i>Pale deep sand</i></b>          (Podzol; calcareous at depth).</p> <table border="1" data-bbox="805 1041 1484 1736"> <thead> <tr> <th data-bbox="805 1041 949 1131">Depth (cm)</th> <th data-bbox="949 1041 1484 1131">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="805 1131 949 1232">0 – 10</td> <td data-bbox="949 1131 1484 1232">Very dark grey (10YR 3/1) <b>loamy sand</b>, dry; clear boundary to;</td> </tr> <tr> <td data-bbox="805 1232 949 1332">10 – 25</td> <td data-bbox="949 1232 1484 1332">Dark grey (10YR 4/1) <b>sand</b>, dry; clear boundary to;</td> </tr> <tr> <td data-bbox="805 1332 949 1433">25 – 95</td> <td data-bbox="949 1332 1484 1433">Light grey (10YR 7/1) <b>sand</b>, dry, clear boundary to;</td> </tr> <tr> <td data-bbox="805 1433 949 1534">95 – 155</td> <td data-bbox="949 1433 1484 1534">Dark brown (7.5YR 3/3) <b>sand</b>, (very weak pan), calcareous, dry, gradual boundary to;</td> </tr> <tr> <td data-bbox="805 1534 949 1736">155-180+</td> <td data-bbox="949 1534 1484 1736">Dark brown (7.5YR 3/3) <b>sand</b>, calcareous, moist, moderately alkaline (pH 8.0), moderately saline (ECe 474 mS/m).</td> </tr> </tbody> </table>		Depth (cm)	Description	0 – 10	Very dark grey (10YR 3/1) <b>loamy sand</b> , dry; clear boundary to;	10 – 25	Dark grey (10YR 4/1) <b>sand</b> , dry; clear boundary to;	25 – 95	Light grey (10YR 7/1) <b>sand</b> , dry, clear boundary to;	95 – 155	Dark brown (7.5YR 3/3) <b>sand</b> , (very weak pan), calcareous, dry, gradual boundary to;	155-180+	Dark brown (7.5YR 3/3) <b>sand</b> , calcareous, moist, moderately alkaline (pH 8.0), moderately saline (ECe 474 mS/m).
Depth (cm)	Description													
0 – 10	Very dark grey (10YR 3/1) <b>loamy sand</b> , dry; clear boundary to;													
10 – 25	Dark grey (10YR 4/1) <b>sand</b> , dry; clear boundary to;													
25 – 95	Light grey (10YR 7/1) <b>sand</b> , dry, clear boundary to;													
95 – 155	Dark brown (7.5YR 3/3) <b>sand</b> , (very weak pan), calcareous, dry, gradual boundary to;													
155-180+	Dark brown (7.5YR 3/3) <b>sand</b> , calcareous, moist, moderately alkaline (pH 8.0), moderately saline (ECe 474 mS/m).													
<p><b>Indicative subsoil permeability and drainage class</b> (at leach drain depth): &gt; 3.0 m/d (Rapidly drained).  <b>Depth to water:</b> 180 cm.</p> <p><b>Comment:</b> Suitable for conventional on-site effluent disposal subject to use of partially inverted leach drains (within imported soil fill material) to achieve adequate separation from groundwater. Also suitable for alternative effluent disposal systems (with lesser minimum depth to water requirement).</p>														

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 4</b> Lot 85 50 H 577095 m E; 6122557 m N	<b>DAFWA Soil landscape mapping:</b> Meerup flats Mf over Owingup flats OW	<b>Land unit: Pd</b>
------------------------------------------------------------------	----------------------------------------------------------------------------	----------------------



**Landform:** Imperfectly drained interdunal flat (**partly obscured at photo left**) or deflation basin.

	<b>WA Soil Group: Alkaline grey shallow sandy duplex</b> - over buried calcareous sand.	
	<b>Depth (cm)</b>	<b>Description</b>
	0 - 25	Very dark grey (10YR 3/1) <b>loamy sand</b> , calcareous, slightly moist; clear boundary to;
	25 – 65	Light brownish grey (10YR 6/2) <b>Clay loam, sandy</b> , calcareous, slightly moist; moderately alkaline (pH 8.8), non-saline (ECe 116 mS/m); clear to;
	65 - 80	Light yellowish brown (10YR 6/4) <b>sand</b> , with few black mottles (cutans), calcareous; slightly moist; gradual boundary to;
	80 - 180	Greyish brown (10YR 5/2) <b>sand</b> , calcareous, with few black mottles (cutans), slightly moist; strongly alkaline (pH 9.0), non-saline (ECe 165 mS/m); gradual boundary to;
180-200+	Very dark greyish brown (10YR 3/2) <b>clayey sand</b> , calcareous, moist.	

**Indicative subsoil permeability and drainage class** (at leach drain depth): 0.12 – 0.5 m/d (Imperfectly drained). **Depth to water:** 190 cm.

**Comment:** Best avoided as generally not suitable for conventional on-site effluent disposal due to need for fully inverted leach drains within imported soil fill material to achieve adequate separation from clayey subsoil near surface and need for setback from soakage dam. Possibly suitable for alternative effluent disposal systems (with lesser minimum depth to water requirement).

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 5</b> <b>Lot 87 50 H 577048 m E; 6122828 m N</b>	<b>DAFWA Soil landscape mapping: Meerup flats Mf</b>	<b>Land unit: Fs1</b>
-------------------------------------------------------------------------	------------------------------------------------------	-----------------------



**Landform:** Well drained interdunal depression (< 2% gradient).





<b>WA Soil Group: <i>Pale deep sand</i></b> (Deep siliceous podzol)	
Depth (cm)	Description
0 – 20	Very dark grey (10YR 3/1) <b>loamy sand</b> , dry; strongly acid (pH 5.4), non-saline (ECe 110 mS/m); gradual boundary to;
20 - 100	Grey (10YR 5/1) <b>sand</b> , dry, moderately alkaline (pH 8.6), non-saline (ECe 111 mS/m); clear to;
100 –135	Very dark brown (7.5YR 2.5/2) <b>sand</b> , dry, neutral (pH 7.6), non-saline (ECe 56 mS/m); clear to;
135– 190+	Pale brown (10YR 6/3) <b>sand</b> , with few black mottles (cutans), slightly moist, neutral (pH 7.4), non-saline (ECe 87 mS/m).

**Indicative subsoil permeability and drainage class** (at leach drain depth): > 3.0 m/d (Rapidly drained).  
**Depth to water:** Not encountered here but > 3.0 m based on observation in adjacent excavated area.

**Comment:** Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have moderate nutrient retention ability and site is not close to water table or surface waterbodies).

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 6</b> <b>Lot 87 50 H 577101 m E; 6122786 m N</b>	<b>DAFWA Soil landscape mapping: Meerup dunes Mp</b>	<b>Land unit: Dm</b>												
		<p><b>Landform:</b> Rapidly drained sand dune (moderate sideslope, 14 % gradient). <u>Note</u> Steeper bank is edge of excavated terrace</p>												
		<p><b>WA Soil Group: <i>Pale deep sand</i></b> (Podzol; calcareous at depth).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">Depth (cm)</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>0 – 20</td> <td>Dark grey (10YR 4/1) <b>sand</b>, dry; clear boundary to;</td> </tr> <tr> <td>20 - 70</td> <td>Light grey (10YR 7/2) <b>sand</b>, dry, clear boundary to;</td> </tr> <tr> <td>70 – 120</td> <td>Yellowish brown (10YR 5/6) <b>sand</b>, dry; moderately alkaline (pH 8.0), non saline (ECe 51 mS/m.); diffuse boundary to;</td> </tr> <tr> <td>120 - 185</td> <td>Yellowish brown (10YR 5/6) <b>sand</b>, with few bleached mottles, dry; gradual boundary to;</td> </tr> <tr> <td>185–220+</td> <td>Very pale brown (10YR 7/4) <b>sand</b>, calcareous, strongly alkaline (pH 9.2), non saline (ECe 99 mS/m).</td> </tr> </tbody> </table>	Depth (cm)	Description	0 – 20	Dark grey (10YR 4/1) <b>sand</b> , dry; clear boundary to;	20 - 70	Light grey (10YR 7/2) <b>sand</b> , dry, clear boundary to;	70 – 120	Yellowish brown (10YR 5/6) <b>sand</b> , dry; moderately alkaline (pH 8.0), non saline (ECe 51 mS/m.); diffuse boundary to;	120 - 185	Yellowish brown (10YR 5/6) <b>sand</b> , with few bleached mottles, dry; gradual boundary to;	185–220+	Very pale brown (10YR 7/4) <b>sand</b> , calcareous, strongly alkaline (pH 9.2), non saline (ECe 99 mS/m).
Depth (cm)	Description													
0 – 20	Dark grey (10YR 4/1) <b>sand</b> , dry; clear boundary to;													
20 - 70	Light grey (10YR 7/2) <b>sand</b> , dry, clear boundary to;													
70 – 120	Yellowish brown (10YR 5/6) <b>sand</b> , dry; moderately alkaline (pH 8.0), non saline (ECe 51 mS/m.); diffuse boundary to;													
120 - 185	Yellowish brown (10YR 5/6) <b>sand</b> , with few bleached mottles, dry; gradual boundary to;													
185–220+	Very pale brown (10YR 7/4) <b>sand</b> , calcareous, strongly alkaline (pH 9.2), non saline (ECe 99 mS/m).													
<p><b>Indicative subsoil permeability and drainage class</b> (at leach drain depth): &gt; 3.0 m/d (Rapidly drained).  <b>Depth to water:</b> Not encountered, likely to be &gt; 3.5 m based on topography and geomorphology.</p> <p><b>Comment:</b> Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have moderate nutrient retention ability and site is not close to water table or surface waterbodies).</p>														

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 7</b> Lot 87 50 H 576958 m E; 6122855m N	<b>DAFWA Soil landscape mapping:</b> Meerup dunes Mp	<b>Land unit: Dc</b>
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**Landform:** Rapidly drained sand dune (gentle upper slope, 7 % gradient).



<b>WA Soil Group: <i>Pale deep sand</i></b> (Deep siliceous podzol)	
Depth (cm)	Description
0 - 40	Dark grey (10YR 4/1) <b>sand</b> , dry, gradual boundary to;
40 – 110	Grey (10YR 5/1) <b>sand</b> , dry, moderately acid (pH 5.6), non-saline (ECe 56 mS/m); gradual boundary to;
110 - 165	Light grey (10YR 7/1) <b>sand</b> , dry; clear boundary to;
165–210+	Dark yellowish brown (10YR 4/4) <b>sand</b> , mottled, dry, slightly acid (pH 6.5), non-saline (ECe 48 mS/m).

**Indicative subsoil permeability and drainage class** (at leach drain depth): > 3.0 m/d (Rapidly drained).  
**Depth to water:** Not encountered, likely to be > 3.5 m based on topography and geomorphology.

**Comment:** Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have moderate nutrient retention ability and site is not close to water table or surface waterbodies).

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 8</b> Lot 98 50 H 577352 m E; 6122837 m N	<b>DAFWA Soil landscape mapping:</b> Owingup flats OW	<b>Land unit: Pf</b>
------------------------------------------------------------------	-------------------------------------------------------	----------------------



**Landform:** Imperfectly drained estuarine plain (< 2% gradient) with fill material.



**WA Soil Group: Disturbed land / Semi-wet soil**  
 (Loamy fill material over siliceous sand)

Depth (cm)	Description
0 – 60	Brown (10YR 4/3/) <b>loamy sand</b> , with few ferruginous gravels, (fill material) dry, neutral (pH 7.2), non-saline (ECe 57 mS/m); clear boundary to;
60 - 105	Very dark greyish brown (10YR 3/2) <b>clay loam fine sandy</b> , (fill material) calcareous, dry, moderately alkaline (pH 8.4), non-saline (ECe 142 mS/m); clear boundary to;
105 -150	Dark grey (10YR 4/1) <b>sand</b> , (former land surface?) dry, moderately alkaline (pH 8.5), non-saline (ECe 132 mS/m); clear boundary to;
150 -170+	Grey (10YR 5/1) <b>clayey sand</b> , moist.

**Indicative subsoil permeability and drainage class** (at leach drain depth): 0.12 – 0.5 m/d (Imperfectly drained). **Depth to water:** 170 cm. **Estimated depth of fill:** 105 cm.

**Comment:** Fill material brings site above 2.64m AHD but not suitable for conventional on-site effluent disposal using septic tanks and leach drains due to policy requirements (City of Albany - Frenchman Bay Road Residential Development Area - undated local planning policy). Suitable for effluent disposal using Alternative Treatment Units subject to 6 m setback from drain on north side of property access way.

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 9</b> Lot 98 50 H 577221 m E; 6122844 m N	<b>DAFWA Soil landscape mapping:</b> Intergrade area Meerup dunes Mp over Owingup flats OW	<b>Land unit: Fd</b>
------------------------------------------------------------------	--------------------------------------------------------------------------------------------	----------------------



**Landform:** Imperfectly drained depression within sandplain margin or footslope area.



<b>WA Soil Group: <i>Semi-wet soil</i></b> (calcareous organic loam over siliceous sand)	
Depth (cm)	Description
0 – 20	Black (10YR 2/1) <b>loamy sand</b> , dry; gradual boundary to;
20 - 80	Black (10YR 2/1) <b>loam fine sandy</b> calcareous, slightly moist, moderately alkaline (pH 8.6), moderately saline (ECe 699 mS/m); gradual boundary to;
80 – 140	Black (10YR 2/1) <b>clayey fine sand</b> , slightly moist; clear boundary to;
140 - 210	Black (10YR 2/1) <b>loamy fine sand</b> , moist (with some seepage inflow).

**Indicative subsoil permeability and drainage class** (at leach drain depth): 1.5 - 3.0 m/d (Moderately well drained). **Depth to water:** 210 cm (although gradual seepage inflow above).

**Comment:** Limited area, best avoided and generally not suitable for on-site effluent disposal systems.

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 10</b> Lot 98 50 H 577248 m E; 6122827 m N	<b>DAFWA Soil landscape mapping:</b> Intergrade area Meerup dunes Mp over Owingup flats OW	<b>Land unit: Fs2</b>
-------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------



**Landform:** Gently undulating, well drained sandplain margin or footslope area.



<b>WA Soil Group: <i>Pale deep sand</i></b> (Podzol; calcareous at depth).	
Depth (cm)	Description
0 - 35	Dark grey (10YR 4/1) <b>sand</b> , dry, gradual boundary to;
35 - 80	Grey (10YR 5/1) <b>sand</b> , dry, neutral (pH 7.6), non-saline (ECe 57 mS/m); gradual boundary to;
80 - 85	Dark brown (10YR 3/3) <b>loamy sand</b> , dry; weak hardpan, neutral (pH 7.7), slightly-saline (ECe 228 mS/m); clear boundary to;
85 - 100	Very dark brown (7.5YR 2.5/2) <b>loamy sand</b> (with limestone / marl rubble); dry, clear to;
100-180+	Pale brown (10YR 6/3) <b>sand</b> , calcareous, dry, moderately alkaline (pH 9.0), non-saline (ECe 144 mS/m).

**Indicative subsoil permeability and drainage class** (at leach drain depth): > 3.0 m/d (Rapidly drained).  
**Depth to water:** Not encountered, likely to be > 3.0 m based on topography and geomorphology.

**Comment:** Limited area, but suitable for conventional on-site effluent disposal using septic tanks and leach drains subject to adequate setback distance from nearby soakage dam.



## REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 11</b> Lot 98 50 H 577190 m E; 6122929 m N	<b>DAFWA Soil landscape mapping:</b> Intergrade area Meerup dunes Mp over Owingup flats OW	<b>Land unit: Fs2</b>
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**Landform:** Gently undulating, well drained sandplain margin or footslope area. (site on cleared area beyond access road)



<b>WA Soil Group: <i>Pale deep sand</i></b> (Podzol; calcareous at depth).	
Depth (cm)	Description
0 - 35	Dark grey (10YR 4/1) <b>sand</b> , dry, slightly acid (pH 6.0), non-saline (ECe 69 mS/m); clear boundary to;
35 - 60	Grey (10YR 5/1) <b>sand</b> , clear boundary to;
60 - 90	Light yellowish brown (10YR 6/4) <b>sand</b> , dry, gradual boundary to;
90 - 130	Yellowish brown (10YR 5/4) <b>sand</b> , calcareous, dry, neutral (pH 6.9), non-saline (ECe 35 mS/m); gradual to;
130-180+	Very pale brown (10YR 7/4) <b>sand</b> , calcareous, dry, moderately alkaline (pH 9.0), non-saline (ECe 119 mS/m).

**Indicative subsoil permeability and drainage class** (at leach drain depth): > 3.0 m/d (Rapidly drained).

**Depth to water:** Not encountered, likely to be > 3.5 m based on topography and geomorphology.

**Comment:** Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have moderate nutrient retention ability and site is not close to water table or surface waterbodies).

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 12</b> Lot 98 50 H 577052 m E; 6122975 m N	<b>DAFWA Soil landscape mapping:</b> Intergrade area Meerup over Owingup flats OW	<b>Land unit: Pd</b>
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**Landform:** Imperfectly drained estuarine plain (< 1% gradient) fringing wetland area (at far left).





<b>WA Soil Group: Alkaline grey deep sandy duplex</b> - over buried calcareous sand.	
Depth (cm)	Description
0 – 20	Very dark grey (10YR 3/1) <b>sand</b> , dry, gradual boundary to;
20 - 50	Dark grey (10YR 4/1) <b>sand</b> , dry, neutral (pH 6.7), non-saline (ECe 74 mS/m); clear boundary to;
50 – 60	Very dark brown (10YR2/2) <b>sand</b> , (weak hardpan); dry, clear boundary to;
60 - 80	Light brownish grey (10YR 6/2) <b>Clay loam, sandy</b> , calcareous with limestone / marl rubble, slightly moist; clear boundary to;
80 –150+	Pale brown (10YR 6/3) <b>sand</b> , calcareous, moist, with few black mottles (cutans), moderately alkaline (pH 8.2), slightly-saline (ECe 338 mS/m).

**Indicative subsoil permeability and drainage class** (at leach drain depth): partly within rapidly drained sand (> 3.0 m/d) and imperfectly drained clay loam (0.12 – 0.5 m/d). **Depth to water:** 150 cm (although gradual seepage inflow above).

**Comment:** Best avoided as generally not suitable for conventional on-site effluent disposal due to need for partially inverted leach drains within imported soil fill material to achieve adequate separation from clayey subsoil and need for setback from nearby wetland.

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Pit 13</b> <b>Lot 98 50 H 577055 m E; 6122889 m N</b>	<b>DAFWA Soil landscape mapping: Meerup dunes Mp</b>	<b>Land unit: Dg</b>														
		<p><b>Landform:</b> Gently undulating upland surface of well drained dunes (4 – 5 % gradient).</p>														
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="padding: 5px;"><b>WA Soil Group: <i>Pale deep sand</i></b> (Deep siliceous podzol)</td> </tr> <tr> <th style="width: 15%; padding: 5px;">Depth (cm)</th> <th style="padding: 5px;">Description</th> </tr> <tr> <td style="padding: 5px;">0 – 20</td> <td style="padding: 5px;">Dark grey (10YR 4/1) <b>sand</b>, dry, neutral (pH 6.8), non-saline (ECe 87 mS/m); clear boundary to;</td> </tr> <tr> <td style="padding: 5px;">20 – 85</td> <td style="padding: 5px;">Grey (10YR 5/1) <b>sand</b>, dry, clear to;</td> </tr> <tr> <td style="padding: 5px;">85 - 105</td> <td style="padding: 5px;">Light grey (10YR 7/2) <b>sand</b>, dry; neutral (pH 7.1), non-saline (ECe 54 mS/m); clear boundary to;</td> </tr> <tr> <td style="padding: 5px;">105 –125</td> <td style="padding: 5px;">Pale brown (10YR 6/3) <b>sand</b>, dry, clear to;</td> </tr> <tr> <td style="padding: 5px;">125-150+</td> <td style="padding: 5px;">Strong brown (7.5YR 4/6 ) <b>sand</b>, with few bleached mottles, dry; neutral (pH 6.5), non-saline (ECe 68 mS/m).</td> </tr> </table>		<b>WA Soil Group: <i>Pale deep sand</i></b> (Deep siliceous podzol)		Depth (cm)	Description	0 – 20	Dark grey (10YR 4/1) <b>sand</b> , dry, neutral (pH 6.8), non-saline (ECe 87 mS/m); clear boundary to;	20 – 85	Grey (10YR 5/1) <b>sand</b> , dry, clear to;	85 - 105	Light grey (10YR 7/2) <b>sand</b> , dry; neutral (pH 7.1), non-saline (ECe 54 mS/m); clear boundary to;	105 –125	Pale brown (10YR 6/3) <b>sand</b> , dry, clear to;	125-150+	Strong brown (7.5YR 4/6 ) <b>sand</b> , with few bleached mottles, dry; neutral (pH 6.5), non-saline (ECe 68 mS/m).
<b>WA Soil Group: <i>Pale deep sand</i></b> (Deep siliceous podzol)																
Depth (cm)	Description															
0 – 20	Dark grey (10YR 4/1) <b>sand</b> , dry, neutral (pH 6.8), non-saline (ECe 87 mS/m); clear boundary to;															
20 – 85	Grey (10YR 5/1) <b>sand</b> , dry, clear to;															
85 - 105	Light grey (10YR 7/2) <b>sand</b> , dry; neutral (pH 7.1), non-saline (ECe 54 mS/m); clear boundary to;															
105 –125	Pale brown (10YR 6/3) <b>sand</b> , dry, clear to;															
125-150+	Strong brown (7.5YR 4/6 ) <b>sand</b> , with few bleached mottles, dry; neutral (pH 6.5), non-saline (ECe 68 mS/m).															
<p><b>Indicative subsoil permeability and drainage class</b> (at leach drain depth): &gt; 3.0 m/d (Rapidly drained).  <b>Depth to water:</b> Not encountered, likely to be &gt; 3.5 m based on topography and geomorphology.</p> <p><b>Comment:</b> Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have moderate nutrient retention ability and site is not close to water table or surface waterbodies).</p>																

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Exposure 1</b> <b>Lot 85 50 H 577095 m E; 6122598 m N</b>	<b>DAFWA Soil landscape mapping:</b> Meerup flats Mf over Owingup flats OW	<b>Land unit:</b> <b>Pd/Pw</b>
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**Landform:** Interdunal flat or deflation basin; Imperfectly drained (0 -1% gradient) and adjacent wetland (excavated soak).



<b>WA Soil Group:</b> <i>Alkaline grey shallow loamy duplex</i> (over buried calcareous sand).	
Depth (cm)	Description
0 - 15	Very dark grey (10YR 3/1) <b>clayey sand</b> , calcareous; dry, gradual boundary to;
15 - 30	Very dark brown (10YR 2/2) <b>sandy loam</b> ; dry, clear boundary to;
30 - 55	<b>Limestone / marl, in clay loam</b> matrix; dry, clear boundary to;
55 - 90	Very pale brown (10YR 7/3) <b>sandy clay loam</b> , with calcareous rubble; dry, gradual boundary to;
90 – 120+	Pale brown (10YR 6/3) <b>sand</b> , calcareous; slightly moist.

**Indicative subsoil permeability and drainage class** (at leach drain depth): 0.5 – 1.5 m/d (Moderately well drained). **Depth to water:** 130 cm.

**Comment:** Possibly suitable for conventional on-site effluent disposal (apart from need for setback from soakage dam) using partially inverted leach drains within imported soil fill material to achieve adequate separation from groundwater. Possible also suitable for alternative effluent disposal systems (with lesser minimum depth to water requirement).

# REPORT ITEM DIS021 REFERS

Land Capability and Geotechnical Investigation – Harding / Home Rd Area.

<b>Site Number: Exposure 2</b> <b>Lot 84 50 H 577193 m E; 6122600 m N</b>	<b>DAFWA Soil landscape mapping: Meerup dunes Mp</b>	<b>Land unit: Dm.</b>
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**Landform:** Rapidly drained sand dune (moderate sideslope, 18 % gradient).



<b>WA Soil Group: <i>Pale deep sand</i></b> (Podzol; calcareous at depth)	
Depth (cm)	Description
0 - 50	Greyish brown (10YR 5/2) <b>sand</b> , dry, clear boundary to;
50 - 120	Light yellowish brown (10YR 6/4) <b>sand</b> , slightly calcareous; dry, gradual boundary to;
120–190+	Yellowish brown (10YR 5/4) <b>sand</b> ,; with few bleached mottles; calcareous; dry, moderately alkaline (pH 8.7), non-saline (ECe 156 mS/m)

**Indicative subsoil permeability and drainage class** (at leach drain depth): > 3.0 m/d (Rapidly drained).  
**Depth to water:** Not encountered, likely to be > 3.5 m based on topography and geomorphology.

**Comment:** Suitable for conventional on-site effluent disposal using septic tanks and leach drains. (Subsoil likely to have limited nutrient retention ability but site is not close to water table or surface waterbodies).

**ATTACHMENT D**  
**ACID SULFATE TEST RESULTS**



REPORT ITEM DIS021 REFERS  
**ChemCentre**  
Inorganic Chemistry Section  
Report of Examination



Purchase Order: 1512  
Your Reference:  
ChemCentre Reference: 15S1434 R1  
  
Land Assessment Pty Ltd  
PO Box 117  
Subiaco WA 6008

PO Box 1250, Bentley Delivery Centre  
Bentley WA 6983  
T +61 8 9422 9800  
F +61 8 9422 9801  
[www.chemcentre.wa.gov.au](http://www.chemcentre.wa.gov.au)  
ABN 40 991 885 705

**Attention: Martin Wells**

**Final Report on 2 samples of soil received on 21/12/2015**

**LAB ID**                      **Client ID and Description**

15S1434 / 001      P8/4  
15S1434 / 002      P9/4

Analyte		ANCe	pH <sub>KCl</sub>	pH <sub>ox</sub>	SkCl	Sp	S <sub>pos</sub>
Method		iSPOCAS	iSPOCAS	iSPOCAS	iSPOCAS	iSPOCAS	iSPOCAS
Unit		moles H <sup>+</sup> /t			%	%	%

**Lab ID**                      **Client ID**

15S1434/001	P8/4	3.0	7.2	4.1	<0.01	0.02	0.02
15S1434/002	P9/4	<1.0	6.7	3.4	0.06	1.56	1.50

Analyte		Stones	TAA	TPA
Method		(>2mm)	iSPOCAS	iSPOCAS
Unit		%	moles H <sup>+</sup> /t	moles H <sup>+</sup> /t

**Lab ID**                      **Client ID**

15S1434/001	P8/4	0.7	<1.0	<1.0
15S1434/002	P9/4	33.7	<1.0	3200

## REPORT ITEM DIS021 REFERS

Analyte	Method	Description
Stones	(>2mm)	Stones - sieved particles greater than 2 mm (sample preparation method manual 3.3.2)
TAA	iSPOCAS	Titrateable Actual Acidity Method 23F
TPA	iSPOCAS	Titrateable Peroxide Acidity
ANCe	iSPOCAS	Excess Acid Neutralisation Capacity (AS4969.3)
pH <sub>KCl</sub>	iSPOCAS	pH in a KCl soil extract (1:40 w/v)
pH <sub>ox</sub>	iSPOCAS	pH in a soil suspension after 30% H <sub>2</sub> O <sub>2</sub> digest
S <sub>KCl</sub>	iSPOCAS	Sulfur soluble in 1M KCl after TAA titration
S <sub>p</sub>	iSPOCAS	Sulfur soluble in 1M KCl after 30% H <sub>2</sub> O <sub>2</sub> digest and TPA titration
S <sub>pos</sub>	iSPOCAS	Sulfur oxidise by peroxide digest, calculated as S <sub>P</sub> minus S <sub>KCl</sub>

The results apply only to samples as received. This report may only be reproduced in full.

Unless otherwise advised, the samples in this job will be disposed of after a holding period of 30 days from the report date shown below.

Results for soil analysis are reported on an air-dry (40C) less than 2 mm basis, whereby stones are removed (material >2mm) by sieving.

When stone content is deemed significant the result is recorded and reported.

Unless otherwise specified, all analytes (except Stones) are reported in the listed concentrations and on a dry, less than 2 mm basis.

Stones are reported on a dry, whole sample basis.



**Barry Price**  
**Team Leader**  
**Scientific Services Division**  
8-Jan-2016



**ATTACHMENT E**  
**ACID SULFATE SOILS: SELF-ASSESSMENT FORM**



## Acid Sulfate Soils Self-Assessment Form



### Applicant

The applicant is the person with whom the WAPC will correspond and, if the application is approved, the person to whom the approval will be sent.

**WAPC reference no**

**Full name**

**Postal address**

**Town / suburb**  **Postcode**

**Email**  **Phone number**

**Applicant signature**  **Date**

**Application property details**

### Step 1

#### Assess the possibility of acid sulfate soils disturbance

- Question 1:** Are any dewatering or drainage works (either temporary or permanent) proposed to be undertaken?  yes  no
- Question 2:** Is excavation of 100 cubic metres or more of soil proposed?  yes  no  
(In lay person's terms 100 cubic metres is about 10 standard-sized dump truck loads.)

If no to both question 1 and question 2 then no further investigation is required at this stage. Please sign this form and submit it, together with a completed 'Clearance of Conditions Request' form along with supporting documentation, to Department of Environment Regulation (DER).

If yes to either question 1 or question 2 go on to step 2.

### Step 2

#### Conduct an acid sulfate soils investigation in accordance with DER's *Identification and Investigation of Acid Sulfate Soils* guideline

- Question 3:** Did the acid sulfate soils investigation indicate that there are acid sulfate soils present?  yes  no

If no to question 3, then no further investigation is required at this stage. Please sign this form and submit it, together with the written results of the investigation (in the form of an acid sulfate soils report) and a completed 'Clearance of Conditions Request' form and required information, to DER with a request for clearance of the acid sulfate soils condition.

If yes to question 3, please sign this form and submit it, together with the written results of the investigation (in the form of an acid sulfate soils report), an acid sulfate soils management plan and a copy of the approved subdivision plan, to DER with a request for approval of the management plan.

**Note:** After completion of site works in accordance with the approved management plan you will be required to submit a closure report, prepared in accordance with DER's acid sulfate soils guideline series, to DER together with a request for clearance of the acid sulfate soils condition.

**Tick box for attachments as appropriate**

- Clearance of conditions request form
- Copy of approved subdivision plan
- Copy of approved development plan
- Acid Sulfate Soils investigation report
- Acid Sulfate Soils management plan

- Addressed as part of land capability report

**Declaration**

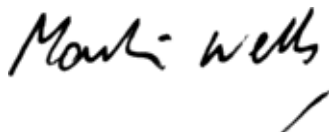
I declare that the information provided is true and correct to the best of my knowledge.

A completed 'Clearance of Conditions Request' form and required information is attached to this form (a copy can be downloaded from <http://www.der.wa.gov.au/your-environment/acid-sulfate-soils/68-ass-forms>)

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

Submit form to the  
Department of Environment Regulation (DER)  
Locked Bag 33  
Cloisters Square, Perth WA 6850

If you have any questions relating to the Acid Sulfate Soils Self-Assessment form, please contact Acid Sulfate Soils Section (DER) on 1300 762 982 for assistance or email [contaminated\\_sites@der.wa.gov.au](mailto:contaminated_sites@der.wa.gov.au).



Land Assessment Pty Ltd

11/ 1 /16

**ATTACHMENT F**  
**ALTERNATIVE TREATMENT SYSTEMS**  
**APPROVED FOR USE IN WA**

# Approved Aerobic Treatment Units

## What are Aerobic Treatment Units (ATUs)?

Aerobic Treatment Units (ATUs) are small ('package') wastewater treatment plants. Due to the treatment and disinfection process, the treated wastewater from several systems may be used for garden irrigation. Some ATUs are also approved for Phosphorus removal. The listed systems have standard approval as domestic models (they may also be used in commercial situations). They are to be installed and operated in accordance with the Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974 and the **Code of Practice for the Design, Manufacture, Installation and Operation of Aerobic Treatment Units (ATUs) Serving Single Dwellings**.

As the conditions of approval can vary between designs, persons interested in installing a particular ATU should confirm it meets their needs and discuss site requirements with the local government.

ATUs have regular service requirements (usually quarterly) and maintenance must be through an **Authorised person** or their staff/subcontractors.

More detailed information on ATUs is contained in the **Aerobic Treatment Units** pamphlet and the **Code of Practice**.



Manufacturer or supplier	Brand name and model	Capacity	Comments and restrictions	AS certification & Approval Expiry Date
<p><b>Allied Pumps</b>                      2 Modal Crescent                      CANNING VALE WA 6155                      Ph: 9350 1000 / 1800 447 777                      Fax: 9356 5255                      Website: <a href="http://www.aquanova.com.au">www.aquanova.com.au</a>                      Email: <a href="mailto:sms@alliedpumps.com.au">sms@alliedpumps.com.au</a></p>	<p>Everhard                      Aqua-Nova 2000                      Model 80100</p>	<p>Single dwelling units up to 10 person capacity.</p>	<p>Approved for sub-surface or sub-strata or above ground spray irrigation.</p>	<p>Global Certification PL No. 077                       27/03/2017</p>
<p><b>Aquarius Wastewater Management Pty Ltd</b>                      Unit 1/20 Abrams Street                      BALCATTWA WA 6021                      Ph: 9240 8545                      Fax: 9240 8542                      Website: <a href="http://www.aquariuswastewater.com.au">www.aquariuswastewater.com.au</a>                      Email: <a href="mailto:admin@aquariuswastewater.com.au">admin@aquariuswastewater.com.au</a></p>	<p>Aquarius O-3</p>	<p>Single dwelling units up to 10 person capacity.</p>	<p>Approved for sub-surface or sub-strata or above ground spray irrigation.                      Capable of removing nutrients to the following concentrations:                      TP (% removal): &lt;1 mg/L (98.5%)                      TN (% removal): &lt;10 mg/L (97.8%)</p>	<p>SMKH21519                       25/03/2018</p>
	<p>Aquarius O-2</p>	<p>Single dwelling units up to 10 person capacity.</p>	<p>Approved only for below ground disposal via sub-surface irrigation, leach drains, soak wells or AquaSafe Drains.                      The system does not include Alum Sulphate dosing and disinfection system.                      The system does not remove nutrients.</p>	
	<p>Aquarius O-2 NR</p>	<p>Single dwelling units up to 10 person capacity.</p>	<p>Approved only for below ground disposal via sub-surface irrigation, leach drains, soak wells or AquaSafe Drains.                      The system does not include disinfection system.                      Capable of removing nutrients to the following concentrations:                      TP (% removal): &lt;1 mg/L (98.5%)                      TN (% removal): &lt;10 mg/L (97.8%)</p>	



Manufacturer or supplier	Brand name and model	Capacity	Comments and restrictions	AS certification & Approval Expiry Date
<b>Biomax Pty Ltd</b> PO Box 462 MIDLAND DC WA 6936 Ph: 9250 7733 Fax: 9250 5844 Website: <a href="http://www.biomax.com.au">www.biomax.com.au</a> Email: <a href="mailto:biomax@inet.net.au">biomax@inet.net.au</a>	BioMax P10-M (phosphorus removal) BioMax C-10	Single dwelling units up to 10 person capacity.	Approved for sub-surface or sub-strata or above ground spray irrigation.	No AS1546.3 certification  30/06/2015
<b>BioSeptic Pty Ltd</b> Concrete Products WA Ph: 9274 6988 Fax: 9274 6939 Website: <a href="http://www.bioseptic.com.au">www.bioseptic.com.au</a> Email: <a href="mailto:sales@bioseptic.com.au">sales@bioseptic.com.au</a>	Performa 2000	Single dwelling units up to 10 person capacity.	Approved for sub-surface or sub-strata or above ground spray irrigation.	SMK02221  18/10/2015
<b>BioSystems 2000 Pty Ltd</b> 3 Carlow Circle WATERFORD WA 6152 Ph: 9450 2570 Fax: 9450 1635 Email: <a href="mailto:biosystems2000@yahoo.com.au">biosystems2000@yahoo.com.au</a>	Biosystem 2000	Single dwelling units up to 10 person capacity.	Approved for sub-surface or sub-strata or above ground spray irrigation.	No AS1546.3 certification  30/06/2015
<b>Earthsafe Environmental Pty Ltd</b> PO Box 605 WYONG NSW 2259 Ph: 1300 327 847 Email: <a href="mailto:steven@rivatec.com.au">steven@rivatec.com.au</a>	Earthsage Environmental ES10PC	Single dwelling units up to 10 person capacity.	Approved for sub-surface or sub-strata or above ground spray irrigation.	SMKH20612  27/08/2016



Manufacturer or supplier	Brand name and model	Capacity	Comments and restrictions	AS certification & Approval Expiry Date
<p><b>Fuji Clean Australia Pty Ltd</b>                      5/520 Mulgrave Road                      Earlville, Cairns QLD 4870                      Website: <a href="http://www.fujiclean.com.au">www.fujiclean.com.au</a></p> <p><u>WA Distributor</u>                      Ecowater WA                      37 Granite Place                      YANCHEP WA 6035                      Ph: 0417 098 281                      Email: <a href="mailto:ecowaterwa@bigpond.com">ecowaterwa@bigpond.com</a></p>	CE1200	Single dwelling units up to 8 person capacity.	Approved for sub-surface or sub-strata or above ground spray irrigation.	No AS1546.3 certification  30/06/2015
	CE1500EX	Single dwelling units up to 10 person capacity or 1500L/day	Approved for sub-surface or sub-strata or above ground spray irrigation.	SMKH21993  09/05/2016
			Capable of removing nutrients to the following concentrations: TP (% removal): 1.3 mg/L (84%) TN (% removal): 21.0 mg/L (58%)	
	CRX1500	Single dwelling units up to 10 person capacity.	Approved for sub-surface or sub-strata or above ground spray irrigation.	No AS1546.3 certification  30/06/2015
			Capable of removing nutrients to the following concentrations: TP (% removal): 0.24 mg/L (97%) TN (% removal): 8.29 mg/L (82%)	





Manufacturer or supplier	Brand name and model	Capacity	Comments and restrictions	AS certification & Approval Expiry Date
<p><b>Galvin Concrete &amp; Sheetmetal Pty Ltd</b>                      Ph: 9302 2175                      Website: <a href="http://www.galvins.com.au">www.galvins.com.au</a>                      Email: <a href="mailto:csm@galvins.com.au">csm@galvins.com.au</a></p> <p><u>WA Distributor</u>                      Clearwater Domestic Sewerage                      52 Railway Parade                      WELSHPOOL WA 6106                      Ph: 9258 6933                      Fax: 9258 6944                      Email: <a href="mailto:naiquip@iinet.net.au">naiquip@iinet.net.au</a></p>	<p>Clearwater 90 Compact</p>	<p>Single dwelling units up to 10 person capacity.</p>	<p>Approved for above ground spray irrigation.</p>	<p>No AS1546.3 certification  30/06/2015</p>
<p><b>Icon-Septech Pty Ltd</b>                      Lot 265 Valencia Way                      MADDINGTON WA 6109                      Ph: (08) 9493 2352 or                      1300 557 143                      Fax: (08) 9493 2548                      Website: <a href="http://www.icon-septech.com.au">www.icon-septech.com.au</a></p>	<p>Septech Turbojet 2000</p>	<p>Single dwelling units up to 10 person capacity.</p>	<p>Approved for sub-surface or above ground spray irrigation.</p>	<p>SMK0239  13/11/2015</p>
<p><b>Jowa Group Pty Ltd</b>                      8 Lander Avenue                      SHEIDOW PARK SA 5158                      Ph: (08) 8381 9100                      Fax: (08) 8381 9116                      Website: <a href="http://www.biocyclejowagroup.com.au">www.biocyclejowagroup.com.au</a>                      Email: <a href="mailto:sales@biocyclejowagroup.com.au">sales@biocyclejowagroup.com.au</a></p>	<p>Biocycle 5800</p>	<p>Single dwelling units up to 10 person capacity.</p>	<p>Approved for sub-surface or above ground spray irrigation.</p>	<p>No AS1546.3 certification  30/06/2015</p>



Manufacturer or supplier	Brand name and model	Capacity	Comments and restrictions	AS certification & Approval Expiry Date
<b>Krystal Kleer Pty Ltd</b> 59 Commerce Circuit Yatala QLD 4207 Ph: (07) 3382 7666 Website: <a href="http://www.qualitytanks.com.au">www.qualitytanks.com.au</a> Email: <a href="mailto:Nicole@qualitytanks.com.au">Nicole@qualitytanks.com.au</a>	Krystal Kleer ADV5000 (Concrete and plastic models)	Single dwelling units up to 10 person capacity.	Approved for sub-surface or above ground spray irrigation.	Cert No. 125  13/09/2014
<b>Suncoast Waste Water Management</b> 59 Industrial Avenue KUNDA PARK QLD 4556 Ph: 1800 450 767 Website: <a href="http://www.ozzikleen.com">www.ozzikleen.com</a> Email: <a href="mailto:info@ozzikleen.com">info@ozzikleen.com</a>	Ozzi Kleen RP10	Single dwelling units up to 10 person capacity.	Approved for sub-surface or above ground spray irrigation.	SMK02608  14/08/2016



Manufacturer or supplier	Brand name and model	Capacity	Comments and restrictions	AS certification & Approval Expiry Date
<b>Taylex Industries Pty Ltd</b> 56 Prairie Road Ormeau QLD 4208 Ph: (07) 3441 5200 Fax: (07) 3287 4199 Email: <a href="mailto:Taylex@bigpond.com.au">Taylex@bigpond.com.au</a>	Taylex DMS (Domestic Membrane System)	Single dwelling units up to 10 person capacity.	Approved for above ground spray irrigation, sub-surface or sub-strata drip irrigation.  Capable of removing nutrients to the following concentrations: TP (% removal): 0.29 mg/L (96%) TN (% removal): 6.19 mg/L (86%)	No AS1546.3 certification  30/06/2015
	Taylex ABS (Advanced Blower System)	Single dwelling units up to 10 person capacity.	Approved for above ground spray irrigation, sub-surface or sub-strata drip irrigation.	
	Taylex Poly ABS (Advanced Blower System)	Single dwelling units up to 10 person capacity.	Approved for above ground spray irrigation, sub-surface or sub-strata drip irrigation.	



## Assessed and not approved OR Approval withdrawn

Manufacturer / Supplier	Brand name and model	Reason not approved / Further information
<b>Biolytix Technologies</b> PO Box 591 MALENY QLD 4552 Ph: (07) 5435 2700 Fax: (07) 5435 2701 Website: <a href="http://www.biolytix.com">www.biolytix.com</a> Email: <a href="mailto:info@biolytix.com">info@biolytix.com</a>	Biolytix BF-6 Aerated	Company liquidated. Biolytix units which have been issued a 'Permit to Use' by local government before 19 January 2011 can still be in use. For further information, visit the following webpage: <a href="http://www.lawlerpartners.com.au/creditor_reports/biolytix_group_of_companies/faqs">www.lawlerpartners.com.au/creditor_reports/biolytix_group_of_companies/faqs</a>
<b>Water Gurus Pty Ltd</b> 3/57 Inspiration Drive WANGARA WA 6065 Ph: 9302 6444 or 1800 043 956 Fax: 9302 6777 Website: <a href="http://www.watergurus.com.au">www.watergurus.com.au</a>	Novaclear	Company liquidated. For further information, visit the following webpage: <a href="http://www.asic.gov.au/">http://www.asic.gov.au/</a>

### More information:

#### Water Unit

Environmental Health Directorate  
 Department of Health  
 PO Box 8172  
 PERTH BUSINESS CENTRE WA 6849

**Telephone: 08 9388 4999**

**Facsimile: 08 9388 4910**

**This document is available in alternative formats on request for a person with a disability.**



## Approved Alternative Leach Drains

These phosphorus reducing systems have a conventional septic tank and leaching field (leach drain) arrangement. The leaching field is contained within an approved amended soil which binds phosphates from the effluent.

Manufacture / Supplier	Brand Name and Model	Comments and Restrictions	Approval Date
Filtrex Innovative Wastewater Solutions PO Box 5122 BUNBURY WA 6231 Ph: (08) 9726 0118 Fax: (08) 9726 0117 Website: <a href="http://www.filtrex.com.au">www.filtrex.com.au</a> Email: <a href="mailto:info@filtrex.com.au">info@filtrex.com.au</a>	Filtrex Split System	<ul style="list-style-type: none"> <li>Leach drains (for blackwater) and subsurface irrigation (for greywater) only.</li> <li>Minimum 600mm soil absorption from any ground or pooled waters at the wettest time of year</li> </ul>	01/02/08
	Filtrex Phosphate and Nutrient Wastewater Irrigation System	<ul style="list-style-type: none"> <li>Leach drains disposal only.</li> <li>Minimum 600mm soil absorption from any ground or pooled waters at the wettest time of year</li> </ul>	31/05/11
	Filtrex Leach Drain Cage	<ul style="list-style-type: none"> <li>Has an infiltrative area of 0.9m<sup>2</sup> per metre length</li> <li>Non-phosphorus retentive.</li> <li>Install in accordance to Department of Health approval conditions</li> </ul>	29/10/2008
	Filtrex Standard Leach Drain Cage SLD MK2	<ul style="list-style-type: none"> <li>Has an infiltrative area of 1.5m<sup>2</sup> per metre length</li> <li>Non-phosphorus retentive.</li> <li>Install in accordance to Department of Health approval conditions</li> </ul>	27/10/2009



## More information

Water Unit  
Environmental Health Directorate  
Department of Health  
PO Box 8172  
PERTH BUSINESS CENTRE WA 6849  
Telephone: (08) 9388 4999  
Fax: (08) 9388 4910

Produced by Environmental Health Directorate  
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## Appendix B

### **Existing Provisions & Subdivision Guide Plan**

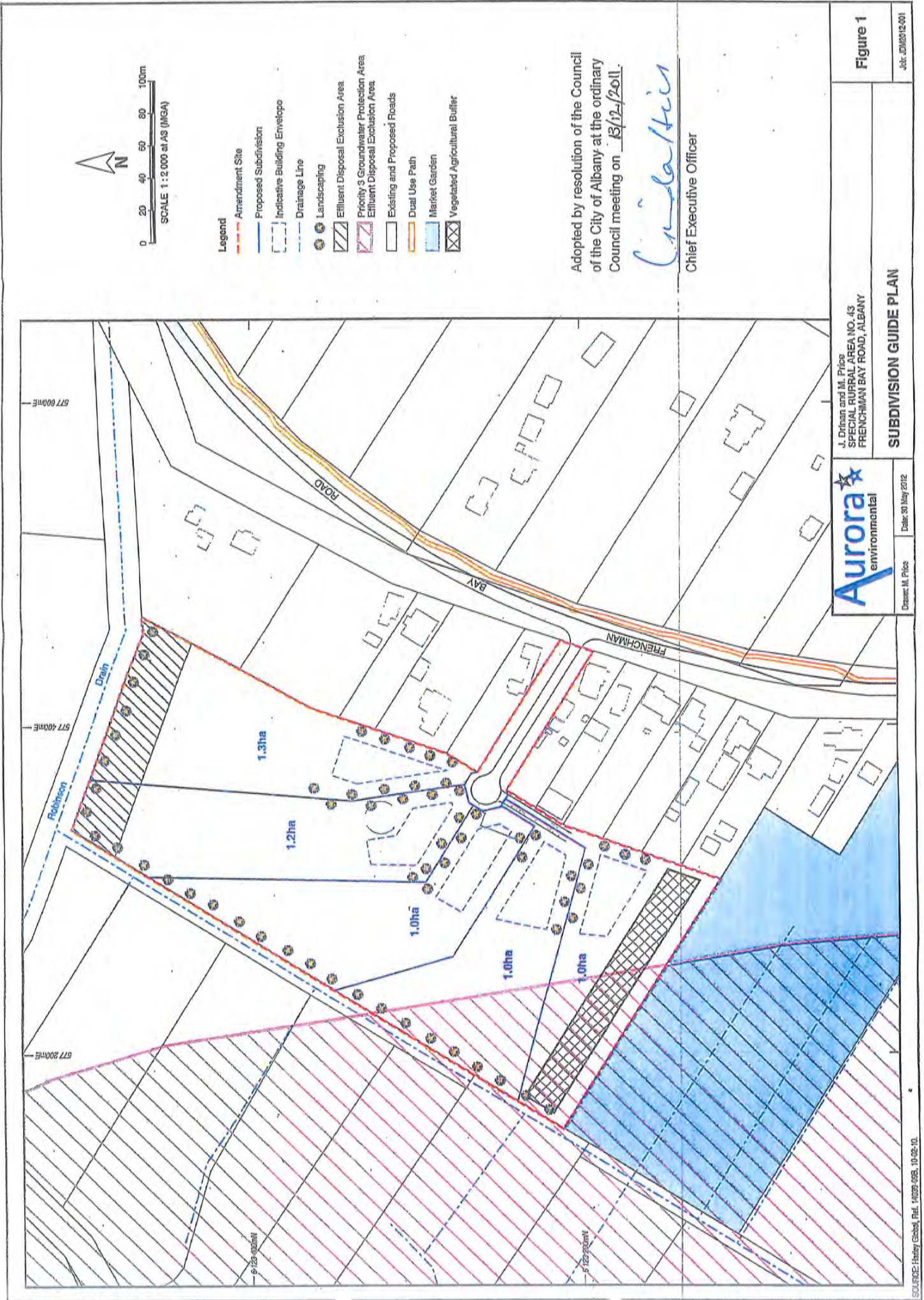
Local Planning Scheme No. 1

Rural Residential Area No. 43

No.	Specified Rural Residential Zone	Special Provisions Applying to Specified Rural Residential Zone
		<p>the local government both prior to commencement of subdivision works and following completion of subdivision works. The report to provide adequate information proving that the land is suitable to accommodate future dwellings.</p>
RR42	Little Grove Rural Residential zone	<ol style="list-style-type: none"> <li>1. The minimum lot size shall be two hectares.</li> <li>2. The following land uses are 'P' permitted uses— <ul style="list-style-type: none"> <li>• Single House.</li> </ul> </li> <li>3. The following land uses are 'D' discretionary uses— <ul style="list-style-type: none"> <li>• Ancillary Accommodation;</li> <li>• Bed and Breakfast/Farmstay;</li> <li>• Home Business;</li> <li>• Home Occupation;</li> <li>• Industry—Cottage;</li> <li>• Public Utility; and</li> <li>• Rural Pursuit (which shall be limited to existing cleared and pastured land only).</li> </ul> </li> <li>4. All buildings and structures shall be— <ol style="list-style-type: none"> <li>(a) Located off any ridgeline as shown on the Subdivision Guide Plan as determined by the Local Government;</li> <li>(b) Located to retain the maximum amount of remnant vegetation on the site; and</li> <li>(c) Setback a minimum of 15 metres from any lot boundary.</li> </ol> </li> </ol>
RR43	Lot 114 Frenchman Bay Road, Robinson	<p><b>Plan of Subdivision</b></p> <ol style="list-style-type: none"> <li>1. Subdivision shall be generally in accordance with the adopted Subdivision Guide Plan <i>RR43</i>, as endorsed by the CEO.</li> <li>2. The Western Australian Planning Commission may allow an alternative plan of subdivision, should it be satisfied that the plan of subdivision is consistent with the objectives and outcomes of the zone and Subdivision Guide Plan.</li> <li>3. The Local Government will not generally recommend lots sizes less than one hectare.</li> </ol> <p><b>Land Use</b></p> <ol style="list-style-type: none"> <li>4. Within Special Rural Zone Area No. 43 the following uses are permitted— <ul style="list-style-type: none"> <li>• Single House</li> </ul> </li> <li>5. The following uses may be permitted subject to the special approval of the Local Government ('A')— <ul style="list-style-type: none"> <li>• Home Occupation (cottage industry);</li> <li>• Public Utility;</li> <li>• Bed and Breakfast/Farmstay;</li> <li>• Holiday Accommodation;</li> <li>• Stables;</li> <li>• Home Office;</li> <li>• Home Business; and</li> <li>• Other non-defined or incidental activities considered appropriate by the Local Government which are consistent with the objectives of the zone.</li> </ul> </li> </ol> <p><b>Location of Buildings and Structures</b></p> <ol style="list-style-type: none"> <li>6. Any building on a lot must be constructed within a Building Envelope. Such Building Envelopes shall not exceed 2000m<sup>2</sup>. Indicative building envelopes are shown on the subdivision guide plan.</li> <li>7. Notwithstanding the requirement the Local Government may permit an alternative Building</li> </ol>



No.	Specified Rural Residential Zone	Special Provisions Applying to Specified Rural Residential Zone
		<p>Envelope location if it is shown to the satisfaction of the Local Government that—</p> <ul style="list-style-type: none"> <li>(a) The proposed location of the building envelope can achieve the setbacks established at 8;</li> <li>(b) All effluent disposal systems remain outside of the effluent disposal exclusion areas; and</li> <li>(c) That the necessary clearance to the ground water table can be achieved to support a suitable effluent disposal system.</li> </ul> <p>8. All buildings are to be setback a minimum of 10 metres from all lot boundaries.</p> <p><b>Water Supply</b></p> <p>9. All dwellings shall be required to provide a rainwater tank of not less than 50,000 litres capacity to harvest rainwater for household and garden use.</p> <p><b>Effluent Disposal</b></p> <ul style="list-style-type: none"> <li>10. The Local Government shall require the use of amended soil type effluent disposal systems, such as EcoMax/ATU Systems.</li> <li>11. Effluent disposal systems are to be located outside of the effluent disposal exclusion areas marked on the Subdivision Guide Plan.</li> <li>12. No more than one effluent disposal system will be permitted on one lot.</li> </ul> <p><b>Access</b></p> <ul style="list-style-type: none"> <li>13. Battleaxe legs are to be a minimum of 5 metres. Where access legs are to be co-located, their combined width may be reduced by 7.5 metres.</li> <li>14. All driveways and underground infrastructure shall be designed and constructed so as to avoid erosion impacts and prevent unnecessary discharge of storm water.</li> </ul> <p><b>Water Management</b></p> <p>15. The wastewater, stormwater and effluent disposal solutions documented in the <i>Local Water Management Strategy and Urban Water Management Plan Lot 114 (No. 142) Frenchman Bay Road, Robinson, City of Albany (April 2011)</i> shall form the basis for the detailed water management strategies.</p> <p><b>Finished Floor Levels</b></p> <p>16. All buildings must achieve a minimum finished floor level of 2.64 metres AHD.</p> <p><b>Notification of Prospective Owners</b></p> <p>17. The Local Government may require the subdivider to make arrangements satisfactory to the Local Government to ensure prospective purchasers are advised of the potential for nuisance impacts of odour, noise, dust and spray drift from the market garden located within 300 metres of the proposed development.</p> <p><b>Agricultural Buffer</b></p> <ul style="list-style-type: none"> <li>18. A vegetated agricultural buffer is to be provided to the minimum width of 20 metres, plus a 10 metre setback for access from the south south-east boundary of the subject lot where the market garden adjoins, together with any required additional land for access for maintenance and firebreaks.</li> <li>19. In relation to the 20 metre vegetated agricultural buffer to the existing market garden, species used in the closest 10 metre portion of the buffer shall not be capable of growing taller than 3 metres to prevent the incidence of overshadowing.</li> </ul>
RR44	Torbay Hill, Kronkup Rural Residential zone	<p>1. Subdivision of RR44 shall generally be in accordance with the Subdivision Guide Plan <i>RR44</i> endorsed by the CEO, with any minor</p>



0 20 40 60 80 100m  
SCALE 1:2,000 at AS (MGA)

- Legend**
- Amendment Site
  - Proposed Subdivision
  - Indicative Building Envelope
  - Drainage Line
  - Landscaping
  - Effluent Disposal Exclusion Area
  - Priority 3 Groundwater Protection Area
  - Effluent Disposal Exclusion Area
  - Existing and Proposed Roads
  - Dual Use Path
  - Market Garden
  - Vegetated Agricultural Buffer

Adopted by resolution of the Council of the City of Albany at the ordinary Council meeting on 13/12/2011.

*Crabtree*

Chief Executive Officer

J. Driscoll and M. Price  
SPECIAL RURAL AREA NO. 43  
FRENCHMAN BAY ROAD, ALBANY



**SUBDIVISION GUIDE PLAN**

Date: 30 July 2012

Drawn: M. Price

**Figure 1**

Job: DIS021-001

## Appendix C

### **Fire Assessment**

RR 43 Home & Harding Road Precinct

Biodiverse Solutions Pty Ltd

# AS 3959 Bushfire Attack Level (BAL)

## Contour Plan Report

Site Details			
<b>Address:</b>	Lots 84,85,87,98 Home and Harding Road		
<b>Suburb:</b>	Robinson	<b>State:</b>	W.A.
<b>Local Government Area:</b>	City of Albany		
<b>Description of Building Works:</b>	Building development		
<b>Stage of WAPC Planning</b>	WAPC Application		

Report Details			
<b>Report / Job Number:</b>	AB007	<b>Report Version:</b>	Final Ver 2
<b>Assessment Date:</b>	1 <sup>st</sup> & 8 <sup>th</sup> November 2016	<b>Report Date:</b>	20/2/2017



# REPORT ITEM DIS021 REFERS

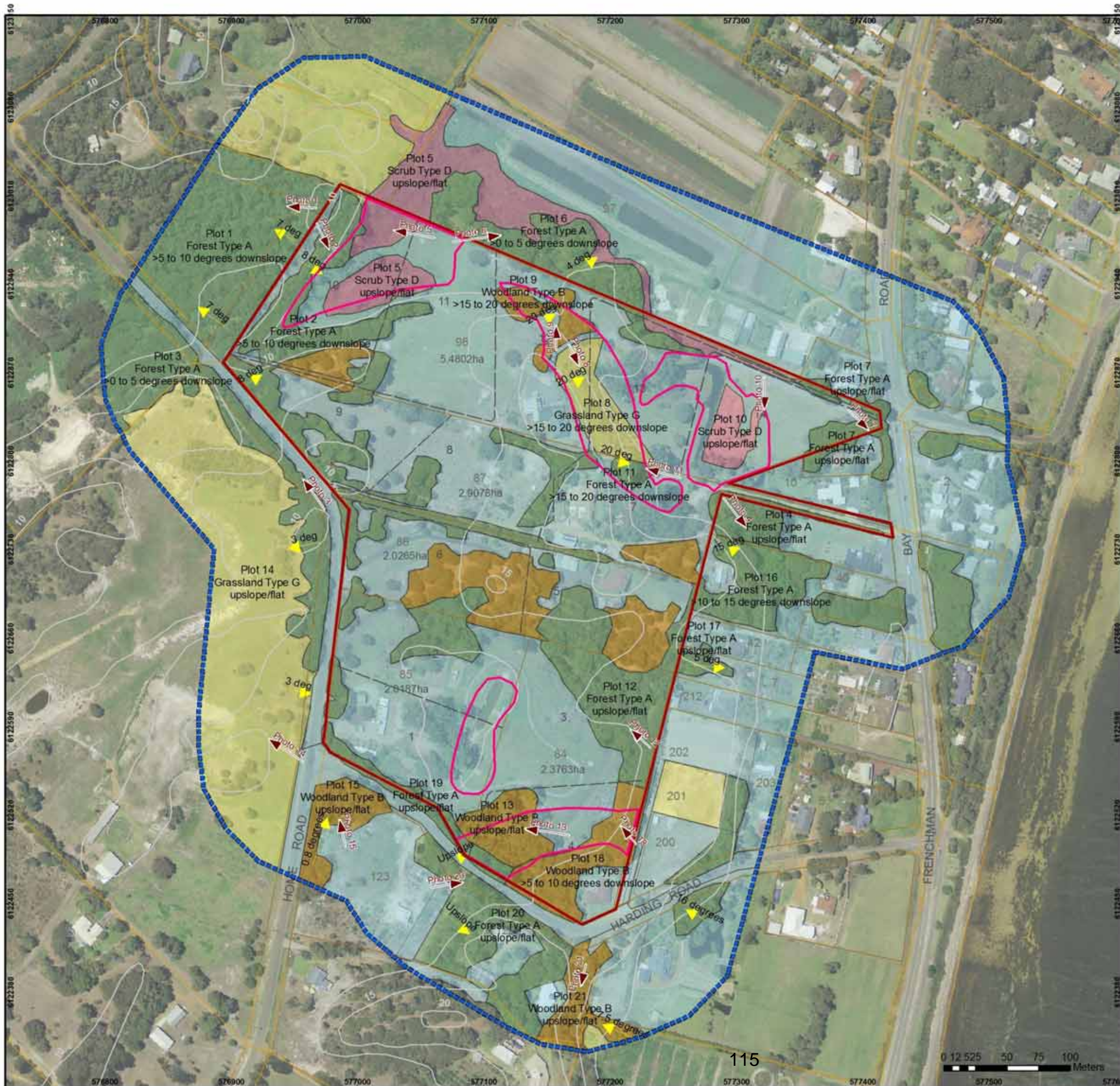
Kathryn Kinnear, Bio Diverse Solutions  
 Accreditation No: BPAD30794  
 Valid to: Feb 2017  
 Jurisdiction: Level 2 - WA



Unit 5A, 209 Chester Pass Rd  
 Albany, WA 6330  
 Australia  
 Tel: 08 9842 1575  
 Fax: 08 9842 1575



Overview Map Scale 1:100,000



## Legend

- ▶ Photo ID
- ▭ Subject Site
- ▭ 100m Assessment Boundary
- ▭ Cadastre
- 5m Contours
- ▶ Slope Degrees
- Vegetation**
- ▭ Forest Type A
- ▭ Woodland Type B
- ▭ Shrubland Type C
- ▭ Scrub Type D
- ▭ Grassland Type G
- ▭ Low fuel or non vegetated 2.2.3.2
- ▭ Development Exclusion Area

Scale  
 1:3,000 @ A3  
 GDA MGA 94 Zone 50

**Data Sources**  
 Aerial Imagery: SLIP Virtual Mosaic WMS Service, Landgate 2016  
 Cadastre and Contours: Landgate 2016  
 Overview Map: World Topographic map service, ESRI 2012

**CLIENT**  
 Ayton Baesjou  
 Lots 84, 85, 87, 98 Home and Harding Road  
 Albany, WA 6330


## Vegetation Classes Map


STATUS	FILE	DATE
FINAL	AB007	16/12/2016



**SECTION 1 - Vegetation Classification**


All vegetation within 100m of the site / proposed development was classified in accordance with Table 2.3 of AS 3959-2009. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below and shown on the Vegetation Classes Map page 2.

Plot	1	Classification or Exclusion Clause	Forest Type A
		<p>Closed <i>Agonis flexuosa</i> forest.                      Multi-layered vegetation structure.                      Potential surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      External to site.                      Down slope-effective slope 7 degrees.</p>	
<p>Photo 1-Photo ID 1-Looking north east from northern boundary. Boundary located on ridge running from east to west.</p>			


Plot	2	Classification or Exclusion Clause	Forest Type A
		<p>Closed <i>Agonis flexuosa</i> forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Upslope/downslope (straddles ridgline)-effective slope 8 degrees.                      Internal to site-APZ management can be applied.</p>	
<p>Photo 2-Photo ID 2 –Photo looking south east from plot 1.</p>			


## REPORT ITEM DIS021 REFERS

Plot	3	Classification or Exclusion Clause	Forest Type A
			<p>Closed <i>Agonis flexuosa</i> forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Downslope-effective slope 3 degrees.                      External to site.                      Separation 10 metres.</p>
<p>Photo 3-Photo ID 3- View looking north along Home Road. Road cuts through original ridge line.</p>			

Plot	4	Classification or Exclusion Clause	Forest Type A
			<p>Closed Warren River Cedar Forest and Peppermint forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      External to site.                      Flat land.                      0m separation to site.</p>
<p>Photo 4-Photo ID 4-View to the south east. Steep slopes are located further south.</p>			


## REPORT ITEM DIS021 REFERS


Plot	5	Classification or Exclusion Clause	Scrub Type D
		<p>Pampas Grass to 3 metres in height growing on peat swamp.                      Potential Fuel Loading 25t/ha at maturity.                      &gt;30% vegetative cover.                      Flat land.                      Internal and external to the site and contained within development exclusion area.                      Internal to site-APZ management can be applied.</p>	
		<p>Photo 5-Photo ID 5-View west towards plots 1 and 2. Heavy Pampas grass infestation.</p>	

Plot	6	Classification or Exclusion Clause	Forest Type A
		<p>Closed <i>Agonis flexuosa</i> forest                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      External to site.                      Downslope-effective slope 4 degrees.</p>	
		<p>Photo 6-Photo ID 6-View to the north east. Heavy infestation of Arum Lilly and Dolichos</p>	





## REPORT ITEM DIS021 REFERS

Plot	7	Classification or Exclusion Clause	Forest Type A
		<p><i>Agonis flexuosa</i> forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Located external and external to site.                      Flat ground.                      Internal to site-APZ management can be applied.</p>	
		<p>Photo 7-Photo ID 7-Looking south towards adjoining property. Heavy pasture invasion in understory.</p>	

Plot	8	Classification or Exclusion Clause	Grassland Type G
		<p>Located with development exclusion area.                      Potential fuel load 3-4.5 t/ha.                      Down slope-effective slope 20 degrees to the east                      Internal to site.                      Mowing and slashing to meet APZ requirement.                      Internal to site-APZ management can be applied.</p>	
		<p>Photo 8-Photo ID 8-View to the south from driveway-height of grasses exceeds 300mm. Patchy understory regeneration displays frequency of current management.</p>	

## REPORT ITEM DIS021 REFERS

Plot	9	Classification or Exclusion Clause	Woodland Type B
			<p>Peppermint woodland average height 9-10 metres with 10-30% foliage cover.                      Understory cleared-replaced by mixed unmanaged pasture-grasses 100-300mm.                      Not multi layered.                      Effective slope 20 degrees.                      Potential fuel loading 15-25 t/ha.                      Internal to site and located within development exclusion area.                      APZ management standards can be applied.</p>
			<p>Photo 9-Photo ID 9-Looking north towards plot 6</p>

Plot	10	Classification or Exclusion Clause	Scrub Type D
			<p>Located to the east-internal to subject site.                      Pampas grass infestation adjoining water hole.                      Currently grazed by goats.                      If grazing were discontinued the site would return to a state similar to plot 5.                      Potential fuel load 3-4.5 t/ha.                      Flat ground.                      Internal to site-APZ management can be applied.</p>
			<p>Photo 10-Photo ID 10-View to the south east. Goats can just be seen in background.</p>

## REPORT ITEM DIS021 REFERS


Plot	11	Classification or Exclusion Clause	Forest Type A
			<p>Closed <i>Agonis Flexuosa</i> Forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Downslope-effective slope 20 degrees.                      Internal to site, within development exclusion area.                      APZ management can be applied.</p>

Photo 11-Photo ID 11-View to the west. Plot 8 located top right of photo.




Plot	12	Classification or Exclusion Clause	Forest Type A
			<p>Closed <i>Agonis Flexuosa</i> Forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Effective Slope – Upslope.                      Internal to site, within development exclusion area.                      APZ management can be applied.</p>


Photo 12-Photo ID 12 View of forest Type A from the east (LHS of Phot)

## REPORT ITEM DIS021 REFERS

Plot	13	Classification or Exclusion Clause	Woodland Type B
			<p>Karri woodland average height 15 metres with 10-30% foliage cover. Some over storey dying.                      Understorey cleared-replaced by mixed unmanaged pasture-grasses 100-300mm.                      Not multi layered.                      Effective slope flat ground.                      Potential fuel loading 15-25 t/ha.                      Internal to site.                      APZ management standards can be applied.</p>
			<p>Photo 13-Photo ID 13-View to the west adjacent to Lot 12. Heavy weed infestation present.</p>

Plot	14	Classification or Exclusion Clause	Grassland Type G
			<p>Located western boundary-external to subject site.                      Currently grazed.                      Potential fuel load 3-4.5 t/ha.                      Effective slope - Upslope.                      Separation 11 metres.</p>
			<p>Photo 14-Photo ID 14-view to the north west from home Road.</p>


## REPORT ITEM DIS021 REFERS

Plot	15	Classification or Exclusion Clause	Woodland Type B
			<p>Peppermint woodland average height 6-8 metres with 10-30% foliage cover.                      Understory - unmanaged pasture-grasses 100-300mm.                      Not multi layered.                      Upslope-effective slope 0.8 degrees.                      External to site</p>
		<p>Photo 15-Photo ID 15 View of Woodland Type B in private property to the south</p>	


Plot	16	Classification or Exclusion Clause	Forest Type A
<p><i>Photo not available, private property</i></p>			<p>Closed <i>Agonis Flexuosa</i> Forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Down slope-Effective slope 15 degrees.                      External to site.</p>


## REPORT ITEM DIS021 REFERS

Plot	17	Classification or Exclusion Clause	Forest Type A
<p><i>Photo not available, private property</i></p>			<p>Closed <i>Agonis Flexuosa</i> Forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Upslope-effective slope 5 degrees.                      External to site.</p>


Plot	18	Classification or Exclusion Clause	Woodland Type B
			<p>Peppermint woodland average height 6-8 metres with 10-30% foliage cover.                      Understory - unmanaged pasture-grasses 100-300mm. Scattered remnant natives                      Not multi layered.                      Down slope-effective slope 10 degrees to existing house.                      Upslope to lot internal areas.                      Internal to site-APZ management can be applied.</p>
		<p>Photo 18-Photo ID 18-View of Woodland Type B north of existing house</p>	

## REPORT ITEM DIS021 REFERS

Plot	19	Classification or Exclusion Clause	Forest Type A
			<p>Closed <i>Agonis Flexuosa</i> Forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Flat Ground.                      Internal and external to site. Internal to site-APZ management can be applied.</p>
<p>Photo 19-Photo ID 19-Looking west to Home Road of Plot 19 (RHS of photo)</p>			

Plot	20	Classification or Exclusion Clause	Forest Type A
			<p><i>Agonis flexuosa</i> Forest.                      Multi-layered vegetation structure.                      Potential Surface fuels 25-35T/ha.                      30-70% vegetative structure/cover.                      Average tree height 8-13m.                      Upslope.                      External to site,</p>
<p>Photo 20-Photo ID 20-View to the south west from the north east of Plot 20.</p>			

## REPORT ITEM DIS021 REFERS

Plot	21	Classification or Exclusion Clause	Woodland Type B
		<p>Peppermint woodland average height 6-8 metres with 10-30% foliage cover.                      Understory - unmanaged pasture-grasses 100-300mm.                      Scattered remnant natives.                      Not multi layered.                      Upslope.                      External to site to the south east.</p>	
		<p>Photo 21-Photo ID 21 view of Woodland Type B to the south east of the subject site. View from the north to the south along Plot 21 in private property.</p>	



**SECTION 3: Potential Bushfire Impacts**

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below and shown on the BAL Contour Page 16.

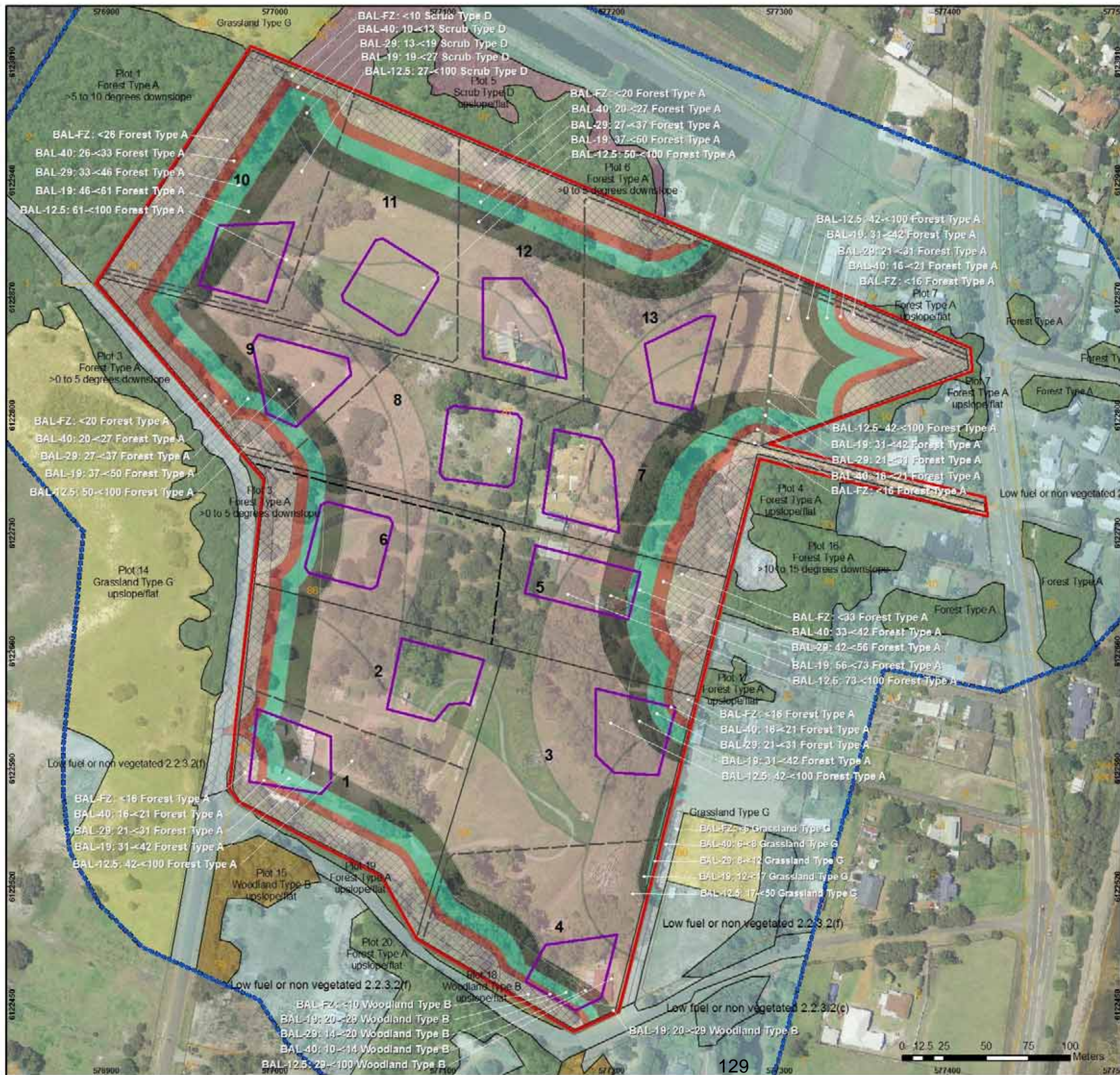
BE on lot	Vegetation Classification	Effective Slope	Separation (m) to lot	BAL
1	Forest Type A (Plot 19) Woodland Type B (Plot 15) Forest Type A (Plot 3)	Flat Land Flat Land Downslope>0 to 5 deg	0m 20m 10m	BAL 12.5 to existing house N/A overridden by Plot19 BAL 12.5 to existing house
2	Forest Type A (Plot 3)	Downslope>0 to 5 deg	10m	BAL 12.5 to BAL Low on BE
3	Forest Type A (Plot 17) Grassland Type G	Upslope Upslope	0m 10m	BAL 29 to BAL 12.5 BAL 12.5
4	Woodland Type B (Plot 18)	Upslope	0m	BAL19 and BAL 12.5 can apply to existing house
5	Forest Type A (Plot 17) Forest Type A (Plot 16)	Upslope Downslope>10 to 15 deg	0m 0m	N/A overridden by Plot 16 BAL 29 to BAL 12.5 can apply
6	Forest Type A (Plot 3)	Downslope>0 to 5 deg	10m	BAL 29 and 12.5 on BE
7	Forest Type A (Plot 16) Forest Type A (Plot 4)	Downslope>10 to 15 deg Flat Land	0m 0m	BAL 12.5 to BAL-Low can apply BAL 12.5 to BAL-Low can apply
8	N/A	N/A	>100m	BAL – Low can apply
9	Forest Type A (Plot 3)	Downslope>0 to 5 deg	10m	BAL 29 to BAL 12.5 can apply
10	Forest Type A (Plot 1)	Down slope>5 to 10 degrees	0 m	BAL 12.5, BAL 19 and BAL 29 can apply to BE
11	Forest Type A (Plot 6)	Downslope>0 to 5 deg	0m	BAL 12.5 and BAL Low to BE
12	Forest Type A (Plot 6)	Down slope>0 to 5 deg	0m	BAL 12.5 and BAL Low to BE
13	Forest Type A (Plot 6) Forest Type A (Plot 4)	Down slope>0 to 5 degrees Flat Land	0m 0m	BAL 12.5 and BAL Low to existing house in BE BAL 12.5 to BE
14	Forest Type A (Plot 7)	Flat Land	0m	BAL 12.5 to 29 can apply

**COMMENTS ON BAL CALCULATIONS:**

- Distances from vegetation were made based on surface fuels to edge of lot (subject site) boundary;
- BAL Calculation was worked from external boundaries of the subject site, with the assumption that all internal areas of the lots will be maintained to APZ standards by the new owners;
- Effective slopes were measured in the field using a Nikon Forestry Pro and represented on the respective plots;
- Method 1 (AS3959-2009) Simplified procedure was used for vegetation classification and BAL Assessment process;
- Vegetation was classified within 100m of the lot boundaries;
- The perimeter of the vegetation was measured using field GPS and notations on field GIS maps;
- The BAL Contour Plan was prepared by an Accredited Level 2 Bushfire Planning Practitioner (BPAD30794); and
- The BAL Contour Map has been prepared in accordance with Department of Planning (WAPC) Fact Sheet – BAL Contour Maps (Version 2, January 2016).

### ASSUMPTIONS

- The lots and the Development Exclusion areas can be fuel reduced to meet APZ standards; and
- All other areas on the lots can be cleared or maintained to APZ standards as per AS3959-2009 Low fuel Exclusion 2.2.3.2 (f) and the Guidelines for Planning in Bushfire Prone Areas – APZ Standards (Appendix Four A 2.1 Version 1.1, February 2017).



## REPORT ITEM DIS021 REFERS

Kathryn Kinnear, Bio Diverse Solutions  
Accreditation No: BPAD30794  
Valid to: Feb 2017  
Jurisdiction: Level 2 - WA



Unit 5A, 209 Chester Pass Rd  
Albany, WA 6330  
Australia  
Tel: 08 9842 1575  
Fax: 08 9842 1575



Overview Map Scale 1:100,000

### Legend

- Subject Site
- 100m Assessment Boundary
- Proposed Building Envelope
- Cadastre

### Vegetation

- Forest Type A
- Woodland Type B
- Shrubland Type C
- Scrub Type D
- Grassland Type G
- Low fuel or non vegetated 2.2.3.2

### BAL Contours

- BAL-FZ
- BAL-40
- BAL-29
- BAL-19
- BAL-12.5

### Scale

1:2,250 @ A3  
GDA MGA 94 Zone 50

**Data Sources**  
Aerial Imagery: SLIP Virtual Mosaic WMS Service, Landgate 2016  
Cadastre and Contours: Landgate 2016  
Overview Map: World Topographic map service, ESRI 2012

### CLIENT

Ayton Baesjou  
Lots 84, 85, 87, 98 Home and Harding Road  
Albany, WA 6330

### BAL Contour Plan

STATUS	FILE	DATE
FINAL	AB007	17/02/2017

**AS3959-2009 disclaimer:** It should be borne in mind that the measures contained within this Standard (AS3959-2009) cannot guarantee that a building will survive a bushfire event on every occasion. This is substantially due to the unpredictable nature and behaviour of fire and extreme weather condition. (AS3959, 2009)

Building to AS3959-2009 is a standard primarily concerned with improving the ability of buildings in designated bushfire prone areas to better withstand attack from bushfire thus giving a measure of protection to the building occupants (until the fire front passes) as well as to the building itself.

**SECTION 4: DISCLAIMER**

*The recommendations and measures contained in this assessment report are based on the requirements of the Australian Standards 3959-2009 – Building in Bushfire prone Areas, WAPC State Planning Policy 3.7 (WAPC, 2015), , WAPC Guidelines for Planning in Bushfire Prone Areas (WAPC, 2015), and CSIRO’s research into Bushfire behaviour. These are considered the minimum standards required to balance the protection of the proposed dwelling and occupants with the aesthetic and environmental conditions required by local, state and federal government authorities. They DO NOT guarantee that a building will not be destroyed or damaged by a bushfire. All surveys and forecasts, projections and recommendations made in this assessment report and associated with this proposed dwelling are made in good faith on the basis of the information available to the fire protection consultant at the time of assessment. The achievement of the level of implementation of fire precautions will depend amongst other things on actions of the landowner or occupiers of the land, over which the fire protection consultant has no control. Notwithstanding anything contained within, the fire consultant/s or local government authority will not, except as the law may require, be liable for any loss or other consequences (whether or not due to negligence of the fire consultant/s and the local government authority, their servants or agents) arising out of the services rendered by the fire consultant/s or local government authority.*

**SECTION 7: Certification**

I hereby certify that I have undertaken the assessment of the above site and determined the Bushfire Attack Level stated above in accordance with the requirements of AS 3959-2009 (Incorporating Amendment No’s 1, 2 and 3).

SIGNED, ASSESSOR: .....  .. DATE:

Kathryn Kinnear, Bio Diverse Solutions  
 Accredited Level 1 BAL Assessor (Accreditation No: BPAD30794)  
 “Experienced” Level 2/3 Bushfire Practitioner pending accreditation.



**References**

## REPORT ITEM DIS021 REFERS

Western Australian Planning Commission (WAPC) (2017) Guidelines for Planning in Bushfire Prone Areas Version 1.1. Western Australian Planning Commission and Department of Planning WA, Government of Western Australia.

Western Australian Planning Commission (WAPC) State Planning Policy 3.2 Planning in Bushfire Prone Areas. Department of Planning WA and Western Australian Planning Commission.

State Land Information Portal (SLIP) (2015 & 2016) map of Bushfire Prone Areas. Office of Bushfire Risk management (OBRM) data retrieved from:

**Appendix 1: – Additional Information / Advisory Notes / Justifications Related to Assessment**

Vegetation types analysed to A3959-2009 with the following justifications:

Forest type A

- Multi-layered vegetation structure;
- Surface fuels and could reach 25-35T/ha;
- 30-70% vegetative structure/cover; and
- Eucalypt Trees 10-30m.

Woodland Type B

- Not multi-layered vegetation structure;
- Available fuels and could reach 15-25T/ha;
- 10-<30% vegetative structure/cover;
- Eucalypt Trees 8-15m.

Scrub Type D:

- Maximum vegetation heights 4m;
- Occasional tree at 5m;
- >30% vegetative cover;
- Available Fuels 25T/ha; and
- Melaleuca, pampas grass and tea tree scrubs.

Grassland Type G

- Unmanaged grasslands – not regularly slashed or grazed;
- Average heights of grasses 100-400mm;
- Dominated by grass species; and potential fuel loading 4.5t/ha; and
- <10% tree/scrub species present.

Low Fuel and non-vegetated areas (AS3959-2009 2.2.3.2):

*Clause (e) – Non-vegetated areas, including waterways, roads, footpaths, buildings and rocky outcrops.*

- Footpaths;
- Buildings;
- Bare ground;
- Car parks; and
- Roads

*Clause (f) – Low threat vegetation including managed grassland in minimal fuel condition, maintained lawns, golf courses, maintained public reserves and parklands, vineyards, orchards, cultivated ornamental gardens, commercial nurseries, nature strips and wind breaks.*

- Low fuel areas associated with managed grasslands, ornamental gardens in APZ areas of established buildings/dwellings; and
- Managed grasses <100mm in height, evidence of regular mowing.

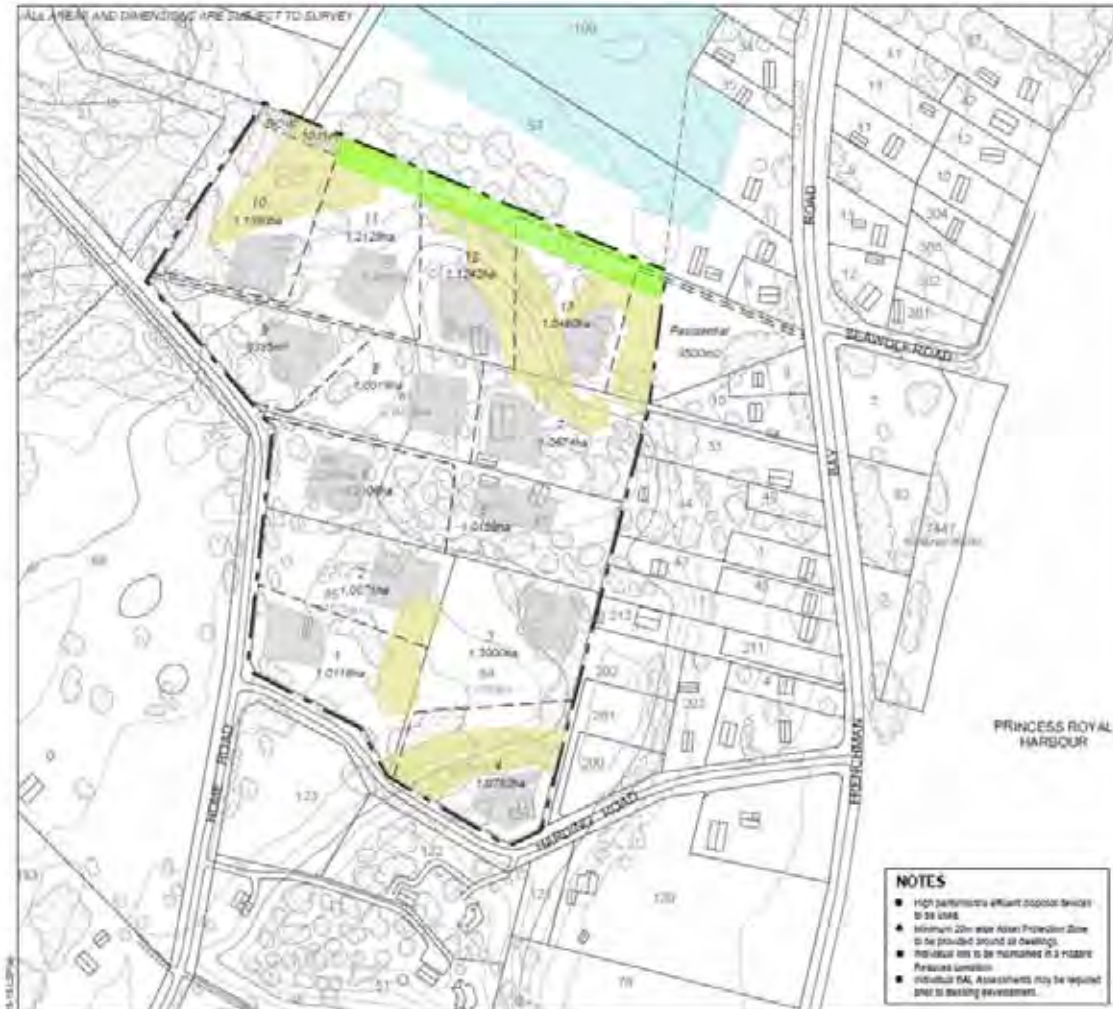
BAL Assessment undertaken by an Experienced Level 2 Bushfire Practitioner. Method 1 AS3959-2009 applied for BAL Assessment.

Appendix 2 – OBRM Mapping



(SLIP, 2015 & 2016)

Appendix 3 – Local Structure Plan



Local Structure Plan  
 Frenchman Bay,  
 Home & Harding Roads  
 Rural Residential Area 43  
 Lots 84, 85 Harding Road &  
 Lots 86, Pt87 & Pt98 Home Road  
 Robinson, City of Albany

**LEGEND**

- Subject Land
- Existing Lot Boundaries
- Proposed Lot Boundaries
- Existing Vegetation
- Existing Buildings
- Vegetated Agricultural Buffer
- Effluent Disposal Exclusion Area
- Market Garden
- Indicative Building Envelope (Max 200sq)

N  
 DRG A3  
 SCALE 1:2000  
 0 10 20 30 40 50

PREPARED BY: AYTON BAESJOU PLANNING  
 CHECKED BY: JANE BAESJOU  
 DRAWN BY: JANE BAESJOU  
 DATE: 10/10/2023  
 SUBJECT: LOCAL STRUCTURE PLAN

**NOTES**

- High performance effluent disposal service to be used.
- Minimum 20m wide Riparian Protection Zone to be provided around all channels.
- Individual lots to be managed in a holistic fashion.
- Individual EAL Assessments may be required prior to building developments.

**AYTON BAESJOU**  
 PLANNING  
 19 First Floor  
 ALBANY WA 6170  
 Ph 0842 2306 Fax 0842 8666





## REPORT ITEM DIS021 REFERS

Checklist for proposal compliance and justification to the Guidelines for Planning in Bushfire Prone Areas (2015 )			
<b>BDS Project Name</b>	BAL Contour Plan		
<b>BDS Job Number</b>	AB007		
<b>Date</b>	20/2/17	<b>WAPC#</b>	N/A
<b>Client name</b>	Ayton Baesjou	<b>Condition #</b>	N/A
<b>Bushfire Prone Area</b>	Yes (see attached)	<b>Mapping</b>	Yes see attached
<b>Planning proposal</b>	WAPC subdivision	<b>Lots created</b>	14
1. Bushfire Protection Criteria Acceptable Solutions as defined by Guidelines for Planning for Bushfire Prone Areas (WAPC 2015).			
Element	Compliant to Acceptable Solution– Yes/No	Justification	
<b>Element 1 – Location</b>	No	Site has areas which are classified extreme and Low hazards. (Forest Type A, Woodland Type B, Scrub Type D, Grassland Type G). Proposed buildings can be in BAL 29 to BAL 12.5 zones and existing buildings in BAL 12.5 or BAL low.  <b>Development is deemed to meet Acceptable Solutions for Element 1.</b>	
<b>Element 2 - Siting and design of development</b>	Yes	A2.1: APZ can be achieved within the individual lots and a setback associated with BAL 29 or less. Fuel can be modified within the lots to meet APZ requirements.  <b>Plan of subdivision is deemed to meet Acceptable Solutions for Element 2 with APZ's applied to BAL 29 or less to lots.</b>	
<b>Element 3 - Vehicular access</b>	Yes	A3.1: Direct access onto Home and Harding Roads for most lots to separate destinations. A3.2 Public roads not proposed. A3.3 Cul-de-sacs not proposed. A3.4 Battle axes proposed, do not exceed 200m. A3.5 Private Driveways will meet minimum requirements. A3.6 No EAW proposed, use the existing road network. A3.7 No FSA proposed, use the existing road network. A3.8 Firebreaks compliant by current owner (s). <b>Deemed to meet Acceptable Solutions for Element 3.</b>	
<b>Element 4 – Water</b>	Yes	Reticulated water. <b>Deemed to meet Acceptable Solutions for Element 4.</b>	
<b>Bushfire Hazard Assessment required</b>	Yes	See Vegetation Classes Plan Page 2.	
<b>BAL Contour required</b>	Yes	See BAL Contour Map Page 16.	
<b>BMP required</b>	Yes	Extreme levels of fuel and slope exist within the properties. Application of APZ for BAL setbacks of BAL 29 or less is required.	

## 2. Recommendations based on above checklist

1. Assessment indicates that the location has bushfire hazards of Forest Type A, Scrub Type D, Woodland Type B, Grassland Type G external and internal to site. Internal areas low fuel to be maintained by the developer/land owners.
2. BAL 12.5, BAL 19, BAL-29 can be achieved in newly created lots. Existing buildings can achieve BAL 29 or less. All new buildings to be placed in the BAL 29 or less contours in BE's.
3. Brief assessment to Guidelines indicated can meet the Elements by applying Acceptable Solutions can be achieved in the subsequent stages.
4. Detailed BMP required as a condition of subdivision.
5. Notification for condition of approval - building to AS3959-2009 to apply to any new dwellings.
6. Bushfire prone area mapping is correct as per the Map of Bush Fire Prone Areas identifying land falling within, or partially within, a bush fire prone area of Western Australia as designated by the Fire and Emergency Services (FES) Commissioner dated 8/12/2015 and 21/5/2016. Updates of this mapping will occur at the discretion of the FES Commissioner and the BAL Contour Mapping is considered valid for a period of 12 months from the date of production.

### Prepared by:

Kathryn Kinnear, Bio Diverse Solutions

Accredited Level 2 Bushfire Practitioner (Accreditation No: BPAD30794)



# REPORT ITEM DIS021 REFERS

## PLANNING AND DEVELOPMENT ACT 2005

### CITY OF ALBANY

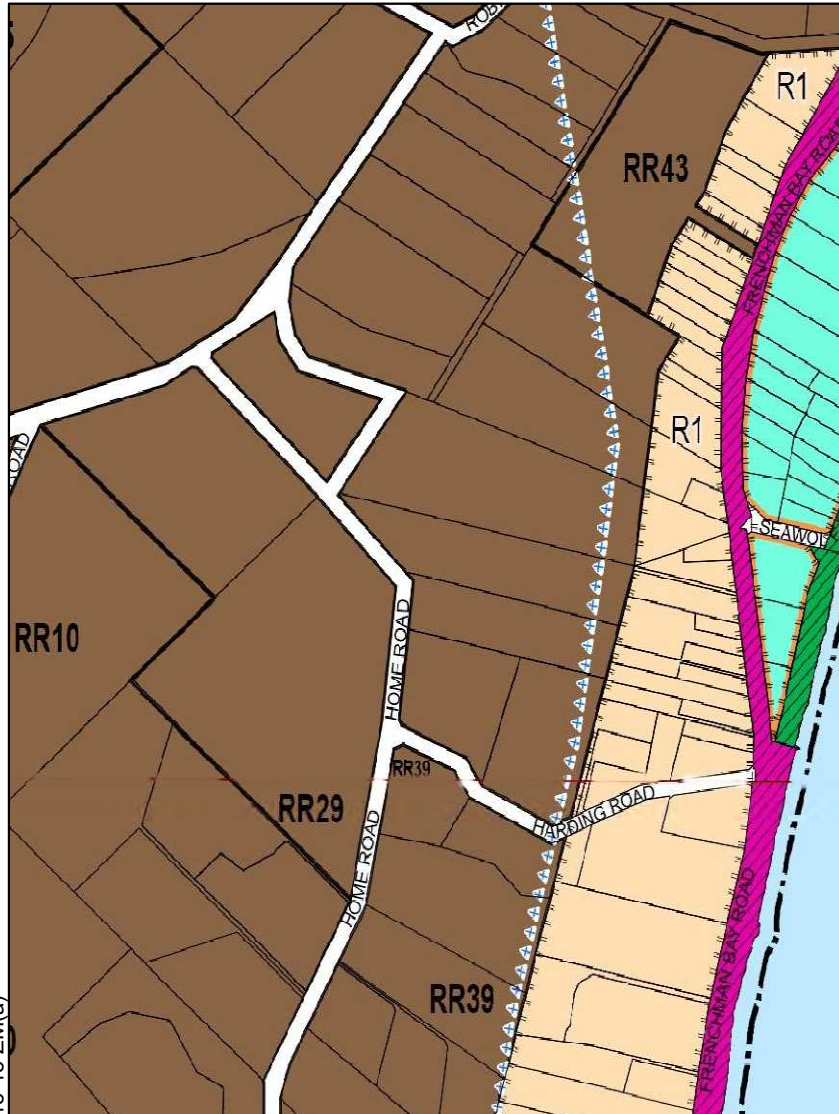
#### LOCAL PLANNING SCHEME No. 1

#### AMENDMENT No. 27

The City of Albany under and by virtue of the powers conferred upon it in that behalf by the Planning and Development Act 2005 hereby amends the above local planning scheme by:

- i. Transferring Lots 84, 85 & 86 and portion of Lots 87 & 98 from Schedule 14 Rural Residential Zone Area No. 29 to Rural Residential Zone Area No. 43.
  - ii. Renaming Schedule 14 Rural Residential Zone Area No. 43 Specified Rural Residential Zone from "Lot 114 Frenchman Bay Road Robinson" to "Frenchman Bay, Harding & Home Roads Rural Residential Area".
  - iii. Within Provisions 1, 2 & 11 of Schedule 14 Rural Residential Zone Area No. 43 replacing "Subdivision Guide Plan" with "Local Structure Plan".
  - iv. Replacing Provision 9 of Schedule 14 Rural Residential Zone Area No. 43 with the following:  
"For the Lots applicable to a Local Structure Plan and which a reticulated water supply is provided, all dwellings shall be required to provide a rainwater tank of not less than 50,000 litres capacity to harvest rainwater for household and garden use. In other circumstances, clause 5.6.9 of the Scheme shall apply."
  - v. Within Provision 13 of Schedule 14 Rural Residential Zone Area No. 43 replacing "reduced by 7.5m" with "reduced to 7.5m".
  - vi. Replacing Provision 17 of Schedule 14 Rural Residential Zone Area No. 43 with the following:  
"The Local Government may require the subdivider to make arrangements satisfactory to the Local Government to ensure prospective purchasers are advised that a Bushfire Management Plan may apply to the land and that prospective purchasers are advised of the potential for nuisance impacts of odour, noise, dust and spray drift from agricultural activities undertaken in the locality."
  - vii. Replacing Provision 18 of Schedule 14 Rural Residential Zone Area No. 43 with the following:  
"Where shown on a Local Structure Plan a vegetated agricultural buffer is to be provided to the minimum width of 20 metres, plus where shown, a 10 metre setback for access."
  - viii. Replacing Provision 19 of Schedule 14 Rural Residential Zone Area No. 43 with the following:  
"In relation to the 20 metre vegetated agricultural buffer to the north of the existing market garden, species used in the closest 10 metre portion of the buffer shall not be capable of growing taller than 3 metres to prevent the incidence of overshadowing."
  - ix. Including a Provision 20 within Schedule 14 Rural Residential Zone Area No. 43 as follows:  
**"Bushfire Management**  
20. The Local Government may request the Commission to impose a condition at the time of subdivision requiring the preparation and implementation of a Bushfire Management Plan in accord with SPP 3.7."
- and
- x. Updating the Scheme Maps accordingly.

**Existing Zoning**



**LEGEND**

**LOCAL SCHEME RESERVES**  
(see scheme text for additional information)

- Local road
- Parks and recreation
- Priority road
- Waterbodies

**LOCAL SCHEME ZONES**  
(see scheme text for additional information)

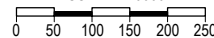
- Residential
- Rural residential
- Tourist residential

**OTHER CATEGORIES**  
(see scheme text for additional information)

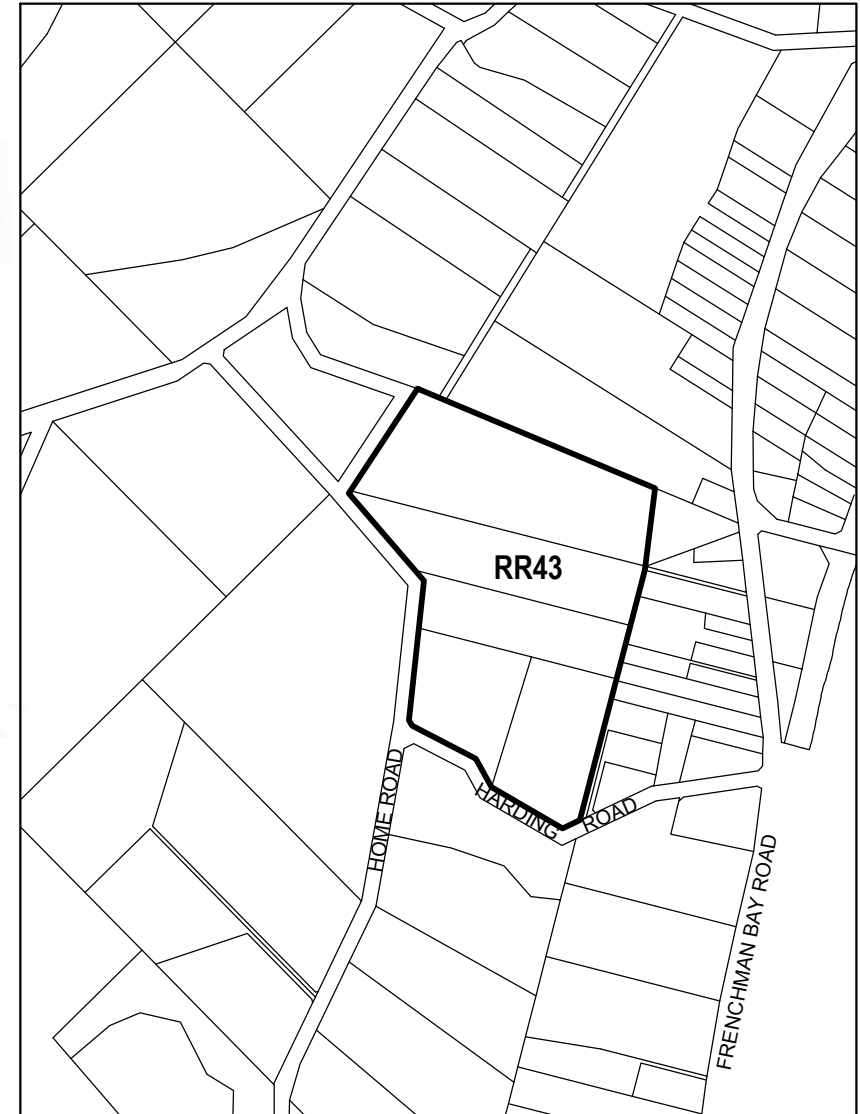
- Scheme boundary
- R20 R Codes
- RR1 Rural residential area
- Public drinking water sources special control areas (see o.6.3)



ORIG A4  
SCALE 1:10000



**Proposed Zoning**



15-15-ZM(a)

# REPORT ITEM DIS021 REFERS

## ADOPTION

Adopted by resolution of the Council of the City of Albany at the Meeting of the Council held on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_

\_\_\_\_\_  
**Mayor**

\_\_\_\_\_  
**Chief Executive Officer**

## FINAL APPROVAL

Adopted for final approval by resolution of the City of Albany at the Meeting of the Council held on the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_ and the Common Seal of the City of Albany was hereunto affixed by the authority of a resolution of the Council in the presence of:

\_\_\_\_\_  
**Mayor**

\_\_\_\_\_  
**Chief Executive Officer**

Recommended/Submitted for Final Approval

\_\_\_\_\_  
**Delegated Under S.16  
of the PD Act 2005**

\_\_\_\_\_  
**Date**

Final Approval Granted

\_\_\_\_\_  
**Minister for Planning**

\_\_\_\_\_  
**Date**

**CITY OF ALBANY**  
**LOCAL PLANNING SCHEME No. 1**

**LOCAL STRUCTURE PLAN**

**RURAL RESIDENTIAL AREA No. 43**  
**FRENCHMAN BAY, HARDING & HOME ROADS**  
**ROBINSON**

**Endorsement**

This structure plan is prepared under the provisions of the City of Albany Local Planning Scheme No. 1.

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

\_\_\_\_\_ Date

Signed for and on behalf of the Western Australian Planning Commission:

\_\_\_\_\_

an officer of the Commission duly authorised by the Commission pursuant to section 16 of the Planning and Development Act 2005 for that purpose, in the presence of:

\_\_\_\_\_ Witness

\_\_\_\_\_ Date

\_\_\_\_\_ Date of Expiry

# REPORT ITEM DIS021 REFERS

## Amendments:

Amendment No.	Summary Amendment	of	Amendment Type	Date Approved (WAPC)



**EXECUTIVE SUMMARY**

This Local Structure Plan has been prepared to guide subdivision and development of Lots 84, 85, 86 and a portion of Lots 87 & 98 Home, Harding & Frenchman Bay Roads Robinson for Rural Residential purposes.

The land is located less than 5.5km from the Albany Central Area and is currently used for Rural Small Holding/ Rural Residential Purposes.

In accord with local and state policy promoting the efficient use of underutilised zoned and serviced land, the Local Structure Plan provides for the intensification of Rural Residential landuse to the density set and permitted in the locality and as established by local scheme and strategy.

Lot yield and arrangement is based on capability, site opportunities and constraints and is informed by specific site and fire assessments.

This Local Structure Plan should be read with and is adjunct to Local Planning Scheme No. 1 Amendment No. 27.

<b>Local Structure Plan Summary Table:</b>	
Total Area	14.05ha
Existing Lots	5
Lot Yield	13
Dwelling Density	1.05ha/Dw
Estimated Population	31pp
Estimated Additional Population	19pp
School Sites/ Other	NA

**Contents**

**PART 1. – STATUTORY ..... 1**

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2.0 CONTENT OF LOCAL STRUCTURE PLAN ..... 1

3.0 RELATIONSHIP TO LOCAL PLANNING SCHEME NO. 1 ..... 1

4.0 OPERATION ..... 1

5.0 SUBDIVISION AND DEVELOPMENT CONDITIONS ..... 1

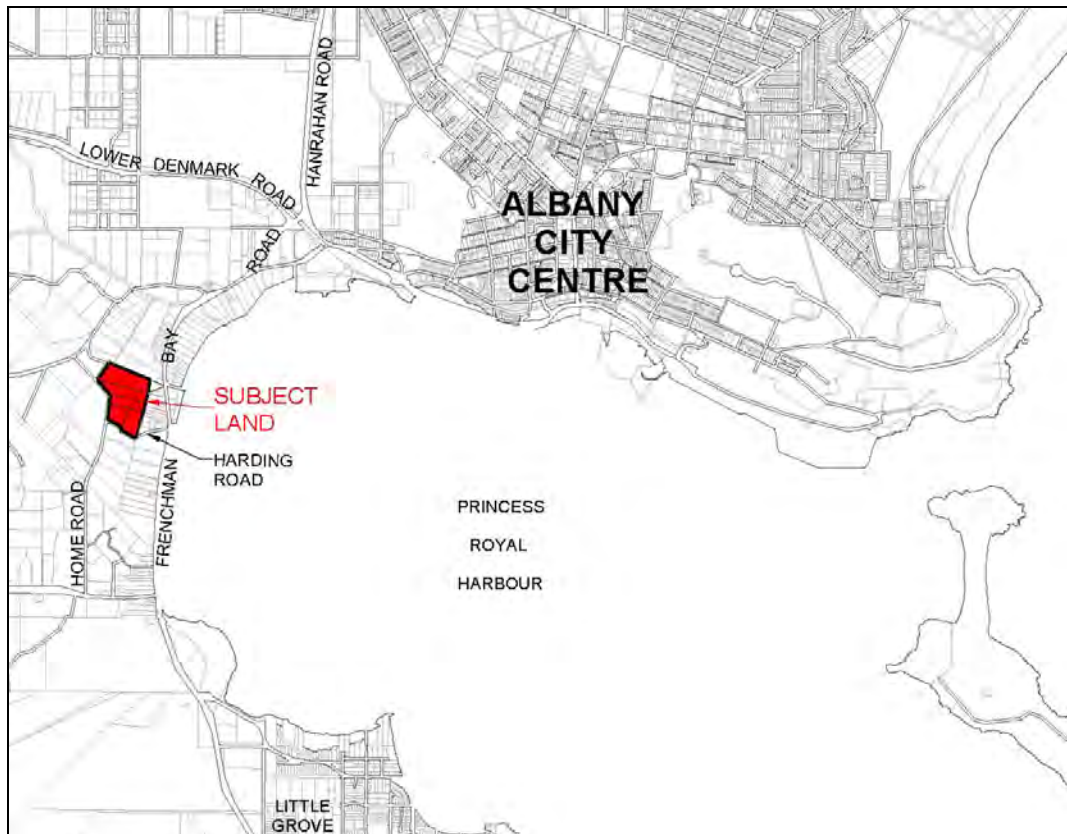
LOCAL STRUCTURE PLAN MAP ..... 2

**PART 2 – EXPLANATORY ..... 3**

## PART 1. – STATUTORY

### 1.0 Structure Plan Area

The Structure Plan covers Lots 84, 85, 86 and a portion of Lots 87 & 98 Home, Harding & Frenchman Bay Roads Robinson zoned Rural Residential and as shown below.



### 2.0 Content of Local Structure Plan

The Local Structure Plan comprises two parts being:

1. Statutory; Containing the Local Structure Plan Map (Following Page).
2. Explanatory; referring to the background for and issues inherent in the Local Structure Plan per Local Planning Scheme No. 1 Amendment No. 27.

### 3.0 Relationship to Local Planning Scheme No. 1

The requirements of the LSP apply as if they were part of the Scheme.

In any conflict between scheme clauses or provisions and the LSP, the provisions or clauses of the scheme shall prevail.

Words and expressions used in the LPS have the same meaning as given in Local Planning Scheme No. 1. Pursuant to clause 27 Schedule 2 Part 4 of the Planning and Development (Local Planning Schemes) Regulations 2015, due regard is to be given to the requirements of the Local Structure Plan in any subdivision and development applications.

### 4.0 Operation

The LSP will come into effect following certification by the WA Planning Commission.

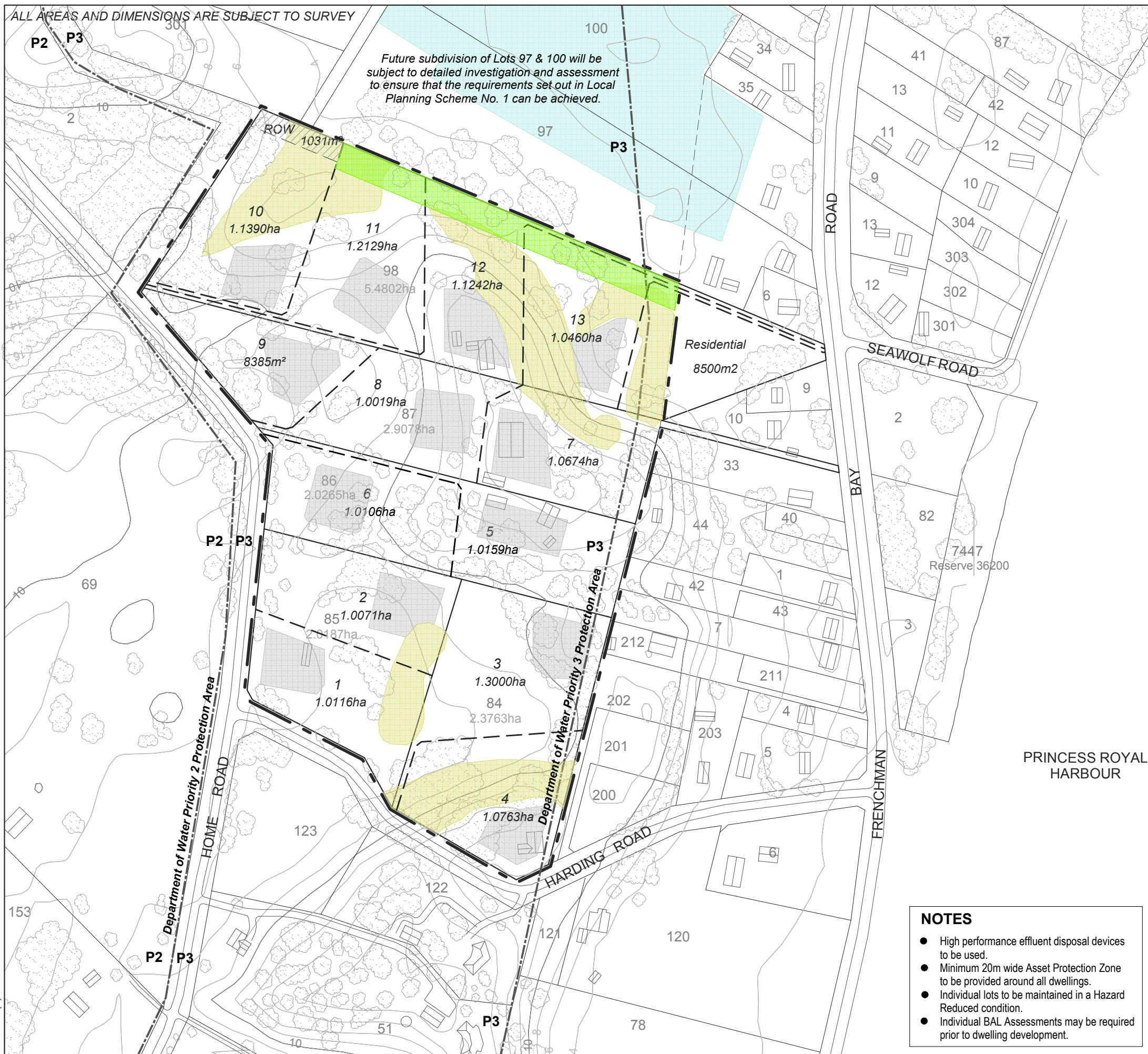
### 5.0 Subdivision and Development Conditions

In addition to the general clauses of the Scheme and the Special Provisions of Schedule 14 relating to Rural Residential Area No. 43, subdivision is to follow that shown on the LSP Map. Minor variations may be approved by the WA Planning Commission.

# Local Structure Plan

Frenchman Bay,  
Home & Harding Roads  
Rural Residential Area 43

Lots 84, 85 Harding Road &  
Lots 86, Pt87 & Pt98 Home Road  
Robinson, City of Albany



**LEGEND**

- Subject Land
- Existing Lot Boundaries
- Proposed Lot Boundaries
- Existing Vegetation
- Existing Buildings
- Vegetated Agricultural Buffer
- Effluent Disposal Exclusion Area
- Market Garden
- Indicative Building Envelope Max 2000m2
- DoW Priority 2 Protection Area
- DoW Priority 3 Protection Area

Map Modification - 1a  
Map Creator - BQ/MRT  
Copyright - Aytou Baesjou Planning  
Sources - Landgate (Cadastral & Contours)  
Datum - AHD  
Contact - Aytou Baesjou Planning  
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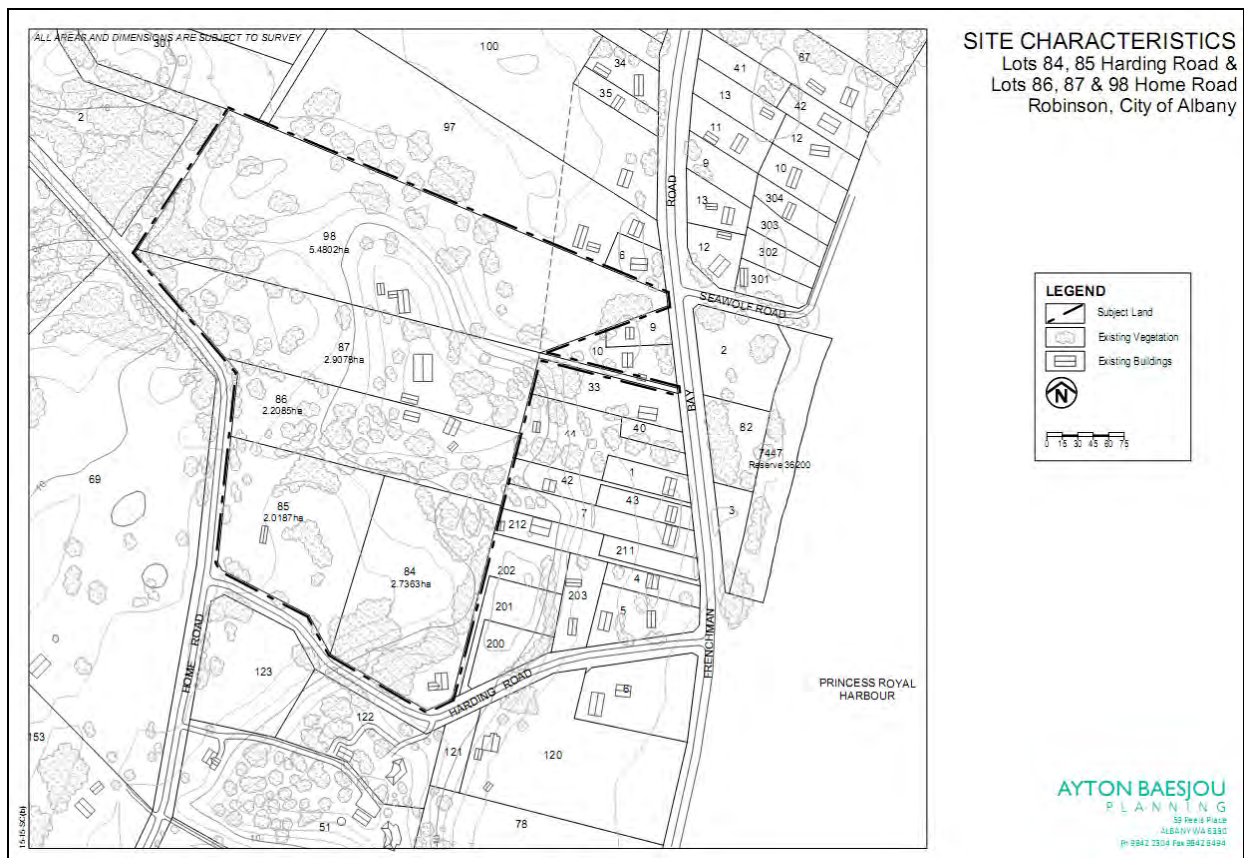
- NOTES**
- High performance effluent disposal devices to be used.
  - Minimum 20m wide Asset Protection Zone to be provided around all dwellings.
  - Individual lots to be maintained in a Hazard Reduced condition.
  - Individual BAL Assessments may be required prior to dwelling development.

**AYTON BAESJOU**  
PLANNING  
59 Peels Place  
ALBANY WA 6330  
Ph 9842 2304 Fax 9842 8494

## PART 2 – EXPLANATORY

The land is located some 5.5km by road south west of the Albany City Centre (Princess Royal Drive and Frenchman Bay Road). The land has access to Frenchman Bay Road, Harding Road & Home Road.

Lot sizes range from 2ha to 5.4ha and are used for rural retreat or rural small holdings purposes. The land is in a precinct comprised of residential lots fronting and east of Frenchman Bay Road, rural residential and rural pursuits on the low flat land to the north with established rural residential estates to the south and west.



As a part of Amendment No. 27 to Local Planning Scheme No. 1 which seeks to transfer the land from Rural Residential Area No. 29 to Area No. 43, a Local Structure Plan (Map) is required. This plan identifies the future lot layout and associated spatial subdivision and development issues and requirements following on from the special provisions identified in Amendment 27 necessary to apply to the land.

As a result, reference should be made to the Amendment No. 27 reports and technical assessments covering site and capability, bushfire safety, existing provisions, servicing and the requirements for future subdivision.

The LSP depicts the general layout, outlines effluent disposal exclusion areas, indicative building envelopes, access arrangements and the other subdivisional components necessary to provide for development.

The plan is based on capability, site opportunities and constraints and is informed by specific site and fire assessments. Background and analysis including the site specific assessments carried out are included in the Amendment No. 27 documentation.

Supporting the LSP, Amendment No. 27 and the existing rural residential controls include measures to:

- Include the land within Rural Residential Area No. 43 and reference the LSP Map as the guide to future subdivision.
- Provide for subdivisional and development servicing as necessary.
- Provide for landowner notifications covering agricultural activities and bushfire safety.
- Include specific bushfire safety provisions.
- Provide prudent landuse control and approval requirements.
- Provide building envelope and effluent disposal location control.



## Planning & Development Services

### City of Albany Policy

# HOLIDAY ACCOMMODATION

# 'HOLIDAY ACCOMMODATION' POLICY

## Policy Statement

1. This Policy has been adopted in accordance with Part 2 of *Local Planning Scheme 1*.
2. Local Government is to have due regard to the provisions of this Policy and the objectives which the Policy is designed to achieve before making its determination.

## Objective

3. To encourage good quality, well managed holiday accommodation for use by short-term visitors generally in locations that will enhance the tourism experience while minimising potential impacts on adjoining residents.

## Scope

4. This Policy applies to applications for Holiday Accommodation.

## Definition

5. Holiday Accommodation: means any land and/or building providing accommodation and recreation facilities for guests/tourists on a short-term commercial basis and may include a shop or dining area incidental to the function providing limited services to patrons (Source: *Local Planning Scheme 1*).
6. Short Stay: means that no person is to stay more than three months in any 12 month period.

*Note: Holiday Accommodation is not the same as 'Bed and Breakfast'.*

*Bed and breakfast/farmstay means a dwelling, used by a resident of the dwelling, to provide accommodation for no more than six guests away from their normal place of residence on a short-term commercial basis within the dwelling and may include the provision of meals.*

## Strategic Context

7. This Policy relates directly to the following element of the *Community Strategic Plan "Albany 2023"*: to advocate, plan and build friendly and connected communities.

## Legislative Context

### Zoning/Location

8. Holiday Accommodation' is not permitted in the 'Residential', 'Caravan and Camping', 'Regional Centre', 'Rural Small Holding' and 'Rural Village' zones unless the Local Government has exercised its discretion by granting planning approval.
9. 'Holiday Accommodation' is not permitted in the 'Yakamia Creek', 'General Agriculture' and 'Priority Agriculture' zones unless the Local Government has exercised its discretion by granting planning approval after giving special notice in accordance with clause 9.4 of the *Local Planning Scheme 1*.
10. 'Holiday Accommodation' is permitted in the 'Tourist Residential' and 'Hotel/Motel' zones providing the use complies with requirements of the Scheme.



## Policy Provisions

### Referral to Council

11. Where a neighbour objects to a proposal for Holiday Accommodation, the application is to be referred to the Council for deliberation and considered in view of the following:
- a. The proximity of the holiday accommodation to key tourism attractions such as the beach or town centre/activity centre (typically a 5 minute walk – 400m); and/or
  - b. Location within a street(s) which facilitates safe, efficient and pleasant walking, cycling and driving; and/or
  - c. Location compatible with Figure A (refer to attachment - the areas illustrated are within close proximity to the town centre and popular swimming beaches); and
  - d. A management plan designed to facilitate community concerns.

### Management Plan

12. On application for Holiday Accommodation, a Management Plan shall be submitted to address matters including:
- a. Effective on-going management;
    - i. The responsibility for appropriate on-going management rests with the proponent to ensure that visitors are responsible and do not create inappropriate impacts (including noise) to adjoining/nearby properties. Suitable on-going management can be more difficult if owners live a considerable distance from the application site. Accordingly, as part of the planning application, the local government will require the proponent to outline how the site will be managed, especially if the owners do not live nearby.
  - b. The amenity of adjoining/nearby land uses;
    - ii. managing noise impacts of visitors;
    - iii. the submission of a code of conduct for guests which shall, amongst others, list what is considered acceptable and unacceptable behavior;
    - iv. outlining how the premises will be managed on a day-to-day basis (including how keys are easily available for late entry, providing onsite assistance and confirming arrangements for cleaning/waste management);
    - v. relevant site specific matters including fire management/emergency response plans for visitors and managing risks for visitors; and
    - vi. the handling of complaints (it is expected that the tenant be contacted by phone immediately and the proponent or their representative visit the property, preferably within 12 hours).

### Amount of Persons Residing

13. The amount of guests residing within holiday accommodation is to comply with the following standards:
- a. 4 square metres per person in each bedroom utilising beds;
  - b. 2.5 square metres per person in each bedroom utilising bunks; and
  - c. Maximum of 12 persons within a 'Single House' at any time.

*Note: Where more than 12 guests are proposed, the premise is classified under the Health Act 1911 as a "lodging house" and will require further approval (from Environmental Health). A planning application for a lodging house shall be treated as a "use not listed" under the provisions of the Town Planning Scheme.*

**Period of Stay**

14. The maximum stay for any one person within a building approved for holiday accommodation is 3 months within any 12 month period.

**Register**

15. Operators must provide and maintain a register of all people who utilise the holiday accommodation during the year to Council's satisfaction.

**Car Parking**

16. At a minimum, 2 on-site car parking bays are to be provided per 6 guests (4 car-parks/12 guests).

17. Tandem parking may be permitted for a maximum of one vehicle behind another vehicle.

18. All car parking is to be contained on-site and no verge area should be used for car parking.

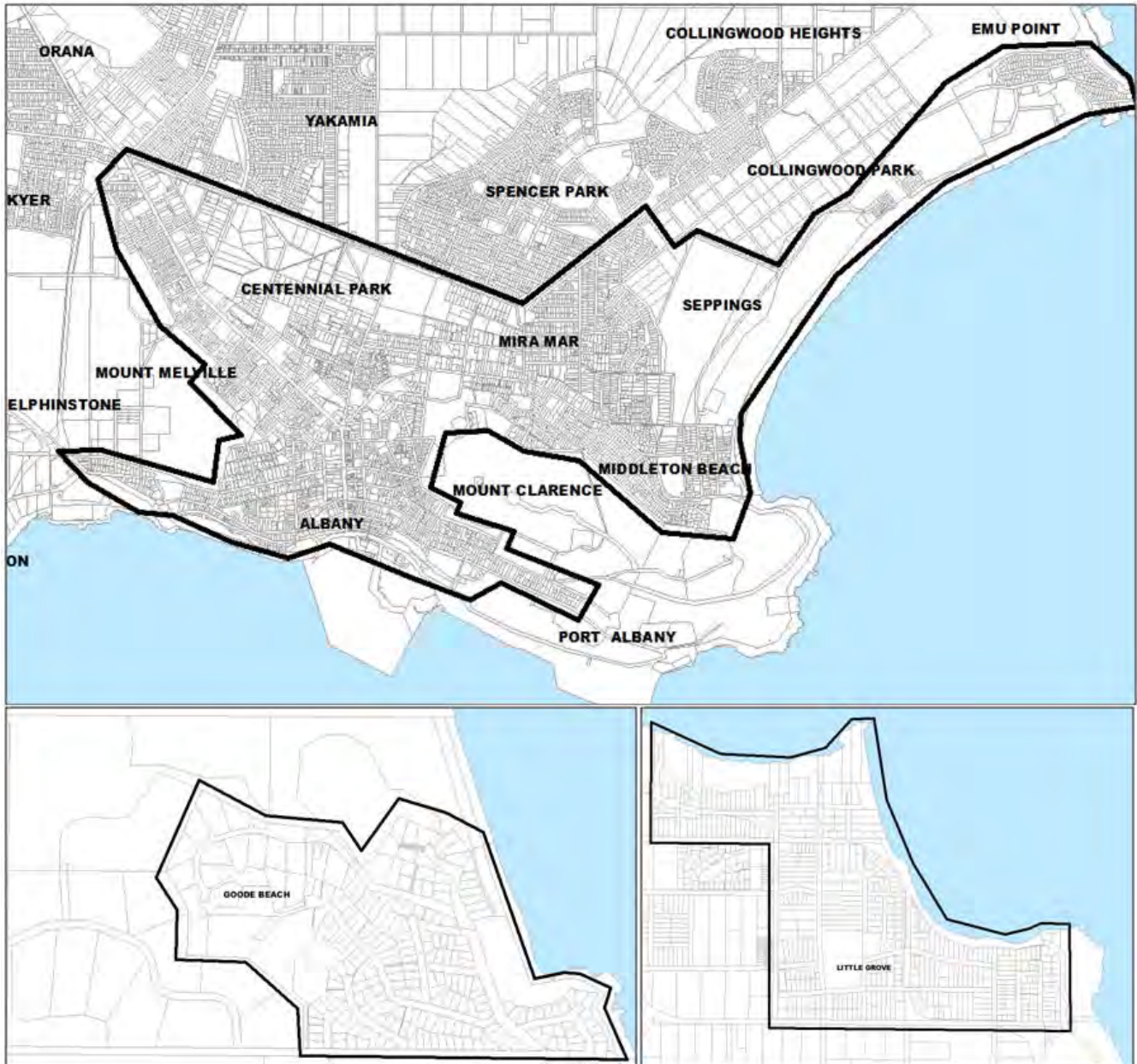
19. It is common for holiday makers to have a boat, trailer, caravan etc. and there should be additional space allocated for such. All vehicle access (including crossovers) and car parking areas are to be sealed and drained to the approval of the local government.

*Note: A new proprietor wishing to continue the use of the site for holiday accommodation will need to provide an updated management plan.*

*Except as otherwise provided in the Scheme, a 'Single House' does not require planning approval of the Local Government.*

*Reverting holiday accommodation back to permanent accommodation ('Single House') does not require the approval of the Local Government.*

Figure A – Preferred Areas for Holiday Accommodation



**Review Position and Date**

20. N/A

**Associated Documents**

- 21. *Local Planning Scheme 1 (LPS1).*
- 22. *Residential Design Codes (R Codes).*
- 23. *The Western Australian Planning Commission (WAPC) Planning Bulletin 99 (Holiday Home Guideline).*

**Version Control**

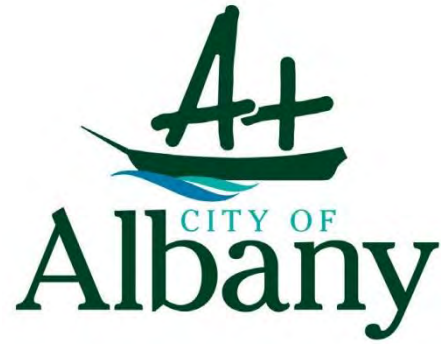
<b>Document Approval</b>			
Document Development Officer: Adrian Nicoll		Document Owner: <i>Dale Putland</i>	
Holiday Accommodation Policy			
<b>Document Control</b>			
File Number - Document Type:	CM.STD.7 – Policy		
Synergy Reference Number:	(Created when cover sheet is created in Synergy Records Module)		
Meta Data: Key Search Terms	Holiday Accommodation Policy		
Status of Document:	Final		
Document file details:	<a href="#">N:\Devel.Service\Development\</a>		
Quality Assurance:	Chief Executive Officer, Executive Management Team		
Distribution:	Internal Document, Public Document		
<b>Document Revision History</b>			
Version	Author	Version Description	Date Completed
Draft v0.01	Senior Planning Officer	Initial Draft - Advertised	24/07/2014
1.0	ED	Adopted by Council - 2014 Report Item PD005	2014

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**\*\* DISCLAIMER \*\***

*This information contained in this document is a guide only. Verification with original Local Laws, Acts, Planning Schemes, and other relevant documents is recommended for detailed references. The City of Albany accepts no responsibility for errors or omissions.*



## Development Services

### City of Albany Policy

# BED AND BREAKFAST ACCOMMODATION

# BED AND BREAKFAST ACCOMMODATION

***Objectives:***

- 1) *To promote the orderly and proper development of land by making suitable provisions to guide applicants who wish to establish Bed and Breakfast accommodation from their homes;*
- 2) *To secure the amenity, health and convenience of both visitors and surrounding residents through appropriate development requirements; and*
- 3) *To ensure that the Bed and Breakfast accommodation is incidental to the predominant use of the property in order to maintain the amenity of the immediate area.*

**Definitions**

***“Bed and Breakfast Accommodation”*** means a dwelling, used by a resident of the dwelling, to provide accommodation for persons away from their normal place of residence on a short-term commercial basis and includes the provision of breakfast.

**Policy Statement**

Bed and Breakfast Accommodation should occupy a maximum of two bedrooms of a dwelling house and be made available for short-stay accommodation for a maximum of six guests at any one time and will only be approved on a lot where it can be demonstrated that:

- 1) The proposal is consistent with surrounding land use activities and can demonstrate general support from adjoining landowners;
- 2) The owner/manager of the Bed and Breakfast accommodation will reside on-site;
- 3) The proposal provides additional on-site car parking bays at the ratio of 1 bay per bedroom and shall not interfere with vehicular access; and
- 4) Access/egress to the site and car parking shall not adversely impact on with local vehicular or pedestrian traffic.

**CITY OF ALBANY**

**REPORT**

To : His Worship the Mayor and Councillors  
From : Information Officer – Development Services  
Subject : Development Application Approvals – March 2017  
Date : 4 April 2017

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1. The attached report shows Development Application Approvals issued under delegation by a planning officer for the month of March 2017.
2. Within this period 64 Development applications were determined, of these;
  - 61 Development applications were approved under delegated authority;
  - 1 Development application was approved by JDAP;
  - 1 Development application was withdrawn; and
  - 1 Development application was refused.



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**Vicki Martin**  
Information Officer – Development Services

**PLANNING SCHEME CONSENTS ISSUED UNDER DELEGATED AUTHORITY**

Applications determined for March 2017

Application Number	Application Date	Street Address	Locality	Description of Application	Decision	Decision Date	Assessing Officer
P2170072	10/02/2017	York Street	Albany	Office - Signage	Delegate Approved	3/03/2017	Taylor Gunn
P2170076	13/02/2017	Burgoyne Road	Albany	Single House - Alterations & Additions (Design Codes Assessment)	Delegate Approved	1/03/2017	Craig McMurtrie
P2170077	14/02/2017	Vancouver Street	Albany	Development - Maintenance & Repairs	Delegate Approved	17/03/2017	Taylor Gunn
P2170086	22/02/2017	Parade Street	Albany	Home Business (Online Florist)	Delegate Approved	28/03/2017	Alex Bott
P2170097	28/02/2017	York Street	Albany	Development - Sign x 1 (Illuminated)	Delegate Approved	22/03/2017	Craig McMurtrie
P2170130	15/03/2017	Spencer Street	Albany	Change of Use - Shop	Delegate Approved	30/03/2017	Craig McMurtrie
P2170080	17/02/2017	Yatana Road	Bayonet Head	Single House - Alterations & Additions (Design Codes Assessment)	Delegate Approved	2/03/2017	Craig McMurtrie
P2170148	23/03/2017	Lower King Road	Bayonet Head	Single House - Outbuilding (Over Height)	Delegate Approved	29/03/2017	Taylor Gunn
P2170101	28/02/2017	Albany Highway	Centennial Park	Development - Maintenance (Replace Gutters)	Delegate Approved	17/03/2017	Taylor Gunn
P2170125	14/03/2017	Sanford Road	Centennial Park	Industry Light - Units x 2	Delegate Approved	24/03/2017	Taylor Gunn
P2170075	13/02/2017	Baxteri Road	Cheynes	Single House - Additions (2 x Bedrooms)	Delegate Approved	13/03/2017	Alex Bott
P2170093	24/02/2017	Hassell Street	Elleker	Single House Retaining Wall & Water Tank (x 2) - Boundary Setback Variation	Delegate Approved	15/03/2017	Taylor Gunn
P2170041	25/01/2017	Cunningham Street	Emu Point	Single House - (Design Codes Assessment) Outbuilding (Overheight) & Water Tank	Delegate Approved	27/03/2017	Taylor Gunn
P2170098	28/02/2017	Karrakatta Road	Goode Beach	Single House - Retaining Wall (Design Codes Assessment)	Delegate Approved	28/03/2017	Alex Bott
P2170146	22/03/2017	St Georges Crescent	Goode Beach	Single House - Addition (Carport) Design Codes Assessment	Delegate Approved	24/03/2017	Taylor Gunn



Application Number	Application Date	Street Address	Locality	Description of Application	Decision	Decision Date	Assessing Officer
P2170079	15/02/2017	Mount Boyle Road	Kalgan	Agriculture - Intensive (Cut Flowers) Rural Pursuit (Florist) & Recreation - Private (Workshops)	Delegate Approved	21/03/2017	Craig McMurtrie
P2170102	28/02/2017	Walford Road	Kalgan	Single House - Outbuilding	Delegate Approved	3/03/2017	Taylor Gunn
P2170123	13/03/2017	Walford Road	Kalgan	Single House - Outbuilding	Delegate Approved	21/03/2017	Taylor Gunn
P2170096	28/02/2017	Vaughan Vista	Lange	Grouped Dwelling x 2 (Design Codes Assessment)	Delegate Approved	10/03/2017	Jessica Anderson
P2170081	17/02/2017	Frenchman Bay Road	Little Grove	Market (Flowers)	Delegate Approved	16/03/2017	Craig McMurtrie
P2170084	20/02/2017	Maitland Avenue	Little Grove	Single House & Outbuilding (Design Codes Assessment)	Delegate Approved	1/03/2017	Jessica Anderson
P2170116	7/03/2017	Wilson Street	Little Grove	Ancillary Accommodation & Retaining Walls (Design Codes Assessment)	Delegate Approved	27/03/2017	Jessica Anderson
P2170071	9/02/2017	Leschenault Street	Lockyer	Single House - Additions	Delegate Approved	3/03/2017	Jessica Anderson
P2160625	30/11/2016	Townsend Street	Lockyer	Nursing Home	Approved	7/03/2017	Taylor Gunn
P2170073	13/02/2017	Koonwarra Close	Lower King	Single House - Outbuilding (Overheight)	Delegate Approved	3/03/2017	Jessica Anderson
P2170095	27/02/2017	Nanarup Road	Lower King	Agricultural storage shed	Delegate Approved	2/03/2017	Craig McMurtrie
P2170107	2/03/2017	Lower King Road	Lower King	Single House - Earthworks in excess of 600m (Retaining Wall)	Delegate Approved	22/03/2017	Taylor Gunn
P2170112	3/03/2017	Bushby Road	Lower King	Change of Use - Single Dwelling to Ancillary Accommodation & Water Tanks (x2)	Delegate Approved	20/03/2017	Jessica Anderson
P2170153	24/03/2017	Nambucca Rise	Lower King	Single House	Delegate Approved	28/03/2017	Alex Bott
P2170114	7/03/2017	Berrima Road	Marbelup	Use Not Listed - Development (Outbuilding)	Delegate Approved	9/03/2017	Alex Bott
P2170120	9/03/2017	Lowanna Drive	Marbelup	Single House - Outbuilding - Addition & Water Tank	Delegate Approved	20/03/2017	Jessica Anderson
P2170030	23/01/2017	Dustan Way	McKail	Single House - Retaining Wall (Design Codes Assessment)	Delegate Approved	14/03/2017	Taylor Gunn
P2170078	14/02/2017	Gladville Road	McKail	Single House - Outbuilding (Extension)	Delegate Approved	9/03/2017	Craig McMurtrie

Application Number	Application Date	Street Address	Locality	Description of Application	Decision	Decision Date	Assessing Officer
P2170126	14/03/2017	Radiata Drive	McKail	Single House - Design Codes Assessment	Delegate Approved	21/03/2017	Craig McMurtrie
P2170133	16/03/2017	South Coast Highway	McKail	Single House - Outbuilding (Stable - Boundary Setback Variation)	Delegate Approved	20/03/2017	Alex Bott
P2170155	27/03/2017	Neptune Pass	McKail	Single House - Additions (Patio & Carport) - Design Codes Assessment	Delegate Approved	31/03/2017	Taylor Gunn
P2170100	28/02/2017	Marine Terrace	Middleton Beach	Grouped Dwelling (x 2) & Retaining Walls	Delegate Approved	15/03/2017	Jessica Anderson
P2170122	10/03/2017	Middleton Road	Middleton Beach	Single House - Additions (Swimming Pool)	Delegate Approved	31/03/2017	Craig McMurtrie
P2170127	14/03/2017	Warren Road	Millbrook	Single House - Outbuilding	Delegate Approved	17/03/2017	Alex Bott
P2170094	24/02/2017	Albany Highway	Milpara	Single House	Delegate Approved	14/03/2017	Alex Bott
P2170119	9/03/2017	Newbey Street	Milpara	Motor Vehicle Repair - Extension to Warehouse for Storage	Delegate Approved	21/03/2017	Taylor Gunn
P2170128	14/03/2017	Anderson Place	Mira Mar	Single House - Retaining Wall (Design Codes Assessment)	Delegate Approved	22/03/2017	Taylor Gunn
P2170141	21/03/2017	Cockburn Road	Mira Mar	Single House - Additions (Patio)	Delegate Approved	27/03/2017	Jessica Anderson
P2170121	10/03/2017	Festing Street	Mount Melville	Single House - Alterations & Additions (Design Codes Assessment)	Delegate Approved	14/03/2017	Alex Bott
P2170131	15/03/2017	Jeffries Street	Mount Melville	Application for Development Approval - Patio Lot 4 Jeffries Street Mount Melville	Withdrawn	22/03/2017	Planning
P2170025	19/01/2017	Chester Pass Road	Napier	Industry - Extractive (Gravel & Sand)	Delegate Approved	3/03/2017	Jessica Anderson
P2170103	28/02/2017	Albany Highway	Orana	Warehouse (Storage x 21) & Industry - Light (x 9)	Delegate Approved	28/03/2017	Alex Bott
P2170139	21/03/2017	Minor Road	Orana	Single House - Addition Carport (Design Codes Assessment)	Delegate Approved	23/03/2017	Taylor Gunn
P2160267	18/05/2016	Albany Highway	Orana	Service Station & Lunch Bar	Refused	8/03/2017	Alex Bott
P2170046	1/02/2017	Princess Avenue	Robinson	Single House - Outbuilding	Delegate Approved	1/03/2017	Jessica Anderson

Application Number	Application Date	Street Address	Locality	Description of Application	Decision	Decision Date	Assessing Officer
P2170092	24/02/2017	Frenchman Bay Road	Robinson	Single House - Additions (Patio)	Delegate Approved	1/03/2017	Jessica Anderson
P2170099	28/02/2017	Discovery Drive	Spencer Park	Single House - Retaining Wall (Design Codes Assessment)	Delegate Approved	2/03/2017	Alex Bott
P2170106	1/03/2017	Torbay Inlet Road	Torbay	Development - Public Toilet	Delegate Approved	13/03/2017	Alex Bott
P2170140	21/03/2017	Fennell Road	Torbay	Single House - Addition (Garage)	Delegate Approved	23/03/2017	Alex Bott
P2170105	1/03/2017	Frenchman Bay Road	Torndirrup	Development - Public Carpark and Retaining Wall	Delegate Approved	8/03/2017	Alex Bott
P2170001	4/01/2017	Deloraine Drive	Warrenup	Home Occupation - Family Day Care	Delegate Approved	9/03/2017	Alex Bott
P2170151	24/03/2017	Kooyong Avenue	Warrenup	Single House - Outbuilding (Extension)	Delegate Approved	28/03/2017	Alex Bott
P2170090	23/02/2017	Pendeen Road	Willyung	Development - Sign (1 x Horizontal)	Delegate Approved	22/03/2017	Craig McMurtrie
P2170104	1/03/2017	Willow Place	Willyung	Ancillary Accommodation	Delegate Approved	23/03/2017	Taylor Gunn
P2170113	3/03/2017	Weston Ridge	Willyung	Single House - Addition (Patio)	Delegate Approved	8/03/2017	Jessica Anderson
P2170124	13/03/2017	Greenwood Drive	Willyung	Single House - Water Tank (Boundary Setback Variation)	Delegate Approved	31/03/2017	Taylor Gunn
P2170052	2/02/2017	Baltic Ridge	Yakamia	Single House - (Design Codes Assessment)	Delegate Approved	8/03/2017	Alex Bott
P2170147	23/03/2017	Mears Road	Yakamia	Single House - Outbuilding (Overheight)	Delegate Approved	29/03/2017	Jessica Anderson
P2170109	2/03/2017	Eden Road	Youngs Siding	Development - Outbuilding (Hay Storage) & Water Tanks x2	Delegate Approved	9/03/2017	Taylor Gunn

**CITY OF ALBANY**

**REPORT**

To : His Worship the Mayor and Councillors  
From : Administration Officer - Development  
Subject : Building Activity – March 2017  
Date : 4 April 2017

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1. In March 2017, ninety one (91) building permits were issued for building activity worth \$15,342,075.00, including five (5) demolition licences and one (1) sign licence.

It is brought to Council's attention that these figures included building licences: #161261 for a New Single Detached Dwelling Two-Storey with Patio Porch; estimated value: \$1,286,015.00.

#161210 for Occupancy Permit - Church Assembly Building; estimate value: \$2,200,000.00

#161167 for Place of Worship & Educational Establishment estimated value: \$3,826,961.00.

2. The two (2) attached graphs compare the current City activity with the past three (3) fiscal years. One compares the value of activity, while the other compares the number of dwelling units.
3. A breakdown of building activity into various categories is provided in the Building Construction Statistics form.
4. Attached are the details of the permits issued for March 2017, the ninth month of activity in the City of Albany for the financial year 2016/2017.



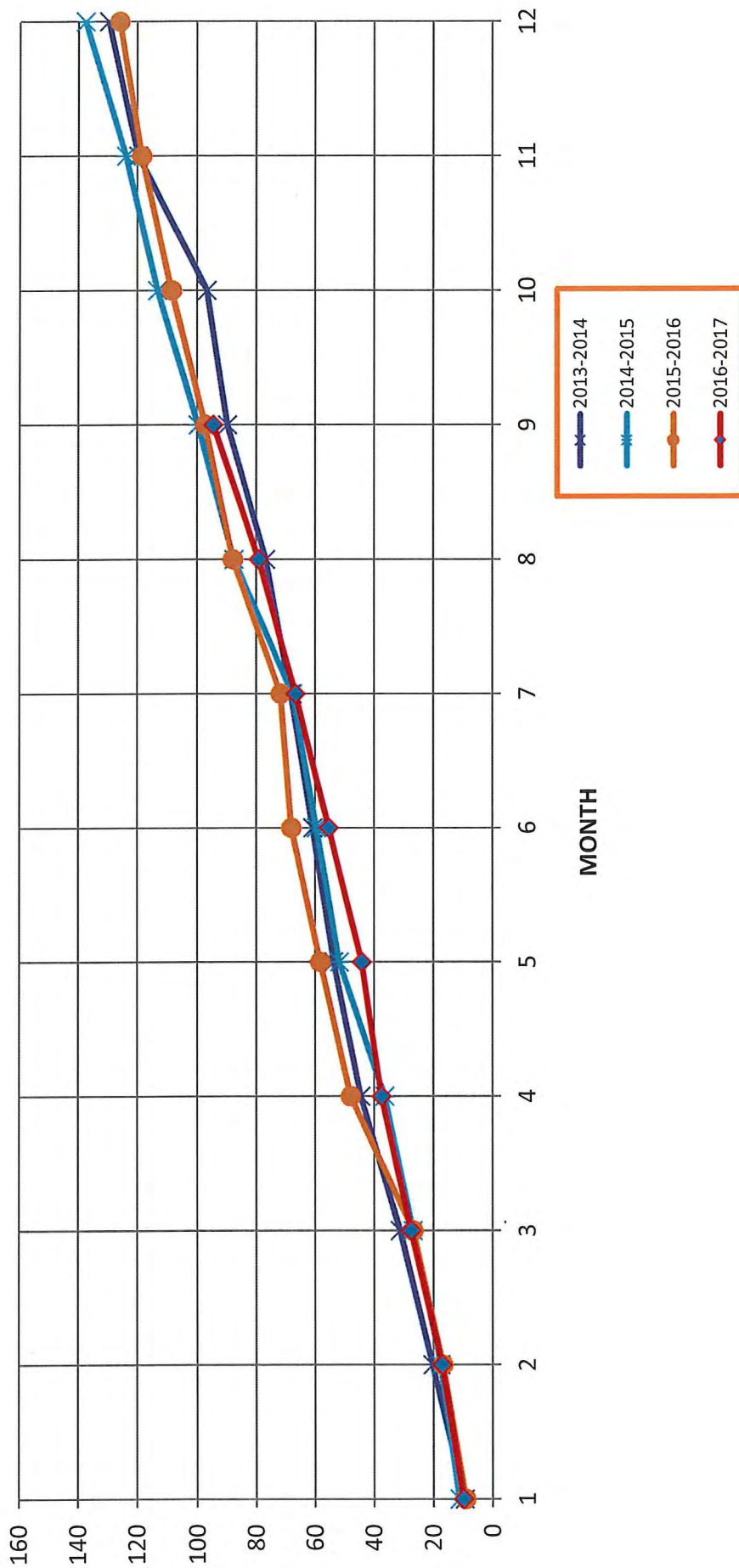
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Zoe Sewell  
**Administration Officer – Development**

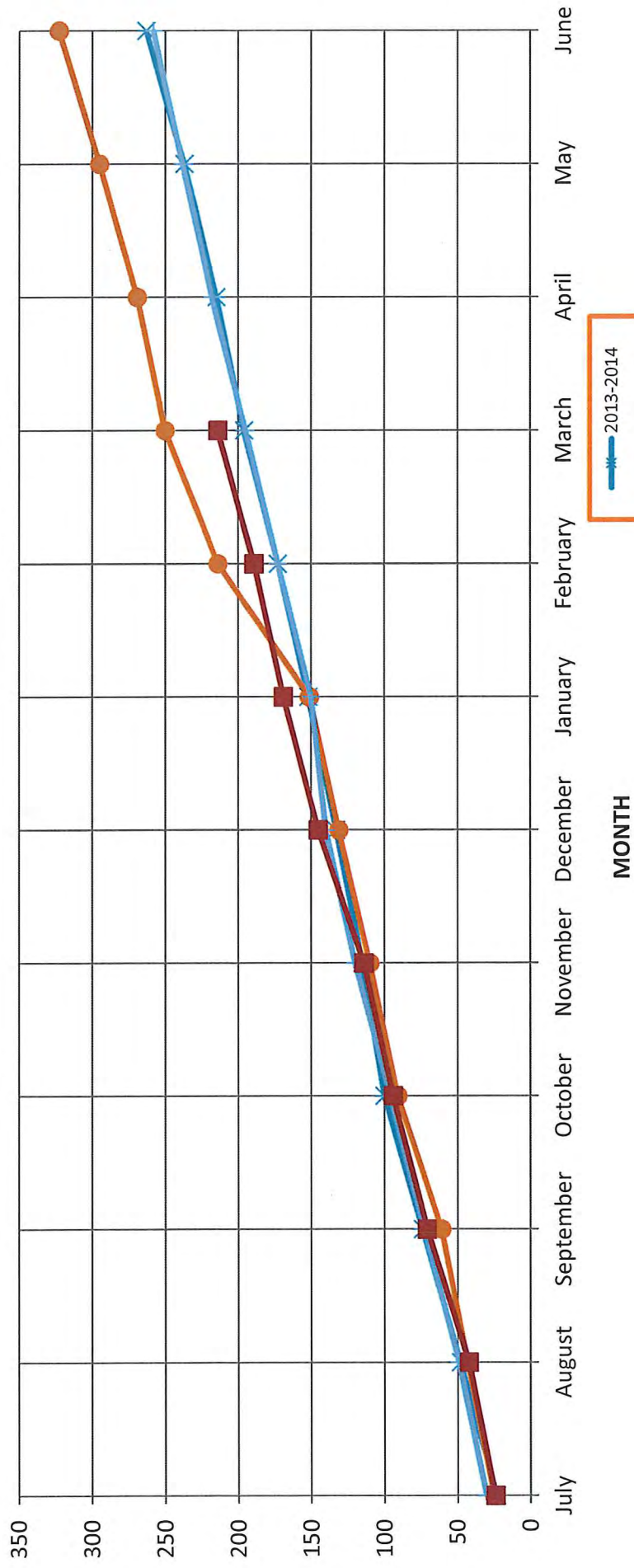
CITY OF ALBANY  
BUILDING CONSTRUCTION STATISTICS FOR 2016 - 2017

2016-2017	SINGLE DWELLING		GROUP DWELLING		DOMESTIC/ OUTBUILDINGS		ADDITIONS/ DWELLINGS		HOTEL/ MOTEL		NEW COMMERCIAL		ADDITIONS/ COMMERCIAL		OTHER		TOTAL \$ VALUE
	No	\$ Value	No	\$ Value	No	\$ Value	No	\$ Value	No	\$ Value	No	\$ Value	No	\$ Value	No	\$ Value	
JULY	22	5,099,241	2	303,900	24	274,840	17	368,250	0	0	2	3,206,764	4	418,265	9	117,085	9,788,345
AUGUST	17	4,427,348	1	35,000	18	380,839	28	1,725,271	0	0	0	0	4	141,793	10	608,920	7,319,171
SEPTEMBER	29	9,077,464	0	0	29	337,170	15	566,839	0	0	0	0	3	377,000	5	61,200	10,419,673
OCTOBER	23	7,369,345	0	0	23	562,909	23	1,134,368	0	0	3	62,326	6	595,067	11	133,466	9,857,481
NOVEMBER	17	4,376,370	3	439,375	20	320,925	26	832,790	0	0	0	0	2	68,500	13	703,670	6,741,630
DECEMBER	22	6,499,717	9	2,130,761	31	241,430	27	1,093,900	0	0	2	950,505	2	190,000	12	95,865	11,202,178
JANUARY	23	7,242,364	1	56,000	24	227,579	22	550,869	1	70,000	0	0	2	2,672,000	10	312,920	11,131,732
FEBRUARY	19	5,556,328	1	150,000	20	303,975	22	381,419	0	0	3	605,000	4	5,460,769	9	124,547	12,582,038
MARCH	22	6,183,794	3	1,193,292	25	222,733	28	788,827	0	0	2	6,026,961	2	514,813	11	411,655	15,342,075
APRIL																	
MAY																	
JUNE																	
TOTALS TO DATE	194	55,831,971	20	4,308,328	214	2,872,400	208	7,442,533	1	70,000	12	10,851,556	29	10,438,207	90	2,569,328	94,384,323

# BUILDING ACTIVITY \$M Value



# DWELLING UNITS



NUMBER OF UNITS

# REPORT ITEM DIS023 REFERS

## **BUILDING, SIGN & DEMOLITION LICENCES ISSUED UNDER DELEGATED AUTHORITY**

Applications determined for March 2017

Application Number	Builder	Description of Application	Street Address	Suburb
161104	WA COUNTRY BUILDERS PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY	LOWER KING ROAD	LOWER KING
161150	RYDE BUILDING COMPANY PTY LTD	NEW GROUPED DWELLING X2 & ASSOCIATED RETAINING WALLS - UNCER	BARNESBY DRIVE	YAKAMIA
161153	RYDE BUILDING COMPANY PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH ALFRESCO PORC	CULLINAN TERRACE	BAYONET HEAD
161161	JACKSON DONALD MERVYN	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH COVERED OUTDO	FORSYTH GLADE	KRONKUP
161162	J & TW DEKKER PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH ALFRESCO PORC	BARRY COURT	COLLINGWOOD PARK
161163	RYDE BUILDING COMPANY PTY LTD	ADDITIONS TO EXISTING SINGLE DETACHED DWELLING - UPPER STORE	BURGOYNE ROAD	ALBANY
161166	OCCUPANCY PERMIT	OCCUPANCY PERMIT STRATA - CERTIFIED	COCKBURN ROAD	MIRA MAR
161167	GREGORY LEEDER	PLACE OF WORSHIP & EDUCATIONAL ESTABLISHMENT -	BREWSTER ROAD	COLLINGWOOD HEIGHTS
161172	WARREN BENNETT HOMES PTY LTD	ALTERATIONS TO EXISTING SINGLE DETACHED DWELLING -	WAKEFIELD COURT	MIRA MAR
161173	DEMOLITION	DEMOLITION - SHED - UNCERTIFIED	CUTHBERT STREET	ALBANY
161175	A McCONNELL	ALTERATIONS & ADDITIONS TO EXISTING SINGLE DETACHED	BEDWELL STREET	EMU POINT
161176	A PONSFORD	SHED - UNCERTIFIED	STEWART HOUSE HILL	KRONKUP
161177	BUILDING APPROVAL CERTIFICATE	BUILDING APPROVAL CERTIFICATE - SECTION	WILSON STREET	LITTLE GROVE
161178	UNAUTHORISED PATIO	51(3) - UNAUTHORISED		
161178	K & T CASTLEHOW BUILDERS	NEW SEMI ENCLOSED DECK - UNCERTIFIED	MICHAELMAS WAY	COLLINGWOOD HEIGHTS
161179	WARREN BENNETT HOMES PTY LTD	SHED - UNCERTIFIED	MORGAN PLACE	MCKAIL
161180	BUILDING APPROVAL CERTIFICATE SHED AND PATIO	BUILDING APPROVAL CERTIFICATE - SHED EXTENSION & PATIO	MANLEY CRESCENT	COLLINGWOOD
161181	OWNER BUILDER	SHED - UNCERTIFIED	RANGE COURT CRESCENT	HEIGHTS BAYONET HEAD
161182	OCCUPANCY PERMIT	OCCUPANCY PERMIT - SECTION 46 - NEW OFFICE BUILDING TO INSTI	HARDIE ROAD	SPENCER PARK
161183	B C & AND J G POWELL	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH ALFRESCO PORC	LAKE SAIDE ROAD	YOUNGS SIDING



## REPORT ITEM DIS023 REFERS

Application Number	Builder	Description of Application	Street Address	Suburb
161207	RYDE BUILDING COMPANY PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH PORCH ALFRESC	MAITLAND AVENUE	LITTLE GROVE
161208	GRAEME STEWART WAUGH	NEW SINGLE DETACHED DWELLING TWO-STOREY WITH VERANDAH - UNC	BAY VIEW DRIVE	LITTLE GROVE
161209	OWNER BUILDER	PATIO - UNCERTIFIED	WESTON RIDGE	WILLYUNG
161210	OCCUPANCY PERMIT	OCCUPANCY PERMIT - SECTION 46 - CHURCH	TALYUBERLUP WAY	LANGE
161212	TURPS STEEL FABRICATIONS	PATIO - UNCERTIFIED	TUNNEY WAY	SPENCER PARK
161213	BUILDING APPROVAL CERTIFICATE UNAUTHORISED VARIATIONS	BUILDING APPROVAL CERTIFICATE - SECTION 51 - UNAUTHORISED VA	BAY VIEW DRIVE	LITTLE GROVE
161214	RANBUILD GREAT SOUTHERN	SHED - UNCERTIFIED	LITTLEHEART PLACE	MCKAIL
161215	R A WHITE & J MORRIS	COMPLETION OF NEW SINGLE DETACHED DWELLING & NEW	MATTHEW ROAD	YOUNGS SIDING
161216	PLUNKETT HOMES (1903) PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH ALFRESCO PORC	RADIATA DRIVE	MCKAIL
161217	POCOCK BUILDING COMPANY PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH PORCH ALFRESC	KARROO VISTA	BAYONET HEAD
161218	T \$ S E NOSTRINI	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH COVERED OUTDOO	LOWANNA DRIVE	MARBELUP
161219	OWNER BUILDER	PATIO - UNCERTIFIED	MINOR ROAD	ORANA
161220	WA BUILDING & MAINTENANCE PTY LTD	ASBESTOS ROOF - DEMOLITION	PEELS PLACE	ALBANY
161221	WA COUNTRY BUILDERS PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH ALFRESCO VERA	CARTER STREET	GLEDHOW
161222	WA COUNTRY BUILDERS PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH VERANDAH ALFR	JUNIPER COURT	YAKAMIA
161223	DUNKELD CONSTRUCTION PTY LTD	ALTERATIONS & ADDITIONS TO EXISTING SINGLE DETACHED DWELLING	BAXTERI ROAD	CHEYNES
161224	WA COUNTRY BUILDERS PTY LTD	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH ALFRESCO PORC	DUSTAN WAY	MCKAIL
161225	C STEPHEN	NEW SINGLE DETACHED DWELLING ONE-STOREY WITH VERANDAH; RETA	HASELL STREET	ELLEKER
161226	RANBUILD GREAT SOUTHERN	DEMOLITION - CARPORT	WATTLE COURT	COLLINGWOOD HEIGHTS
161227	P.M.A DEMO PTY LTD	REMOVAL OF FLOOR ROOF AND INTERNALS - DEMOLITION	YORK STREET	ALBANY

# REPORT ITEM DIS023 REFERS

Application Number	Builder	Description of Application	Street Address	Suburb
161261	POCOCK BUILDING	NEW SINGLE DETACHED DWELLING TWO-STOREY	CUNNINGHAM STREET	EMU POINT
	COMPANY PTY LTD	WITH PATIO PORCH		
161263	C DRESSLER	SHED - UNCERTIFIED	PRINCESS AVENUE	ROBINSON
161265	J GREEN	PATIO - UNCERTIFIED	ARGYLL STREET	GLEDHOW
161268	ALBANY PROPERTY MAINTENANCE	CARPORT - UNCERTIFIED	MINOR ROAD	ORANA
161270	OUTDOOR WORLD	PATIO - UNCERTIFIED	DEACON CREST	YAKAMIA