



## NOTICE OF AN ORDINARY COUNCIL MEETING

Dear Council Member,

The next Ordinary Meeting of the Dandaragan Shire Council will be held on **Thursday 28 June 2018** at the **Council Chambers Jurien Bay** commencing at **4.00pm**.

Attached is your copy of the agenda and business papers for the meeting.

*The format for the day is as follows:*

<b>1.30pm</b>	<b>Agenda Briefing Session</b>
<b>2.00pm</b>	<b>Council Forum</b> <ul style="list-style-type: none"><li>▪ <b>Budget Discussions</b></li></ul>
<b>3.30pm</b>	<b>Councillor Discussion Session</b>
<b>4.00pm</b>	<b>Ordinary Meeting of Council</b>
<b>5.00pm</b>	<b>Public Forum</b>

**Brent Bailey**  
**CHIEF EXECUTIVE OFFICER**

21 June 2018



# **SHIRE** *of* **DANDARAGAN**

**AGENDA AND BUSINESS PAPERS**

**for the**

**ORDINARY COUNCIL MEETING**

**to be held**

**AT THE COUNCIL CHAMBERS, JURIEN BAY**

**on**

**THURSDAY 28 JUNE 2018**

**COMMENCING AT 4.00PM**

*(THIS DOCUMENT IS AVAILABLE IN LARGER PRINT ON REQUEST)*





## **ORDINARY COUNCIL MEETING**

**THURSDAY 28 JUNE 2018**

Welcome to the Ordinary Council Meeting of the Shire of Dandaragan.

Please be advised that the Ordinary Meeting of Council will be held on the following dates, times and venues:

<b>DAY</b>	<b>DATE</b>	<b>TIME</b>	<b>MEETING VENUE</b>
<b>Thurs</b>	<b>28 June 2018</b>	<b>4.00pm</b>	<b>Jurien Bay</b>
<b>Thurs</b>	<b>26 July 2018</b>	<b>4.00pm</b>	<b>Jurien Bay</b>
<b>Thurs</b>	<b>23 August 2018</b>	<b>11.00am</b>	<b>Jurien Bay School Visit</b>
<b>Thurs</b>	<b>27 September 2018</b>	<b>4.00pm</b>	<b>Dandaragan</b>
<b>Thurs</b>	<b>25 October 2019</b>	<b>4.00pm</b>	<b>Jurien Bay</b>
<b>Thurs</b>	<b>22 November 2018</b>	<b>4.00pm</b>	<b>Cervantes</b>
<b>Thurs</b>	<b>20 December 2018</b>	<b>4.00pm</b>	<b>Jurien Bay</b>
<b>Thurs</b>	<b>24 January 2019</b>	<b>4.00pm 6.00pm</b>	<b>Badgingarra AGM of Electors</b>
<b>Thurs</b>	<b>28 February 2019</b>	<b>4.00pm</b>	<b>Jurien Bay</b>
<b>Thurs</b>	<b>28 March 2019</b>	<b>4.00pm</b>	<b>Jurien Bay</b>
<b>Wed</b>	<b>24 April 2019</b>	<b>4.00pm</b>	<b>Badgingarra</b>
<b>Thurs</b>	<b>23 May 2019</b>	<b>4.00pm</b>	<b>Jurien Bay</b>
<b>Thurs</b>	<b>27 June 2019</b>	<b>4.00pm</b>	<b>Jurien Bay</b>

Public Forums commence immediately following the closure of the Council Meeting which is generally about 5.00pm.

Members of the public are most welcome to attend both the Council Meetings and the Public Forums.

**Brent Bailey**  
**CHIEF EXECUTIVE OFFICER**



## **DISCLAIMER**

### **INFORMATION FOR THE PUBLIC ATTENDING A COUNCIL MEETING**

**Please note:**

The recommendations contained in this agenda are Officer's Recommendations only and should not be acted upon until Council has considered the recommendations and resolved accordingly.

The resolutions of Council should be confirmed by perusing the Minutes of the Council Meeting at which these recommendations were considered.

Members of the public should also note that they act at their own risk if they enact any resolution prior to receiving official written notification of Council's Decision.

**Brent Bailey**  
**CHIEF EXECUTIVE OFFICER**



## COUNCIL MEETING INFORMATION NOTES

1. Your Council generally handles all business at Ordinary or Special Council Meetings.
2. From time to time Council may form a Committee, Working Party or Steering group to examine subjects and then report to Council.
3. Generally all meetings are open to the public; however, from time to time Council will be required to deal with personal, legal and other sensitive matters. On those occasions Council will generally close that part of the meeting to the public. Every endeavour will be made to do this as the last item of business of the meeting.
4. Public Question Time. It is a requirement of the Local Government Act 1995 to allow at least fifteen (15) minutes for public question time following the opening and announcements at the beginning of the meeting. Should there be a series of questions the period can be extended at the discretion of the Chairman.

*Written notice of each question should be given to the Chief Executive Officer fifteen (15) minutes prior to the commencement of the meeting. A summary of each question and response is included in the Minutes.*

*When a question is not able to be answered at the Council Meeting a written answer will be provided after the necessary research has been carried out. Council staff will endeavour to provide the answers prior to the next meeting of Council.*

*Council has prepared an appropriate form and Public Question Time Guideline to assist.*

5. **Councillors** may from time to time have a financial interest in a matter before Council. Councillors must declare an interest and the extent of the interest in the matter on the Agenda. However, the Councillor can request the meeting to declare the matter **trivial, insignificant or in common with a significant number of electors or ratepayers**. The Councillor must leave the meeting whilst the matter is discussed and cannot vote unless those present agree as above.

**Members of staff**, who have delegated authority from Council to act on certain matters, may from time to time have a financial interest in a matter on the Agenda. The member of staff must declare that interest and generally the Chairman of the meeting will advise the Officer if he/she is to leave the meeting.

6. Agendas including an Information Bulletin are delivered to Councillors within the requirements of the Local Government Act 1995, i.e. seventy-two (72) hours prior to the advertised commencement of the meeting. Whilst late items are generally not considered there is provision on the Agenda for items of an urgent nature to be considered.

Should an elector wish to have a matter placed on the Agenda the relevant information should be forwarded to the Chief Executive Officer in time to allow the matter to be fully researched by staff. An Agenda item including a recommendation will then be submitted to Council for consideration should it be determined appropriate by the Chief Executive Officer.

The Agenda closes the Monday week prior to the Council Meeting (i.e. ten (10) days prior to the meeting).

The Information Bulletin produced as part of the Agenda includes items of interest and information, which does not require a decision of Council.

7. Agendas for Ordinary Meetings are available in the Shire of Dandaragan Administration Centre and all four libraries as well as on the website [www.dandaragan.wa.gov.au](http://www.dandaragan.wa.gov.au) seventy-two (72) hours prior to the meeting and the public are invited to secure a copy.
8. Agenda items submitted to Council will include a recommendation for Council consideration. Electors should not interpret and/or act on the recommendations until after they have been considered by Council. Please note the Disclaimer in the Agenda (page 3).
9. Public Inspection of Unconfirmed Minutes (Reg 13)

A copy of the unconfirmed Minutes of Ordinary and Special Meetings will be available for public inspection in the Shire of Dandaragan Libraries and on the website [www.dandaragan.wa.gov.au](http://www.dandaragan.wa.gov.au) within ten (10) working days after the Meeting.

**NOTE:**

**10.3 Unopposed Business**

- (1) Upon a motion being moved and seconded, the person presiding may ask the meeting if any member opposes it.
- (2) If no member signifies opposition to the motion the person presiding may declare the motion in sub clause (1) carried without debate and without taking a vote on it.
- (3) A motion carried under sub clause (2) is to be recorded in the minutes as a unanimous decision of the Council or committee.
- (4) If a member signifies opposition to a motion the motion is to be dealt with according to this Part.

This clause does not apply to any motion or decision to revoke or change a decision which has been made at a Council or committee meeting.

## SHIRE OF DANDARAGAN QUESTIONS FROM THE PUBLIC

The Shire of Dandaragan welcomes community participation during public question time as per the Shire of Dandaragan Standing Orders Local Law.

A member of the public who raises a question during question time is requested to:

- (a) provide a copy of his or her questions at least 15 minutes prior to the commencement of the meeting;
- (b) first state his or her name and address;
- (c) direct the question to the President or the Presiding Member;
- (d) ask the question briefly and concisely;
- (e) limit any preamble to matters directly relevant to the question;
- (f) ensure that the question is not accompanied by any expression of opinion, statement of fact or other comment, except where necessary to explain the question;
- (g) each **member of the public** with a question is **entitled to ask up to 3 questions** before other members of the public will be invited to ask their questions;
- (h) when a member of the public gives written notice of a question, the President or Presiding Member may determine that the question is to be responded to as normal business correspondence.

The following is a summary of procedure and a guide to completion of the required form.

- 1. This is a “question” time only. Orations, explanations or statements of belief will not be accepted or allowed.
- 2. Questions must relate to a matter affecting the Shire of Dandaragan.
- 3. Questions must be appropriate and made in good faith. Those containing defamatory remarks, offensive language or question the competency or personal affairs of council members or employees may be ruled inappropriate by the Mayor or Presiding Member and therefore not considered.
- 4. Frame your question so that it is both precise and yet fully understood. Long questions covering a multitude of subjects are easily misunderstood and can result in poor replies being given.
- 5. Write your question down on the attached form, it helps you to express the question clearly and provides staff with an accurate record of exactly what you want to know.
- 6. When the President or presiding member calls for any questions from the public, stand up and wait until you are acknowledged and invited to speak. Please start by giving your name and address first, then ask the question.
- 7. Questions to be put to the President or presiding member and answered by the Council. No questions can be put to individual Councillors.
- 8. The question time will be very early in the meeting. **There is only 15 minutes available for Question Time.** Questions not asked may still be submitted to the meeting and will be responded to by mail.
- 9. When you have put your question, resume your seat and await the reply. If possible, the President or presiding member will answer directly or invite a staff member with special knowledge to answer in his place. However, it is more likely that the question will have to be researched, in which case the President or presiding member will advise that the question will be received and that an answer will be forwarded in writing. Please note under NO circumstances, will the question be debated or discussed by Council at that meeting.
- 10. To maximise public participation only three questions per person will initially be considered with a time limit of 2 minutes per person. If there is time after all interested persons have put their questions the President or presiding member will allow further questions, again in limits of two per person.
- 11. To fill out the form, just enter your name and address in the appropriate areas together with details of any group you are representing, then write out your question.
- 12. Please ensure your form is submitted to the minute’s secretary.

If you have difficulty in or are incapable of writing the question, Shire staff are available on request to assist in this task.

We hope this note assists you in the asking of your question and thank you for your interest and participation in the affairs of our Shire.

## SHIRE OF DANDARAGAN

### QUESTIONS FROM THE PUBLIC

**Any member of the public wishing to participate in Public Question Time during Council or Committee meetings is welcome to do so, however, Council requires your name, address and written questions to be provided to the meeting secretary.**

Name: \_\_\_\_\_ Signature: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Contact No: \_\_\_\_\_ Meeting Date: \_\_\_\_\_

Council Agenda Item No: \_\_\_\_\_

Name of Organisation Representing: \_\_\_\_\_  
(if applicable)

#### **QUESTION:**

*Each member of the public is entitled to ask up to 3 questions before other members of the public will be invited to ask their question. 15 Minutes is allotted to Public Question Time at Council Meetings.*

**Please see notes on Public Question Time overleaf...**



# SHIRE OF DANDARAGAN

## Record of Disclosure

Person making disclosure:

Surname: \_\_\_\_\_

Given Names: \_\_\_\_\_

☐ Member of Council

☐ Officer of Council

☐ Committee Member

Date of Meeting: \_\_\_\_\_

Type of Meeting: ☐ Ordinary Meeting of the Council ☐ Committee Meeting

☐ Special Meeting of the Council

☐ Selection Panel

☐ Other \_\_\_\_\_

Report Item No: \_\_\_\_\_

Report Title: \_\_\_\_\_

Type of Interest: ☐ Financial (section 5.60A)

☐ Proximity (section 5.60B)

☐ Indirect Financial (section 5.61)

☐ Impartiality

Nature of Interest: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Extent of Interest: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

(Office Use Only)

Minute Book Page: \_\_\_\_\_

Signature of Staff Recording Entry: \_\_\_\_\_

## **Local Government Act 1995 - Extract**

### **5.60A. Financial interest**

*For the purposes of this Subdivision, a person has a financial interest in a matter if it is reasonable to expect that the matter will, if dealt with by the local government, or an employee or committee of the local government or member of the council of the local government, in a particular way, result in a financial gain, loss, benefit or detriment for the person.*

### **5.60B. Proximity interest**

- 1) For the purposes of this Subdivision, a person has a proximity interest in a matter if the matter concerns —*
  - a) a proposed change to a planning scheme affecting land that adjoins the person's land; or*
  - b) a proposed change to the zoning or use of land that adjoins the person's land; or*
  - c) a proposed development (as defined in section 5.63(5)) of land that adjoins the person's land.*
- 2) In this section, land (the proposal land) adjoins a person's land if —*
  - a) the proposal land, not being a thoroughfare, has a common boundary with the person's land; or*
  - b) the proposal land, or any part of it, is directly across a thoroughfare from, the person's land; or*
  - c) the proposal land is that part of a thoroughfare that has a common boundary with the person's land.*
- 3) In this section a reference to a person's land is a reference to any land owned by the person or in which the person has any estate or interest.*

### **5.61. Indirect financial interests**

*A reference in this Subdivision to an indirect financial interest of a person in a matter includes a reference to a financial relationship between that person and another person who requires a local government decision in relation to the matter.*

## **Local Government Operational Guideline 1 – Extract**

### **Impartiality Interest**

*The existence of an interest affecting impartiality is dependent on —*

- the member or employee having an association with a person or organisation that has a matter being discussed at a council or committee meeting;*
- the employee being required to give advice on a matter where they have an association with a person or an organisation related to that matter; and*
- the type of matter being discussed at a council or committee meeting.*

*The Department would not expect a disclosure to be made in matters which are solely related to —*

- an individual's beliefs, philosophies or attitudes;*
- a member's election pledges; or*
- any other public pledges made by a member.*



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## AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018

### 1 DECLARATION OF OPENING / ANNOUNCEMENT OF VISITORS

#### 1.1 DECLARATION OF OPENING

#### 1.2 DISCLAIMER READING

*"No responsibility whatsoever is implied or accepted by the Shire of Dandaragan for any act, omission, statement or intimation occurring during this meeting.*

*It is strongly advised that persons do not act on what is heard, and should only rely on written confirmation of Council's decision, which will be provided within fourteen (14) days."*

### 2 RECORD OF ATTENDANCE / APOLOGIES / APPROVED LEAVE OF ABSENCE

#### Members

Councillor L Holmes	(President)
Councillor P Scharf	(Deputy President)
Councillor W Gibson	
Councillor K McGlew	
Councillor J Clarke	
Councillor R Shanahun	
Councillor D Slyn	
Councillor D Richardson	
Councillor A Eyre	

#### Staff

Mr B Bailey	(Chief Executive Officer)
Mr S Clayton	(Executive Manager Corporate & Community Services)
Mr G Yandle	(Executive Manager Infrastructure)
Mr D Chidlow	(Executive Manager Development Services)
Ms R Headland	(Council Secretary & Personal Assistant)
Mr R Mackay	(Planning Officer)

#### Apologies

#### Approved Leave of Absence

### 3 RESPONSE TO PREVIOUS PUBLIC QUESTIONS TAKEN ON NOTICE

### 4 PUBLIC QUESTION TIME

### 5 APPLICATIONS FOR LEAVE OF ABSENCE

**6 CONFIRMATION OF MINUTES****6.1 MINUTES OF THE ORDINARY MEETING HELD 24 MAY 2018****7 NOTICES AND ANNOUNCEMENTS BY PRESIDING MEMBER WITHOUT DISCUSSION****8 PETITIONS / DEPUTATIONS / PRESENTATIONS / SUBMISSIONS**

## 9 REPORTS OF COMMITTEES AND OFFICERS

### 9.1 CORPORATE & COMMUNITY SERVICES

#### 9.1.1 FINANCIAL STATEMENTS - MONTHLY REPORTING FOR THE PERIOD ENDING 31 MAY 2018

Location:	Shire of Dandaragan
Applicant:	N/A
Folder	Business Classification Scheme / Financial Management / Financial Reporting / Periodic Reports
Disclosure of Interest:	None
Date:	12 June 2018
Author:	Scott Clayton, Executive Manager Corporate and Community Services
Senior Officer:	Brent Bailey, Chief Executive Officer

#### PROPOSAL

To table and adopt the monthly financial statements for the period ending 31 May 2018.

#### BACKGROUND

As part of the Local Government Act 1995 and Financial Management Regulations (1996), monthly financial statements are required to be presented to Council. Circulated are the monthly financial statements for the period ending 31 May 2018.

#### COMMENT

Regulation 34 of the Financial Management Regulations (1996) requires the following information to be provided to Council:

##### 1. Net Current Assets

Council's Net Current Assets [i.e. surplus / (deficit)] position as at the 31 May 2018 was \$2,816,276. The composition of this equates to Current Assets minus Current Liabilities less Cash Assets that have restrictions on their use placed on them, in this case Reserves and Restricted Assets. The current position indicates that Council can easily meet its short-term liquidity or solvency.

The Net Current Asset position is reflected on page 8 and reconciled with the Statement of Financial Activity on page 1 of the financial statements.

The amount raised from rates, shown on the Statement of Financial Activity (page 1), reconciles with note 6 (page 9) of the financial statements and provides information to Council on the budget vs actual rates raised.

##### 2. Material Variances

During budget adoption a 10 percent and \$10,000 threshold for these variances to be reported was set.

## AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018

Note 14 of the attached report details any significant variances. Should Councillors wish to raise any issues relating to the 31 May 2018 financial statements, please do not hesitate to contact the Executive Manager Corporate and Community Services prior to the Council Meeting in order that research can be undertaken and details provided either at the time of the query or at the meeting.

### CONSULTATION

- Chief Executive Officer

### STATUTORY ENVIRONMENT

- Regulation 34 of the Local Government Financial Management Regulations (1996)

### POLICY IMPLICATIONS

There are no policy implications relevant to this item.

### FINANCIAL IMPLICATIONS

There are no adverse trends to report at this time.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

<i>Goal 5: Proactive and leading local government</i>	
Business as Usual	k) Finance

### ATTACHMENTS

Circulated with the agenda is the following item relevant to this report:

- Financial statements for the period ending 31 May 2018 (Doc Id:113954)  
**(Marked 9.1.1)**

### VOTING REQUIREMENT

Simple majority

### **OFFICER RECOMMENDATION**

**That the monthly financial statements for the period 31 May 2018 be adopted.**

## AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018

### 9.1.2 ACCOUNTS FOR PAYMENT – MAY 2018

Location:	Shire of Dandaragan
Applicant:	N/A
Folder Path:	Business Classification Scheme / Financial Managements / Creditors / Expenditure
Disclosure of Interest:	None
Date:	19 June 2018
Author:	Scott Clayton, Executive Manager Corporate & Community Services
Senior Officer:	Brent Bailey, Chief Executive Officer

#### PROPOSAL

To accept the cheque, EFT and direct debit listing for the month of May 2018.

#### BACKGROUND

As part of the Local Government Act 1995, Financial Management Regulations 1996, a list of expenditure payments is required to be presented to Council.

#### COMMENT

The cheque, electronic funds transfer (EFT) and direct debit payments for May 2018 totalled \$1,352,306.17 for the Municipal Fund.

Should Councillors wish to raise any issues relating to the May 2018 Accounts for payment, please do not hesitate to contact the Executive Manager Corporate and Community Services prior to the Council Meeting, in order that research can be undertaken and details provided either at the time of the query or at the meeting.

#### CONSULTATION

- Chief Executive Officer

#### STATUTORY ENVIRONMENT

- Regulation 13 of the Local Government Financial Management Regulations 1997.

#### POLICY IMPLICATIONS

There are no policy implications relevant to this item.

#### FINANCIAL IMPLICATIONS

There are no adverse trends to report at this time.

#### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

<i>Goal 5: Proactive and leading local government</i>	
Business as Usual	k) Finance

**AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018****ATTACHMENTS**

Circulated with the agenda are the following items relevant to this report:

- Cheque, EFT and direct debit listings for May 2018 (Doc Id: 113646)

***(Marked 9.1.2)***

**VOTING REQUIREMENT**

Simple majority

**OFFICER RECOMMENDATION**

**That the Municipal Fund cheque and EFT listing for the period ending 31 May 2018 totalling \$1,352,306.17 the Municipal Fund be accepted.**



## AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018

### 9.2 INFRASTRUCTURE SERVICES

#### 9.2.1 AWARD OF REQUEST FOR TENDER 01-18 MOWING OF PUBLIC OPEN SPACE

Location:	Jurien Bay, Cervantes, Dandaragan, Badgingarra
Applicant:	N/A
Folder Path:	Business Classification Scheme / Parks and Reserves / Tendering / Tender Evaluation
Disclosure of Interest:	None
Date:	19 June 2018
Author:	Garrick Yandle, Executive Manager Infrastructure
Senior Officer:	Brent Bailey, Chief Executive Officer

#### PROPOSAL

For Council to consider Request for Tender (RFT) 01-18 *Mowing of Public Open Space*.

#### BACKGROUND

Mowing of turfed areas of public open spaces across the Shire has been delivered in recent years by a combination of Shire internal operations resources and by a local Contractor (Vari-skilled).

Shire operations staff, currently deliver mowing services in the following locations:

- Dandaragan Oval
- Dandaragan Hockey Field
- Pioneer Park (Dandaragan)
- Dandaragan CRC
- Badgingarra Oval
- Jurien Bay Oval
- Fauntleroy Park (Jurien Bay Foreshore Redevelopment area)

The remaining areas of POS in Jurien Bay and Cervantes are delivered by the Contractor.

In April **2013 RFT 02/2013 Mowing of Public Open Space** was advertised for the mowing of the following locations.

Jurien Bay	Cervantes	Dandaragan	Badgingarra
<ul style="list-style-type: none"> <li>- Weld Park</li> <li>- Federation (Memorial) Park</li> <li>- Administration Centre including Family Resource Centre</li> <li>- Community Resource Centre</li> <li>- Dobbyn Park</li> <li>- Jurien Bay Sports Oval and Recreation Centre</li> <li>- Jurien Bay Sports Oval Surrounds</li> <li>- Jurien Town Hall Surrounds</li> <li>- Fauntleroy Park</li> </ul>	<ul style="list-style-type: none"> <li>- Ronsard Park</li> <li>- Catalonia Street Reserve</li> <li>- Weston Street Reserve</li> <li>- Memorial Park</li> <li>- Recreation Ground –</li> <li>- Surrounds</li> <li>- Recreation Ground – Car</li> <li>- Park Area</li> <li>- Recreation Ground</li> </ul>	<ul style="list-style-type: none"> <li>- Dandaragan Oval and surrounds</li> <li>- Dandaragan Hockey Field and surrounds</li> </ul>	<ul style="list-style-type: none"> <li>- Badgingarra Oval</li> <li>- Badgingarra Oval Surrounds</li> <li>- Badgingarra Park</li> </ul>

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<b>Jurien Bay</b>	<b>Cervantes</b>	<b>Dandaragan</b>	<b>Badgingarra</b>
<ul style="list-style-type: none"> <li>- R E Snook Park</li> <li>- Pioneer Park</li> <li>- Passamani Park</li> <li>- Eric Collinson</li> <li>- Baudin Park</li> <li>- Marina</li> <li>- Seinor Park</li> <li>- POS 4B</li> <li>- POS 5A</li> </ul>			

As part of the RFT02/2013 process a contract was awarded to Vari-skilled (the Contractor) for public open space areas at only the following locations outlined in the RFT:

- Jurien Bay
- Cervantes

For various reasons it was determined that the public open space at Dandaragan and Badgingarra would be undertaken internally via Shire operations staff.

The original RFT 02/2013 contract was in place for 4 years from 1 July 2013 to 30 June 2017.

Components of this contract have been extended and revised throughout the 2017/18 financial year. A summary of the contract time periods is as follows:

<b>Contract</b>	<b>Duration</b>	<b>Time Period</b>
RFT02/2013 – Original Contract	4 years	1st July 2013 to 30th June 2017
Initial Contract Extension	3 months	1st July 2017 to 30th September 2017
Revised Interim Contract	9 months	1st October 2017 to 30th June 2018

In 2017/2018 Shire officers undertook a review of turf management within the Shire and the various turf management activities undertaken. This included a comprehensive review of the scope of services associated with mowing of public open space.

**COMMENT**

RFT01/18 *Mowing of Public Open Space* was advertised in The West Australian on Saturday 12 May 2018 and on the Shire website [www.dandaragan.wa.gov.au/tenders](http://www.dandaragan.wa.gov.au/tenders). The Tender submissions closed on Friday 9 June 2018 at 2pm.

The qualitative assessment criteria for the tender submissions were as follows:

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<b>A. Relevant Experience and Key Personnel Skills</b>  Tenderers must address the following information in an attachment and label it “ <b>Relevant Experience</b> ”:	<b>Weighting</b>  <b>30%</b>
<p><i>a) Provide details of similar Turf Mowing work. (10%)</i></p> <ul style="list-style-type: none"> <li><i>a. Scope of the Tenderer’s involvement including details of outcomes.</i></li> <li><i>b. Details of issues that arose during the project and how these were managed.</i></li> </ul> <p><i>b) Provide details of Tenderer’s Key Staff (10%)</i></p> <ul style="list-style-type: none"> <li><i>a. Outline Key staff and their roles in the performance of the Contract.</i></li> <li><i>b. Curriculum vitae of key staff inclusive of membership to any professional or business association, qualifications etc.</i></li> </ul> <p><i>c) Provide details of Turf Management skills (10%)</i></p> <ul style="list-style-type: none"> <li><i>a. Qualifications</i></li> <li><i>b. Training</i></li> <li><i>c. Experience.</i></li> </ul>	
<b>B. Tenderer’s Resources and Delivery</b>  Tenderers must address the following information in an attachment and label it “ <b>Tenderer’s Resources</b> ”:	<b>Weighting</b>  <b>20%</b>
<p><i>a) Plant, equipment, resources and materials. (10%)</i></p> <ul style="list-style-type: none"> <li><i>a. List proposed plant and equipment</i></li> <li><i>b. Contingency measures or backup of resources including personnel (where applicable).</i></li> </ul> <p><i>b) Demonstrated understanding of the Scope of Work (10%)</i></p> <ul style="list-style-type: none"> <li><i>a. Specifically a Schedule for delivery</i></li> <li><i>b. OHS Procedures.</i></li> </ul>	
<b>C. Tendered Price</b>	<b>Weighting</b>
<p>The Weighted Price method is used where price is considered to be crucial to the outcome of the contract.</p> <p>The price is then assessed with quality.</p>	<b>50%</b>

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The scope of the works advertised was to mow the public open space in the Shire of Dandaragan at the following locations:

- Item 1 – Jurien Bay townsite POS
  - Dobbyn Park
  - Pioneer Park
  - JCC Surrounds
  - Federation (Memorial) Park
  - Baudin Park
  - POS 5A - Middleton Boulevard
  - Weld Park
  - R E Snook Reserve
  - Eric Collinson
  - Passamani Park
  - POS 4B - Pacman Park
  - Seinor Park
- Item 2 – Jurien Bay Building Surrounds Lawns
  - Administration Centre
  - Civic Centre Precinct
  - JB Police Station Verge
  - Jurien Town Hall
- Item 3 – Cervantes townsite POS
  - Catalonia Street Reserve
  - Memorial Park
  - Cervantes Recreation Ground
  - Cervantes Recreation Ground Car Park
  - Cervantes Rec Ground Surrounds
  - Cervantes CBD
  - Ronsard Park
  - Weston Street Reserve
- Item 4 (Discretionary Item) – Jurien Bay additional nominated areas
  - Fauntleroy Park
  - JCC Oval
- Item 5 (Discretionary Item) – Dandaragan townsite POS
  - Dandaragan Pioneer Park
  - Dandaragan Oval
  - Dandaragan Hockey Oval
- Item 6 (Discretionary Item) – Badgingarra townsite POS
  - Badgingarra Oval

Discretionary services were are also sought to provide turf management services within the Shire of Dandaragan:

- Item 7 (Discretionary Service) – Turf Renovations Program (including but not limited to the following activities):
  - Verti-mowing
  - Scarifying
  - Coring
  - Verti-draining
  - Top dressing
- Item 8 (Discretionary Service) – Turf Pest Management Program (including but not limited to the following activities):
  - Weed management

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– Insect management

Two turf management options were proposed in order to assess the best value for money with regard to maintaining minimum levels of service associated with POS. For this contract, summer months are deemed to be September through to April and winter months are deemed to be May through to August.

**Option 1 - Current Mowing Regime including Catching of Clippings**

- Broad area mowing with frequency as outlined in the table below.
- This is the same regime that has been undertaken during 2017/18 financial year.
- Clippings to be caught and disposed of to landfill (or acceptable location agreed by Principal).
- Ancillary services to be undertaken every cut.

	<b>Summer</b>	<b>Winter</b>	<b>Annual</b>
<b>Months</b>	Sep – Apr 8	May – Aug 4	12
<b>All Ovals and POS</b>	Fortnightly 17 Commence first week of September	Monthly 4 First week of each month	21
<b>Building Lawns</b>	Weekly 34	Fortnightly 9	43
<b>Clippings</b>	Caught Disposed at Landfill	Caught Disposed at Landfill	

**Option 2 – Alternative Mowing Regime with increased frequency and no catching of clippings**

- Broad area mowing with frequency as outlined in the table below.
- This regime is focused on an increased frequency of cuts dependent upon the functional hierarchy of the POS location.
- Clippings not required to be caught.
- Ancillary services mowing to be undertaken every other cut.

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	<b>Summer</b>	<b>Winter</b>	<b>Annual</b>
<b>Months</b>	Sep – Apr 8	May – Aug 4	12
<b>Hierarchy 1, 2 &amp; 3</b>	Weekly 34 Commence first week of September	Fortnightly 9 Commence first week of May	43
<b>Hierarchy 4</b>	Fortnightly 17 Commence first week of September	Monthly 4 First week of each month	21
<b>Building Lawns</b>	Weekly 34 Commence first week of September	Fortnightly 9 Commence first week of May	43
<b>Clippings</b>	Not Caught	Not Caught	

At 2pm on 9 June 2018 the tender period closed with tenders received from the following 3 contractors:

- Gro-Turf Pty Ltd
- Lawn Doctor Turf Solutions
- Vari-skilled

All tenders received were conforming.

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The following provides an assessment of tender submissions against the Qualitative Selection Criteria:

<b>QUALITATIVE CRITERIA</b>	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
<b>A. Relevant Experience and Key Personnel Skills (30%)</b> Tenderers must address the following information in an attachment and label it “ <b>Relevant Experience</b> ”:	<b>a) 8</b>  <b>b) 9</b>  <b>c) 9</b>  <b>Total 26 / 30</b>	<b>a) 9</b>  <b>b) 9</b>  <b>c) 9</b>  <b>Total 27 / 30</b>	<b>a) 7</b>  <b>b) 7</b>  <b>c) 7</b>  <b>Total 21 / 30</b>
a) Provide details of similar Turf Mowing work. (10%) a. Scope of the Tenderer’s involvement including details of outcomes. b. Details of issues that arose during the project and how these were managed.	<ul style="list-style-type: none"> <li>▪ Comprehensive list similar projects for multiple clients</li> <li>▪ Similar or bigger magnitude of work <ul style="list-style-type: none"> <li>– Shire of Gingin</li> <li>– Venueswest</li> </ul> </li> <li>▪ Similar services also provided to a variety of small scale clients.</li> <li>▪ Comprehensive description of mowing services delivered.</li> <li>▪ Comprehensive list and descriptions of additional turf management services.</li> <li>▪ Comprehensive list of issues resolution process.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Comprehensive list similar projects for multiple clients</li> <li>▪ Similar or bigger magnitude of work <ul style="list-style-type: none"> <li>– City of Wanneroo</li> <li>– City of Nedlands</li> </ul> </li> <li>▪ Department of Education</li> <li>▪ Similar services also provided to a variety of small scale clients.</li> <li>▪ Comprehensive description of mowing services delivered, including timeframes, staff and equipment allocation.</li> <li>▪ Comprehensive list and descriptions of additional turf management services.</li> <li>▪ Outline of previous services delivered for Shire of Dandaragan</li> <li>▪ Dandaragan Oval turf</li> <li>▪ Jurien Bay Oval refurbishment</li> <li>▪ Jurien Bay Foreshore turf installation and establishment</li> <li>▪ Various ovals coring, vertidrainage.</li> <li>▪ Comprehensive list of issues resolution process.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Solid list similar projects for multiple clients</li> <li>▪ Incumbent contractor who has delivered a significant portion of this service for the past 10 years.</li> <li>▪ Similar services also provided to a variety of small scale clients.</li> <li>▪ Solid description of mowing services delivered, including timeframes and methodology.</li> <li>▪ Comprehensive list and descriptions of additional turf management services.</li> <li>▪ Outline of previous services delivered for Shire of Dandaragan and associated reporting processes.</li> <li>▪ Basic list of issues resolution process, however the existing issues resolution process has not always resolved management’s concerns in the current contract period.</li> </ul>
b) Provide details of Tenderer’s Key Staff (10%) a. Outline Key staff and their roles in the performance of the Contract. b. Curriculum vitae of key staff inclusive of membership to any professional or business association, qualifications etc.	<ul style="list-style-type: none"> <li>▪ Comprehensive outline of Key Staff, roles and responsibility.</li> <li>▪ CVs included</li> <li>▪ Multiple staff with accredited turf management qualifications.</li> <li>▪ Comprehensive list of relevant professional licenses, training and memberships.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Comprehensive outline of Key Staff, roles and responsibility.</li> <li>▪ CVs included</li> <li>▪ Multiple staff with accredited turf management qualifications.</li> <li>▪ Comprehensive list of relevant professional licenses, training and memberships.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Basic outline of Key Staff, roles and responsibility.</li> <li>▪ CVs included</li> <li>▪ Staff have minimal accredited turf management qualifications.</li> <li>▪ Solid list of relevant professional licenses, training and memberships.</li> </ul>
c) Provide details of Turf Management skills (10%) a. Qualifications b. Training c. Experience.	<ul style="list-style-type: none"> <li>▪ Multiple staff with &gt; 20 years turf mowing and turf management experience.</li> <li>▪ Multiple staff with accredited turf management qualifications.</li> <li>▪ Additional licenses and training listed, including a training and qualifications register, machine training matrix.</li> <li>▪ Professional Memberships listed.</li> <li>▪ Comprehensive outline of key skills and services.</li> <li>▪ Comprehensive outline of previous relevant experience and roles.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Multiple staff with &gt; 20 years turf mowing and turf management experience.</li> <li>▪ Multiple staff with accredited turf management qualifications.</li> <li>▪ Additional licenses and training listed, including a training and qualifications register, machine training matrix.</li> <li>▪ Professional Memberships listed.</li> <li>▪ Comprehensive outline of key skills and services.</li> <li>▪ Comprehensive outline of previous relevant experience and roles.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Staff with 10 years turf mowing experience, but comparatively limited turf management experience.</li> <li>▪ Staff with minimal accredited turf management qualifications.</li> <li>▪ Additional licenses and training listed, including a training and qualifications register, machine training matrix.</li> <li>▪ Professional Memberships listed.</li> <li>▪ Solid outline of key skills and services.</li> <li>▪ Solid outline of previous relevant experience and roles.</li> </ul>

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<b>QUALITATIVE CRITERIA</b>	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
<b>B. Tenderer's Resources and Delivery (20%)</b> Tenderers must address the following information in an attachment and label it " <b>Tenderer's Resources</b> ":	<b>a) 9</b>  <b>b) 8</b>  <b>Total 17 / 20</b>	<b>a) 9</b>  <b>b) 10</b>  <b>Total 19 / 20</b>	<b>a) 7</b>  <b>b) 8</b>  <b>Total 15 / 20</b>
a) Plant, equipment, resources and materials. (10%) a. List proposed plant and equipment b. Contingency measures or backup of resources including personnel (where applicable).	<ul style="list-style-type: none"> <li>▪ Clear outline of proposed equipment that meets requirements outlined in specification.</li> <li>▪ Comprehensive list of additional equipment, as well as alternative options.</li> <li>▪ Comprehensive list of additional equipment outlining flexibility and ability to provide contingency arrangements.</li> <li>▪ Summary of potential issues requiring contingency measures and comprehensive outline how these would be dealt with.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Clear outline of proposed equipment that meets requirements outlined in specification.</li> <li>▪ Comprehensive list of additional equipment, as well as alternative options.</li> <li>▪ Comprehensive list of additional equipment outlining flexibility and ability to provide contingency arrangements.</li> <li>▪ Summary of potential issues requiring contingency measures and comprehensive outline how these would be dealt with.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Contractor has outlined proposed equipment, based upon previous contract, <ul style="list-style-type: none"> <li>- This does not address the requirements outlined in specification.</li> <li>- No discussion or clarification to justify.</li> </ul> </li> <li>▪ Solid list of additional equipment.</li> <li>▪ Basic list of equipment outlining flexibility and ability to provide contingency arrangements.</li> <li>▪ Summary of potential issues requiring contingency measures and comprehensive outline how these would be dealt with.</li> </ul>
b) Demonstrated understanding of the Scope of Work (10%) a. Specifically a Schedule for delivery b. OHS Procedures.	<ul style="list-style-type: none"> <li>▪ Comprehensive methodology broken down for each type of service area and service requirement.</li> <li>▪ Comprehensive methodology for additional services and overall turf management knowledge.</li> <li>▪ Comprehensive delivery schedule, outline specific days each month for each location, including machinery servicing.</li> <li>▪ Effective outline of OHS procedures.</li> <li>▪ Comprehensive outline of machinery maintenance practices.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Comprehensive methodology broken down for each type of service area and service requirement.</li> <li>▪ Comprehensive methodology for additional services and overall turf management knowledge.</li> <li>▪ Comprehensive delivery schedule, outline specific days each month for each location, including machinery servicing.</li> <li>▪ Comprehensive outline of OHS procedures.</li> <li>▪ Comprehensive outline of machinery maintenance practices.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Comprehensive methodology broken down for each type of service area and service requirement.</li> <li>▪ Effective methodology for additional services and overall turf management knowledge.</li> <li>▪ Comprehensive delivery schedule, outline specific days each month for each location, including machinery servicing.</li> <li>▪ Basic outline of OHS procedures.</li> <li>▪ Effective outline of machinery maintenance practices.</li> </ul>
<b>TOTAL</b>	<b>43/50</b>	<b>46/50</b>	<b>36/50</b>

The weight price assessment is considered in financial implications. The overall review and recommendation of preferred contractor will also be outlined in the financial implications section.



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### Qualitative Criteria Tender Ranking and Summary Notes

1. Lawn Doctor
  - a. Extensive experience with mowing.
  - b. Extensive turf management experience and qualifications.
  - c. Perth based, but would establish a Jurien Bay sub-base.
  - d. Comprehensive OHSE procedures.
  - e. Has successfully delivered turf management projects for the Shire.
2. Gro-Turf
  - a. Extensive experience with mowing.
  - b. Extensive turf management experience and qualifications.
  - c. Muchea based.
  - d. Solid OHSE procedures.
3. Vari-skilled
  - a. Incumbent contractor who has a good understanding of scope of services.
  - b. Locally based in Jurien Bay.
  - c. Limited turf management qualifications.
  - d. Queries regarding proposed plant and equipment.
  - e. Basic OHSE procedures

### CONSULTATION

- Chief Executive Officer
- Executive Manager Corporate and Community Services
- Coordinator Infrastructure Operations
- Jurien Bay Operations Supervisor
- Dandaragan Operations Supervisor

### **Turf Management Review**

During the 2017/18 extension period Shire officers have been undertaking an extensive review of Turf Management, including *Mowing of Public Open Space* services. This entailed:

- Turf management review undertaken by turf consultant Woodlands.
- Working with the incumbent turf mowing contractor (Vari-skilled) as well as operations staff to review and trial alternative mowing regimes.

The Shire commissioned a turf consultant, Woodlands, to provide an independent review and recommendations to the Shire on our current turf management practices. Information gathered as part of this review process contributed towards refining how turf mowing and turf management as a whole is to be undertaken from 1 July 2018 onwards.

The review process included a detailed assessment of the mowing frequency requirements for each park. Several observations were made in this assessment including:

- Inconsistencies of frequency from location to location as outlined in the original contract.

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- Recent renovation projects across a number of Shire owned locations.
- Issues regarding turf quality, weed contamination and wider turf management practices.

This Turf Management Report outlined a number of recommendations going forward that drove the specifications for RFT01-18. These key recommendations mainly relate to:

- Mowing Frequency
- Mower Types
- Fertilising
- Irrigation
- Pest Management

Details of the Turf Management Review were presented to Council at the April 2018 Council Forum prior to RFT01-18 being advertised.

### **Tender Briefing**

A mandatory tender briefing was held on Tuesday, 22 May 2018 at 10am at the Shire of Dandaragan Administration Building, Jurien Bay. The tender briefing provided prospective tenderers with the opportunity to clarify any uncertainties with the contact person prior to the closing of the tender.

The following 3 contractors attended the mandatory Tender Briefing:

- Gro-Turf Pty Ltd
- Lawn Doctor Turf Solutions
- Vari-skilled

### **STATUTORY ENVIRONMENT**

Section 11 Local Government (Functions & General) Regulations 1996 – When tenders have to be publically invited.

### **POLICY IMPLICATIONS**

Shire of Dandaragan Purchasing Policy and Tender Guide 1.15.

### **FINANCIAL IMPLICATIONS**

The following section provides a financial summary of Tenders received and also the Shire Officers' recommendation.

This includes a comparison of costs against:

- 2016/17 Financial Year as per RFT 02-2013.
  - Reflective of actual budget costs over the course of 2016/17 financial year.
  - Items 5 and 6 delivered via Shire internal operations staff.
- 2017/18 Interim Contract.
  - Reflective of actual budget costs over the course of 2017/18 financial year.
  - Includes changes to proposed scope of works and methodology.

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- Item 4 delivered by Shire internal operations staff, following turf renovation projects.
- Items 5 and 6 delivered via Shire internal operations staff.
- Options 1 and 2 for each tender submitted.

Information includes costs “Per Cut” as well as “Indicative Annual Costs” for each option. All costs are exclusive of GST.

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<b>OPTION 1 - Current Mowing Regime including Catching of Clippings</b>					
<b>Cost per Cut</b>					
<b>Item</b>	<b>16/17 Budget</b>	<b>17/18 Interim</b>	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
1. Jurien Bay	\$ 4,310.81	\$ 4,310.81	\$ 4,987.00	\$ 5,704.92	\$ 3,795.89
2. Jurien Bay - Building Surrounds Lawn	\$ 598.79	\$ 598.79	\$ 1,155.00	\$ 224.64	\$ 839.08
3. Cervantes	\$ 1,966.98	\$ 1,966.98	\$ 2,405.00	\$ 2,953.08	\$ 1,957.63
	<b>\$ 6,876.58</b>	<b>\$ 6,876.58</b>	<b>\$ 8,547.00</b>	<b>\$ 8,882.64</b>	<b>\$ 6,592.60</b>
4. Jurien Bay - Additional Areas	\$ 625.39	\$ 566.67	\$ 1,565.00	\$ 1,322.92	\$ 844.36
5. Dandaragan	\$ 766.67	\$ 966.67	\$ 1,060.75	\$ 814.15	\$ 1,218.18
6. Badgingarra	\$ 200.00	\$ 200.00	\$ 620.00	\$ 386.92	\$ 422.18
	<b>\$ 1,592.06</b>	<b>\$ 1,733.33</b>	<b>\$ 3,245.75</b>	<b>\$ 2,523.99</b>	<b>\$ 2,484.72</b>
	<b>\$ 8,468.64</b>	<b>\$ 8,609.92</b>	<b>\$ 11,792.75</b>	<b>\$ 11,406.63</b>	<b>\$ 9,077.32</b>
<b>Indicative Annual Cost</b>					
<b>Item</b>	<b>16/17 Budget</b>	<b>17/18 Interim</b>	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
1. Jurien Bay	\$ 102,018.56	\$ 79,003.46	\$ 104,737.50	\$ 119,803.32	\$ 79,713.71
2. Jurien Bay - Building Surrounds Lawn	\$ 22,683.26	\$ 34,049.63	\$ 48,510.00	\$ 9,350.64	\$ 34,800.91
3. Cervantes	\$ 45,043.18	\$ 37,308.32	\$ 50,505.00	\$ 62,014.68	\$ 41,110.36
	<b>\$ 169,745.00</b>	<b>\$ 150,361.41</b>	<b>\$ 203,752.50</b>	<b>\$ 191,168.64</b>	<b>\$ 155,624.98</b>
4. Jurien Bay - Additional Areas	\$ 19,232.27	\$ 17,000.00	\$ 32,865.00	\$ 27,778.32	\$ 17,731.64
5. Dandaragan	\$ 23,000.00	\$ 29,000.00	\$ 22,275.50	\$ 17,097.15	\$ 25,581.82
6. Badgingarra	\$ 6,000.00	\$ 6,000.00	\$ 13,020.00	\$ 8,125.32	\$ 8,865.82
	<b>\$ 48,232.27</b>	<b>\$ 52,000.00</b>	<b>\$ 68,160.50</b>	<b>\$ 53,000.79</b>	<b>\$ 52,179.28</b>
	<b>\$ 217,977.27</b>	<b>\$ 202,361.41</b>	<b>\$ 271,913.00</b>	<b>\$ 244,169.43</b>	<b>\$ 207,804.26</b>
<b>Weighted Price Rating</b>			<b>35</b>	<b>40</b>	<b>50</b>

*Note: Items in italics represent services delivered by Shire internal operations staff.*

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<b>OPTION 2 – Alternative Mowing Regime with increased frequency and no catching of clippings</b>					
<b>Cost per Cut</b>					
<b>Item</b>	<b>16/17 Budget</b>	<b>17/18 Interim</b>	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
1. Jurien Bay	\$ 4,310.81	\$ 4,310.81	\$ 3,241.83	\$ 5,704.92	\$ 3,252.49
2. Jurien Bay - Building Surrounds Lawn	\$ 598.79	\$ 598.79	\$ 1,033.50	\$ 224.64	\$ 839.08
3. Cervantes	\$ 1,966.98	\$ 1,966.98	\$ 1,591.23	\$ 2,953.08	\$ 1,545.61
	<b>\$ 6,876.58</b>	<b>\$ 6,876.58</b>	<b>\$ 5,866.56</b>	<b>\$ 8,882.64</b>	<b>\$ 5,637.18</b>
4. Jurien Bay - Additional Areas	\$ 625.39	\$ 566.67	\$ 1,045.25	\$ 1,322.92	\$ 639.16
5. Dandaragan	\$ 766.67	\$ 966.67	\$ 870.00	\$ 814.15	\$ 848.17
6. Badgingarra	\$ 200.00	\$ 200.00	\$ 510.00	\$ 386.92	\$ 422.18
	<b>\$ 1,592.06</b>	<b>\$ 1,733.33</b>	<b>\$ 2,425.25</b>	<b>\$ 2,523.99</b>	<b>\$ 1,909.51</b>
	<b>\$ 8,468.64</b>	<b>\$ 8,609.92</b>	<b>\$ 8,291.81</b>	<b>\$ 11,406.63</b>	<b>\$ 7,546.69</b>
<b>Indicative Annual Cost</b>					
<b>Item</b>	<b>16/17 Budget</b>	<b>17/18 Interim</b>	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
1. Jurien Bay	\$ 102,018.56	\$ 79,003.46	\$ 107,117.28	\$ 188,786.52	\$ 106,347.54
2. Jurien Bay - Building Surrounds Lawn	\$ 22,683.26	\$ 34,049.63	\$ 43,285.50	\$ 9,350.64	\$ 34,800.91
3. Cervantes	\$ 45,043.18	\$ 37,308.32	\$ 64,294.24	\$ 113,906.52	\$ 60,690.73
	<b>\$ 169,745.00</b>	<b>\$ 150,361.41</b>	<b>\$ 214,697.02</b>	<b>\$ 312,043.68</b>	<b>\$ 201,839.18</b>
4. Jurien Bay - Additional Areas	\$ 19,232.27	\$ 17,000.00	\$ 44,945.75	\$ 56,885.56	\$ 27,484.04
5. Dandaragan	\$ 23,000.00	\$ 29,000.00	\$ 37,410.00	\$ 35,008.45	\$ 36,451.83
6. Badgingarra	\$ 6,000.00	\$ 6,000.00	\$ 10,710.00	\$ 8,125.32	\$ 8,865.82
	<b>\$ 48,232.27</b>	<b>\$ 52,000.00</b>	<b>\$ 93,065.75</b>	<b>\$ 100,019.33</b>	<b>\$ 72,801.69</b>
	<b>\$ 217,977.27</b>	<b>\$ 202,361.41</b>	<b>\$ 307,762.77</b>	<b>\$ 412,063.01</b>	<b>\$ 274,640.87</b>
<b>Weighted Price Rating</b>			<b>25</b>	<b>20</b>	<b>35</b>

*Note: Items in italics represent services delivered by Shire internal operations staff.*

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A weighted price rating was based upon the referenced indicative annual cost of financial years 2016/2017 and 2017/2018, which provides a basis for historical and ongoing annual turf mowing budgets.

Tender submission cost information can be summarised as follows:

- Only Vari-skilled Option 1 provides an indicative annual cost comparable to actual budget figures of 2016/17 and 2017/18.
- All indicative annual cost tenders submitted for Option 2 are significantly above budget figures of 2016/17 and 2017/18.
- The cost per cut does not significantly reduce for Option 2, even though:
  - clippings are not having to be caught and disposed of; and
  - ancillary services are to be undertaken every other cut.
- Option 2 would provide an overall better turf management regime, but at an additional Indicative annual cost of between \$60,000 to \$80,000, if the lowest tender was endorsed.
- Discretionary Items 4, 5 and 6 have been delivered internally by shire operations staff in 2017/18 and the annual costs for these items are comparable to the lowest Indicative annual cost tender submission for Option 1.

During the review process shire officers undertook an initial assessment of the indicative annual cost to undertake all mowing services via internal operations staff as opposed to outsourcing via contract. This estimate was based upon:

- Historical costs to the deliver the existing services internally (Items 4, 5 and 6)
- An estimate of time, resources and plant to undertake the remaining services (Items 1, 2 and 3).

This information was discussed with Council at Council Forum in April 2018, prior to advertising the RFT. Shire officers did not submit an In House Tender during the RFT process.

Shire officers estimate to undertake this work internally as follows:

<b>Shire Operations - Internal Estimate</b>		
<b>Indicative Annual Cost</b>		
	<b>Option 1</b>	<b>Option 2</b>
<b>Items 1, 2, 3 &amp; 4</b>	\$ 150,000	\$ 200,000
<b>Item 5</b>	\$ 23,000	\$ 29,000
<b>Item 6</b>	\$ 6,000	\$ 6,000
<b>Total</b>	\$ 179,000	\$ 235,000

The overall assessment for each tenderer against the criteria is summarised as follows:

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<b>OPTION 1 - Current Mowing Regime including Catching of Clippings</b>			
	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
<b>Qualitative Criteria</b>	43	46	36
<b>Weighted Price Rating</b>	35	40	50
<b>Total</b>	78	86	86
<b>OPTION 2 – Alternative Mowing Regime with increased frequency and no catching of clippings</b>			
	<b>Grow Turf</b>	<b>Lawn Doctor</b>	<b>Vari-skilled</b>
<b>Qualitative Criteria</b>	43	46	36
<b>Weighted Price Rating</b>	25	20	35
<b>Total</b>	68	66	71

Based upon the both qualitative criteria and cost information submitted, shire officers are recommending the following regarding the award of contract.

Vari-skilled be awarded RFT01-18 for Option 1.

- Items 1.
- Item 2.
- Item 3.
- Should additional services be required during the year at the discretion of shire officers these will be delivered based upon the cost per cut as outlined in Option 2.

Shire operations continue to deliver items 4, 5 and 6 via internal operations staff for the following reasons:

- Items 4.
  - Delivered internally by Shire operations staff since November 2016, following major turf renovations projects.
  - Allowed greater flexibility with overall turf management components.
  - Contributed towards upskilling Shire operations staff.
  - Shire operations staff have taken ownership and immense pride in delivering this service.
- Item 5 and Item 6.
  - These services have been historically delivered by internal shire operations staff in Dandaragan, as part of the wider public open space and town maintenance services.
  - This provides an overall cost effective delivery of all services in these two towns.

These recommendations are consistent with the delivery of services undertaken during the 2017/18 financial year and the indicative annual costs are comparative to the annual budget for services delivered over the 2016/17 and 2017/18 financial years.

Shire officers recommend that no contract be awarded for discretionary services relating to Items 7 and 8. Whilst all

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submissions exhibited turf management skills and knowledge, none of the submitted tenders provided a cost effective submission that combined mowing and overall turf management service that warranted whole outsourcing of all turf management services. Greater flexibility, cost effectiveness and service delivery would be achieved by Shire operations staff addressing specific turf management issues on an as needs basis, as per existing processes.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

<i>Goal 1: Great Place for Residential and Business Development</i>	
Objective	How the Shire will contribute
1.3: Ensure timely provision of essential and strategic infrastructure	e) Provide and manage public open space, including ovals, parks and gardens, playgrounds, open reserves, road verges and median strips and street trees.
BUSINESS AS USUAL	1h) Public Open Spaces

### ATTACHMENTS

Nil

### VOTING REQUIREMENT

Absolute majority

### **OFFICER RECOMMENDATION**

**That Council:**

- 1. award RFT01-18 to Vari-skilled for Option 1 to deliver the following services for an annual indicative cost of \$155,625 exclusive of GST:**
  - Items 1 – Jurien Bay townsite Public Open Space.
  - Item 2 – Jurien Bay Building Surrounds Lawns.
  - Item 3 – Cervantes townsite Public Open Space.
- 2. endorse the following discretionary services to be delivered by internal operations staff:**
  - Items 4 – Jurien Bay Additional Areas.
  - Item 5 – Dandaragan townsite Public Open Space.
  - Item 6 – Badgingarra townsite Public Open Space.
- 3. resolve not to award discretionary services associated with Items 7 and 8.**

**Advice Note:**

Should additional services be required during the year, at the discretion of the CEO, these will be delivered based upon the cost per cut for each location as outlined in their submission for Option 2.



## 9.2.2 PROPOSAL TO ENTER A LEASE AGREEMENT WITH LENDLEASE

Location:	Shire of Dandaragan
Applicant:	Shire of Dandaragan
Folder Path:	Business Classification Scheme / Commercial Activities / Joint Ventures / Service Level Agreements / Agenda Report Lendlease Jurien Bay Depot Operations
Disclosure of Interest:	None
Date:	20 June 2018
Author:	Garrick Yandle, Executive Manager Infrastructure
Senior Officer:	Brent Bailey, Chief Executive Officer

### PROPOSAL

For Council to consider establishing an agreement to lease a portion of the Jurien Bay Operations Centre to Lendlease, who are Main Roads Mid-West Gascoyne Regional Network contractor, and advertise this agreement via public notice Council's intent to enter a lease agreement.

### BACKGROUND

The Shire of Dandaragan has been approached by Lendlease to establish a Road Maintenance Operation within Jurien Bay. This proposal outlines Lendlease's request to co-locate with the Shire at its operations centre in Jurien Bay under a lease agreement and to seek Council's approval to advertise via public notice Council's intent to enter a lease agreement for this purpose.

Lendlease has recently secured a five year maintenance contract with Main Roads Mid-West Gascoyne Region which covers Main Roads WA road infrastructure corridors in the region. This contract commenced in November 2017 with an option to extend for an additional two years based on Lendlease's performance.

### COMMENT

Main Roads and Lendlease have for some time considered establishing an operating base in the southern part of the Mid-West Region. This need has been driven by the proximity of Geraldton to Two Rocks and the need to respond faster to an increased number of requirements for road maintenance. Main Roads' plan for this started over 3 years ago. Now, with a new supply contract in place, Main Roads and Lendlease have together revisited this option. Main Roads and Lendlease's considerations for a base have included Moora, Dalwallinu and Jurien Bay.

Jurien Bay has become an important strategic location for Main Roads and Lendlease as it provides central access for servicing the southern section of the network including Indian Ocean Drive, Brand Highway and Midlands Road.

A base in Jurien Bay will allow Lendlease to place resources for dispatch at short notice and respond to customer needs, attend to emergencies, and importantly become part of the local community where they operate out of.

The operation will be independent of that of the Shire's operations centre and it is proposed that Lendlease will operate their own gate access to the premises. Security of Lendlease's equipment will rest with Lendlease.

Lendlease will offer local employment opportunities, support local businesses and foster local relationships for the long term.

### **Nature of Operations**

The tasks to be completed by the local crews include routine road maintenance and litter collection, including rest area maintenance. The team will also respond to emergencies such as fires and vehicle accidents. The incident focus is to keep the public safe and keep traffic flowing by providing traffic control. All Lendlease's operators are accredited traffic controllers.

The resources required to be placed at the Shire's Jurien Depot include five items of plant and five permanent employees as follows:

1. One 8T Routine Maintenance Truck and two plant operators
2. One Utility Vehicle with Litter Cage Trailer and two plant operators
3. One Foreperson with Utility Vehicle
4. One Bobcat and Equipment Trailer

The personnel will typically work Monday to Friday from 7am to 5pm to travel the road network, and whilst they will start in the depot on a Monday morning, they may travel away all week and stay in motel or camp accommodation and return Friday afternoon. This is depending on task locations and response priorities.

The crew and foreperson will preferably have a portable site office and toilet access at the depot. Lendlease and Main Roads will cover the cost of any installation of these facilities.

Lendlease will require to store cold mix and fine aggregate, and propose to install concrete ground bins for this purpose. Emulsion will be stored in 1,000L bulk bins and an option for bulk tank storage will be considered once the operation has been bedded in. Lendlease and Main Roads will also cover the cost for this installation.

### **Health, Safety and Environment**

Lendlease operates under Global Minimum Requirements (GMR) in relation to occupational, health, safety and environment.

Lendlease will submit to the Shire a comprehensive Depot Management Plan for approval prior to the operation commencing. The Plan will include relevant operational detail, contacts, and safety approach to tasks. Other relevant operating plans will be shared as required.

### **Personnel**

Lendlease personnel are inducted under the GMR scheme to meet Lendlease's operating standards in everything they do.

The Foreperson will have operational responsibility day to day and the maintenance personnel will report to the Foreperson. This person will report to our Maintenance Supervisor based in Geraldton.

In relation to the security of Shire assets on site, in the past the Shire has provided numerous external agencies access to the Operations Centre outside of normal business hours, and provided Council property and resources are properly secured by Shire operations staff, the Shire does not envisage there to be any risk to Council property or resources.

Incidentally, provision has also been made in the draft 2018/19 annual budget for the purchase of locking mechanisms to be installed on Shire sheds and equipment to prevent mis-intended use or theft.

Following in-depth discussion with Main Roads Mid-West Gascoyne Region, Lendlease and Shire officers in regards to this proposal, the Shire believes that the establishment of this operation will be of mutual benefit to all parties, including the local community, in delivering local services by local people, sharing skills and knowledge, and fostering a long term and positive relationship.

Furthermore, under Section 3.58 (3) of the Local Government Act Council is permitted to lease property provided certain procedures have taken place in accordance with the Act and the Shire seeks Council's approval to provide public notice of Council's intent to lease this space.

### **CONSULTATION**

#### **Internal**

- Chief Executive Officer
- Executive Manager Infrastructure
- Executive Manager Corporate & Community Services

- Executive Manager Development Services
- Coordinator Infrastructure Services
- Operations Supervisor Jurien Bay

#### External

- Lendlease
- Main Roads Mid-West Gascoyne Region
- Griffin Valuation Advisory

With Lendlease being a private company, Council is required to advertise the commercial nature of this lease agreement. If the proposed lease agreement had of been with Main Roads as a government department, then the requirement for advertising is not as stringent.

As part of the consultation process, Main Roads advised the Shire that this lease agreement would have to be established with Lendlease directly as opposed to establishing a lease agreement with Main Roads, hence the requirement for advertising.

#### STATUTORY ENVIRONMENT

Council is able to lease property provided it meets the requirements of Section 3.58 of the *Local Government Act 1995* Disposing of Property

#### **3.58. Disposing of property**

(1) *In this section —*

**dispose** includes to sell, lease, or otherwise dispose of, whether absolutely or not;

**property** includes the whole or any part of the interest of a local government in property, but does not include money.

(2) *Except as stated in this section, a local government can only dispose of property to —*

(a) *the highest bidder at public auction; or*

(b) *the person who at public tender called by the local government makes what is, in the opinion of the local government, the most acceptable tender, whether or not it is the highest tender.*

(3) *A local government can dispose of property other than under subsection (2) if, before agreeing to dispose of the property —*

(a) *it gives local public notice of the proposed disposition —*

(i) *describing the property concerned; and*

(ii) *giving details of the proposed disposition; and*

(iii) *inviting submissions to be made to the local government before a date to be specified in the notice, being a date not less than 2 weeks after the notice is first given;*

*and*

(b) *it considers any submissions made to it before the date specified in the notice and, if its decision is made by the*

*council or a committee, the decision and the reasons for it are recorded in the minutes of the meeting at which the decision was made.*

- (4) The details of a proposed disposition that are required by subsection (3)(a)(ii) include —*
  - (a) the names of all other parties concerned; and*
  - (b) the consideration to be received by the local government for the disposition; and*
  - (c) the market value of the disposition —*
    - (i) as ascertained by a valuation carried out not more than 6 months before the proposed disposition; or*
    - (ii) as declared by a resolution of the local government on the basis of a valuation carried out more than 6 months before the proposed disposition that the local government believes to be a true indication of the value at the time of the proposed disposition.*
- (5) This section does not apply to —*
  - (a) a disposition of an interest in land under the Land Administration Act 1997 section 189 or 190; or*
  - (b) a disposition of property in the course of carrying on a trading undertaking as defined in section 3.59; or*
  - (c) anything that the local government provides to a particular person, for a fee or otherwise, in the performance of a function that it has under any written law; or*
  - (d) any other disposition that is excluded by regulations from the application of this section.*

#### POLICY IMPLICATIONS

There are no policy implications in relation to this item.

#### FINANCIAL IMPLICATIONS

The Shire engaged Griffin Valuation Advisory to provide a desktop land asset value report in order to determine the market rental value for the amount of land proposed to be leased (see attachment 9.2.2 – Doc ID: 113706).

This assessment of the subject property ground rental value was based on the best available market rental evidence from country locations. Given the subject area to be leased is in close proximity to the Jurien Bay townsite and all utility services provided at the location the opinion of Griffin Valuation Advisory is that a rate of \$6 per m<sup>2</sup> is satisfactory.

Following the preparation of the attached Land Asset Valuation Report by Griffin Valuation Advisory the proposed ground lease valuation amounts to a market rental value of \$12,000 per annum ex GST. This equates to a total amount of \$60,000 ex GST over the 5 year term of the contract with the possibility to extend the contract for another two years depending on Main Roads Mid-West Gascoyne Region's review of Lendlease's performance.

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Lendlease's satisfactory performance review could ultimately see the Shire receive an additional \$24,000 within the 2023/24 and 2024/2025 financial years.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

<i>Goal 1: Great Place For Residential And Business Development</i>	
Objectives	How the Shire will contribute
1.4 Ensure Shire is "open for business" and supports industry and business development	a) Manage commercial and caravan park leases b) Identify and engage with future new business and industry opportunities c) Realise potential of Council's control of lazy land assets.
<i>Goal 5: Proactive And Leading Local Government</i>	
Objectives	How the Shire will contribute
5.2 High Performing Administration	b) Provide robust financial management and guardianship of the community's assets c) Compliance in all legislative requirements and functions
5.6 Implement sound corporate governance and risk management	f) maintain a high standard of governance and accountability g) Manage risk

### ATTACHMENTS

Circulated with the agenda is the following item relevant to this report:

- Griffin Valuation Advisory Land Asset Valuation Report (Doc Id 113706)

**(Marked 9.2.2)**

### VOTING REQUIREMENT

Simple majority

### **OFFICER RECOMMENDATION**

**That Council agree to provide public notice of Council's intent to lease 2000m<sup>2</sup> of depot space to Lendlease for the amount of \$60,000 over a term of 5 years, with an option for an additional 2 years, as per Section 3.58 (3) of the *Local Government Act 2005*.**



### 9.3 DEVELOPMENT SERVICES

#### 9.3.1 RETROSPECTIVE PLANNING APPROVAL – UNAUTHORISED DEVELOPMENT – LOT 414 JURIEN BAY VISTA, JURIEN BAY HEIGHTS

Location:	Lot 414 Jurien Bay Vista, Jurien Bay Heights
Applicant:	DJ Ball
Folder Path:	Development Services Apps / Development Applications / 2018 / 35
Disclosure of Interest:	Nil
Date:	28 May 2018
Author:	Rory Mackay, Planning Officer
Senior Officer:	David Chidlow, Executive Manager Development Services

#### PROPOSAL

The proponent is seeking retrospective planning approval for the following unauthorised buildings on Lot 414 Jurien Bay Vista, Jurien Bay Heights:

- 1 x Donga 7.4m x 2.8m
- 1 x Sea Container 6m x 2.4m
- 1 x Old Site Office 6m x 4m
- 1 x Pergola 7m x 6.5m
- 1 x Patio 5.6m x 5.5m

#### Location Plan



#### BACKGROUND

The Manager of Building Services (MBS) investigated a complaint about illegal buildings on the subject property. It was found no development or building consent was given for the development which had occurred on the land. The MBS under guidance of the Executive Manager of Development Services (EMDS) took action on this breach by notifying the landowner to the nature of the

breach and the relevant Shire requirements to rectify noncompliance within an appropriate timeframe via letter. An aspect of the letter also asked the landowner to “show cause” as to why Council should not exercise its discretion to implement further specified enforcement action as available under the relevant acts. This action was not unique to this given property as several other properties in Shire’s Rural Residential and Special Use – Rural Development Local Planning Scheme No.7 (LPS7) zones have been notified of breaching planning and building statute.

Council does not have a policy which effectively deals with this compliance matter. However, it is noted the Shire may become aware of an alleged noncompliance or a breach by a landowner or occupier within the Shire through either a site inspection, aerial photography or a complaint. All complaints are investigated, whether received in writing, by telephone or in person.

The Shire acknowledges it does not have unlimited resources and somewhat relies upon the public to make complaints and to provide evidence to assist in taking enforcement action. Not all requests for Shire action will warrant detailed investigation or the taking of action, and Shire resources may inhibit the taking of action in all cases where, otherwise, action would be justified. Nonetheless, the Shire does and will continue to record all complaints of unauthorised development and activity even though some of these may not be dealt with for a considerable time.

The exercise of the Shire's authority to enforce planning law is discretionary. Meaning, the Shire does not have a legal obligation to take action to enforce planning law that is enforceable at the insistence of a third party. Council may choose not to enforce the law at all in particular circumstances. However, the Shire may commit a legal error if it does not turn its mind to the exercise of its statutory power in the event of a breach of planning law. Under common law, failure to take planning law enforcement action may constitute negligence in the event that a duty of care can be established to exist and to have been breached.

Section 164 of the Planning and Development Act 2005 (the Act) affords a local authority the ability to retrospectively approve development which was carried out prior to planning approval being granted for the subject development. More specifically, Section 164(3) states retrospective approval does not affect the operation of Part 13 of the Act, which comprises the relevant enforcement and penalty provisions. This indicates that retrospective approval will not preclude prosecution for prior unlawful development.

The Shire has deferred commencement of enforcement action in this case as the application for retrospective approval (the subject of this item) has been lodged for assessment.



### COMMENT

There are three legal tests to be considered for retrospective planning approval, as follows.

#### **Likelihood of Consent**

*Is the unauthorised development a form of development or activity that, 'but for' the failure to make application for a development consent or an activity approval, would likely have been granted such consent or approval subject to appropriate conditions.*

An unauthorised development is understood to 'pass' this test in the event that it is likely that the development or activity would have been granted consent, had application been made for such consent prior to the undertaking of the development.

Shire planning staff consider if an application was made prior to development that formal consent would not have been granted for the ad hoc development. Reasons for this are the development is noncompliant with Clauses 1.4, 2.1, 4.1 and 7.2 of *Schedule 9: Specific Conditions for Rural Development on Victoria Location 10751 ('Jurien Bay Heights')* of LPS7. Each noncompliant Clause is listed below.

*1.4 Local government shall require a buffer distance of 150 metres between the nearest boundary of the waste landfill site and any dwelling consistent with the Department of Environmental Protection's Draft Code of Practice for Country Landfill Management.*

It is noted the development may in fact be compliant with this clause but submitted plans do not detail the setback from the affected rear property boundary.

*2.1 Buildings shall be designed and constructed of materials which allow them to blend into the landscape of the site. No materials or colours shall be used which the Local government considers will have an undue impact on the visual amenity of the adjoining sites or the surrounding locality.*

*4.1 The disposal of liquid and/or solid wastes on the lots shall be carried out by way of an effluent system approved by the Local government and the health Department of Western Australia. Systems shall be designed and located to minimise nutrient export and/or release into any waterway or groundwater. Effluent disposal areas for development utilising conventional effluent disposal systems shall be setback a minimum of 100 metres from a natural permanent water course, water body or existing drain, and situated 2 metres above the highest known ground water level.*

7.2 *Each dwelling shall be provided with a supply of potable water comprising of not less than 120,000 litres of storage directly connected to the necessary roof catchment area to provide this supply.*

### **Environmental Impact**

*"Is the unauthorised development likely to cause a significant environmental impact, including impacts on the natural and the built environment? The application of this test requires a determination of the fact of any environmental impact and an assessment of the degree of that impact."*

An unauthorised development is understood to 'pass' this test in the event that the impacts of the development or activity are negligible or insignificant and action to control the impacts is not required.

Such development is not common within 'Jurien Bay Heights' and the granting of approval of this development would set an undesirable precedent for similar applications in the future.

Furthermore, as outlined above the proposal is considered to be in conflict with Clause 2.1 of Schedule 9 in respect of amenity impacts to neighbouring land, although visual impact is somewhat mitigated by remnant vegetation on the property. Adding to this, an environmental health concern is apparent in the operation of an unauthorised effluent disposal system in a sensitive soil region of the Shire. Therefore, it is concluded the development does not pass this legal test.

### **Public Safety**

*"Is the unauthorised development likely to lead to injury and/or to create a public liability? The application of this test requires a determination of the fact of any health and safety risk and an assessment of the degree of that risk."*

An unauthorised development is understood to 'pass' this test in the event that no significant health and/or safety risk is created by the development.

The applicant although requested by staff has not detailed if the development is used for habitable purposes. Nevertheless, the applicant supplied pictures of the development show an operational hot water unit and sewage treatment apparatus which lead to an understanding the development is habitable whether that be occasional or a more permanent nature. In either case the use of such structures requires a separate septic apparatus approval under the Health Act 1911. Furthermore, the development is non-compliant with Clause 4.1 of Schedule 9 of LPS7 in this aspect as detailed above.

The following is required for the development to be used for permanent habitable nature, pursuant to the Building Code of Australia. To convert an office building (Class 5) to a dwelling (Class 1), the following 'Required Facilities' are outlined under Clause 3.8.3.2 of the Code:

- (a) *A Class 1 building must be provided with-*
  - i. *kitchen sink and facilities for the preparation and cooking of food; and*
  - ii. *A bath or shower; and*
  - iii. *Clothes washing facilities, comprising at least one washtub and space in the same room for a washing machine; and*
  - iv. *A closed pan and washbasin*
- (b) *If any of the facilities in (a) are detached from the main building, they must be set aside for the exclusive use of the occupants of the building.*

Details of the development to ensure compliance with the above have not been supplied by the applicant. As such, a serious health and safety risk is created by the development.

Further to this the property is located with a Bushfire Prone Area and as result a Bushfire Attack Level (BAL) Assessment is required. The EMDS as an accredited BAL assessor has noted the development would require significant changes to achieve the required BAL of less than 29, further adding to the health and safety risks of the development.

In addition to this another serious health and safety risk is posed by the development in the form of the potable water supply. As per Clause 7.1 of Schedule 9 of LPS7, 120,000 litres of potable water storage directly connected to the necessary roof catchment area is required. This is not achieved by the existing water tank or aggregate roof catchment of approximately 135m<sup>2</sup>.

There is also a concern the development could be within the required buffer distance of 150m of the waste landfill site, which is noncompliant with Clause 1.4 of Schedule 9 of LPS7 as outline previously.

In summary it is considered the development fails this legal test, resulting in the failing of each of the three tests. Thus the development is recommended for refusal.

In giving refusal for the retrospective application it is appropriate to undertake enforcement measures to remedy the subject land of the illegal development. This can be facilitated under Section 214 of the Act, whereby, the Shire can issue a written direction for the illegal development to be removed and for the land to be restored to its condition immediately before development started (to the Shire's

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satisfaction) within a period of 60 days. It is recommended Council authorise this written direction be served on the applicant.

Pursuant to Section 215 of the Act, if the direction is not carried out within the specified timeframe, the Shire can execute the required work of the direction with all costs of such works borne by the directed person.

Under Section 255 of the Act there is right of review to the State Administrative Tribunal to the person served the direction under Section 214. If the State Administrative Tribunal confirms or varies the direction, it may, by written notice served on the person to whom the direction was given, direct the owner to comply with the direction as so confirmed or varied, within a period of not less than 40 days after service of the notice, as is specified in the notice.

**Alternative Recommendation:**

That Council grant retrospective planning approval to the development on Lot 414 Jurien Bay Vista, Jurien Bay, subject to the following conditions:

1. all development shall be in accordance with application and plans dated 28 June 2018 unless required to be amended hereunder.
2. if the Bushfire Attack Level for this application is above 29, a new planning application showing fire hazard mapping for the subject property must be provided and implemented to achieve a BAL of 29.
3. an application is to be submitted and approved to the satisfaction of the Shire's Principle Environmental Health Officer for an effluent disposal system on the property.
4. the area around the effluent disposal system shall be planted with indigenous trees and shrubs by the land owner and be maintained to the satisfaction of the local authority.
5. the building materials of all structures are to be painted a colour consistent with the surrounding vegetation and/or predominant colours of the individual site.
6. the existing sea container is to be secured to the satisfaction of the Shire's Manager of Building Services.
7. the existing 'donga' and 'old site office' is not be used for habitable purposes unless a separate time limited approval is granted in accordance with any Council policy.
8. this is planning approval only and not a building permit. A building permit must be obtained for this development.

**CONSULTATION**

As the property is situated on the corner of Conover Road and Jurien Bay Vista, only the neighbouring Lot 413 Jurien Bay Vista is potentially affected. However, notification of unauthorised works was also mailed by the MBS to this landowner, and hence, this

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landowner was not consulted in regards to this retrospective planning application.

### STATUTORY ENVIRONMENT

- Planning and Development Act 2005
- Local Planning Scheme No.7
- Building Code of Australia
- Health Act 1911

### POLICY IMPLICATIONS

There are no policy implications relevant to this item.

### FINANCIAL IMPLICATIONS

The applicant has paid the standard planning application fee, plus, by way of penalty, double the prescribed fee, totally a fee of \$441.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

<i>Goal 1: Great Place for Residential and Business Development</i>	
Objectives	How the Shire will contribute
1.2 Ensure effective and efficient development and building services	a) Process development applications and undertake building regulation functions and services
<i>Goal 2: Healthy, Safe and Active Community</i>	
2.5 Provide environmental health and safety services	a) Provide inspection and enforcement services to protect environmental and public health and control nuisances
<i>Goal 5: Proactive and Leading Local Government</i>	
5.2 High performing administration	c) Compliance in all legislative requirements and functions
5.6 Implement sound corporate governance and risk management	h) maintain and implement up to date policies and procedures (including delegations)

### ATTACHMENTS

Circulated with the agenda are the following items relevant to this report:

- Submitted Plans (Doc Id: 112188)
  - Photos provided by the applicant (Doc Id: 112187)
- (Marked 9.3.1)**

### VOTING REQUIREMENT

Simple majority

**OFFICER RECOMMENDATION****That Council:**

- 1. refuse the application for retrospective planning approval for development on Lot 414 Jurien Bay Vista, Jurien Bay Heights for the following reasons:**
  - a. approval of the application would set an undesirable precedent for future applications for such development type within the 'Special Use – Rural Development' zone.**
  - b. Council considers that this type of development will not satisfactorily blend in with the rural development landscape and will have undue adverse impact on the visual amenity of the adjoining sites and surrounding locality in contravention of Clause 2.1 of the Development Criteria for the Estate as listed under Schedule 9 of the Shire of Dandaragan Local Planning Scheme No.7.**
  - c. the proposed development does not comply with orderly and proper planning for the locality.**
- 2. pursuant to Section 214 of the Planning and Development Act 2005 (the Act), authorise Shire staff serve a written direction to the landowner of Lot 414 Jurien Bay Vista, Jurien Bay Heights to remove the unauthorised development and restore the land to its condition immediately before the unauthorised development started within a period of 60 days to the satisfaction of the Shire's Chief Executive Officer. The landowner is to be advised there is a right of review to the State Administrative Tribunal within 40 days after service of the notice under Section 255 of the Act.**



### 9.3.2 RETROSPECTIVE PLANNING APPROVAL – UNAUTHORISED DEVELOPMENT – LOT 103 HOMESTEAD LOOP, MARINE FIELDS

Location:	Lot 103 Homestead Loop, Marine Fields
Applicant:	AM Waters
Folder Path:	Development Services Apps / Development Applications / 2018 / 34
Disclosure of Interest:	Nil
Date:	31 May 2018
Author:	Rory Mackay, Planning Officer
Senior Officer:	David Chidlow, Executive Manager Development Services

#### PROPOSAL

The proponent is seeking retrospective planning approval for the following unauthorised buildings on Lot 103 Homestead Loop, Marine Fields:

- 2 x Sea Containers 8m x 2.5m
- 1 x Patio 12m x 4m
- 1 x Ablution Block 4m x 3m

Location Plan



#### BACKGROUND

The Manager of Building Services (MBS) investigated a complaint about illegal buildings on the subject property. It was found no development or building consent was given for the development which had occurred on the land. The MBS under guidance of the Executive Manager of Development Services (EMDS) took action on this breach by notifying the landowner to the nature of the breach and the relevant Shire requirements to rectify noncompliance within an appropriate timeframe via letter. An aspect of the letter also asked the landowner to “show cause” as to why Council should not exercise its discretion to implement further specified enforcement action as available under the relevant acts. This action was not unique to this given property as several other properties in Shire’s Rural Residential and Special Use – Rural

**AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018**

Development Local Planning Scheme No.7 (LPS7) zones have been notified of breaching planning and building statute.

Council does not have a policy which effectively deals with this compliance matter. However, it is noted the Shire may become aware of an alleged noncompliance or a breach by a landowner or occupier within the Shire through either a site inspection, aerial photography or a complaint. All complaints are investigated, whether received in writing, by telephone or in person.

The Shire acknowledges it does not have unlimited resources and somewhat relies upon the public to make complaints and to provide evidence to assist in taking enforcement action. Not all requests for Shire action will warrant detailed investigation or the taking of action, and Shire resources may inhibit the taking of action in all cases where, otherwise, action would be justified. Nonetheless, the Shire does and will continue to record all complaints of unauthorised development and activity even though some of these may not be dealt with for a considerable time.

The exercise of the Shire's authority to enforce planning law is discretionary. Meaning, the Shire does not have a legal obligation to take action to enforce planning law that is enforceable at the insistence of a third party. Council may choose not to enforce the law at all in particular circumstances. However, the Shire may commit a legal error if it does not turn its mind to the exercise of its statutory power in the event of a breach of planning law. Under common law, failure to take planning law enforcement action may constitute negligence in the event that a duty of care can be established to exist and to have been breached.

Section 164 of the Planning and Development Act 2005 (the Act) affords a local authority the ability to retrospectively approve development which was carried out prior to planning approval being granted for the subject development. More specifically, Section 164(3) states retrospective approval does not affect the operation of Part 13 of the Act, which comprises the relevant enforcement and penalty provisions. This indicates that retrospective approval will not preclude prosecution for prior unlawful development.

The Shire has deferred commencement of enforcement action in this case as the application for retrospective approval (the subject of this item) has been lodged for assessment.

**COMMENT**

There are three legal tests to be considered for retrospective planning approval, as follows.



**Likelihood of Consent**

*Is the unauthorised development a form of development or activity that, 'but for' the failure to make application for a development consent or an activity approval, would likely have been granted such consent or approval subject to appropriate conditions.*

An unauthorised development is understood to 'pass' this test in the event that it is likely that the development or activity would have been granted consent, had application been made for such consent prior to the undertaking of the development.

Shire planning staff consider if an application was made prior to development that formal consent would have been granted subject to conditions, such as the sea containers are to be secured to the satisfaction of the MBS and an effluent disposal system must be approved by the Shire's Principal Environmental Health Officer (PEHO). The reduced rear setback from 50m to 44m would be approved by way of discretion. Further backing is given by the development meeting the following relevant Clauses of LPS7:

*4.12.2 Development in a Rural Residential Zone shall comply with the following general requirements:*

*(v) Native vegetation shall be retained unless its removal is authorised by Local government except in the cases of vegetation which is proposed to be removed to make way for approved construction, fences, access ways, fire management and for trees that are dead diseased or dangerous.*

*(vi) In the Rural Residential zone, a demonstrated and sustainable water supply is to be provided in accordance with Western Australian Planning Commission policy.*

*(vii) The siting and erection of any building, outbuilding or fence shall not be approved by Local government unless or until it is satisfied that the design construction, materials and position will be in harmony with the rural character of the land within the zone and locality generally.*

*(xi) All residences, outbuildings, carports and the like shall be constructed of materials sympathetic to the character of the locality, as may be approved or required by Local government. The scale of outbuildings shall be of a domestic nature such that the Rural Residential amenity of the locality is not prejudiced. Large industrial type buildings will not be permitted.*

**Environmental Impact**

*"Is the unauthorised development likely to cause a significant environmental impact, including impacts on the natural and the built environment? The application of this test requires a determination*

*of the fact of any environmental impact and an assessment of the degree of that impact.”*

An unauthorised development is understood to ‘pass’ this test in the event that the impacts of the development or activity are negligible or insignificant and action to control the impacts is not required.

As eluded to in the above LPS7 Clauses, the development satisfies the visual amenity requirements for ‘Marine Fields’ in using consistent building materials and colours for all structures which are sympathetic to the rural character of the estate. Additionally, the development has retained and used native vegetation on the property in aid of the placement of all structures.

Conversely, there is an environmental health concern in the operation of an unauthorised effluent disposal system in a sensitive soil region of the Shire. Nonetheless, it is concluded the development does pass this legal test as the environmental impacts can be managed via conditions of planning approval and other required approvals (building & health) of the development.

### **Public Safety**

*“Is the unauthorised development likely to lead to injury and/or to create a public liability? The application of this test requires a determination of the fact of any health and safety risk and an assessment of the degree of that risk.”*

An unauthorised development is understood to ‘pass’ this test in the event that no significant health and/or safety risk is created by the development.

The applicant has detailed the use of the development is to facilitate monthly camping on the property and provide storage of owned items. This is compliant with Regulation 11 (1) (a) of the Caravan Parks and Camping Grounds Regulations 1997 as follows:

*A person may camp for up to 3 nights in any period of 28 consecutive days on land which he or she owns or has a legal right to occupy.*

There is a health and safety issue with the plumbing of the ablution block not completed by a licensed plumber. The current system would require removal and replacement with a Shire’s PEHO approved effluent disposal system under the Health Act 1911. Furthermore, the development is noncompliant with Clause 4.12.2 (viii) of LPS7 in this aspect as detailed above.

It is noted the property is located with a Bushfire Prone Area, however as all structures are non-habitable and the development is below the \$20,000 cost threshold, a Bushfire Attach Level (BAL) Assessment is not required.

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Supplementary to the above a sustainable and proven water supply by way of bore feed water tank is supplied on the property although this is not required in conjunction with the existing non-habitable development.

With all this in mind, it is considered the development passes this test, resulting in the passing of all three tests. Thus the retrospective application is recommended for approval.

### **Alternative Recommendation:**

That Council:

1. refuse the application for retrospective planning approval for development on Lot 103 Homestead Loop, Marine Fields for the following reasons:
  - A. approval of the application would set an undesirable precedent for future applications for such development type within the 'Rural Residential' zone.
  - B. Council considers that this type of development will not satisfactorily blend in with the rural development landscape and will have undue adverse impact on the visual amenity of the adjoining sites and surrounding locality in contravention of the Shire of Dandaragan Local Planning Scheme No.7.
  - C. the proposed development does not comply with orderly and proper planning for the locality.
2. pursuant to Section 214 of the Planning and Development Act 2005 (the Act), authorise Shire staff serve a written direction to the landowner of Lot 103 Homestead Loop, Marine Fields to remove the unauthorised development and restore the land to its condition immediately before the unauthorised development started within a period of 60 days to the satisfaction of the Shire's Chief Executive Officer. The landowner is to be advised there is a right of review to the State Administrative Tribunal within 40 days after service of the notice under Section 255 of the Act.

### CONSULTATION

Not required in this instance

### STATUTORY ENVIRONMENT

- Planning and Development Act 2005
- Local Planning Scheme No.7
- Building Code of Australia
- Caravan Parks and Camping Grounds Regulations 1997
- Health Act 1911

### POLICY IMPLICATIONS

- Local Planning Policy 8.4: Outbuildings and Temporary Accommodation Rural Residential and Special Use – Rural Development Zones
- Local Planning Policy 8.8. Shipping Containers

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### FINANCIAL IMPLICATIONS

The applicant has paid the standard planning application fee, plus, by way of penalty, double the prescribed fee, totally a fee of \$441.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan:

<i>Goal 1: Great Place for Residential and Business Development</i>	
Objectives	How the Shire will contribute
1.2 Ensure effective and efficient development and building services	a) Process development applications and undertake building regulation functions and services
<i>Goal 2: Healthy, Safe and Active Community</i>	
2.5 Provide environmental health and safety services	a) Provide inspection and enforcement services to protect environmental and public health and control nuisances
<i>Goal 5: Proactive and Leading Local Government</i>	
5.2 High performing administration	c) Compliance in all legislative requirements and functions
5.6 Implement sound corporate governance and risk management	h) maintain and implement up to date policies and procedures (including delegations)

### ATTACHMENTS

Circulated with the agenda are the following items relevant to this report:

- Submitted Plans (Doc Id: 112285)
- Site Photos (Doc Id: 112286)

**(Marked 9.3.2)**

### VOTING REQUIREMENT

Simple majority

### **OFFICER RECOMMENDATION**

**That Council grant retrospective planning approval to the development on Lot 103 Homestead Loop, Marine Fields subject to the following conditions:**

- 1. all development shall be in accordance with application and plans dated 28 June 2018 unless required to be amended hereunder.**
- 2. an application to construct and install an apparatus for the treatment of sewage must be submitted and approved by the Shire's Principal Environmental Health Officer. Said application is to meet the following on site effluent disposal requirements of Marine Fields:**
  - a. adequate separation achieved between the base of the leach drains and the highest recorded groundwater level;**
  - b. adequate horizontal separations achieved between the disposal system and existing drains, water courses or water bodies;**

- c. the area around each effluent disposal system shall be planted with indigenous trees and shrubs by the land owner and be maintained to the satisfaction of the local authority; and
  - d. prevention of direct movement of wastewater and nutrients from the locality of each disposal area.
3. all native vegetation should be retained unless their removal is authorised by Council except in cases of vegetation which are proposed to be removed to make way for approved construction, fences, access ways, fire management and for trees that are dead, diseased or dangerous.
  4. the building materials of all structures are to be painted a colour consistent with the surrounding vegetation and/or predominant colours of the individual site.
  5. the existing sea containers are to be secured to the satisfaction of the Shire's Manager of Building Services.
  6. this is planning approval only and not a building permit. A building permit must be obtained for this development.

**Advice Note:**

1. This development is subject to conditions in Local Planning Scheme No.7 Clause 4.12 Development in Rural Residential Zone as well as Schedule 7.2 – additional specific provisions for Melbourne Locations pt 3122, 757, 2520, 716, 618, 744, pt 2528 and Pt Crown Reserves 19206, 1222 and 36053.

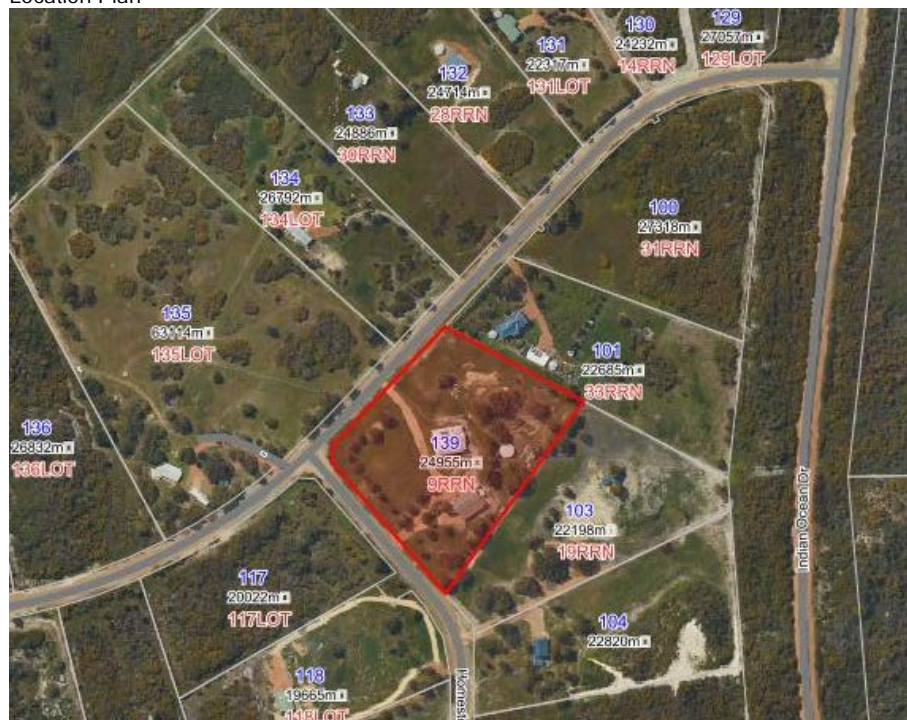
### 9.3.3 RETROSPECTIVE PLANNING APPROVAL – UNAUTHORISED DEVELOPMENT – LOT 139 HOMESTEAD LOOP, MARINE FIELDS

Location:	Lot 139 Homestead Loop, Marine Fields
Applicant:	S P & A M Devitt
Folder Path:	Development Services Apps / Development Applications / 2018 / 36
Disclosure of Interest:	Nil
Date:	1 June 2018
Author:	Rory Mackay, Planning Officer
Senior Officer:	David Chidlow, Executive Manager Development Services

#### PROPOSAL

The proponent is seeking retrospective planning approval for an unauthorised lean-to (31m x 8m) attached to the existing shed on Lot 139 Homestead Loop, Marine Fields.

Location Plan



#### BACKGROUND

The Manager of Building Services (MBS) investigated a complaint about illegal buildings on the subject property. It was found no development or building consent was given for the development which had occurred on the land. The MBS under guidance of the Executive Manager of Development Services (EMDS) took action on this breach by notifying the landowner to the nature of the breach and the relevant Shire requirements to rectify noncompliance within an appropriate timeframe via letter. An aspect of the letter also asked the landowner to “show cause” as to why Council should not exercise its discretion to implement further specified enforcement action as available under the relevant acts. This action was not unique to this given property as several other



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properties in Shire's Rural Residential and Special Use – Rural Development Local Planning Scheme No.7 (LPS7) zones have been notified of breaching planning and building statute.

Council does not have a policy which effectively deals with this compliance matter. However, it is noted the Shire may become aware of an alleged noncompliance or a breach by a landowner or occupier within the Shire through either a site inspection, aerial photography or a complaint. All complaints are investigated, whether received in writing, by telephone or in person.

The Shire acknowledges it does not have unlimited resources and somewhat relies upon the public to make complaints and to provide evidence to assist in taking enforcement action. Not all requests for Shire action will warrant detailed investigation or the taking of action, and Shire resources may inhibit the taking of action in all cases where, otherwise, action would be justified. Nonetheless, the Shire does and will continue to record all complaints of unauthorised development and activity even though some of these may not be dealt with for a considerable time.

The exercise of the Shire's authority to enforce planning law is discretionary. Meaning, the Shire does not have a legal obligation to take action to enforce planning law that is enforceable at the insistence of a third party. Council may choose not to enforce the law at all in particular circumstances. However, the Shire may commit a legal error if it does not turn its mind to the exercise of its statutory power in the event of a breach of planning law. Under common law, failure to take planning law enforcement action may constitute negligence in the event that a duty of care can be established to exist and to have been breached.

Section 164 of the Planning and Development Act 2005 (the Act) affords a local authority the ability to retrospectively approve development which was carried out prior to planning approval being granted for the subject development. More specifically, Section 164(3) states retrospective approval does not affect the operation of Part 13 of the Act, which comprises the relevant enforcement and penalty provisions. This indicates that retrospective approval will not preclude prosecution for prior unlawful development.

The Shire has deferred commencement of enforcement action in this case as the application for retrospective approval (the subject of this item) has been lodged for assessment.

**COMMENT**

There are three legal tests to be considered for retrospective planning approval, as follows.

### Likelihood of Consent

*Is the unauthorised development a form of development or activity that, 'but for' the failure to make application for a development consent or an activity approval, would likely have been granted such consent or approval subject to appropriate conditions.*

An unauthorised development is understood to 'pass' this test in the event that it is likely that the development or activity would have been granted consent, had application been made for such consent prior to the undertaking of the development.

Shire planning staff consider if an application was made prior to development that formal consent would not have been granted for the development. The reasons for this are the development is noncompliant with Local Planning Policy 8.4 (LPP8.4), in regards to the maximum aggregate outbuilding floor area of 300m<sup>2</sup>. The existing legal outbuilding is an aggregate of 250m<sup>2</sup> (176m<sup>2</sup> enclosed shed area and 73m<sup>2</sup> open lean-tos). The unauthorised lean-to attached to the existing outbuilding is a further 250m<sup>2</sup> in floor area (as shown in the measured aerial photo below), resulting in an aggregate outbuilding floor area of 500m<sup>2</sup>. This is a 66% increase to the maximum policy standards. As this is a major variation to the policy standards and would set an undesirable precedent the development is said to fail this legal test.



### Environmental Impact

*"Is the unauthorised development likely to cause a significant environmental impact, including impacts on the natural and the built environment? The application of this test requires a determination of the fact of any environmental impact and an assessment of the degree of that impact."*



An unauthorised development is understood to 'pass' this test in the event that the impacts of the development or activity are negligible or insignificant and action to control the impacts is not required.

As mention previously, the granting of approval for this development would set an undesirable precedent for similar applications in the future for the locality. It is noted the applicant intends to screen the lean-to with vegetation further to the appearance, setback and roof height requirements of LPP8.4 being satisfied. Nonetheless, the major increase in aggregate floor area is considered unreasonable. The bulk and scale of the complete structure is not keeping with the rural character of Marine Fields and therefore the development is determined to fail this legal test.

### **Public Safety**

*"Is the unauthorised development likely to lead to injury and/or to create a public liability? The application of this test requires a determination of the fact of any health and safety risk and an assessment of the degree of that risk."*

An unauthorised development is understood to 'pass' this test in the event that no significant health and/or safety risk is created by the development.

There is no apparent health or safety concerns of the development. It is noted the property is located with a Bushfire Prone Area, however as the structure is non-habitable and is below the \$20,000 cost threshold, a Bushfire Attach Level (BAL) Assessment is not required. Therefore the development passes this test.

In summary, the development passes two out of three tests, thus the development is recommended for refusal.

In giving refusal for the retrospective application it is appropriate to undertake enforcement measures to remedy the subject land of the illegal development. This can be facilitated under Section 214 of the Act, whereby, the Shire can issue a written direction for the illegal development to be removed and for the land to be restored to its condition immediately before development started (to the Shire's satisfaction) within a period of 60 days. It is recommended Council authorise this written direction be served on the applicant.

Pursuant to Section 215 of the Act, if the direction is not carried out within the specified timeframe, the Shire can execute the required work of the direction with all costs of such works borne by the directed person.

Under Section 255 of the Act there is right of review to the State Administrative Tribunal to the person served the direction under Section 214. If the State Administrative Tribunal confirms or varies

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the direction, it may, by written notice served on the person to whom the direction was given, direct the owner to comply with the direction as so confirmed or varied, within a period of not less than 40 days after service of the notice, as is specified in the notice.

### **Alternative Recommendation:**

That Council grant retrospective planning approval to the development on Lot 139 Homestead Loop, Marine Fields, subject to the following conditions:

1. all development shall be in accordance with application and plans dated 28 June 2018 unless required to be amended hereunder.
2. the building materials of the lean-to are to be painted a colour consistent with the surrounding vegetation and/or predominant colours of the individual site.
3. the lean-to is to remain as open on all sides excluding the wall of the 'shed' attached to. This condition may be varied by any future approvals.
4. the outbuilding is not to be used for human habitation.
5. the lean-to is been screened by vegetation to the satisfaction of the Executive Manager of Development Services.
6. this is planning approval only and not a building permit. A building permit must be obtained for this development.

### CONSULTATION

The applicant has consulted the potentially affected neighbour who has stated their support for the development. However, Councillors are to note the neighbouring landowner has also undertaken unauthorised development which is the subject of item 9.3.2.

### STATUTORY ENVIRONMENT

- Planning and Development Act 2005
- Local Planning Scheme No.7
- Building Code of Australia

### POLICY IMPLICATIONS

- Local Planning Policy 8.4: Outbuildings and Temporary Accommodation Rural Residential and Special Use – Rural Development Zones:

Clause 13: Council shall not approve outbuildings with a floor area greater than 300m<sup>2</sup> in aggregate.

### FINANCIAL IMPLICATIONS

The applicant has paid the standard planning application fee, plus, by way of penalty, double the prescribed fee, totally a fee of \$441.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

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<i>Goal 1: Great Place for Residential and Business Development</i>	
Objectives	How the Shire will contribute
1.2 Ensure effective and efficient development and building services	a) Process development applications and undertake building regulation functions and services
<i>Goal 2: Healthy, Safe and Active Community</i>	
2.5 Provide environmental health and safety services	a) Provide inspection and enforcement services to protect environmental and public health and control nuisances
<i>Goal 5: Proactive and Leading Local Government</i>	
5.2 High performing administration	c) Compliance in all legislative requirements and functions
5.6 Implement sound corporate governance and risk management	h) maintain and implement up to date policies and procedures (including delegations)

### ATTACHMENTS

Circulated with the agenda are the following items relevant to this report:

- Existing Authorised Outbuilding Plan (Doc Id: 112169)
- Submitted Plans (Doc Id: 112317)
- Additional Information (Doc Id: 112582)

**(Marked 9.3.3)**

### VOTING REQUIREMENT

Simple majority

### **OFFICER RECOMMENDATION**

**That Council:**

- 1. refuse the application for retrospective planning approval for development on Lot 139 Homestead Loop, Marine Fields for the following reasons:**
  - a. approval of the application would set an undesirable precedent for future applications for outbuildings within the 'Rural Residential' zone.**
  - b. Council considers that this type of development is not keeping with the required domestic nature of 'Marine Fields' and will not satisfactorily blend in with the rural development landscape in contravention of Clause 4.12.2 (xi) of the Shire of Dandaragan Local Planning Scheme No.7.**
  - c. the proposed development does not comply with orderly and proper planning for the locality.**
- 2. pursuant to Section 214 of the Planning and Development Act 2005 (the Act), authorise Shire staff serve a written direction to the landowner of Lot 139 Homestead Loop, Marine Fields to remove the unauthorised development and restore the land to its condition immediately before the unauthorised development started within a period of 60 days**

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**to the satisfaction of the Shire's Chief Executive Officer. The landowner is to be advised there is a right of review to the State Administrative Tribunal within 40 days after service of the notice under Section 255 of the Act.**

### 9.3.4 INITIATION AND CONSENT TO ADVERTISE – SCHEME AMENDMENT NO.36 – PUBLIC DRINKING WATER SOURCE AREAS

Location:	Various locations
Applicant:	Shire of Dandaragan
Folder Path:	Business Classification Scheme / Land Use and Planning / Zoning / Rezoning Applications / 36
Disclosure of Interest:	None
Date:	22 May 2018
Author:	Rory Mackay, Planning Officer
Senior Officer:	David Chidlow, Executive Manager Development Services

#### PROPOSAL

This submission seeks to initiate a Scheme Amendment to delete current Local Planning Scheme No.7 (LPS7) Special Control Area No.1: Bassendean Precinct (SPA1) and introduce a new SPA1: Public Drinking Water Source Areas (PDWSA).

Amendment 36 introduces appropriate management controls relating to land use and development within PDWSA of the Shire to prevent adverse environmental impacts on and in close proximity to such areas.

#### BACKGROUND

Local Planning Strategy – Rural Land Use and Rural Settlement 2012:

#### *8.3.2 Bassendean Precinct Special Control Area*

*The Bassendean Precinct Special Control Area (BPSCA) was introduced to the Scheme as the land was considered in some areas to have very low capability for agriculture due to the low nutrient holding ability of the sand and potential for winter water logging.*

*The Shire had sought to remove this SCA because it was considered unnecessary in that any proposal for the intensification of land use such as irrigated horticulture or rural living development anywhere in the municipality is subject to environmental assessment. The landowners within the BPSCA believed their property values are adversely affected by inclusion in this area. A number of other factors supporting removal of the BPSCA were also presented.*

*Council were unsuccessful in seeking to amend the Scheme to remove the BPSCA in 2007 however in its refusal the WAPC advised that;*

- i. The future deletion of the Bassendean Precinct Special Control Area from the Scheme could be considered in conjunction with the introduction of a special control area for the Jurien water*

*reserve (in accordance with State Planning Policy 2.7), and the additional provisions in Part 5 of the Scheme to guide development in areas with vulnerable soils.*

*As the LPS proposes the inclusion of public drinking water source areas as Special Control Areas in the LPS and the Scheme together with other land resource management measures the DoW have no objection to the removal of the BPSCA subject to:*

- *adequate planning mechanisms being inserted in the Scheme to ensure that land use development does not degrade the environmental values of the area;*
- *considering requiring all 'A' and 'D' uses in the Rural zone to be assessed against the factors listed in Appendix 2 (in the LPS); and*
- *that the changes be made by an Amendment prepared in consultation with the DoW.*

*The Scheme should be amended to remove the Bassendean Precinct Special Control Area subject to the inclusion in the LPS of adequate alternative mechanisms to ensure that land use and development does not degrade environmental values. The Shire will consult DoW regarding appropriate provisions to be included in the LPS and the composition of the Amendment.*

*Draft Local Planning Strategy 2016:*

#### *5.7.4.5 Water protection and management and the Local Planning Scheme*

*The protection and management of water resources including groundwater abstraction should be reinforced in the Scheme.*

*The following modifications to the Scheme should be initiated (see Annexure 1):*

- *introduce Special Control Areas to protect PDWSAs and to show these areas on the Scheme Maps;*
- *introduce a new clause to the Scheme to reinforce existing provisions '5.22 Protection of Water Sources' and '5.23 Water Management and Protection' with a new clause to require the landowner to show the acceptability of an application for intensive agriculture; and*
- *provide guidelines for the assessment of an application in a Priority area of a PDWSA by Council.*

*In addition Council intends to remove the Bassendean Precinct Special Control Area from the Scheme and to have all rural land to be treated in the same way. This acknowledges that the whole shire is within Proclaimed Groundwater or Surface Water areas*

*and any application in the Rural zone would be dealt with appropriately.*

*With the inclusion of Special Control Areas in the Scheme to protect PDWSAs, activities in areas with Bassendean Sands and other soil types would still be managed to specifically protect ground water resources.*

#### COMMENT

As recommend by the current adopted and draft local planning strategies for the Shire, the proposed amendment provides greater protection for Public Drinking Water Source Areas of the Shire as required by SPP2.7 by ensuring sufficient planning controls are in place to prevent adverse impacts on vulnerable groundwater and surface water resources. This acknowledges that any planning application within or in close proximity to Proclaimed Groundwater or Surface Water areas would be dealt with appropriately.

The Scheme Amendment also provides an opportunity to update elements of LPS 7 to be more consistent with the *Planning and Development (Local Planning Schemes) Regulations 2015* (‘the Regulations’). However, the Amendment is not intended to be the mechanism for a comprehensive review of LPS 7 as required under regulation 65 of the Regulations, which shall be undertaken at a later stage.

#### CONSULTATION

The recommendation of this report is to commence the advertising process for the proposed Scheme Amendment.

#### STATUTORY ENVIRONMENT

Section 75 of the Planning and Development Act 2005 affords a local government the ability to amend its local planning scheme, which is undertaken in accordance with the provisions of the *Planning and Development Act 2005* and *Planning and Development (Local Planning Schemes) Regulations 2015*.

#### POLICY IMPLICATIONS

There are no local policy implications relevant to this item.

#### FINANCIAL IMPLICATIONS

The Shire will be required to pay the costs of advertising the Scheme Amendment.

#### STRATEGIC IMPLICATIONS

As per relevant sections of the Shire’s local planning strategies listed previously in this report.

2016-2026 Strategic Community Plan

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<b><i>Goal 1: Great Place for Residential and Business Development</i></b>	
<b>Objectives</b>	<b>How the Shire will contribute</b>
1.1 Ensure planning and land availability provides opportunity for sustainable growth and lifestyle options/choices	a) Strategic land use planning across the Shire, with a focus on coastal settlement and town centre strategy
<b><i>Goal 2: Healthy, Safe and Active Community</i></b>	
2.5 Provide environmental health and safety services	a) Provide inspection and enforcement services to protect environmental and public health and control nuisances
<b><i>Goal 5: Healthy Natural and Built Environment</i></b>	
4.5 Clean, safe key water aquifers	a) Lobby for key drinking water protection areas

### ATTACHMENTS

Circulated with the agenda is the following item relevant to this report:

- Scheme Amendment No. 36 (Doc Id: 112623)

***Marked (9.3.4)***

### VOTING REQUIREMENT

Simple majority

### **OFFICER RECOMMENDATION**

That Council resolve, pursuant to section 75 of the Planning and Development Act 2005, amend the above Local Planning Scheme by:

1. deleting Clause 4.20 Protection of Water Sources.
2. deleting Clause 5.1.1 (i) Special Control Area No.1 – Bassendean Precinct and inserting Clause 5.1.1 (i) Special Control Area No.1 – Public Drinking Water Source Areas.
3. deleting Clause 5.2 Bassendean Precinct Special Control Area and inserting Clause 5.2 Public Drinking Water Source Special Control Areas as follows:  
*“Applications for planning approval for a use or development involving the following within the Public Drinking Water Source Areas shall be referred to the Department of Water Environmental Regulation for comment:*
  - a) the potential increased nutrient loading, particularly having a point source for nutrients, such as a poultry farm or piggery;*
  - b) intensification of the application of fertilisers and pesticides;*
  - c) storage of chemicals, fuels and other potentially polluting substances;*
  - d) a substantial increase in runoff;*
  - e) any other impact which the local government considers to have an impact on the quality of public drinking water; and*



- f) *all development proposals within the water source area that are inconsistent with the DoWER's Water Quality Protection Notes and Guidelines, Land Use Capability Tables or recommendations in current Drinking Water Source Protection Plans.*

*In determining any application for planning approval within the Public Drinking Water Source Areas, the Council shall*

- a. have regard to the DoWER's Water Quality Protection Notes and Guidelines;*
- b. have regard to State Planning Policy No 2.7 (Public Drinking Water Source Policy);*
- c. have regard to any advice from the DoWER; and*
- d. endeavour to ensure that the proposed use or development will not have a detrimental impact on water resources.*

*Notwithstanding that a use or development may be classified as 'P', 'A' or 'D' on the Zoning Table, where the DoWER advises that a use or development should be refused on the basis of potential impact on surface and/or groundwater resources, the Council shall refuse the use or development."*

- 4. amending the Scheme Maps accordingly.
- 5. resolves, pursuant to the Regulation 35(2) of the Planning and Development (Local Planning Schemes) Regulations 2015 (the Regulations), that Amendment 36 is standard under the provisions of the Planning and Development (Local Planning Schemes) Regulations 2015 for the following reason:  
*The Amendment to the Scheme is consistent with a local planning strategy for the scheme that has been endorsed by the Western Australian Planning Commission and does not result in any significant environmental, social, economic or governance impacts on land in the scheme area.*
- 6. authorise Council officers to prepare the scheme amendment documentation.
- 7. authorise the affixing of the common seal to and endorse the signing of the amendment documentation.
- 8. pursuant to Section 81 of the Planning and Development Act 2005, refers Amendment 36 to the Environmental Protection Authority.
- 9. pursuant to Regulation 53 of the Regulations, provides the formal documentation and two copies of Amendment 36 to the Western Australian Planning Commission.
- 10. proceed to advertise the amendment to the local planning scheme without modification.

### 9.3.5 SHIRE OF DANDARAGAN COASTAL HAZARD RISK MANAGEMENT AND ADAPTATION PLAN – FINAL ADOPTION

Location:	Cervantes and Jurien Bay Foreshore and associated areas
Applicant:	Shire of Dandaragan
Folder Path:	Business Classification Scheme/ Grants and Subsidies / Programs / Coastal & Marine Management
Disclosure of Interest:	None
Date:	12 June 2018
Author:	Rory Mackay, Planning Officer
Senior Officer:	David Chidlow, Executive Manager Development Services

#### PROPOSAL

To consider final adoption of the Shire of Dandaragan's Coastal Hazard Risk Management and Adaptation Plan (CHRMAP).

#### BACKGROUND

State Planning Policy 2.6: State Coastal Planning Policy (SPP 2.6 or the Policy) requires local planning authorities to prepare for the impacts of coastal erosion and coastal inundation (temporary flooding of normally dry land). The Policy requires local government to show due regard for its policy when making or revising schemes and assessing new development. The Policy also requires that local governments, and other relevant planning authorities with coastal jurisdiction, prepare CHRMAPs in accordance with the Policy, policy guidelines and CHRMAP guidelines.

The Policy indicates a clear preference for relevant authorities to consider a strategy of Planned or Managed Retreat over coastal protection. Planned and Managed Retreat is aimed at accommodating the impacts of long term sea level rise (current projections of 0.9m by 2110), preserving public beach access and coastal ecosystems, and providing future decision makers with flexibility to change management approaches (unlike hard coastal protection).

In September 2017, the Western Australian Planning Commission released the draft Planned and Managed Retreat Guidelines (the Guidelines) to provide guidance as to how planned and managed retreat could be implemented under the existing State legislative and policy framework. The Guidelines recommend the use of voluntary or compulsory acquisition provisions provided for under the Land Administration Act 1997 (WA) and Planning and Development Act 2005 (WA). In reality, this is unlikely to occur in the Shire of Dandaragan unless the State or Commonwealth Governments provide the majority of funding to acquire property. There is no obligation on Government to adopt a strategy that may invoke a requirement to compensate land owners for loss due to erosion. It is important to note that while the managed retreat option is recommended in this CHRMAP, its future implementation

will need further investigation with respect to the implications for both Government and private stakeholders. It is also important to note that landowners who may be considering purchasing or developing land in designated hazard areas should not assume that any funds will be forthcoming to support future retreat.

Community engagement sessions were held in the Shires of Dandaragan and Gingin during May 2017. At these sessions, the community had the opportunity to view and discuss the maps, provide information about the uses and values of coastal areas to inform future planning, and see examples of how other communities are adapting to coastal change. These sessions were open to all members of the public and participants were asked to complete a feedback form at the session. Coastal engineers, marine scientists, planners and Shire representatives were on hand to discuss the information in person.

The information gathered at these sessions was used to inform the final draft of the plan.

On 22 March 2018, Council resolved to advertise the final draft CHRMAP for a period of 45 days. This consultation period has now expired and the CHRMAP is submitted to Council for final adoption.

#### COMMENT

Development of the Dandaragan CHRMAP has followed the requirements of SPP 2.6 and supporting guideline documents. Previous work had highlighted that the townsites of Jurien Bay and Cervantes as being at risk of coastal erosion and these areas form the focus for this CHRMAP.

The coastal zones of each township were divided into management units with similar asset types and exposure to coastal hazards. The risk and vulnerability assessment was applied to each management unit and results highlighted the most vulnerable management unit within each township, for which more detailed assessment of adaptation options were investigated.

A range of options for addressing the challenges of coastal erosion and its effects on the coastal zone over the next decade and century have been outlined. While it is natural that local communities would prefer to protect and preserve the current features of the coastal zone, the reality is that unless some new and innovative protection methods are developed, the costs of maintaining current features will likely become prohibitively expensive at some point in the future, given current sea level rise projections. The interim nature of protect options needs to be recognised across the community and adaption options developed

and solutions optimised for social, environmental and economic (affordability) drivers.

In the absence of funding to acquire properties and implement a strategy of planned or managed retreat and resources to fund long term protection strategies, the Shire's Administration has worked with Cardno and the Department of Planning, Lands and Heritage to design an alternative interim planning framework. This planning framework accords with advice received from the Department of Planning, Lands and Heritage in 2016 and can be readily adapted to facilitate a strategy of planned or managed retreat as per the Guidelines if funding becomes available for acquisition in the future.

This alternative framework utilises time limited planning consents to allow the continued development and use of land until coastal hazards materialise. This framework does not provide compensation to landholders if coastal hazards materialise. The complex planning issues around setting the intent and establishing controls such Special Control Areas to either restrict development within currently developed areas and/or rezone currently undeveloped land to avoid future development are discussed for each of the management units within each township. A number of options were identified that aim to protect developed areas under imminent threat of a storm erosion event.

The Shire of Dandaragan's CHRMAP is provided as an attachment to the report. Council is requested to formally adopt the CHRMAP, authorizing its implementation.

#### CONSULTATION

The Draft CHRMAP was advertised online on the Shire's website and Facebook page from the 27 April 2018 to 11 June 2018. One submission was received which questioned numerous grammar errors of the CHRMAP. These errors have since been removed from the final CHRMAP attached to this report.

#### STATUTORY ENVIRONMENT

- Local Planning Scheme No. 7
- Planning and Development Act 2005
- State Planning Policy 2.6: State Coastal Planning Policy

#### POLICY IMPLICATIONS

- There are no local policy implications relevant to this item.

#### FINANCIAL IMPLICATIONS

- The project has been funded by the Department of Planning, the Shires of Dandaragan and Gingin.

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## STRATEGIC IMPLICATIONS

### 2016 – 2026 Strategic Community Plan

<i>Goal 4: Healthy Natural and Built Environment</i>	
Objectives	How the Shire will contribute
4.1 Maintain integrity of coastal and marine environments	a) Manager pressure on coastal / beach environment from visitation / locals on Shire of Dandaragan Reserves

<i>Goal 1: Great Place for Residential and Business Development</i>	
Objectives	How the Shire will contribute
1.2 Ensure effective and efficient development and building services	a) Process development applications and undertake building regulation functions and services

<i>Goal 5: Proactive and Leading local Government</i>	
Objectives	How the Shire will contribute
5.6 Implement sound corporate governance and risk management	h) Maintain and implement up to date policies and procedures (including delegations)

## ATTACHMENTS.

Circulated with the agenda is the following item relevant to this report:

- Shire of Dandaragan's CHRMAP (Doc Id: 113868)  
**(Marked 9.3.5)**

## VOTING REQUIREMENT

Simple majority

## **OFFICER RECOMMENDATION**

**That Council formally adopt the Shire of Dandaragan's Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) (Doc Id: 113868), authorising its implementation.**

### 9.3.6 WESTERN AUSTRALIAN PLANNING COMMISSION – PROPOSED SUBDIVISION OF LOT 62 CAMBEWARRA DRIVE, ALTA MARE

Location:	Lot 62 Cambewarra Drive, Alta Mare
Applicant:	De Nada Surveys on behalf of M Phillipson
Folder Path:	Development Services Apps / Subdivision Applications / Requests / WAPC 156771
Disclosure of Interest:	Nil
Date:	12 June 2018
Author:	Rory Mackay, Planning Officer
Senior Officer:	David Chidlow, Executive Manager Development Services

#### PROPOSAL

To consider an application for the subdivision of Lot 62 Cambewarra Drive, Alta Mare and make recommendations to the Western Australian Planning Commission (WAPC).

#### Location Plan



#### BACKGROUND

The WAPC has referred to the Shire an application to subdivide existing Lot 62 Cambewarra Drive of 8.7ha into two lots comprising of 4.7ha (proposed Lot 162) and 4ha (proposed Lot 163) respectively. Proposed Lot 162 is to contain the existing dwelling and outbuilding of current Lot 62. Both proposed lots are aspiring to keep their equestrian status as provided to Lot 62 at the subdivision of the Alta Mare estate.

The following concerns raised during the March 2018 Council Forum were provided to the applicant.

1. shortage or demonstrated need for equestrian lots, so subdivision should not result in the loss of the equestrian status;

2. setting an undesirable precedent for other subdivisions to take place in the locality; and
3. supply of rural residential blocks outweighing market demand.

The applicant provided the following response to the above issues:

*I would like to propose a subdivision into only two blocks which would address the above concerns as follows:*

- 1. Paperwork attached shows my property has a dry sheep rating of 3-5 per hectare. This equates to 26-43 total for my 8.7075 hectare property. Agriculture WA shows that 10 DSE is the equivalent to one light horse. So by cutting into two I would potentially like to keep both new blocks horse rated with calculated bare minimum 1 light horse per block. This would open an opportunity for someone else to come in and buy the remaining block who is looking for somewhere fit for their horse, improve the land, and avoid it going to ruin and waste. I would therefore actually be increasing the equestrian blocks available!*
- 2. This would not set a precedent because as per the attachment, which shows the equestrian rates blocks in Alta Mare estate, there is only 1 other block currently as big as mine that would possibly be able to do this. The others are all much smaller and according to the attached Dry sheep equivalent this would result in them losing their equestrian ratings. Hence a reason for council to not support those applications. The one that is big enough I don't believe will be in threat of applying for subdivision as they are extremely well established and have two horses and don't seem to be interested in losing any of their land any time in the near future! So it's just me.*
- 3. While there is too much rural residential blocks this would also be equestrian rated and per councils previous comments there is a demonstrated shortage in this type of block. A sale of this would thus not be in competition with the regular oversupply of rural residential properties as it would hopefully attract a different type of buyer for which there is currently a shortage of supply of this type of block.*

The proponent's paperwork is attached accordingly to this report.

#### COMMENT

State Planning Policy 2.5 Rural Planning outlines further subdivision of existing rural living lots into smaller parcels is not supported, unless provided for in a local planning strategy and/or scheme. Clause 3 (c) of Schedule 7 of Local Planning Scheme No.7 (LPS7) provides scope to satisfy the above policy standard by stating the following:

*Notwithstanding the provisions of the Scheme and what may be shown on the Plan of Subdivision, the Western Australian*

*Planning Commission after consultation with the Local Authority may approve a minor variation to the subdivisional design.*

Although this clause was implemented to guide the initial estate subdivision, a two lot subdivision of one of the estate's largest lots can be viewed as a minor variation. The reasons for this are precautions to control development on the proposed Lots are already contained within the relevant provisions of LPS7 for the Rural Residential zoned estate. This includes clauses to manage service infrastructure, environmental impacts, and physical amenity impacts of development.

The Shire's Rural Planning Strategy 2012 outlines in Section 5.3.5 that: *the developer/landowner is required to provide the evidence to justify that there is sufficient demand and lack of supply to support the release of additional land for rural living purposes.*

Adding to this, Section 7.4.2.3 lists the following:

*The Council's policies in controlling development and influencing subdivision within the 'Rural-Residential' zone will therefore be to:*

- *consider approving low-key development where the applicant suitably demonstrates the development/use is consistent with the objectives for the zone;*
- *to support lots between 1.0ha - 4.0ha in area;*

It can be argued that the landowner in this instance has done so, in the context of the proposed 2 lot subdivision. These same planning considerations for the Rural Residential zones were taken forward into the Shire's Draft Local Planning Strategy which will supersede the Rural Planning Strategy in due course.

Supplementary to the above, as the subject land is within a Bushfire Prone Area the applicant has supplied a Bushfire Attack Level (BAL) Assessment of the existing dwelling as required under State Planning Policy 3.7 Planning in a Bushfire Prone Area. The result of this assessment (attached to this report) shows the dwelling achieves a manageable safe BAL of 12.5.

For further support of the subdivision the applicant has supplied a water test of the bore water that services the current Lot. Results of this test (attached to this report) shows the water from the bore is suitable for domestic, irrigation and stock usage.

In regards to the equestrian status, superseded Local Planning Scheme No.6 had a clause within the provisions for the Alta Mare estate (attached to this report) that equestrian lots shall have a minimum lot size of 5ha. However, proceeding and current LPS7 did not carry this clause forward. Further to this, given the estate denoted stocking rate of 3-5 Dry Sheep Equivalent (DSE) per hectare equates to a minimum of one light horse (12DSE) on the



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proposed 4ha Lots (excluding the area of built structures); this should not be factor in subdivision determination. Additionally, Clause 4.12 of LPS7 prevents landowners from keeping stock over this stocking rate and for commercial purposes within all Rural Residential zones of the Shire.

On the basis of the above, Council is recommended to provide its support of the subdivision with standard conditions to the WAPC.

### CONSULTATION

Council Forum March 2018

Western Australian Planning Commission

This item is presented at this meeting as comments to the WAPC on the proposed subdivision are due by 24 July 2018.

### STATUTORY ENVIRONMENT

- Planning and Development Act 2005
- Local Planning Scheme No 7
- State Planning Policy 2.5 - Rural Planning
- State Planning Policy 3.7 - Planning in a Bushfire Prone Area
- Stocking Rate Guidelines for Rural Smallholdings 2000

### POLICY IMPLICATIONS

There are no local policy implications relevant to this item.

### FINANCIAL IMPLICATIONS

There are no financial implications relevant to this item.

### STRATEGIC IMPLICATIONS

- Rural Planning Strategy 2012
- Draft Local Planning Strategy 2016
- 2016 – 2026 Strategic Community Plan

<i>Goal 1: Great Place for Residential and Business Development</i>	
Objectives	How the Shire will contribute
1.1 Ensure planning and land availability provides opportunity for sustainable growth and lifestyle options/choices	a) Strategic land use planning across the Shire, with a focus on coastal settlement and town centre strategy

### ATTACHMENTS

Circulated with the agenda are the following items relevant to this report:

- Subdivision Application (Doc Id: 113039)
- Alta Mare Stocking Rates (Doc Id: 107690)
- Alta Mare Equestrian Lots (Doc Id: 107692)

**(Marked 9.3.6)**

### VOTING REQUIREMENT

Simple majority

**OFFICER RECOMMENDATION**

That the Western Australian Planning Commission be advised that Council supports the application for subdivision of Lot 62 Cambewarra Drive, Alta Mare and recommends the following standard conditions:

1. the landowner/applicant installing suitable rural fencing of good standard in accordance with the plan dated (attached) to the satisfaction of the Western Australian Planning Commission. (Local Government)
2. a notification, pursuant to Section 165 of the Planning and Development Act 2005, is to be placed on the certificate(s) of title of the proposed lot(s) with a Bushfire Attack Level (BAL) rating of 12.5 or above, advising of the existence of a hazard or other factor. Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows:  
*'This land is within a bushfire prone area as designated by an Order made by the Fire and Emergency Services Commissioner and is/may be subject to a Bushfire Management Plan. Additional planning and building requirements may apply to development on this land'* (Western Australian Planning Commission)
3. suitable arrangements being made with the local government for the provision of vehicular crossover(s) to service the lot(s) shown on the approved plan of subdivision. (Local Government)
4. a notification, pursuant to Section 70A of the Transfer of Land Act 1893 is to be placed on the certificate(s) of title of the proposed lot(s). Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows:  
*'A mains potable water supply is not available to the lot(s).'* (Local Government)
5. a notification, pursuant to Section 70A of the Transfer of Land Act 1893 is to be placed on the certificate(s) of title of the proposed lot(s). Notice of this notification is to be included on the diagram or plan of survey (deposited plan). The notification is to state as follows:  
*'A reticulated sewerage service is not available to the lot(s).'* (Local Government)

### 9.3.7 LOCAL DEVELOPMENT PLAN LOT 62 ROBERTS STREET, JURIE BAY - FINAL ADOPTION

Location:	Lot 62 (#20) Corner Roberts and Heaton Streets
Applicant:	Burgess Design Group on behalf of Carl Aloï
Folder Path:	Business Classification Scheme / Land Use Planning / Planning / Planning Scheme / Amendment 7.21 – Lot 62 Roberts Street
Disclosure of Interest:	None
Date:	15 June 2018
Author:	Rory Mackay, Planning Officer
Senior Officer:	David Chidlow, Executive Manager of Development Services

#### PROPOSAL

For Council to consider the final adoption with modification of the Local Development Plan (LDP) for Lot 62 Roberts Street, Jurie Bay. It is a requirement of Local Planning Scheme No. 7 (LPS7) Scheme Amendment No.21 that a LDP be approved by the Local Government.

#### BACKGROUND

Scheme Amendment No.21 was approved by the Minister for Planning on 3 September 2015.

Council at the Forum held on 14 April 2016 discussed a draft LDP for Lot 62 Roberts Street.



One of the requirements of Scheme Amendment 21 (the Bluewave Development site at Lot 62 Roberts Street) is to prepare a LDP. Condition 2 of the Scheme Amendment is reproduced and discussed below. Comments reflect the discussions at the Council Forum in April 2016.

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**Condition 2:**

*Development of the land shall be in accordance with a Local Development Plan (LDP) adopted by the local government. The LDP should provide sufficient information to address the requirements of the Scheme and the following:*

Scheme Amendment Requirements	Provided	Comment
(i) the staging of development;	Section 3.6 of the plan indicates that stage one will consist of the development of the Motel and ancillary uses. Timing for all other development will be subject to development and market conditions.	Council is keen to see the Hotel site developed as a priority.
(ii) the staging of land tenure changes;	Covered by section 3.2.4 of the LDP	Satisfactory
(iii) provision of public, communal and private open spaces and landscaping on the site;	Covered by section 3.2.3 of the LDP	Satisfactory Note – Council will require the applicant for each DA to ensure that the whole site is landscaped and maintained, thereby avoiding the problem of partial development and unsightly earthworks, especially given the location.
(iv) provision of public access to areas of high amenity within or adjoining the site;	Covered by section 3.2.4 of the LDP	Satisfactory.
(v) unrestricted access to the Jurien Bay Foreshore area;	Covered by section 3.2.4 of the LDP	Satisfactory.
(vi) a connection between Heaton and Sandpiper Streets that incorporates a street of a minimum width of 11 metres along the north eastern boundary of the site;	Covered by section 3.2.4 of the LDP	Satisfactory.
(vii) the integration of the realigned Heaton Street road reserve into the overall site;	Covered by section 3.2.4 of the LDP	Satisfactory.
(viii) utilisation of the western portion of the site (divided by the realignment of Heaton Street) for hotel accommodation and associated ancillary uses;	Covered by section 3.1 of the LDP.	Satisfactory.
(ix) demonstration that the design and scale of any residential component within the site is subsidiary	Covered by section 3.1 of the LDP.	Satisfactory.

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Scheme Amendment Requirements	Provided	Comment
to the tourism component such that the tourism component remains dominant;		
(x) demonstration that the residential accommodation is to be concentrated in an area of the site and located to provide a transition between tourist development and surrounding residential uses;	Covered by section 3.1 of the LDP.	Satisfactory.
(xi) how areas of the site that provide the highest tourist values will be retained predominantly for tourist purposes and not permanent residential units;	Covered by section 3.1 of the LDP.	Satisfactory.
(xii) the integration of facilities associated with tourist accommodation such as recreation (e.g. pools, gymnasium, function space), entertainment facilities (e.g. food and beverage facilities) and management facilities into the tourist resort;	Covered by section 3.5 of the LDP.	Council may want to sign off on any management plans that address this item.
(xiii) the integration of the management and use of recreation and amenity facilities associated with permanent residential accommodation into the tourist resort;	Covered by section 3.5 of the LDP.	Council may want to sign off on any management plans that address this item.
(xiv) evidence that the proportion of permanent residential accommodation units relative to the total number of accommodation units on the site will be equal to or less than 45%;	Covered by section 3.1 of the LDP.	Satisfactory.
(xv) demonstration that the non-tourist developments (such as commercial, office, retail, reception centre, restaurant) will not detract from the main Jurien Bay commercial centre and will form an integrated part of the	Covered by section 3.1 of the LDP.	Satisfactory.

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Scheme Amendment Requirements	Provided	Comment
tourist resort;		
(xvi) evidence that physical processes setback are in accordance with State Planning Policy 2.6 Coastal Planning Policy;	Covered by sections 3.3 and 3.4 of the LDP.	Satisfactory. Supplements the Shire's CHRMAP.
(xvii) consideration of the visual impacts of proposed structures on views from the Jurien Bay Marine Park and from the land and associated height limitations;	Covered by section 3.2.1 of the LDP.	Satisfactory.
(xviii) traffic management for the site, including the provision of car parking, vehicle access and circulation, loading and unloading areas, storage yards and rubbish collection closures, pedestrian access and walkways within and from the site; and	Covered by section 3.2.5 of the LDP.	Satisfactory. Addressed in the plans.
(xix) any other relevant matter, which the local government considers to be warranted to ensure properly and orderly planning of the site.	Opportunity for Council to add any additional planning considerations.	

As the LDP responded to the clauses of Scheme Amendment 21 condition 2, Council resolved at their June 2016 meeting to advertise the LDP for public comment.

Council are requested to consider submissions made and modifications proposed on the LDP.

#### **COMMENT**

The LDP should be read in conjunction with Scheme Amendment 21 conditions as the LDP is only one component of the list of requirements to be fulfilled by the developer.

Essentially the LDP is the same plan approved by Council as a planning approval in 2012 prior to Scheme Amendment 21 which is now expired given the time taken for the adoption Scheme Amendment 21 and the preparation of this LDP.

Renewal of expired planning approval will require a development application to be lodged with the Mid-West Wheatbelt Joint

Development Assessment Panel (JDAP) as the estimated cost of the proposed development exceeds the \$10million dollar threshold. The Mid-West Wheatbelt JDAP in assessing the development application shall pay due regard to this LDP pursuant to Clause 56 of the Deemed Provisions of LPS7.

A new development application was lodged with the Mid-West / Wheatbelt JDAP in September last year. However this application was later withdrawn as part of the Shire's responsible authority assessment of the application which discovered that several of the gazetted conditions of Scheme Amendment 21 required modification to allow some outstanding issues to be resolved later in the planning process. As such, Scheme Amendments 33 & 34 were initiated and adopted to modify the wording of conditions 5, 6, 10 and 11 to allow the Decision Maker to consider approval of a new development application in due course.

The previous Scheme Amendment 21 conditions 5, 6, 10 and 11 required the following actions to be undertaken 'prior to approval of development':

1. remediation of the site in accordance with the Contaminated Sites Act 2003;
2. the preparation of the required Coastal Hazard Risk Management and Adaptation Plan;
3. the closure, realignment and land transfers of a portion of the Heaton Street road reserve; and
4. completion of the ceding of a minimum 11 metre wide street along the north east boundary of the land, providing a connection between Heaton and Sandpiper Streets.

Scheme Amendments 33 & 34 (approved by the Minister for Planning on 15 May 2018) enables these issues to be progressed and completed at a later stage, while a new development application is considered, assessed, and if satisfactory, conditionally approved.

Furthermore Scheme Amendment 34 corrected an additional administrative error of condition 8 of Scheme Amendment 21 which was ambiguous and inconsistent with Condition 2 (xiv) of the LDP. Whereby, condition 8 specified:

*"8. Any proposed 'Hotel' or 'Motel' on the land shall provide 100% short-stay accommodation. For all other accommodation units proposed on the land, the maximum proportion of permanent residential units relative to the total number of short stay units on the site shall be equal to or less than 45%"*

LDP Condition 2 (xiv) specifies:

*"2(xiv). Evidence that the proportion of permanent residential accommodation units relative to the total number of*

*accommodation units on the site will be equal to or less than 45%.”*

The Shire’s intent has always been to calculate the totals across the site, to include any hotel and motel units as part of the short-stay unit calculation. This is evident in the original planning approval that recommended the following wording of the condition: *“The proportion of permanent residential units relative to the total number of accommodation units on the site shall be equal to or less than 45%, unless otherwise approved by the local government.”*

As such, Scheme Amendment 34 corrected the administrative error by deleting the word “other” to ensure that the Hotel and Motel Units are included in the calculation of the permanent/short stay ratio.

Since advertising the proponent has made modifications to the LDP to reflect these basic amendments to LPS7, hence the prolonged period of time taken from advertising to this request for final adoption of the LDP.

A total of one submission was received, whereby the submitter was against the whole development in principal. Given the expired development approval and subsequent LPS7 amendments this is not a valid planning concern.

Under Part 6 of the Deemed Provisions of LPS7 Council has the opportunity to make changes to the LDP prior to approval and may also make later changes to the LDP once approved if required. Furthermore, approval of the LDP has effect for 10 years.

Council are requested to grant final approval of the LDP and advertise the approval on the Shire’s website.

#### CONSULTATION

The LDP was advertised from June 2016 by publishing a notice of the proposed plan in a newspaper circulating the Scheme area and on the Council website including a statement that submissions may be made to the local government by a specified day being a day not less than 14 days from the day on which the notice was published.

#### STATUTORY ENVIRONMENT

Clauses 46 to 59 of the Deemed Provisions of the Shire of Dandaragan Local Planning Scheme No.7.

#### POLICY IMPLICATIONS

As per Clause 56 (1) of the Deemed Provisions of the Shire of Dandaragan Local Planning Scheme No.7 a decision-maker for an



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application for development approval in an area that is covered by a LDP that has been approved by the local government must have due regard to, but is not bound by, the LDP when deciding the application.

### FINANCIAL IMPLICATIONS

The applicant will be required to pay a fee based on cost recovery for staff time and advertising expenses to be finalised once the process is completed.

### STRATEGIC IMPLICATIONS

There is a need for Lot 62 Roberts to be a highly intensive development for a tourism use, given its strategic location. The future development for Lot 62 is focused on tourism as a land use, conforming to the objectives of the Tourism Planning Strategy and Jurien Bay City Centre Strategy.

### 2016 – 2026 Strategic Community Plan

<i>Goal 1: Great Place for Residential and Business Development</i>	
Objectives	How the Shire will contribute
1.1 Ensure planning and land availability provides opportunity for sustainable growth and lifestyle options / choices	a) Strategic land use planning across the Shire, with focus on coastal settlement and town centre strategy b) Strategic projects with a focus on planning and land availability for health precinct and further residential development c) Activate Growth Plan
<i>Goal 2: Healthy, Safe and Active Community</i>	
2.4 Provide recreation and community facilities and activities	e) Plan, develop and manage key foreshore locations to focus activity in particular areas
<i>Goal 5: Proactive and Leading Local Government</i>	
5.3 Ensure community is well informed and facilitate community engagement in visioning, strategic planning and other significant decisions that affect the community	a) Consult and engage with the community on issues, projects and decisions that affect them

### ATTACHMENTS

Circulated with the agenda are the following items relevant to this report:

- Local Development Plan (Doc Id: 113409)
- Scheme Amendment No.21 Adoption. (Doc Id: 58849)
- Scheme Amendment No.33 text. (Doc Id: 107655)
- Scheme Amendment No.34 text. (Doc Id: 107663)

**(Marked 9.3.7)**

VOTING REQUIREMENT

Simple majority

**OFFICER RECOMMENDATION**

**That Council, pursuant to Clause 55 of the Deemed Provisions of Local Planning Scheme No.7 grant final approval to the Local Development Plan for Lot 62 (#20) Roberts Street, Jurien Bay and Part of Heaton Street Road Reserve as provided as an attachment to this report, and proceed to advertise the approval on the Shire's website.**

## 9.4 GOVERNANCE & ADMINISTRATION

### 9.4.1 TO RECEIVE REPORT ON THE ARCHAEOLOGICAL INVESTIGATIONS OF RADAR STATION 48, NORTH HEAD, JURIEN BAY FOR THE SHIRE OF DANDARAGAN

Location:	Shire of Dandaragan
Applicant:	Shire of Dandaragan
Folder Path:	Business Classification Scheme / Recreation and Cultural Services / Programs / Heritage Protection
Disclosure of Interest:	Nil
Date:	13 June 2018
Author:	Michelle Perkins, Community Development Officer
Senior Officer:	Scott Clayton, Executive Manager Corporate & Community Services

#### PROPOSAL

To receive the Report on the archaeological investigations of Radar Station 48, North Head, Jurien Bay for the Shire of Dandaragan (May 2018) by Heritage Detection Australia.

#### BACKGROUND

The North Head Radar Station site is located approximately 9km NNW of Jurien Bay town site. The remains of two World War 2 (WW2) radar station bunkers are situated on coastal Reserve 19206 administered by the Shire of Dandaragan. Reserve 19206 was created as part of the removal of squatters shacks with the long term intention of transferring to DPAW, but to date, this has not been progressed. In addition, WW2 buildings associated with the radar camp site, including foundations, drains, building pads, and an underground tank are within the boundaries of private land 8836. Shire staff received written approval from the Property Consultant acting on behalf of the private landholder (Private Land 8836) to include it in the archaeological investigation. The whole survey site (particularly the bunkers themselves) is a popular campsite with locals and visitors who use the access tracks running through sand dunes.

Following a brief report carried out in 2014 on the North Head Radar Station site by archaeologist Bob Sheppard from Heritage Detection Australia, a pedestrian survey and report received by Council in June 2016, Council approved Recommendation 2 of the 2016 report to undertake 'archaeological excavations...to investigate the functions of individual structures, the extent of the installation (both residential and administrative, as well as other elements such as communications, drainage, etc.) and to help determine the nature of what day-to-day life was like for personnel serving at Radar Station 48'.

A budget submission of \$20,000 was accepted for the 2017/2018 Shire of Dandaragan budget to undertake a seven day archaeological excavation with a follow-up report to be presented to Council with the findings.

### COMMENT

After consultation with both Shire Planning staff and the Department of Lands it is confirmed that the Shire is responsible for the management of the site. The bunkers are listed on the Shire's Municipal Heritage Inventory but are not heritage listed.

A significant amount of rubbish was cleared from the site by volunteers and the (previous) Shire Ranger in 2016 and remediation work was undertaken by Shire staff in 2017 to reinforce the dune underneath Igloo A to prevent the igloo from collapse. In addition, this year, an unknown graffiti artist painted over significant portions of both igloos which resulted in a lot of community discussion and debate. However, the major concern for the preservation of the site is dune movement caused by natural weather conditions and 4WD use by the community.

The local RSL group in Jurien Bay and Affiliate RSL Members from Cervantes have indicated to Shire staff of their desire to protect the site as it has important local WW2 heritage value.

The attached report to be received contains the outcome of the recent archaeological excavation. As noted in the report, this information asks the question 'what is there?' as opposed to the 'is there anything there?' of the previous report. The attached report will also be forwarded to the private landholders for consideration as per our agreement.

Following on from this report, Shire have recently received funding to prepare a Conservation Management Plan for the site, oral history recordings, creation of a DVD and promotional trailer about the site, and an A5 booklet to be written and printed for the Shire, as per recommendations from the 2016 report, however further information will be provided on this component at a later date.

### CONSULTATION

- Chief Executive Officer
- Executive Manager Corporate & Community Services
- Executive Manager Development Services
- Executive Manager Infrastructure
- Heritage Detection Australia
- Roberts Day Planners
- Nirrep Property
- Jurien Bay RSL Committee
- Shire Facebook page
- Shire Website
- Jurien Bay District High School

### STATUTORY ENVIRONMENT

There are no statutory implications relevant to this item

**AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018**

**POLICY IMPLICATIONS**

There are no policy implications relevant to this item

**FINANCIAL IMPLICATIONS**

There are no financial implications relevant to this item

**STRATEGIC IMPLICATIONS**

2016 – 2026 Strategic Community Plan

<i>Goal 4: Healthy Natural and Built Environment</i>	
Objectives	How the Shire will contribute
4.4 Maintain and conserve significant cultural and built heritage	a) Manage and protect significant heritage places with a focus on Wolba Wolba Cottage and Bunkers at North Head (subject to further assessment) and capturing oral histories

**ATTACHMENTS**

Circulated with the agenda are the following items relevant to this report:

- Report on the Archaeological Investigations of Radar Station 48, North Head, Jurien Bay for the Shire of Dandaragan (Doc Id: 112821)
- North Head Excavation Artefact Database (Doc Id: 113150)
- North Head Excavation Report Attachments (Doc Id: 113151)

**(Marked 9.4.1)**

**VOTING REQUIREMENT**

Simple majority

**OFFICER RECOMMENDATION**

**That Council receive the report on the Archaeological Investigations of Radar Station 48, North Head, Jurien Bay for the Shire of Dandaragan (May 2018) by Heritage Detection Australia.**

#### **9.4.2 PROPOSED VERGE BOND POLICY NO 7.8**

Location:	Shire of Dandaragan
Applicant:	N/A
Folder Path:	Business Classification Scheme / Corporate Management / Policy / Policy Register
Disclosure of Interest:	None
Date:	15 June 2018
Author:	David Chidlow, Executive Manager Development Services
Senior Officer:	Brent Bailey, Chief Executive Officer

##### **PROPOSAL**

To adopt a Verge Bond Policy for the purpose of recouping the cost of repairing verge and footpath damage during construction and providing clear guidance to builders and their contractors.

##### **BACKGROUND**

The Shire of Dandaragan has previously charge a verge bond which has not been enforced since approximately 2007. Development Services are looking at introducing a new policy due to continued damage occurring to shire infrastructure during building construction within the residential town sites.

##### **COMMENT**

The Verge Bond Policy is designed to provide financial security against damage which occurs during the building construction stages within the residential town sites.

The Policy will outline procedures to be put in place for its implementation. The first step is that the verge bond is accepted at the time of submitting the Building Permit application followed by a pre-construction inspection.

At the site inspection, recording and photographing of the current verge / footpath condition is undertaken. On completion of the building works, the Builder requests the refund of the bond by submitting an Application for Verge Bond Refund along with a BA7 Notice of Completion which will trigger a second site inspection and further photographing and recording.

If no damage is recorded the bond is refunded. If damaged is recorded the builder is given 21 days to rectify otherwise the Shire will repair the damaged asset using the bond monies. Following the rectification works and if any bond funds remain, they will be refunded to the builder.

If the asset damage is above the deposited bond value, an invoice will be forwarded to the builder for the additional works.

The builder (applicant) will be required to lodge with the Shire of Dandaragan a security deposit in accordance with the Schedule of Fees & Charges, as determined annually by Council.

## AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018

It will be the responsibility of the person obtaining a Building Permit to pay the bond. The person obtaining the Building Permit is required to give notification in writing, prior to the commencement of works, of any damage to kerbs or paths that exist before the commencement of works.

If the owner of the property where the work is being undertaken contracts another builder, it is the responsibility of the builder who paid the bond to make sure the other contractor does not damage the kerbs or footpaths.

### CONSULTATION

- Manager of Building Services
- Executive Manager of Development Services
- Executive Manager of Corporate and Community Services

### STATUTORY ENVIRONMENT

There are no statutory implications relevant to this item

### POLICY IMPLICATIONS

This item proposes the adoption of proposed new policy to be included in the Shire of Dandaragan Policy Manual.

### FINANCIAL IMPLICATIONS

Council will set the amount of bond required in the fees and charges schedule set at the budget adoption. The proposed bond is to be set at \$500 which is compatible with adjoining Shire's verge bond charges.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

<i>Goal 5: Proactive and Leading Local Government</i>	
Objectives	How the Shire will contribute
5.2 High performing Administration	c) compliance with all legislative requirements and functions

### ATTACHMENTS

Circulated with the agenda is the following item relevant to this report:

- Proposed Verge Bond Policy (Doc Id: 113371)  
**(Marked 9.4.2)**

### VOTING REQUIREMENT

Simple majority

### **OFFICER RECOMMENDATION**

**That Council advertise the proposed new Verge Bond Policy – 7.8 on the Shire website and social media for a period of 21 days.**

### 9.4.3 POLICY 1.6 COMMUNITY GRANTS PROGRAM

Location:	N/A
Applicant:	Shire of Dandaragan
Folder Path:	Business Classification Scheme / Grants and Subsidies / Programs / Community Funding
Disclosure of Interest:	Nil
Date:	30 May 2018
Author:	Michelle Perkins, Community Development Officer
Senior Officer:	Scott Clayton, Executive Manager Corporate and Community Services

#### PROPOSAL

To amend Shire of Dandaragan Policy 1.6 Art Acquisition to better reflect the purpose and outcomes of this recurring grant for the arts community in Cervantes.

#### BACKGROUND

The Cervantes Festival of Art is a biennial event hosted by the Cervantes Cultural Committee which attracts artists and visitors to the region. Each festival, the Shire of Dandaragan contributes \$1,500 to the Cervantes Cultural Committee to secure the Shire of Dandaragan Art Acquisition Prize. The \$1,500 is awarded to the chosen artist irrespective of the purchase value of the artwork. The prize is determined by the Shire President or delegate, with guidance from the judges. In addition, the Shire of Dandaragan contributes \$1,500 towards the cost of delivering the art show. These funds are allocated at the discretion of the Cervantes Cultural Committee.

#### COMMENT

Feedback from the Cervantes Cultural Committee is that due to the wording of the existing policy, artists are hesitant to submit works of higher value into the festival exhibit for fear that their work will be awarded the prize and they will compensation \$1,500. This has resulted in less artwork on display and less high value pieces available. Amending the wording of the policy will enable artists whose work exceeds \$1,500 to have confidence that they can participate in the festival without the possibility that their work is acquired by the Shire for \$1,500.

Removing 1.6.4 "Art acquisition. Each year the Shire of Dandaragan will contribute to the Cervantes Cultural Committee \$1,500 to secure the Shire of Dandaragan Art Purchase Prize. The \$1,500 will be awarded to the chosen artist irrespective of the purchase value of the artwork. The prize will be determined by the Shire President or his delegate, who will seek guidance from the judges. In addition, to the Purchase Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee." Adding 1.6.4 "Art. Each Cervantes Art Festival, the Shire of Dandaragan will contribute \$1,500 to the Cervantes Cultural Committee to purchase art, as



the Shire of Dandaragan Art Prize. The \$1,500 will be awarded to the chosen artist for artwork up to the value of \$1,500. The prize will be determined by the Shire President or delegate, who will seek guidance from the judges. The artwork will be acquired by the Shire of Dandaragan as part of the Shire's art collection. In addition to the Art Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee".

#### CONSULTATION

- Cervantes Cultural Committee
- Executive Manager Corporate & Community Services

#### STATUTORY ENVIRONMENT

Local Government (Functions and General) Regulations 1996

#### POLICY IMPLICATIONS

The following will be deleted from Policy 1.6 Community Grants Program:

*1.6.4 Art acquisition. Each year the Shire of Dandaragan will contribute to the Cervantes Cultural Committee \$1,500 to secure the Shire of Dandaragan Art Purchase Prize.*

*The \$1,500 will be awarded to the chosen artist irrespective of the purchase value of the artwork. The prize will be determined by the Shire President or his delegate, who will seek guidance from the judges.*

*In addition, to the Purchase Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee.*

And replaced with:

#### *1.6.4 "Art*

*Each Cervantes Art Festival, the Shire of Dandaragan will contribute \$1,500 to the Cervantes Cultural Committee to purchase art, as the Shire of Dandaragan Art Prize.*

*The \$1,500 will be awarded to the chosen artist for artwork up to the value of \$1,500. The prize will be determined by the Shire President or delegate, who will seek guidance from the judges. The artwork will be acquired by the Shire of Dandaragan as part of the Shire's art collection.*

*In addition to the Art Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee".*

## AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018

### FINANCIAL IMPLICATIONS

There are no financial implications relevant to this item.

### STRATEGIC IMPLICATIONS

2016 – 2026 Strategic Community Plan

<i>Goal 2: Healthy, Safe and Active Community</i>	
Objectives	How the Shire will contribute
2.3 Enhance vibrancy and community identity through culture and arts	a) deliver or support the delivery of selected arts, culture and community events b) support arts and cultural activities in community precincts

### ATTACHMENTS

Circulated with the agenda are the following items relevant to this report:

- Shire of Dandaragan Policy 1.6 Community Grants Program - original (Doc Id: 113558)
- Shire of Dandaragan Policy 1.6 Community Grants Program - with changes highlighted (Doc Id: 113559)

**(Marked 9.4.3)**

### VOTING REQUIREMENT

Simple majority

### **OFFICER RECOMMENDATION**

**That Council amend Shire of Dandaragan Policy 1.6 Community Grants Program to reflect the following changes:**

#### **1. delete 1.6.4 Art acquisition**

**Each year the Shire of Dandaragan will contribute to the Cervantes Cultural Committee \$1,500 to secure the Shire of Dandaragan Art Purchase Prize.**

**The \$1,500 will be awarded to the chosen artist irrespective of the purchase value of the artwork. The prize will be determined by the Shire President or his delegate, who will seek guidance from the judges.**

**In addition, to the Purchase Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee.**

#### **2. add 1.6.4 “Art**

**Each Cervantes Art Festival, the Shire of Dandaragan will contribute \$1,500 to the Cervantes Cultural Committee to purchase art, as the Shire of Dandaragan Art Prize.**

**The \$1,500 will be awarded to the chosen artist for artwork up to the value of \$1,500. The prize will be determined by**

**the Shire President or delegate, who will seek guidance from the judges. The artwork will be acquired by the Shire of Dandaragan as part of the Shire's art collection.**

**In addition to the Art Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee".**

**9.5 COUNCILLOR INFORMATION BULLETIN****9.5.1 SHIRE OF DANDARAGAN – MAY 2018 COUNCIL STATUS REPORT**

Document ID: 112224

Attached to the agenda is a copy of the Shire's status report from the Council Meeting held 24 May 2018. **(Marked 9.5.1)**

**9.5.2 SHIRE OF DANDARAGAN – EXECUTIVE MANAGER INFRASTRUCTURE REPORT – JUNE 2018**

Document ID: 113461

Attached to the agenda is a copy of the Shire of Dandaragan's Executive Manager Infrastructure Report for June 2018. **(Marked 9.5.2)**

**9.5.3 SHIRE OF DANDARAGAN – BUILDING STATISTICS – MAY 2018**

Document ID: 112667

Attached to the agenda is a copy of the Shire of Dandaragan Building Statistics for May 2018. **(Marked 9.5.3)**

**9.5.4 SHIRE OF DANDARAGAN – PLANNING STATISTICS – MAY 2018**

Document ID: 112665

Attached to the agenda is a copy of the Shire of Dandaragan Planning Statistics for May 2018. **(Marked 9.5.4)**

**9.5.5 LEMC MINUTES 23 MAY 2018**

Document ID: 112173

Attached to the agenda copy of Minutes of the LEMC Meeting held 23 May 2018 **(Marked 9.5.5)**

**9.5.6 SHIRE OF DANDARAGAN TOURISM / LIBRARY REPORT FOR MAY 2018**

Document ID: 113474

Attached to the agenda is monthly report for Tourism / Library for May 2018. **(Marked 9.5.6)**

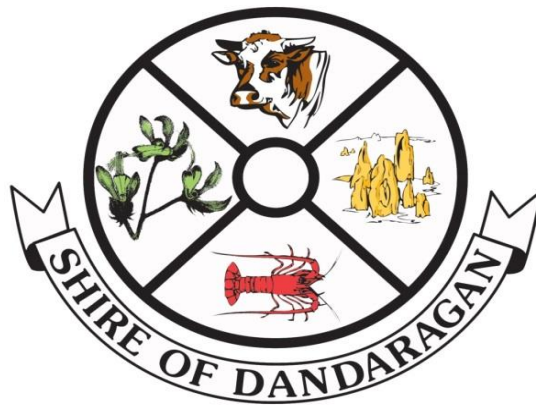
**AGENDA FOR ORDINARY COUNCIL MEETING TO BE HELD THURSDAY 28 JUNE 2018**

- 10 NEW BUSINESS OF AN URGENT NATURE – INTRODUCED BY RESOLUTION OF THE MEETING**
- 11 CONFIDENTIAL ITEMS FOR WHICH MEETING IS CLOSED TO THE PUBLIC**
- 12 ELECTED MEMBERS MOTIONS OF WHICH PREVIOUS NOTICE HAS BEEN GIVEN**
- 13 CLOSURE OF MEETING**



# ATTACHMENTS

**FOR ORDINARY COUNCIL MEETING 28 JUNE 2018**



# Monthly Statements

for the period ended  
31 May 2018

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SHIRE OF DANDARAGAN  
STATEMENT OF FINANCIAL ACTIVITY  
AS AT 31 MAY 2018

Description	Notes	Annual Budget 2017/2018	Y-T-D Budget 2017/2018	Actual 2017/2018	Y-T-D Variance
<b>Operating</b>					
<b>Revenues / Sources</b>					
Governance		(31,978)	(10,499)	(11,500)	110%
General Purpose Funding (Excluding Rate Revenue)		(897,686)	(860,265)	(853,952)	99%
Law, Order and Public Safety		(479,105)	(461,268)	(468,104)	101%
Health		(19,667)	(15,293)	(14,305)	94%
Education and Welfare		(0)	(0)	(0)	100%
Community Ammenities		(1,205,857)	(1,204,593)	(1,250,457)	104%
Recreation and Culture		(321,519)	(444,013)	(481,674)	108%
Transport		(1,670,252)	(1,508,727)	(1,355,695)	90%
Economic Services		(208,840)	(250,251)	(259,860)	104%
Other Property and Services		(537,079)	(154,706)	(226,795)	147%
		<b>(5,371,983)</b>	<b>(4,909,614)</b>	<b>(4,922,343)</b>	
<b>Expenses / (Application)</b>					
Governance		695,773	494,739	457,479	92%
General Purpose Funding		243,529	139,427	132,217	95%
Law, Order and Public Safety		1,346,668	1,176,236	1,175,039	100%
Health		378,880	339,119	296,578	87%
Education and Welfare		81,423	78,225	86,919	111%
Community Ammenities		2,210,697	1,750,382	1,675,101	96%
Recreation and Culture		3,199,140	3,223,111	3,008,581	93%
Transport		5,392,510	4,957,600	4,657,363	94%
Economic Services		736,999	686,996	575,369	84%
Other Property and Services		533,415	290,886	458,831	158%
		<b>14,819,034</b>	<b>13,136,721</b>	<b>12,523,477</b>	
<b>Adjustments for Non-Cash (Revenue) and Expenditure</b>					
(Profit)/Loss on Asset Disposals	3	(189,341)	105,250	(35,226)	
Movement in Accrued Interest		(0)	(0)	(10,569)	
Movement in Accrued Salaries and Wages		(0)	(0)	(38,307)	
Movement in Employee Provisions		(0)	(0)	(375,516)	
Movement in Deferred Rates		(0)	(0)	(0)	
Movement in Accrued Expenses		(0)	(0)	(35,439)	
Depreciation on Assets		6,171,904	5,657,578	5,640,096	
<b>Total Operating less non cash items</b>		<b>3,464,489</b>	<b>2,464,279</b>	<b>2,456,095</b>	
<b>Capital Revenue and (Expenditure)</b>					
Purchase Land and Buildings	2	822,295	822,295	770	
Purchase Furniture and Equipment	2	160,000	160,000	28,515	
Purchase Plant and Equipment	2	1,054,000	1,054,000	435,694	
Purchase Infrastructure Assets - Roads	2	3,636,017	3,636,017	(0)	
Purchase Infrastructure Assets - Parks & Reserves	2	23,993	23,993	(0)	
Purchase Infrastructure Assets - Other	2	336,480	336,480	(0)	
Capital Works in Progress	2	0	0	3,244,381	
Proceeds from New Debentures	4	(0)	(0)	(21,000)	
Proceeds from disposal of assets	3	(739,727)	(739,727)	(230,053)	
Payment Self Supporting Loan to Community Group	4	(0)	(0)	21,000	
Repayment of Debentures	4	108,362	108,362	111,760	
Self-Supporting Loan Principal Income	4	(47,368)	(47,368)	(54,919)	
Transfer to Reserves	8	579,958	579,958	118,880	
Transfer from Reserves	8	(537,430)	(537,430)	(0)	
Surplus/(Deficit) July 1 B/Fwd		2,789,561		2,845,406	
Surplus/(Deficit) June 30 C/Fwd	5	0		2,816,276	
<b>Amount raised from rates</b>	<b>6</b>	<b>(6,071,507)</b>		<b>(6,081,993)</b>	

This statement is to be read in conjunction with the accompanying notes.

SHIRE OF DANDARAGAN  
BALANCE SHEET  
AS AT 31 MAY 2018

Description	Notes	Opening Balance		Closing Balance
<b>CURRENT ASSETS</b>				
Cash	7	7,216,558	196,760	7,413,318
Trade & Other Receiveables		986,066	(451,791)	534,275
Inventories		24,690	1,450	26,140
<b>TOTAL CURRENT ASSETS</b>		<b>8,227,314</b>	<b>(253,581)</b>	<b>7,973,733</b>
<b>NON-CURRENT ASSETS</b>				
Land		3,060,000	0	3,060,000
Buildings and Improvements		31,016,300	(1,016,883)	29,999,417
Furniture and Equipment		917,743	(130,784)	786,959
Plant and Equipment		4,460,872	(479,943)	3,980,929
Infrastructure		210,715,353	2,175	210,217,400
Trade & Other Receiveables		198,552	(33,919)	164,633
<b>TOTAL NON-CURRENT ASSETS</b>		<b>250,368,821</b>	<b>(1,619,777)</b>	<b>248,209,340</b>
<b>TOTAL ASSETS</b>		<b>258,596,134</b>	<b>(1,873,358)</b>	<b>256,183,072</b>
<b>CURRENT LIABILITIES</b>				
Creditors		(436,369)	343,330	(93,039)
Provisions		(526,245)	375,516	(150,729)
Loans Leases Overdrafts		(108,362)	108,362	0
Accruals		(84,314)	84,314	0
<b>TOTAL CURRENT LIABILITIES</b>		<b>(1,155,289)</b>	<b>911,522</b>	<b>(243,768)</b>
<b>NON-CURRENT LIABILITIES</b>				
Provisions		(76,862)	0	(76,862)
Loans Leases and Overdrafts		(416,933)	(17,602)	(434,535)
<b>TOTAL NON-CURRENT LIABILITIES</b>		<b>(493,795)</b>	<b>(17,602)</b>	<b>(511,397)</b>
<b>TOTAL LIABILITIES</b>		<b>(1,649,084)</b>	<b>893,920</b>	<b>(755,164)</b>
<b>TOTAL NET ASSETS</b>		<b>256,947,050</b>	<b>(979,438)</b>	<b>255,427,908</b>
<b>EQUITY</b>				
Reserves - Cash Backed	8	4,945,538	118,880	5,064,419
Revaluation Surplus		43,367,167	(0)	43,367,167
Accumulations		208,634,345	(1,638,021)	206,996,324
<b>TOTAL EQUITY</b>		<b>256,947,050</b>	<b>(1,519,141)</b>	<b>255,427,910</b>

This statement is to be read in conjunction with the accompanying notes.

SHIRE OF DANDARAGAN  
INCOME STATEMENT by Department  
AS AT 31 MAY 2018

Description	Annual Budget 2017/2018	Y-T-D Budget 2017/2018	Actual 2017/2018
<b>Revenues from Ordinary Activities</b>			
Governance	(31,175)	(9,696)	(11,500)
General Purpose Funding	(6,969,193)	(6,933,210)	(6,935,945)
Law, Order, Public Safety	(479,105)	(461,268)	(468,104)
Health	(19,667)	(15,293)	(14,305)
Education and Welfare	(0)	(0)	(0)
Community Amenities	(1,205,857)	(1,204,593)	(1,250,457)
Recreation and Culture	(321,519)	(394,013)	(431,674)
Transport	(234,335)	(237,325)	(139,459)
Economic Services	(208,840)	(250,251)	(259,860)
Other Property and Services	(223,043)	(154,706)	(191,783)
	<b>(9,692,734)</b>	<b>(9,660,354)</b>	<b>(9,703,089)</b>
<b>Expenses from Ordinary Activities</b>			
Governance	677,667	(39,576)	445,156
General Purpose Funding	243,529	(2,175)	132,217
Law, Order, Public Safety	1,346,668	1,176,236	1,175,039
Health	378,880	339,119	296,578
Education and Welfare	81,423	78,225	86,919
Community Amenities	2,210,697	1,750,382	1,675,101
Recreation and Culture	3,190,499	3,214,470	3,002,908
Transport	5,287,545	4,852,635	4,657,363
Economic Services	734,787	684,784	571,898
Other Property and Services	512,112	290,518	458,541
	<b>14,663,807</b>	<b>12,344,617</b>	<b>12,501,722</b>
	<b>4,971,073</b>	<b>2,684,263</b>	<b>2,798,633</b>
<b>Borrowing Costs Expense</b>			
Governance	18,106	18,106	10,833
General Purpose Funding	(0)	(0)	(0)
Law, Order, Public Safety	(0)	(0)	(0)
Health	(0)	(0)	(0)
Education and Welfare	(0)	(0)	(0)
Community Amenities	(0)	(0)	(0)
Recreation and Culture	8,641	8,641	5,673
Transport	(0)	(0)	(0)
Economic Services	(0)	(0)	(0)
Other Property and Services	368	368	289
	<b>27,115</b>	<b>27,115</b>	<b>16,795</b>
<b>Grants and Subsidies Non-Operating</b>			
Governance	(0)	(0)	(0)
General Purpose Funding	(0)	(0)	(0)
Law, Order, Public Safety	(0)	(0)	(0)
Health	(0)	(0)	(0)
Education and Welfare	(0)	(0)	(0)
Community Amenities	(0)	(0)	(0)
Recreation and Culture	(0)	(50,000)	(50,000)
Transport	(1,433,304)	(1,268,789)	(1,211,062)
Economic Services	(0)	(0)	(0)
Other Property and Services	(0)	(0)	(0)
	<b>(1,433,304)</b>	<b>(1,318,789)</b>	<b>(1,261,062)</b>
<b>Profit / Loss on Asset Disposal</b>			
Governance	(803)	686	1,489
General Purpose Funding	(0)	(0)	(0)
Law, Order, Public Safety	(0)	(0)	(0)
Health	(0)	(0)	(0)
Education and Welfare	(0)	(0)	(0)
Community Amenities	(0)	(0)	(0)
Recreation and Culture	(0)	(0)	(0)
Transport	102,352	102,352	(5,174)
Economic Services	2,212	2,212	3,471
Other Property and Services	(293,102)	(0)	(35,012)
	<b>(189,341)</b>	<b>105,250</b>	<b>(35,226)</b>
<b>NET RESULT</b>	<b>3,375,544</b>	<b>1,497,840</b>	<b>1,519,141</b>
<b>Other Comprehensive Income</b>			
Changes on revaluation of non-current assets	(0)	(0)	(0)
	<b>(0)</b>	<b>(0)</b>	<b>(0)</b>
<b>TOTAL COMPREHENSIVE INCOME</b>	<b>3,375,544</b>	<b>1,497,840</b>	<b>1,519,141</b>

SHIRE OF DANDARAGAN  
INCOME STATEMENT by Nature or Type  
AS AT 31 MAY 2018

Description	Notes	Annual Budget 2017/2018	Y-T-D Budget 2017/2018	Actual 2017/2018
<b>Revenue form Ordinary Activities</b>				
Rates	6	(6,084,507)	(6,085,945)	(6,095,635)
Grants and Subsidies	12	(1,040,917)	(1,013,314)	(974,401)
Contributions Reimbursements Donations		(250,702)	(273,747)	(252,983)
Service Charges		(0)	(0)	(0)
Fees and Charges		(2,120,008)	(2,101,937)	(2,168,521)
Interest Earnings		(109,000)	(102,628)	(109,582)
Other Revenue		(87,599)	(82,783)	(101,966)
		<b>(9,692,734)</b>	<b>(9,660,354)</b>	<b>(9,703,089)</b>
<b>Expenses from Ordinary Activities</b>				
Employee Costs		3,967,246	3,263,927	3,229,738
Materials and Contracts		2,810,189	2,576,733	2,264,578
Utilities		590,263	542,267	418,471
Insurance		380,061	(39,576)	396,502
Other Expenses		744,145	(2,175)	552,336
Depreciation		6,171,904	5,657,578	5,640,096
		<b>14,663,807</b>	<b>11,998,755</b>	<b>12,501,722</b>
		<b>4,971,073</b>	<b>2,338,400</b>	<b>2,798,633</b>
Borrowing Costs Expense		27,115	27,115	16,795
Grants & Subsidies (towards non-operating activities)	12	(1,433,304)	(1,318,789)	(1,261,062)
Profit / Loss on Disposal of Assets	3	(189,341)	105,250	(35,226)
<b>NET RESULT</b>		<b>3,375,544</b>	<b>1,151,977</b>	<b>1,519,141</b>
<b>Other Comprehensive Income</b>				
Changes on revaluation of non-current assets		(0)	(0)	(0)
		<b>(0)</b>	<b>(0)</b>	<b>(0)</b>
<b>TOTAL COMPREHENSIVE INCOME</b>		<b>3,375,544</b>	<b>1,151,977</b>	<b>1,519,141</b>

This statement is to be read in conjunction with the accompanying notes

## SHIRE OF DANDARAGAN

NOTE 2 - ADDITIONAL INFORMATION ACQUISITION OF ASSETS

AS AT 31 May 2018

			TOTAL		Land & Buildings		Plant & Equipment		Furniture &		Parks & Reserves		Roads	
			Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget	Actual	Budget
Program/Sub-program			17/18	17/18	17/18	17/18	17/18	17/18	17/18	17/18	17/18	17/18	17/18	17/18
<b>Governance</b>		<b>400</b>												
Chamber audio visual (CO from Civic fitout)	New	CAP0264	25,515	120,000					25,515	120,000				
Toyota Prado GXL	New	CAP0294	-	56,000				56,000						
Toyota Fortuner GXL	New	CAP0296	-	48,000				48,000						
Jurien Admin Office Layout	FA2400	IS0142	320	6,600	320	6,600								
<b>Community Amenities</b>		<b>1000</b>												
Cer. Transfer Fencing staged replacement	FA3073	I30034	1,023	6,485										
Cer. Waste Trans. Replace roller door on shed	FA2451	IS0127		6,240		6,240								
Sewerage	FA3013	I70002	- 43,377	25,859										
Jur. Bay FRC. Playground shade sails	FA2431	IS0140	-	4,000		4000								
FRC New emergency escape path	FA2431	IS0145	-	3,900		3,900								
FRC Internal painting	FA2431	IS0146	2,725	3,200	2,725	3,200								
FRC Revised security fencing	FA2431	IS0147	-	2,100		2,100								
FRC Revised lighting and replacements	FA2431	IS0148	13,060	14,366	13,060	14,366								
Dan. Cemetery Gates	FA3098	I30049	12,203	9,000										
<b>Transport</b>		<b>1200</b>												
Mower tractor	New	CAP0287	-	56,000				56,000						
Water Tank 6 Wheeler	New	CAP0288	226,630	220,000			226,630	220,000						
Side Tipper and Dolly S/Hand	New	CAP0289	59,000	85,000			59,000	85,000						
CAT Grader 12M	New	CAP0290	-	355,000				355,000						
Tandem axle trailer	New	CAP	-	4,040				4,040						
Toro Groundmaster 360	New	CAP0291	64,780	60,000			64,780	60,000						
Turquoise Way Staged Replacement	FA2601	I10041	35,549	30,000										
Bashford Street Footpath Batt to Whitfield	FA2601	I10050	-	60,000										
Bashford Street Footpath Doust to Hastings	FA2601	I10051	59,904	80,000										
Beachridge Swales Staged Renewal	FA2600	I30041	4,000	30,000										
Cer. Comm. Cent. Carpark	FA2694	I30047	-	30,000										
Dand. Depot Lunchroom - carryover	FA2416	IS0136	113		113									
Dand. Depot OHS - carryover	FA3061	IS0141	5,459		5,459									
Dand. Depot OHS - carryover	FA3061	CAP0262	770		770									
Dan. Depot Fencing	New	IS0141	-	6,000		6,000								
Gillingarra Road		MGR010	16,075										16,075	
Yerramullah - Carryover	FA2600	MGR022	10,000										10,000	
Cadda rd. Gravel Resheet 9.3-11.8km & 22-26.4km	FA2600	MGR009	120,861	174,207									120,861	174,207
McKays rd. Gravel Resheet 0.0-3.0km	FA2600	MGR040	60,215	77,829									60,215	77,829
Dewar rd. Gravel Resheet 2.0-6.0km	FA2600	MGR042	29,260	124,372									29,260	124,372
Cantabilling rd. Gravel Resheet 9.3-11.8km	FA2600	MGR047	66,851	90,978									66,851	90,978
Cowalla rd. Gravel Resheet 0.0-3.0km	FA2600	MGR035	92,021	106,639									92,021	106,639
Black Arrow rd. Gravel Resheet 2.0-6.0km	FA2600	MGR052	100,815	122,237									100,815	122,237
Bidgerabbie rd. Gravel Resheet 0.0-4.0km	FA2600	MGR059	84,601	119,999									84,601	119,999
Koodjee rd. Gravel Resheet 0.0-4.0km	FA2600	MGR120	82,607	108,304									82,607	108,304
Bashford Street Preparatory Works	FA2600	MUC078	-	100,000										100,000
Dan. rd. Widen to 8m 37.3-40.3km	FA2600	RRG002	355,407	287,968									355,407	287,968
Dan. rd. Final Seal 28.35-32.55km	FA2600	RRG002A	87,781	130,000									87,781	130,000
Rowes rd. Upgrade to 8m seal 30.2-33.3km	FA2600	RRG007	89,938	138,800									89,938	138,800
Jur. East rd. Widen to 8m 0.0-7.0km	FA2600	RRG856	698,607	553,007									698,607	553,007
Jur. East rd. Final Seal 0.0-7.0km	FA2600	RRG856A	150,876	276,200									150,876	276,200
Cadiz Street Upgrade 0.0-0.613km	FA2600	RTR116	-	200,000										200,000
Ward Street New 10m seal	FA2600	RTR124	120,828	150,000									120,828	150,000
Carmella Street Asphalt upgrade 0.6km-end	FA2600	RTR147	330,288	350,000									330,288	350,000
Drummond Circus Upgrade 0.0-0.35km	FA2600	RTR208	214,277	200,000									214,277	200,000
Gillingarra rd. Gravel Resheet 0.0-3.0km	FA2600	SCR010	35,445	126,476									35,445	126,476
Sandy Cape rd. Gravel Resheet 0.0-3.0km	FA2600	SCR127	11,465	169,000									11,465	169,000
Tree Box Solution Prepare and seal	FA2600	I20046	-	30,000										30,000
Airstrip	FA2814	I30052	8,176											
<b>Recreation and Culture</b>		<b>1100</b>												
Playground Cer. Recreation Reserve	FA2191	I80002	-	40,000					40,000					
Cer. Recreation Reserve Replace Tank	FA2793	I30046	-	15,000										
Jur. Bay Oval Replace Water Tank	FA2790	I20084	453	25,000										
Cer. Oval Bore Installation	FA2673	I20085	-	15,000										
Outdoor Shower Thirsty Point	FA3099	I20086	3,320	10,000							3,320	10,000		
CCC Renewal Project	FA2441	IS0129	308,419	714,202	308,419	714,202								
Jur. Comm. Cent. Door latching and key revision	FA2425	IS0131	13,350	10,000	13,350	10,000								
Cer. Memorial Park Replace power box	FA3100	IS0134	9,085	3,200	9,085	3,200								
Dan. Comm. Cent. Toilet Revision	FA2468	IS0066	10,161	9,332	10,161	9,332								
BCC Repair windows	FA2488	IS0149	5,373	6,000	5,373	6,000								
BCC Mezzanine carpet and function carpet	FA2488	IS0150	4,716	6,000	4,716	6,000								
JCC Repairs to internal wall behind ball nets.	FA2425	IS0151	6,802	9,200	6,802	9,200								
JBVC Offices and storeroom	FA2399	IS0152	3,374	14,000	3,374	14,000								
BCC Carpark lighting at exit point	FA2488	IS0153	10,958	1,200	10,958	1,200								
JB Memorial Park Lighting	FA2351	I30048	-	9,993									9,993	
Cer. Foreshore Painting gazebos	FA2876	I30050	4,543	4,000							4,543	4,000		
Cer. Memorial Corner gazebo	FA2916	I30051	1,874	1,200										
Wolba Wolba retain and level	FA3074	I30040	2,439											
Civic Centre - Wind support for outdoor cinema screen	FA2399	IS0121	200		200									
Sandy Cape Project		I20083	4,849											
<b>Economic Services</b>		<b>1300</b>												
Mazda CX5 Wagon	New	CAP0298	35,753	37,000			35,753	37,000						
Coin Operated Water Dispenser	New	I30045	-	8,936										
<b>Other Property &amp; Services</b>		<b>1400</b>												
Toyota Hilux Space Cab	New	CAP0292	-	43,000				43,000						
Toyota Hilux Space Cab	New	CAP0293	-	43,000				43,000						
Toyota Fortuner GXL	New	CAP0295	49,532	48,000			49,532	48,000						
Fuel trailer air compressor	New	CAP0299	3,000	3,000				3,000	3,000					
Residence - 31B Dan. rd. Fireplace		IS0143	-	2,755		2,755								
<b>Totals</b>			<b>3,712,270</b>	<b>6,036,824</b>	<b>394,885</b>	<b>822,295</b>	<b>435,694</b>	<b>1,058,040</b>	<b>28,515</b>	<b>160,000</b>	<b>7,863</b>	<b>23,993</b>	<b>2,758,220</b>	<b>3,636,016</b>

WIP 3,247,291  
CAPITALISED 464,979  
TOTAL 3,712,270

SHIRE OF DANDARAGAN  
NOTE 3 - DISPOSAL OF ASSETS  
AS AT 31 May 2018

Class of Asset	Proceeds from Sale		Cost of Replacement Asset		Net Cost for Change Over	
	2017 / 2018 Actual	2017/2018 Budget	2017 / 2018 Actual	2017/2018 Budget	2017 / 2018 Actual	2017/2018 Budget
	\$	\$	\$	\$	\$	\$
<b>Plant &amp; Machinery</b>						
Tractor		10,000		56,000	0	46,000
6 Wheeler (water tanker)	95,000	60,000	226,630	220,000	131,630	160,000
Side Tipper & Dolly (second hand)		10,000	59,000	85,000	59,000	75,000
Grader	70,000	70,000		355,000	(70,000)	285,000
Mower	7,780	1,000	64,780	60,000	57,000	59,000
Utility		4,000		43,000	0	39,000
Utility		4,000		43,000	0	39,000
Administration Vehicle (CEO)		45,000		56,000	0	11,000
Administration Vehicle (EMDS)		40,909		48,000	0	7,091
Administration Vehicle (EMI)		31,818		48,000	0	16,182
Administration Vehicle (MBS)	20,909	23,000	35,753	37,000	14,844	14,000
Pole Saw Loader Attachment		40,000				
Administration Vehicle (DCEO)	36,364					
<b>Land</b>						
Lot 96 Bashford Street, Jurien Bay		364,036				
<b>Building</b>						
Lot 96 Bashford Street, Jurien Bay		35,964				
<b>Totals</b>	<b>230,053</b>	<b>739,727</b>	<b>386,162</b>	<b>1,051,000</b>	<b>192,473</b>	<b>751,273</b>

Proceeds from Sale		Written Down Value		Profit/(Loss) on Disposal	
2017 / 2018 Actual	2017/2018 Budget	2017 / 2018 Actual	2017/2018 Budget	2017 / 2018 Actual	2017/2018 Budget
\$	\$	\$	\$	\$	\$
0	10,000		12,716	0	(2,716)
95,000	60,000	89,826	99,913	5,174	(39,913)
0	10,000		8,175	0	1,825
70,000	70,000	42,768	76,384	27,232	(6,384)
7,780	1,000	0	212	7,780	788
0	4,000		9,800	0	(5,800)
0	4,000		11,808	0	(7,808)
0	45,000		44,907	0	93
0	40,909		40,199	0	710
0	31,818		39,144	0	(7,326)
20,909	23,000	24,380	25,212	(3,471)	(2,212)
0	40,000		95,952	0	(55,952)
36,364		37,853		(1,489)	
0	364,036		50,000	0	314,036
0	35,964		35,964	0	0
230,053	739,727	194,827	550,386	35,226	189,341

**SHIRE OF DANDARAGAN**  
**NOTE 4 - LOAN REPAYMENT DETAILS**  
**AS AT 31 May 2018**

**(a) Debenture Repayments**

Loan Details  No.	Amount	New Loans	Interest Repayments		Principal Repayments		Principal
	Outstanding	2017/2018 Budget	2017 / 2018 Actual	2017/2018 Budget	2017 / 2018 Actual	2017/2018 Budget	Outstanding
	1/7/2017						30/06/2018
	\$	\$	\$	\$	\$	\$	\$
<b>Self-Supporting Loans</b>							
113 Advance Dandaragan	7,373		368	368	4,842	4,842	2,531
114 Cervantes Community Club	43,092		2,814	2,814	16,316	16,316	26,776
130 Jurien Bowling Club	112,140		5,292	5,292	20,294	20,294	91,846
131 Jurien Bowling Club	21,415		535	535	5,916	5,916	15,499
132 Jurien Sport & Rec Centre		21000	248	0	3,398		17,602
<b>Other Loans</b>							
127 Jurien Admin Centre	341,275		18,106	18,106	60,994	60,994	280,281
128 Jurien Jetty	-						-
<b>Total</b>	<b>525,294</b>	<b>21,000</b>	<b>27,363</b>	<b>27,115</b>	<b>111,760</b>	<b>108,362</b>	<b>416,932</b>
<b>Community Group Cash Advance</b>	<b>Amount</b>	<b>New Loans</b>			<b>Principal Repayments</b>		<b>Principal</b>
	<b>Outstanding</b>	<b>2017/2018 Budget</b>			<b>2017 / 2018 Actual</b>	<b>2017/2018 Budget</b>	<b>Outstanding</b>
	<b>1/7/2017</b>						<b>30/06/2018</b>
	\$	\$			\$	\$	
<b>Self-Supporting</b>							
Cervantes Bowling Club	11,608				4,151	4,152	7,456
<b>Total</b>	<b>11,608</b>				<b>4,151</b>	<b>4,152</b>	<b>7,456</b>
<b>GRAND TOTAL</b>	<b>536,902</b>	<b>21000</b>	<b>37,248</b>	<b>27,115</b>	<b>112,514</b>	<b>106,736</b>	<b>430,166</b>

**(b)**

**Unspent Debentures:**

Council had no unspent debenture funds as at 30th June 2017 nor is it expected to have unspent debenture funds as at 30th June 2018.

**(c)**

**Overdraft:**

Council utilised an overdraft facility during 2016/2017 but did not require it at 30th June 2017. Details of this facility can be found at note 12.  
It is anticipated this facility will be required during 2017/2018.

SHIRE OF DANDARAGAN  
 NOTE 5 - NET CURRENT ASSETS  
 AS AT 31 MAY 2018

	Notes	Brought Forward 1 July	Actual Movement	Actual to Date
<b>5. NET CURRENT ASSETS</b>				
<b>Composition of Estimated Net Current Asset Position</b>				
CURRENT ASSET				
Cash - Unrestricted		2,271,019	77,880	2,348,899
Cash - Restricted	8	4,945,538	118,880	5,064,419
Receivables		986,066	(451,791)	534,275
Inventories		24,690	1,450	26,140
		8,227,314	(253,581)	7,973,733
LESS: CURRENT LIABILITIES				
Payables and Provisions		(436,369)	343,330	(93,039)
		<b>7,790,945</b>	<b>89,750</b>	<b>7,880,694</b>
Less: Cash - Restricted		4,945,538	118,880	5,064,419
<b>NET CURRENT ASSET POSITION</b>		<b>2,845,406</b>	<b>(29,131)</b>	<b>2,816,276</b>



**SHIRE OF DANDARAGAN**
**NOTE 6 - RATING INFORMATION**

AS AT 31 May 2018

RATE TYPE	2017/18 BUDGET					2017/18 ACTUAL			
	Rate in \$	Number of Properties	Rateable Value	Budget Rate Revenue	Budget Total Revenue	Rate Revenue	Interim Rate	Back Rates	Total Revenue
<b>General Rate</b>									
General GRV	0.084300	1,520	25,054,474	2,112,092	2,112,092	2,112,092	13,089	-	2,125,182
General UV	0.007737	685	369,559,156	2,859,280	2,859,280	2,853,276	5,793	-	2,859,070
<b>Sub-Total</b>		<b>2,205</b>	<b>394,613,630</b>	<b>4,971,372</b>	<b>4,971,372</b>	<b>4,965,369</b>	<b>18,882</b>	<b>-</b>	<b>4,984,251</b>
<b>Minimum Rates</b>									
General GRV	\$ 916	1277	8,225,808	1,169,732	1,169,732	532,725	-	-	532,725
Lesser GRV (Dandaragan & Badgingarra)	\$ 691	86	491,530	59,426	59,426	696,433	-	-	696,433
General UV	\$ 865	77	1,390,596	66,605	66,605	64,010	-	-	64,010
Lesser UV (non-mining)	\$ 691	48	2,577,300	33,168	33,168	33,168	-	-	33,168
<b>Sub-Total</b>		<b>1,488</b>	<b>12,685,234</b>	<b>1,328,931</b>	<b>1,328,931</b>	<b>1,326,336</b>	<b>0</b>	<b>0</b>	<b>1,326,336</b>
Ex Gratia Rates					1,204	1,273			1,273
		3,693	407,298,864	6,300,303	6,301,507	6,291,705			6,311,860
Discounts					(230,000)				(229,867)
<b>Total as per Rate Setting Statement</b>					<b>6,071,507</b>				<b>6,081,993</b>
Instalment Admin Fee					13,000				13,642
<b>Total as per Income Statement</b>					<b>6,084,507</b>				<b>6,095,635</b>

SHIRE OF DANDARAGAN  
 NOTE 7 - CASH, INVESTMENTS & RECEIVABLES  
 AS AT 31 May 2018

<b>Note 7</b>	Notes	1-Jul	Movements	Closing Balance
<b>Cash and Investments:</b>				
Municipal Fund		2,269,869	77,680	2,347,549
Petty Cash		1,150	200	1,350
Reserve Fund - Cash Backed		4,945,538	118,880	5,064,419
<b>Total Cash and Investments</b>		<b>7,216,558</b>	<b>196,760</b>	<b>7,413,318</b>
<b>Receivables:</b>				
Rates	13	286,721	(3,483)	283,238
Sundry Debtors	13	675,046	(424,009)	251,037
<b>Total Receivables</b>		<b>961,768</b>	<b>(427,493)</b>	<b>534,275</b>

**SHIRE OF DANDARAGAN**  
**NOTE 8 - RESERVE FUND**  
**AS AT 31 May 2018**

RESERVE ACCOUNTS	BALANCE AS AT 1ST JULY	INTEREST EARNED	INCREASE IN RESERVES	RESERVE FUNDS EXPENDED	REALLOC PER BUDGET	TOTAL
PLANT RESERVE	\$ 255,104.05	\$ 3,708.76				\$ 258,812.81
BUILDING RESERVE	\$ 1,028,466.85	\$ 14,862.67				\$ 1,043,329.52
RUBBISH RESERVE	\$ 363,429.29	\$ 5,283.59				\$ 368,712.88
COMMUNITY CENTRE RESERVE	\$ 385,209.87	\$ 5,600.24				\$ 390,810.11
TELEVISION SERVICES RESERVE	\$ 93,653.27	\$ 1,361.53				\$ 95,014.80
COMPUTER RESERVE	\$ 54,640.26	\$ 794.37				\$ 55,434.63
CARAVAN PARK RESERVE	\$ 379,671.77	\$ 5,519.74				\$ 385,191.51
LAND DEVELOPMENT SCHEMES RESERVE	\$ 67,715.16	\$ 984.46				\$ 68,699.62
PARKING REQUIRMENTS RESERVE <i>a) Cash in Lieu of Parking - Lot 1154 Sandpiper Street</i> <i>b) Interest Earned</i>	\$ 10,929.70	\$ 158.89				\$ 11,088.59
PARKS AND RECREATIONAL GROUNDS DEVELOPMENT RESERVE <i>a) Seagate Public Open Space</i> <i>b) Interest Earned</i>	\$ 360,600.58	\$ 5,242.48				\$ 365,843.06
FOOTPATH CONSTRUCTION RESERVE		\$ 328.35	\$ 50,000.00			\$ 50,328.35
SPORT AND REC RESERVE	\$ 235,708.03	\$ 3,426.76				\$ 239,134.79
ADMIN CENTRE EXTENSION RESERVE	\$ 426.38					\$ 426.38
LANDSCAPING RESERVE <i>a) Lot 1154 Sandpiper Street</i> <i>Interest</i>	\$ 2,536.44	\$ 36.88				\$ 2,573.32
JETTY RESERVE	\$ -					\$ -
HOUSING RESERVE	\$ -					\$ -
AERODROME RESERVE	\$ 73,330.08	\$ 1,066.08				\$ 74,396.16
STAFF ATTRACTION & RETENTION	\$ 200,813.53					\$ 200,813.53
POS Renewal Reseve	\$ 417,120.41	\$ 6,064.17				\$ 423,184.58
Infrastrucutre Renewal Reserve	\$ 569,280.79	\$ 8,266.93				\$ 577,547.72
POS Construction Reserve	\$ 85,553.78	\$ 1,243.80				\$ 86,797.58
Infrastructure Construction Reserve	\$ -					\$ -
Building Contruction Reserve	\$ 111,346.07	\$ 1,618.77				\$ 112,964.84
Leave Reserve	\$ 250,002.06	\$ 3,311.82				\$ 253,313.88
Sewer Stage 1B (Bankwest)	\$ -					\$ -
SuperTowns Reserve (Bankwest)	\$ -					\$ -
	<b>\$ 4,945,538.37</b>	<b>\$ 68,880.29</b>	<b>\$ 50,000.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 5,064,418.66</b>

**SHIRE OF DANDARAGAN**  
**NOTE 9 - RESTRICTED ASSETS**  
**AS AT 31 May 2018**

ACCOUNT NAME	DESCRIPTION	BALANCE OPENING	RECEIPTS	INTEREST	PAYMENTS	BALANCE CLOSING
CENTRAL COAST STRATEGY	Regional Strategy	\$ 13,540.14				\$ 13,540.14
PREPAID P.WORKS DOLA SUBD	DOLA Stage 1 Fencing & Footpaths, Cervantes	\$ 41,401.12				\$ 41,401.12
LANDCORP	Landcorp Cash in Lieu POS	\$ 162,500.00				\$ 162,500.00
JURIEN BAY HEIGHTS STAGE 2	\$500 x 11 Lot Contrib. Mtce of Canover Rd Stage 2	\$ 15,900.00				\$ 15,900.00
SEAGATE ESTATE	Footpath - Foreshore Management Plan	\$ 20,814.20				\$ 20,814.20
CASH IN LIEU OF LANDSCAPING	Lot 1146 Sandpiper Street	\$ 2,000.00				\$ 2,000.00
REHAB BOND	Lot 290 Canover	\$ 5,000.00				\$ 5,000.00
Retention Wormall Civil	Retention Wormall	\$ 148,050.00			\$ 148,050.00	\$ -
Retention DJ MacCormick Stowns	Retention DJ MacCormick	\$ -				\$ -
INTEREST	Interest	\$ 59,550.16				\$ 59,550.16
<b>TOTAL</b>		<b>\$ 468,755.62</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 148,050.00</b>	<b>\$ 320,705.62</b>

**SHIRE OF DANDARAGAN****NOTE 10 - TRUST FUND**

AS AT 31 May 2018

TRUST FUND	BALANCE			
	AS AT	RECEIPTS	PAYMENTS	TOTAL
	1ST JULY			
Housing Bonds	\$250.00	\$0.00	\$0.00	\$250.00
Seagate Estate	\$37,300.00	\$0.00	\$0.00	\$37,300.00
Dust Bond	\$11,049.00	\$0.00	\$0.00	\$11,049.00
Fire Fighting Facility	\$5,000.00	\$0.00	\$0.00	\$5,000.00
Housing Relocation Bond	\$4,000.00	\$0.00	\$0.00	\$4,000.00
Footpath Deposit	\$2,600.00	\$0.00	\$0.00	\$2,600.00
Burial Plots	\$3,125.73	\$150.00	\$0.00	\$3,275.73
Other Development Bonds	\$19,000.00	\$0.00	\$0.00	\$19,000.00
Dandaragan Recreation Fund	\$9,500.00	\$0.00	\$0.00	\$9,500.00
Unclaimed monies	\$0.00	\$0.00	\$0.00	\$0.00
Development Assessment Panel Fee	\$0.00	\$0.00	\$0.00	\$0.00
Nomination Deposits	\$0.00	\$480.00	\$480.00	\$0.00
BCITF	\$0.00	\$0.00	\$0.00	\$0.00
KidsSport	\$2,829.00	\$0.00	\$2,829.00	\$0.00
Scheme Amendment Deposit	\$1,000.00	\$0.00	\$0.00	\$1,000.00
<b>Total Trust Funds</b>	<b>\$95,653.73</b>	<b>\$150.00</b>	<b>\$3,309.00</b>	<b>\$92,974.73</b>

SHIRE OF DANDARAGAN  
NOTE 11 - BUDGET AMENDMENTS  
AS AT 31 May 2018

DESCRIPTION	COUNCIL RESOLUTION	SCHEDULE	CLASSIFICATION	NON-CASH ADJUSTMENT	INCREASE IN CASH AVAILABLE	DECREASE IN CASH AVAILABLE	AMENDED BUDGET RUNNING BALANCE
<b>Budget Adoption</b>			Opening Surplus				191,362
<b>Permanent Changes</b>							
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Footpaths		1,639,982			1,831,344
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Other		36,259			1,867,603
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Parks & Reserves		79,928			1,947,531
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Other		12,893			1,960,424
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Other		7,920			1,968,344
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Other		8,715			1,977,059
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Other		8,168			1,985,227
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Parks & Reserves		12,656			1,997,883
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Infrastructure - Parks & Reserves		10,163			2,008,045
Receive the gifted asset of the 7.74km of Turquoise Way path in accordance with AASB116	20180218 9.3.1	Assets Received below fair value		(1,816,684)			191,362
Dispose of Jurien Bay Infill Sewer Stage 1 to Water Corp for nil consideration	20180222 9.2.1	Infrastructure - Drainage		(5,313,537)			(5,122,175)
	20180222 9.2.1			5,313,537			191,362
Increase CSRFF funding for Jurien Sport & Rec storage shed	20180222 9.1.1	Sport & Recreation			17,046		208,408
Transfer from Sport & Recreation Reserve for the Jurien Sport & Rec storage shed	20180222 9.1.1	Reserves				(17,046)	191,362
Enrich chip seal on aprons and taxiways at the Jurien Bay Airstrip	20180222 10.1.1	Infrastructure - Other				(10,000)	181,362
Transfer from Aerodrome Reserve	20180222 10.1.1	Reserves			10,000		191,362
				0	27,046	(27,046)	

SHIRE OF DANDARAGAN  
NOTE 12 - GRANTS AND CONTRIBUTIONS  
AS AT 31 May 2018

SCHEDULE	PROGRAM / DETAILS	GRANT PROVIDER	PREVIOUS YEARS OUTSTANDING	2017 - 18 BUDGET	2017 - 18 AMENDED BUDGET	RECOUP STATUS		
						RECEIVED	EXPENDITURE	NOT RECEIVED
					\$	\$	\$	
	<b>OPERATING</b>							
<b>0303</b>	<b>Other General Purpose Income</b>							
	Grants Commission - General	WALGGS	390,464	361,203	- 28,965	332,238		-
	Grants Commission - Roads	WALGGS	461,141	389,183		389,551		- 368
<b>0501</b>	<b>Fire Prevention</b>							-
	ESL Operating Grant	FESA		68,000	10,356	61,356		17,000
<b>0502</b>	<b>Animal Control</b>							-
<b>1103</b>	<b>Other Recreation and Sport</b>							-
	Club Dev Officer DSR	DSR		20,000		20,000		-
	Spray the grey Youth festival GRANT	Lotterywest			10,015	10,015		
	CLGF Youth Dev Traineeship Grants					34,023		
<b>1106</b>	<b>Other Culture</b>							-
	Regional Visitors Centre Sustainability				8,006	8,006		-
<b>1201</b>	<b>Streets Roads Bridges Depots Maint</b>							
	MRWA Direct Grant	MRWA		201,377		115,975		85,402
	Street Light Subsidy			1,154		3,237		- 2,083
			<b>851,605</b>	<b>1,040,917</b>	- <b>588</b>	<b>974,401</b>		<b>99,951</b>
	<b>CAPITAL</b>							
<b>1201</b>	<b>Streets Roads Bridges Depots Maint</b>							-
	Regional Road Group RRG	RRG	-	658,060		364,818	1,382,609	293,242
	Commodity Route Funding		-	197,000			46,911	197,000
	DoT Dual Use Path - Bashford to Whitfield	DoT	-	30,000		14,000	-	16,000
	DoT Dual Use Path - Heaton to Dalton	DoT	-	40,000		28,000	29,952	12,000
	Turquoise Way Path Project Reserve Funds	SOD			50,000	50,000		-
	RTR Grant	RTR	-	508,244	296,000	804,244	665,393	-
			-	<b>1,433,304</b>	<b>346,000</b>	<b>1,261,062</b>	<b>2,124,865</b>	<b>518,242</b>
			<b>851,605</b>	<b>2,474,221</b>	<b>345,412</b>	<b>2,235,463</b>		<b>618,193</b>

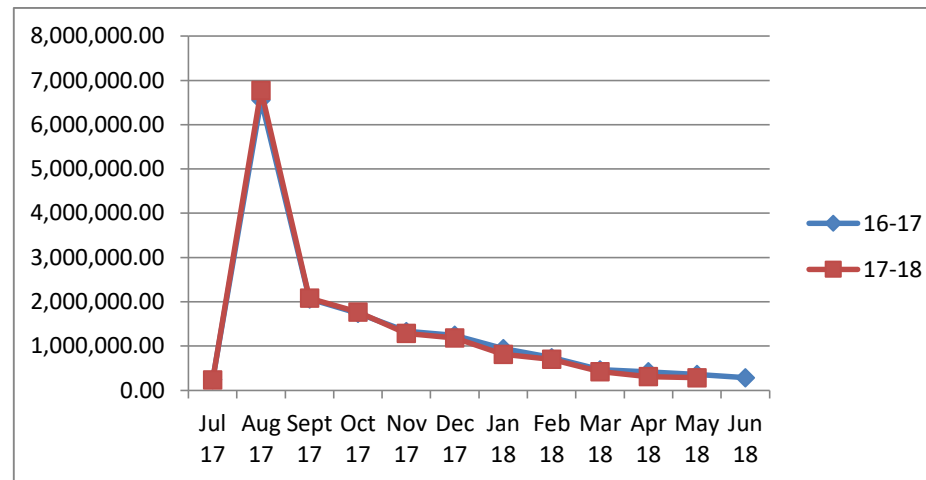
## SHIRE OF DANDARAGAN

### NOTE 13 - RECIEVABLES

AS AT 31 May 2018

#### Receivables - Rates Receivable

	YTD	30-Jun-17
Opening Arrears Previous Years	286,721	238,750
Levied this Year	7,378,635	5,995,556
Supplimentary rates		-6,274
Less Collections to date	- 7,382,118	-5,941,311
Equals Current Outstanding	283,238	286,721
<b>Net Rates Collectable</b>	283,238	286,721
% Collected	96.30	95.40



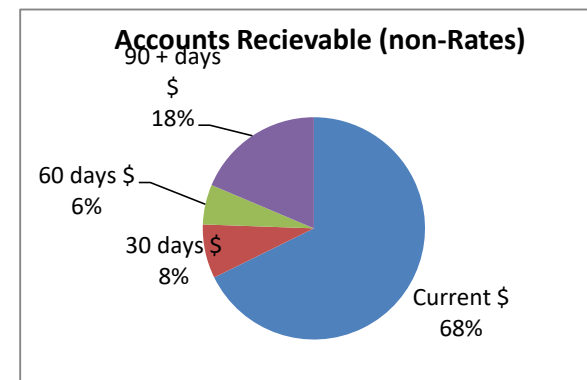
#### Receivables - General

Receivables General

Total Receivables General Outstanding

Amounts shown above include GST (where applicable)

Current	30 days	60 days	90 + days
\$	\$	\$	\$
169997.1	19693.63	14578.85	46767.41
			<u>251036.99</u>





**SHIRE OF DANDARAGAN**
**NOTE 14 - EXPLANATION OF MATERIAL VARIANCES**

AS AT 31 May 2018

REPORTING PROGRAM	VAR. \$	VAR %	VAR	TIMING / PERMANENT	EXPLANATION OF VARIANCE
<b>Operating Revenue</b>					
Governance	1,001	110%	▲		
General Purpose Funding	(6,313)	99%	▼		
Law, Order & Public Safety	6,836	101%	▲		
Health	(987)	94%	▼		
Education and Welfare	0	100%	▲		
Community Ammenities	45,865	104%	▲		
Recreation and Culture	37,661	108%	▲		
Transport	(153,032)	90%	▼		
Economic Services	9,609	104%	▲	Permanent	Sale of merchandise Building Licence fees
Other Property and Services	72,090	147%	▲	Permanent	Fuel rebate, Private works
<b>Operating Expenses</b>					
Governance	(37,260)	92%	▼		
General Purpose Funding	(7,210)	95%	▼		
Law, Order & Public Safety	(1,196)	100%	▼		
Health	(42,541)	87%	▼	Permanent	Doctors Services no longer funded
Education and Welfare	8,694	111%	▲		
Community Ammenities	(75,281)	96%	▼		
Recreation and Culture	(214,530)	93%	▼		
Transport	(300,236)	94%	▼		
Economic Services	(111,627)	84%	▼	Timing (monitor) Permanent	Tourism Employee Costs
Other Property and Services	167,944	158%	▲	Timing Permanent	On Cost Allocations Superannuation allocation

**SHIRE OF DANDARAGAN**

**ACCOUNTS FOR PAYMENT  
FOR THE PERIOD ENDING**

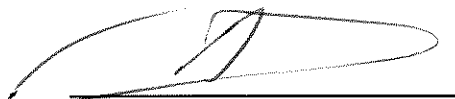
**31 MAY 2018**

**SUMMARY OF SCHEDULE OF ACCOUNTS MAY 2018**

<b><u>FUND</u></b>				<b><u>AMOUNT</u></b>	
<b><u>MUNICIPAL FUND</u></b>					
CHEQUES	33454	-	33476	\$71,898.23	
EFT'S	EFT	246	- EFT	251	\$1,165,036.16
DIRECT DEBITS	GJBDEB-	3188	GJBDEB-	3235	\$115,371.78
<b>TOTAL MUNICIPAL FUND</b>					
<hr/> <b>\$1,352,306.17</b> <hr/>					

<b><u>TRUST FUND</u></b>			
CHEQUES		-	NIL

This schedule of accounts to be passed for payment, covering vouchers as detailed above, which was submitted to each member of Council has been checked and is fully supported by vouchers and invoices which are submitted herewith and which have been duly certified as to the receipt of goods and the rendition of services and as to prices, computations, and costings and the amounts shown the amounts show are due for payment.



CHIEF EXECUTIVE OFFICER



EXECUTIVE MANAGER CORPORATE &  
COMMUNITY SERVICES

MUNICIPAL ACCOUNT				
DATE	CHEQUE	PAYEE	INVOICE DETAILS	AMOUNT
9/05/2018	33454	Synergy	Various Electricity Usage	\$15,605.10
9/05/2018	33455	Cervantes Service Station	7/3 Dies	\$81.29
9/05/2018	33456	Telstra Corporation	Varius Telephone Usage	\$10,648.75
9/05/2018	33457	BCITF	BCITF - Levy Payment April 18	\$6,476.46
9/05/2018	33458	Shire Of Dandaragan	BSL/BCITF Commission April 18	\$150.00
9/05/2018	33460	Water Corporation	Various Water Usage	\$7,941.20
14/05/2018	33461	Synergy	Various Electricity Usage	\$832.45
14/05/2018	33462	Telstra Corporation	Various Telephone Usage	\$1,819.27
14/05/2018	33463	Shire Of Dandaragan	BookEasy Commission 08/05/18	\$18.75
14/05/2018	33464	Water Corporation	Various Water Usage	\$5,234.01
21/05/2018	33470	Jurien Bay IGA	Jurien Administration Consumables	\$760.82
21/05/2018	33471	Shire Of Dandaragan	BookEasy Commission 14/05/18	\$33.50
21/05/2018	33473	Synergy	Various Electricity Usage	\$10,677.20
21/05/2018	33474	Water Corporation	Various Water Usage	\$616.88
25/05/2018	33476	Synergy	Various Electricity Usage	\$11,002.55
				<b>\$71,898.23</b>

DIRECT DEBITS				
DATE		JOURNAL NUMBER	DESCRIPTION	AMOUNT
1/05/2018		GJBDEB-3190	BWA Paper Transaction Fee	\$30.60
1/05/2018		GJBDEB-3191	BPay Maintenance Fee	\$15.00
1/05/2018		GJBDEB-3192	BWA Over The Counter Service Fee	\$22.00
1/05/2018		GJBDEB-3193	BPay Transaction Fee	\$120.80
1/05/2018		GJBDEB-3194	BWA Maintenance Fee ex 117-005816-7	\$20.00
1/05/2018		GJBDEB-3195	BWA OBB Record Fee	\$8.20
1/05/2018		GJBDEB-3197	ANZ Merchant Fees - April 2018	\$37.70
3/05/2018		GJBDEB-3189	Salary Packaging	\$3,710.68
3/05/2018		GJBDEB-3198	Redirect Returned Item - EFT 897	\$840.40
3/05/2018		GJBDEB-3199	CBA Merchant Fees April 2018	\$255.06
4/05/2018		GJBDEB-3188	Click Super	\$18,965.89
7/05/2018		GJBDEB-3201	M/C - RRG Working group lunch	\$158.00
7/05/2018		GJBDEB-3202	M/C - Parking RRG meetings	\$30.24
7/05/2018		GJBDEB-3203	M/C - Parking RRG meetings	\$12.09
7/05/2018		GJBDEB-3204	M/C - Meal RRG meeting	\$27.60
7/05/2018		GJBDEB-3205	M/C - Stationery - RRG meetings	\$40.00
7/05/2018		GJBDEB-3206	M/C - Meals - RRG meetings	\$64.50
7/05/2018		GJBDEB-3207	M/C - Accomodation - RRG meetings	\$132.15
7/05/2018		GJBDEB-3208	M/C - Parking - RRG meetings	\$8.16
7/05/2018		GJBDEB-3209	M/C - Meals - RRG meetings	\$32.00
7/05/2018		GJBDEB-3210	M/C - Parking - Perth Meetings	\$10.18
7/05/2018		GJBDEB-3211	M/C - Refreshments - Perth Meetings	\$21.20
7/05/2018		GJBDEB-3212	M/C - Breakfast meeting - Jurien Bay	\$28.50
7/05/2018		GJBDEB-3213	M/C - PLE Computers - Flash Drives	\$280.70
7/05/2018		GJBDEB-3214	M/C - Accomodation - C & C show Perth	\$1,108.06
7/05/2018		GJBDEB-3215	M/C - All Stamps - Self inking stamps	\$80.65
7/05/2018		GJBDEB-3216	M/C - Accomodation - Tourism meet & function	\$165.31
7/05/2018		GJBDEB-3217	M/C - Revscheck on impounded vehicle	\$25.00
7/05/2018		GJBDEB-3218	M/C - JB Motel - Accom Cr McGlew	\$230.00
7/05/2018		GJBDEB-3219	M/C - State Planning Conference Registration F	\$810.00
7/05/2018		GJBDEB-3220	M/C - Foreign Transaction Fees	\$23.90
7/05/2018		GJBDEB-3221	M/C - Flights - Hobart Conference	\$353.84
7/05/2018		GJBDEB-3222	M/C - Parking - Perth Airport	\$100.54
7/05/2018		GJBDEB-3223	M/C Accomodation - Tourism Training	\$646.00
9/05/2018		GJBDEB-3224	BWA - Deposit Book Fee	\$4.50
10/05/2018		GJBDEB-3196	Westnet - yearly email purchase 2018 (balance)	\$55.56
15/05/2018		GJBDEB-3225	SecurePay ZDN00 Ann Ph Pmt & Trans Fee Ap	\$499.84
17/05/2018		GJBDEB-3226	Salary Packaging	\$3,710.68
17/05/2018		GJBDEB-3227	Click Super	\$19,365.88
21/05/2018		GJBDEB-3228	M Brooks - Dish.Chq - Dandy Camp Fees	\$700.00
21/05/2018		GJBDEB-3230	M Brooks - Dish.Chq Fee - Dandy Camp Fees	\$10.00
24/05/2018		GJBDEB-3231	Australia Post Commission - April 18	\$39.57
28/05/2018		GJBDEB-3232	ERV Lease & Fuel Apr/May 2018	\$1,658.36
30/05/2018		GJBDEB-3233	Payout/Purchase - Side Tipper Ptt018	\$37,112.57
31/05/2018		GJBDEB-3234	Salary Packaging	\$3,710.68
31/05/2018		GJBDEB-3235	Click Super	\$20,089.19
				<b>\$115,371.78</b>

## ELECTRONIC FUNDS TRANSFER

DATE	EFT #	PAYEE	INVOICE DETAILS	AMOUNT
9/05/2018	246/898	Afgri Equipment	Screens - PTC020 (Credit Note)	-\$205.53
9/05/2018	246/898	Afgri Equipment	Electronic Document	\$60.94
9/05/2018	246/898	Afgri Equipment	Idlers	\$57.32
9/05/2018	246/898	Afgri Equipment	Idler, clutch, grommet & strap	\$520.03
9/05/2018	246/898	AMPAC Debt Recovery	Legal Expenses 16/4 to 20/4/18	\$233.20
9/05/2018	246/898	AMPAC Debt Recovery	Legal Expenses 16/4 to 20/4/18	\$843.76
9/05/2018	246/898	AMPAC Debt Recovery	Legal Expenses - 23/04 to 27/04/18	\$210.93
9/05/2018	246/898	Apis Rural Products	Destroy bee infestation Munbinea Bridge	\$100.00
9/05/2018	246/898	Australia Post	Postage - April 2018	\$1,228.34
9/05/2018	246/898	Australia Post	Portable Hard Drive	\$99.00
9/05/2018	246/898	Australia Post	Postage - April 18	\$6.00
9/05/2018	246/898	Australian Taxation Office	April GST	\$12,732.00
9/05/2018	246/898	Avdata Australia	Jurien Airport Flight Data April 18	\$241.96
9/05/2018	246/898	Avon Waste	Sandy Cape 9m3 skip bin Easter	\$190.00
9/05/2018	246/898	Avon Waste	Jurien Information Bay 2 x 6m3 skip bins	\$420.00
9/05/2018	246/898	Avon Waste	Rubbish Collection 2/4 to 13/04/18	\$4,670.82
9/05/2018	246/898	Avon Waste	Recycling 2/4 to 13/04/18	\$3,514.91
9/05/2018	246/898	Avon Waste	Street Bins 2/4 to 13/04/18	\$275.22
9/05/2018	246/898	Avon Waste	Street Bins 1 2/4 to 13/04/18 additional	\$142.56
9/05/2018	246/898	Avon Waste	Service Jetty Bins	\$26.00
9/05/2018	246/898	Avon Waste	Recycling Processing Charges	\$504.00
9/05/2018	246/898	Avon Waste	Skip bins Cervantes Waste	\$1,080.00
9/05/2018	246/898	Avon Waste	Badgy Waste Frontlift bins 5/03-16/03/18	\$570.00
9/05/2018	246/898	Avon Waste	Sandy Cape Frontlift bins 2/4 to 13/04/18	\$630.00
9/05/2018	246/898	Avon Waste	Fish Cleaning Bins	\$288.00
9/05/2018	246/898	Avon Waste	Additional Recycling 2/4/18	\$3,514.91
9/05/2018	246/898	Avon Waste	Additional Servicing Sandy Cape Bins	\$945.00
9/05/2018	246/898	Avon Waste	Servicing Jurien Oval Front Lift Bins	\$810.00
9/05/2018	246/898	Avon Waste	Cervantes Information Bay Front Lift Bin	\$45.00
9/05/2018	246/898	Badgingarra Comm. Assn	May 18 - Partial town maint - Badgingarra	\$3,300.00
9/05/2018	246/898	Bayswater Mazda	30,000km service PLV252	\$380.91
9/05/2018	246/898	Bitutek Pty Ltd	Rowes Rd - Final Seal	\$98,931.89
9/05/2018	246/898	Bitutek Pty Ltd	Supply CRS Emulsion	\$1,870.00
9/05/2018	246/898	Building Commission	BSL Remittance for April 18	\$6,733.53
9/05/2018	246/898	Building Commission	Unauthorized building works	\$123.30
9/05/2018	246/898	Caltex Jurien Bay	Food & Drinks for Fire	\$70.80
9/05/2018	246/898	Caltex Jurien Bay	Food & Drinks for fire	\$298.50
9/05/2018	246/898	Caltex Jurien Bay	Food & Drinks for fire	\$4.00
9/05/2018	246/898	Cerv. Chamber Commerce	2018 Membership fees	\$100.00
9/05/2018	246/898	Comen Limited	Fuel - Cervantes BFB Vehicles - 22.38 lts	\$33.57
9/05/2018	246/898	Council First	Professional Services March 18	\$2,574.00
9/05/2018	246/898	Council First	NSC Payroll Maintenance 2/6/18 to 1/06/19	\$726.00
9/05/2018	246/898	CWA Jurien	ANZAC Wreaths x 3	\$150.00
9/05/2018	246/898	Derricks Auto-Ag	1/2x5 H/T Bolt & Nuts, Nyloc Nuts	\$41.40
9/05/2018	246/898	Elite Builders Jurien Bay	Internal Wall frames at Cerv Rec Centre	\$8,804.60
9/05/2018	246/898	Elite Electrical Contracting	Supply air cond Cerv TV Broadcast Room	\$1,430.00
9/05/2018	246/898	Enlocus Pty Ltd	Site Visits, prep concept design	\$10,450.00
9/05/2018	246/898	Family Affair Cafe	Spray The Grey - Luncheon	\$120.00
9/05/2018	246/898	Fowler Electrical Cont.	Daikin W/M Reverse Cycle Airconditioner	\$2,844.31
9/05/2018	246/898	Fuel Distributors of WA	Diesel - Dandy Depot	\$13,940.32
9/05/2018	246/898	Jurien Bay Concrete	Finish Floor block outs of ppolish mix & foam	\$1,586.20
9/05/2018	246/898	Jurien Bay Newsagency	Verbatm DVD's	\$32.95
9/05/2018	246/898	Jurien Bay Newsagency	Newspapers	\$89.20
9/05/2018	246/898	Jurien Bay Progress Assoc.	Snorkel Trail/Artificial Reef Maintenance	\$2,000.00
9/05/2018	246/898	Jurien Bayview Realty	Staff Housing - 13/05/18 to 26/05/18	\$600.00
9/05/2018	246/898	Jurien Hardware	Large Dog Lead	\$14.25
9/05/2018	246/898	Jurien Hardware	Eveready Batteries	\$19.00
9/05/2018	246/898	Jurien Hardware	9kg Gas Refill	\$30.00
9/05/2018	246/898	Jurien Hardware	PVC Cement, priming fluid, tape elbows	\$54.36
9/05/2018	246/898	Jurien Hardware	Anchor Yellow - Bike Path	\$16.16
9/05/2018	246/898	Jurien Hardware	V-Rex blade, retractable knife, trailer socket	\$49.41
9/05/2018	246/898	Jurien Hardware	S/S Scourer	\$3.80
9/05/2018	246/898	Jurien Hardware	Digital Multimeter	\$38.00
9/05/2018	246/898	Jurien Hardware	Protective Clothing	\$166.25
9/05/2018	246/898	Jurien Home Timber & Hardware	Sanitary 770 Silicone	\$9.50
9/05/2018	246/898	Jurien Home Timber & Hardware	Plywood, Sealant, Drill, Pine, paint brush	\$479.55
9/05/2018	246/898	Jurien Home Timber & Hardware	Mixer Taps, paint, fittings	\$336.60
9/05/2018	246/898	Jurien Home Timber & Hardware	12mm Plastic Universal Adapt	\$4.95

9/05/2018	246/898	Jurien Home Timber & Hardware	Stihl - Chain Loop	\$57.00
9/05/2018	246/898	Jurien Signs	2 Sandy Cape Reflect vehicle magnatic signs	\$90.00
9/05/2018	246/898	Jurien Signs	Bashford St Sign	\$51.50
9/05/2018	246/898	Jurien Signs	Assorted Road Signs	\$1,264.37
9/05/2018	246/898	Jurien Trenching & Excavations	Hire Bobcat & Driver Sandy Cape Earthworks	\$200.00
9/05/2018	246/898	KMAC Botanical and Environ.	Re-vegetation Proj Turquoise Coast Hill River	\$2,956.80
9/05/2018	246/898	Landgate	Rural UV Gen revaluation 2017/18	\$12,425.60
9/05/2018	246/898	Landgate	Land Enquiry	\$25.30
9/05/2018	246/898	Local Gov Supervisors Assoc	LGSA Conference & Expo	\$1,094.50
9/05/2018	246/898	Lowman Engineering	Manufacture Hand Rail	\$1,160.00
9/05/2018	246/898	Lowman Engineering	Bearings and hubs for slasher	\$940.00
9/05/2018	246/898	Lowman Engineering	Manufacture Tank Lids for Dobbyn Park	\$760.00
9/05/2018	246/898	M F & W Purcell	Refund overpayment of rates - 7 Sandpiper st C	\$1,369.43
9/05/2018	246/898	Marketforce Pty Ltd	Advertising public Notices	\$325.25
9/05/2018	246/898	Mcleods Barristers & Solicitors	Legal Expenses - Sale Of 96 Bashford St	\$996.89
9/05/2018	246/898	Nessa Hall	Maintenance Contract April 18 - Dobbyn Park	\$866.16
9/05/2018	246/898	Nessa Hall	Fauntleroy Park Toilets	\$866.16
9/05/2018	246/898	Nessa Hall	Memorial Park	\$866.16
9/05/2018	246/898	Nessa Hall	Fauntleroy Park BBQ new	\$428.30
9/05/2018	246/898	Nessa Hall	Sanitary Bins	\$96.80
9/05/2018	246/898	Nessa Hall	Jurien Fish Cleaning Station	\$866.16
9/05/2018	246/898	Nessa Hall	Beachridge Park BBQ	\$428.30
9/05/2018	246/898	Nessa Hall	Middleton Park BBQ	\$428.30
9/05/2018	246/898	Nessa Hall	Baudlin Park BBQ	\$428.30
9/05/2018	246/898	Ray White Jurien Bay	Staff Housing - 11/05/18 to 24/05/18	\$670.00
9/05/2018	246/898	RDI Transport	Freight - Jurien Depot	\$82.50
9/05/2018	246/898	Shadbolt Electrical	Repairs to pump wiring - Pirate Park	\$202.40
9/05/2018	246/898	State Library of WA	DDS Freight Recoup 17-18 Cerv Library	\$301.82
9/05/2018	246/898	State Library of WA	DDS Freight Recoup 17-18 JB Library	\$301.82
9/05/2018	246/898	Vari-Skilled	Weld Park	\$676.63
9/05/2018	246/898	Vari-Skilled	Catalonia St reserve	\$417.17
9/05/2018	246/898	Vari-Skilled	Mowing Contract Apr 18 - Jurien Admin Ctr	\$1,529.61
9/05/2018	246/898	Vari-Skilled	Memorial Park	\$365.62
9/05/2018	246/898	Vari-Skilled	Bauldin Park	\$510.44
9/05/2018	246/898	Vari-Skilled	Cervantes Rec ground	\$876.21
9/05/2018	246/898	Vari-Skilled	Cervantes Rec ground car park	\$203.12
9/05/2018	246/898	Vari-Skilled	Jurien CRC	\$305.93
9/05/2018	246/898	Vari-Skilled	Cervantes Rec ground surrounds	\$1,488.17
9/05/2018	246/898	Vari-Skilled	Dobbyn Park	\$1,136.20
9/05/2018	246/898	Vari-Skilled	Ronsard Park	\$197.73
9/05/2018	246/898	Vari-Skilled	Eric Collinson	\$511.12
9/05/2018	246/898	Vari-Skilled	Fauntleroy Park	\$434.13
9/05/2018	246/898	Vari-Skilled	Weston St Reserve	\$182.81
9/05/2018	246/898	Vari-Skilled	JCC Oval & Surrounds	\$561.69
9/05/2018	246/898	Vari-Skilled	Civic Ctr Precinct	\$1,237.38
9/05/2018	246/898	Vari-Skilled	Jurien Town Hall	\$126.85
9/05/2018	246/898	Vari-Skilled	JB Police Station	\$205.18
9/05/2018	246/898	Vari-Skilled	Passamani Park	\$561.49
9/05/2018	246/898	Vari-Skilled	Cervantes CBD	\$203.12
9/05/2018	246/898	Vari-Skilled	Pioneer Park	\$1,249.82
9/05/2018	246/898	Vari-Skilled	Pacman Park	\$561.32
9/05/2018	246/898	Vari-Skilled	5A Park Middleton Bvd	\$842.82
9/05/2018	246/898	Vari-Skilled	R E Snook Park	\$561.32
9/05/2018	246/898	Vari-Skilled	Seinor Park	\$293.38
9/05/2018	246/898	WA Hino Sales & Service	Shock Absorbers	\$500.63
9/05/2018	246/898	Waterlogic Australia Pty Ltd	Lease water filters Civic Centre May 18	\$678.70
9/05/2018	246/898	Waterlogic Australia Pty Ltd	Lease Water Filters Jurien Admin May18	\$286.00
9/05/2018	246/898	Waterlogic Australia Pty Ltd	Lease Water Filters Jurien Depot May 18	\$591.80
9/05/2018	246/898	WALGA	Financial Fundamentals Course	\$1,012.00
9/05/2018	246/898	Winc Australia Pty Limited	Tomato Sauce	\$20.15
9/05/2018	246/898	Winc Australia Pty Limited	Desk Organiser & Pen Holder	\$33.86
9/05/2018	246/898	Woodlands Distributors	Turf Management Advice meeting	\$1,188.00
9/05/2018	246/898			<b>\$242,311.90</b>
14/05/2018	247/899	Abco Products	Paper towel, toilet tissue - Jurien Office	\$233.65
14/05/2018	247/899	ANNE-MARIE CONNAUGHTON	Face painting 11am-4pm Spray the Grey	\$300.00
14/05/2018	247/899	Badgingarra Community Assn	Shire Matters Iss 109 & 110 The Sandpaper	\$100.00
14/05/2018	247/899	Bay Glass	Roller blind components	\$36.00
14/05/2018	247/899	Bitutek Pty Ltd	Spray/cover with bituminous Dandaragan Rd	\$96,559.62
14/05/2018	247/899	BookEasy Pty Ltd	Monthly fee April 2018	\$330.00
14/05/2018	247/899	Canover 24 Volunteer BFB	Tank compound clearing - Jurien Bay Heights	\$250.00

14/05/2018	247/899	Canover 24 Volunteer BFB	Tank compound clearing - Marine Fields	\$250.00
14/05/2018	247/899	Cervantes General Store	Catering FCO AGM Badgingarra 14/3/18	\$600.00
14/05/2018	247/899	Cervantes General Store	Catering LEMC meeting 21/2/18	\$252.00
14/05/2018	247/899	Courier Australia	Freight Cervantes Library	\$19.84
14/05/2018	247/899	Courier Australia	Freight Jurien Admin	\$46.79
14/05/2018	247/899	Courier Australia	Freight Dandy Depot	\$10.44
14/05/2018	247/899	Courier Australia	Freight FESA	\$14.61
14/05/2018	247/899	Dandaragan CRC	Cleaner wages/prod Dand Pioneer Pk toilets	\$224.61
14/05/2018	247/899	Dandaragan CRC	Cleaner wages/prod Dandy Depot Apr 18	\$801.87
14/05/2018	247/899	Dandaragan Store	Cleaning materials	\$5.20
14/05/2018	247/899	Dandaragan Store	Meetings and kitchen supplies	\$43.70
14/05/2018	247/899	Dandaragan Store	Other Civic and Official Functions and Events	\$10.00
14/05/2018	247/899	Dandaragan Store	Other Civic and Official Functions and Events	\$10.84
14/05/2018	247/899	Enlocus Pty Ltd	Prep est for prelim concept JB Skate Pk	\$2,310.00
14/05/2018	247/899	Hema Maps Pty Ltd	Various maps merchandise	\$162.06
14/05/2018	247/899	J BAY CONCRETING	1st stage concrete floor grinding	\$11,165.00
14/05/2018	247/899	Jurien Bay CRC	Shire Matters in Craytales #317	\$335.00
14/05/2018	247/899	Jurien Bay Concrete	Blue metal for road patching	\$990.00
14/05/2018	247/899	Jurien Bay Motel Apartments	BookEasy Booking	\$131.25
14/05/2018	247/899	Jurien Bay Panel & Paint	Supply & install door glass R/H/R PLV236	\$308.91
14/05/2018	247/899	Jurien Hardware	9kg gas refill	\$60.00
14/05/2018	247/899	Jurien Hardware	PVC gloves - Sandy Cape Camp Kitchens	\$6.65
14/05/2018	247/899	Jurien Hardware	Car alarm key battery A23 12v - Jurien Depot	\$11.40
14/05/2018	247/899	Jurien Hardware	Delshine sanitiser - Sandy Cape Toilets	\$90.00
14/05/2018	247/899	Jurien Hardware	9kg gass refill - Sandy Cape Camp Kitchens	\$60.00
14/05/2018	247/899	Jurien Hardware	Floor grate, enamel white, duraguard	\$245.81
14/05/2018	247/899	Jurien Hardware	Silicone spray Jurien Depot	\$23.75
14/05/2018	247/899	Jurien Hardware	Staff Uniforms/Protective Clothing	\$560.25
14/05/2018	247/899	Jurien Hardware	Whipper snipper cord - Jurien Depot	\$99.75
14/05/2018	247/899	Jurien Hardware	Cable joiner	\$83.00
14/05/2018	247/899	Jurien Hardware	AAA energizer batteries	\$18.53
14/05/2018	247/899	Jurien Hardware	20mm elbow, ball valve, teflon tape	\$33.44
14/05/2018	247/899	Jurien Hardware	9kg gas refill	\$30.00
14/05/2018	247/899	Jurien Hardware	9kg gas refill	\$60.00
14/05/2018	247/899	Jurien Hardware	Key cutting	\$9.50
14/05/2018	247/899	Jurien Hardware	9v batteries	\$9.50
14/05/2018	247/899	Jurien Home Timber & Hardware	Toilet rolls Sandy Cape Toilets	\$104.00
14/05/2018	247/899	Jurien Home Timber & Hardware	Water containers 22L	\$92.25
14/05/2018	247/899	Jurien Home Timber & Hardware	20mm elbows, poly directors & pipe	\$86.85
14/05/2018	247/899	Jurien Home Timber & Hardware	Toilet rolls	\$52.00
14/05/2018	247/899	Jurien Home Timber & Hardware	Toilet rolls	\$52.00
14/05/2018	247/899	Jurien Home Timber & Hardware	Toilet rolls	\$104.00
14/05/2018	247/899	Jurien Home Timber & Hardware	Toilet rolls	\$52.00
14/05/2018	247/899	Jurien Tyre & Auto	Fit new tyre & tube PTT001	\$549.00
14/05/2018	247/899	Jurien Tyre & Auto	4 x supply & fit rear tyres PTL022	\$1,316.00
14/05/2018	247/899	Landgate	GRV 10/3/18-06/04/18	\$113.92
14/05/2018	247/899	Landgate	RUV 03/03/18-16/03/18	\$80.90
14/05/2018	247/899	Landgate	Mining tenements	\$807.35
14/05/2018	247/899	Midcoast Hydraulic Services	Hydraulic fittings circular blade att PSP034	\$570.70
14/05/2018	247/899	Moora Glass Service	Sup & fit windows & shutters	\$11,633.60
14/05/2018	247/899	Pinnacles Express	Advert traineeship Feb18	\$20.00
14/05/2018	247/899	Pinnacles Express	Shire Matters Dec17-Apr18	\$440.00
14/05/2018	247/899	Shadbolt Electrical	Inst new cables level probe Water Tank	\$359.50
14/05/2018	247/899	Soils Aint Soils	Charcoal tree curbings	\$336.00
14/05/2018	247/899	Stewart & Heaton Clothing	Protective clothing	\$90.16
14/05/2018	247/899	Stewart & Heaton Clothing	Protective clothing	\$574.99
14/05/2018	247/899	Stewart & Heaton Clothing	Protective clothing	\$283.26
14/05/2018	247/899	The Truss Factory	Sup door frames, wall frames	\$26,950.00
14/05/2018	247/899	The Workwear Group Pty Ltd	Staff Uniforms/Protective Clothing	\$232.10
14/05/2018	247/899	Total Eden - Bibra Lake	Water meter Memorial Park - Cervantes	\$588.60
14/05/2018	247/899	T-Quip	Air filter kit	\$33.60
14/05/2018	247/899	Vanguard Press	Brochure distribution April 2018	\$407.00
14/05/2018	247/899	Waterman Irrigation Australia	Replace water meter at Dand Standpipe	\$1,808.40
14/05/2018	247/899	WALGA	Staff Training	\$1,012.00
14/05/2018	247/899	Worldwide Printing Solutions	Camp fee envelopes & inserts - Sandy Cape	\$880.00
14/05/2018	247/899	Wurth Australia Pty Ltd	Spray bottles, window adhesive, spray dev	\$219.29
14/05/2018	247/899			<b>\$166,752.44</b>
17/05/2018	248	PAYROLL	PAYROLL	\$102,649.05
17/05/2018	248			<b>\$102,649.05</b>
21/05/2018	249/900	AMPAC Debt Recovery	Legal Expenses - 01/05 to 04/05/18	\$233.20

21/05/2018	249/900	AMPAC Debt Recovery	Legal Expenses - 01/05 to 04/05/18	\$567.50
21/05/2018	249/900	Bitutek Pty Ltd	Supply CRS Emulsion	\$880.00
21/05/2018	249/900	Cervantes Hardware and Marine	Quick Fit Tees, m/stud, tubing	\$78.10
21/05/2018	249/900	Cervantes Hardware and Marine	Oil & Fuel Filters	\$72.60
21/05/2018	249/900	Cervantes Hardware and Marine	Fuel Filter	\$12.10
21/05/2018	249/900	Cervantes Hardware and Marine	Saw Chain .375"	\$45.38
21/05/2018	249/900	Cervantes Hardware and Marine	Maint Free Battery	\$120.00
21/05/2018	249/900	Cervantes Hardware and Marine	Javelin Herbicide	\$550.00
21/05/2018	249/900	Cervantes Hardware and Marine	Sulphate of ammonia	\$29.90
21/05/2018	249/900	Cervantes Hardware and Marine	Red Self adhesive reflector	\$9.35
21/05/2018	249/900	Cervantes Hardware and Marine	XF92 Davey Pump	\$475.00
21/05/2018	249/900	Cervantes Hardware and Marine	PVC Fittings, Solvent Cement, Primer	\$76.13
21/05/2018	249/900	Cervantes Hardware and Marine	PVC Fittings, 2"poly socket	\$42.90
21/05/2018	249/900	CJD Equipment Pty Ltd	Repairs to Airconditioning Unit	\$1,832.60
21/05/2018	249/900	Dandaragan CRC	Staff Training - HR Truck Licence Course	\$3,200.00
21/05/2018	249/900	Dandaragan Concrete	Supply Of Water Cart - Cadda Rd	\$1,870.00
21/05/2018	249/900	Dandaragan Mechanical Services	SMF58 Battery	\$253.00
21/05/2018	249/900	Dandaragan Mechanical Services	9 Leaf Spring Pack, U Bolt	\$824.85
21/05/2018	249/900	Dandaragan Mechanical Services	Overflow Valve	\$95.45
21/05/2018	249/900	Dandyman Images	Photo - Councillors, Exec Staff	\$400.00
21/05/2018	249/900	Dep Water and Enviro. Reg	Cont Waste tracking 17/04 to 26/04/18	\$704.00
21/05/2018	249/900	Dept Parks and Wildlife	Mechandise for Visitors Centre	\$158.88
21/05/2018	249/900	Derricks Auto-Ag	ZP Cuphead bolts & nuts	\$10.50
21/05/2018	249/900	Derricks Auto-Ag	Quick Fit Elbow, Airbrake union	\$69.00
21/05/2018	249/900	Derricks Auto-Ag	Hydraulic hose, fittings, adaptors	\$252.40
21/05/2018	249/900	Direct Contracting Pty Ltd	Drummond Ccs rd reconstruction	\$235,704.70
21/05/2018	249/900	Elite Builders Jurien Bay	External Cladding. Matrix board completed	\$20,000.00
21/05/2018	249/900	Garison Farms	200m3 Gravel	\$550.00
21/05/2018	249/900	GJW & SJ Howard	Contract Water Supply	\$2,255.55
21/05/2018	249/900	Jurien Bay Adventure Tours	BookEasy Booking	\$234.50
21/05/2018	249/900	Jurien Bay Chamber Commerce	Refund Overpayment of Invoice	\$25.00
21/05/2018	249/900	Jurien Bay Panel & Paint	RepairChip Windscreen PLV208	\$143.00
21/05/2018	249/900	Jurien Bayview Realty	Staff Housing 27/05 to 09/06/18	\$600.00
21/05/2018	249/900	Jurien Hardware	Sprinklers, elbows, sockets & director	\$44.38
21/05/2018	249/900	Jurien Hardware	Garden rakes	\$74.10
21/05/2018	249/900	Jurien Hardware	Elastic straps	\$7.12
21/05/2018	249/900	Jurien Hardware	Staff Uniforms/Protective Clothing	\$180.00
21/05/2018	249/900	Jurien Hardware	Gloves, watering can & pressure sprayer	\$47.98
21/05/2018	249/900	Jurien Home Timber & Hardware	Grab rails	\$295.00
21/05/2018	249/900	Jurien Home Timber & Hardware	Screws & lenghts of meranti	\$140.20
21/05/2018	249/900	Jurien Home Timber & Hardware	10lt low sheen white finish ext	\$165.00
21/05/2018	249/900	Jurien Home Timber & Hardware	Screws, brickies coastal 20kg, b/splitter	\$51.75
21/05/2018	249/900	Jurien Home Timber & Hardware	O-ring	\$55.00
21/05/2018	249/900	Jurien Home Timber & Hardware	Key & Padlock	\$12.00
21/05/2018	249/900	Jurien Home Timber & Hardware	Brass Padlock	\$37.60
21/05/2018	249/900	Jurien Signs	1700x1100 anti grafitti maps - info bay	\$890.00
21/05/2018	249/900	Jurien Trenching & Excavations	Remove sand Turquoise Way Trail	\$1,700.00
21/05/2018	249/900	Jurien Tyre & Auto	New tyres & alignment PLV197	\$647.20
21/05/2018	249/900	Jurien Tyre & Auto	Fuel filter	\$10.00
21/05/2018	249/900	MACH 1 AUTO ONE	Pro-Flow air compressors	\$897.00
21/05/2018	249/900	Mid Coast Contracting	Reset pipe fitting, reconnect & test bore	\$302.50
21/05/2018	249/900	Mid Coast Contracting	Supply 12v pressure switch Ardross Bore	\$167.77
21/05/2018	249/900	Parkwood Hardware	Cosmo Care Suite Memorial Park Toilets	\$299.66
21/05/2018	249/900	Parkwood Hardware	Solder, hacksaw, oxy hose/connected	\$198.61
21/05/2018	249/900	Parkwood Hardware	Stiebel Simplex electrical HWS - BCC	\$529.77
21/05/2018	249/900	Ray White Jurien Bay	Staff Housing - 25/05 TO 07/06/18	\$670.00
21/05/2018	249/900	SARI ASIA PTY LTD	Merchandise for TQVC	\$434.94
21/05/2018	249/900	Scott Printers Pty Ltd	Magnets merchandise TQVC	\$600.60
21/05/2018	249/900	Scott Printers Pty Ltd	Postcare merchandise TQVC	\$766.70
21/05/2018	249/900	Shadbolt Electrical	Install GPOs to store room Council Chambers	\$263.50
21/05/2018	249/900	Swan Aussie Sheds	Tube stripped & hot dip galv Cervantes	\$740.24
21/05/2018	249/900	WA Hino Sales & Service	Hino 500 Series 2628 Water Cart - PTH017	\$140,916.15
21/05/2018	249/900	Westcoast Painting Contractors	25% deposit - paint exterior walls	\$2,310.00
21/05/2018	249/900	Woodlands Distributors	Nutrian Response, Gypsum	\$1,925.00
<b>21/05/2018</b>	<b>249/900</b>			<b>\$427,755.36</b>
25/05/2018	250/901	AMPAC Debt Recovery	Legal Expenses 7/5 to 11/05/18	\$233.20
25/05/2018	250/901	AMPAC Debt Recovery	Legal Expenses 7/5 to 11/05/18	\$369.66
25/05/2018	250/901	AV Truck Services Pty Ltd	Controlled Pressure Valve	\$167.38
25/05/2018	250/901	Avon Waste	Jurien Information Bay 2 x 6m3 skip bins	\$140.00
25/05/2018	250/901	Avon Waste	Rubbish Collection 30/04 to 11/05/18	\$4,682.70



25/05/2018	250/901	Avon Waste	Cervantes Rec Ground 30/04 to 11/05/18	\$280.00
25/05/2018	250/901	Avon Waste	Recycling 30/04 to 11/05/18	\$3,523.85
25/05/2018	250/901	Avon Waste	Street Bins 30/04 to 11/05/18	\$275.22
25/05/2018	250/901	Avon Waste	Service Jetty Bins	\$26.00
25/05/2018	250/901	Avon Waste	Recycling Processing Charges	\$348.90
25/05/2018	250/901	Avon Waste	Skip bins Cervantes Waste	\$360.00
25/05/2018	250/901	Avon Waste	Badgy Waste Frontlift bins 30/04 to 11/05/18	\$570.00
25/05/2018	250/901	Avon Waste	Sandy Cape Frontlift bins 30/04 to 11/05/18	\$630.00
25/05/2018	250/901	Avon Waste	Fish Cleaning Bins	\$288.00
25/05/2018	250/901	Avon Waste	Additional Weekly Recycle 30/04 to 11/05/18	\$3,514.91
25/05/2018	250/901	Avon Waste	Additional Servicing Sandy Cape Bins	\$380.00
25/05/2018	250/901	Avon Waste	Servicing Jurien Oval Front Lift Bins	\$540.00
25/05/2018	250/901	Avon Waste	Street Bins - additional Fri Collection	\$142.56
25/05/2018	250/901	Avon Waste	Street Bins - additional ANZAC day Collection	\$142.56
25/05/2018	250/901	Avon Waste	Rubbish Collection 16/04 to 27/04/18	\$4,682.70
25/05/2018	250/901	Avon Waste	Recycling 16/04 to 27/04/18	\$3,523.85
25/05/2018	250/901	Avon Waste	Additional Weekly Recycle 16/04 to 27/04/18	\$3,514.91
25/05/2018	250/901	Avon Waste	Street Bins 16/04 to 27/04/18	\$275.22
25/05/2018	250/901	Avon Waste	Service Jetty Bins	\$26.00
25/05/2018	250/901	Avon Waste	Recycling Processing Charges	\$543.30
25/05/2018	250/901	Avon Waste	Skip bins Cervantes Waste	\$1,080.00
25/05/2018	250/901	Avon Waste	Badgy Waste Frontlift bins 16/04 to 27/04/18	\$570.00
25/05/2018	250/901	Avon Waste	Sandy Cape Frontlift bins 16/04 to 27/04/18	\$630.00
25/05/2018	250/901	Avon Waste	Fish Cleaning Bins	\$288.00
25/05/2018	250/901	Avon Waste	Servicing Jurien Oval Front Lift Bins	\$540.00
25/05/2018	250/901	Avon Waste	Jurien Information Bay 2 x 6m3 skip bins	\$280.00
25/05/2018	250/901	Avon Waste	Cervantes Rec Ground Information Bay	\$45.00
25/05/2018	250/901	Boc Gases	Gas Cylinder Hire	\$81.82
25/05/2018	250/901	Bruce Rock Engineering	Rollguard 4.2mm x 650mm black	\$231.00
25/05/2018	250/901	Central Regional TAFE	Staff Training - Cert III Comm Services	\$1,592.50
25/05/2018	250/901	Comm. and Wireless Services	Replacement of parts - Cerv TV & Radio	\$1,578.47
25/05/2018	250/901	Comm. and Wireless Services	Replacement UPS for Cerv TV & Radio	\$1,796.85
25/05/2018	250/901	Courier Australia	Freight Dandy Depot	\$11.24
25/05/2018	250/901	Courier Australia	Freight Pathology	\$10.44
25/05/2018	250/901	Courier Australia	Freight FESA	\$14.61
25/05/2018	250/901	Courier Australia	Freight - Badgingarra Lib	\$38.54
25/05/2018	250/901	Courier Australia	Freight - Dandy Depot	\$10.44
25/05/2018	250/901	Covs Parts Pty Ltd	Reflective Sign, rear sign markers	\$392.05
25/05/2018	250/901	Covs Parts Pty Ltd	Marker Plates, oil filter	\$217.54
25/05/2018	250/901	Dandaragan Mechanical Services	Valve Roller	\$536.25
25/05/2018	250/901	Dandaragan Mechanical Services	Foot Pivot	\$123.35
25/05/2018	250/901	Department of Transport	J/Bay Fish Clean Stn Usage 1/3 -30/04/18	\$415.37
25/05/2018	250/901	Derricks Auto-Ag	Nuts & Bolts	\$25.62
25/05/2018	250/901	Elite Electrical Contracting	Erect External steel frams - Cerv Rec Centre	\$4,359.13
25/05/2018	250/901	Family Affair Cafe	Catering Lunch Meeting	\$72.00
25/05/2018	250/901	Family Affair Cafe	Catering Lunch Meeting	\$80.00
25/05/2018	250/901	Fuel Distributors of WA Pty Ltd	Diesel - Jurien Depot	\$6,026.40
25/05/2018	250/901	Fuel Distributors of WA Pty Ltd	Diesel - Jurien Depot	\$9,998.76
25/05/2018	250/901	Fuel Distributors of WA Pty Ltd	Diesel - Dandy Depot	\$10,803.49
25/05/2018	250/901	Haulmore Trailer Rentals Pty Ltd	Tri Water Tanker Hire	\$2,918.64
25/05/2018	250/901	Haulmore Trailer Rentals Pty Ltd	High Pressure Acid Wash Tanker	\$215.60
25/05/2018	250/901	Insight Call Centre Services	Afterhours Calls April 2018	\$84.37
25/05/2018	250/901	Jurien Auto Electrics	Replace Battery - PLV251	\$254.00
25/05/2018	250/901	Jurien Hardware	9kg Gas Refill	\$60.00
25/05/2018	250/901	Jurien Hardware	Scourer and shovel	\$32.30
25/05/2018	250/901	Jurien Hardware	Black Post, Zenith Hang Cell	\$18.53
25/05/2018	250/901	Jurien Hardware	9kg Gas Refill	\$60.00
25/05/2018	250/901	Jurien Hardware	9kg Gas Refill	\$30.00
25/05/2018	250/901	Jurien Hardware	Rags, Spray & Wipe, trigger spray	\$46.55
25/05/2018	250/901	Jurien Hardware	Bannister Brush	\$7.13
25/05/2018	250/901	Jurien Hardware	Black Knight Gripmaster	\$6.18
25/05/2018	250/901	Jurien Home Timber & Hardware	Jumbo Toilet Rolls	\$52.00
25/05/2018	250/901	Jurien Home Timber & Hardware	Drill Bits Spear & Jack Clamp	\$149.96
25/05/2018	250/901	Jurien Pest Management	Treat Ant Infestation	\$198.00
25/05/2018	250/901	Jurien Signs	No Vehicle Access Sign	\$548.00
25/05/2018	250/901	Jurien Tyre & Auto	Service Toyota Hilux - PLV248	\$218.50
25/05/2018	250/901	Jurien Tyre & Auto	Replace Tyre PTC019	\$207.95
25/05/2018	250/901	Landmark Operations Limited	Sout Strainer Assy	\$130.42
25/05/2018	250/901	Lowman Engineering	Repairs to Mower Trailer PTL023	\$1,661.00
25/05/2018	250/901	Melrose Cellars - Cellarbrations	Refreshments	\$157.00

25/05/2018	250/901	Midcoast Hydraulic Services	Hydraulic Hoses for Circ Saw attachment	\$356.24
25/05/2018	250/901	Momar Australia Pty Ltd	Moly DSD Shield Ezlube Nitcracker	\$718.85
25/05/2018	250/901	Moora Health Centre	Dandy Staff Flu Vaccines x 5	\$88.00
25/05/2018	250/901	New Norcia Aboriginal Corp	Reimb Travel Expenses Yued Heritage Group	\$600.00
25/05/2018	250/901	Northlea Homes	Hire OF temporary fencing	\$916.48
25/05/2018	250/901	ORH Truck Solutions	Supply & Fit 50mm ring feeder	\$3,850.00
25/05/2018	250/901	Professional Trapping Supplies	Telescopic Bit Stick	\$229.00
25/05/2018	250/901	RBC Rural	Meterplan Charge P/Copiers	\$1,069.10
25/05/2018	250/901	Russ - Hills Contracting	Freight - Dandy Depot	\$303.16
25/05/2018	250/901	Shadbolt Electrical	Electrical Repairs to New Civic Centre	\$7,412.43
25/05/2018	250/901	smallprint Australia	Staff Training - Participation Guides	\$222.00
25/05/2018	250/901	Soils Aint Soils	560m3 Enviro Mulch	\$16,500.00
25/05/2018	250/901	Stewart & Heaton Clothing	Fire Fighting Clothing	\$177.40
25/05/2018	250/901	Telstra	WHISPIR SMS Usage May 18	\$354.33
25/05/2018	250/901	The Dog Line	Barking Training Collars	\$334.80
25/05/2018	250/901	The Workwear Group Pty Ltd	Staff Uniforms	\$141.85
25/05/2018	250/901	Westcoast Painting Contractors	Repair & Paint Walls Day Care Centre	\$2,997.50
25/05/2018	250/901	Winc Australia Pty Limited	Stationery - May 2018	\$368.45
25/05/2018	250/901	Woodlands Distributors	DAP - 500kg	\$658.35
25/05/2018	250/901	Wren Oil	Oil Waste Disposal	\$16.50
<b>25/05/2018</b>	<b>250/901</b>			<b>\$115,400.36</b>
31/05/2018	251	PAYROLL	PAYROLL	\$110,167.05
<b>31/05/2018</b>	<b>251</b>			<b>\$110,167.05</b>
<b>Grand Total</b>				<b>\$1,165,036.16</b>

Ref: 112-18A

15 June 2018

Mr Garrick Yandle  
Executive Manager Infrastructure, Governance Officer  
Shire of Dandaragan  
PO Box 676  
Jurian Bay, WA 6516

Dear Mr Yandle,

**Re: Professional Desktop Valuation Services - of Land Asset for Market Rental Value Purposes**

In accordance with instructions received, *Griffin Valuation Advisory* have undertaken a Desktop Valuation of the Land Asset located at;

*Shire of Dandaragan*  
❖ 21 Carmella Street, Jurian Bay Western Australia 6516

taken all necessary information and valued this on the basis of “*Market Rental Value*” as defined in the valuation report.

We have pleasure in enclosing our valuation report.

We take this opportunity to thank you for your instructions in this matter and should you have any other valuation requirements, please do not hesitate to contact us.

Yours sincerely,  
**Griffin Valuation Advisory**



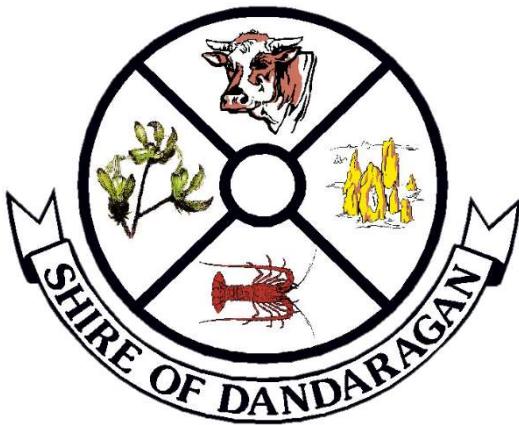
**John Harvey** FAPI (Val) (P&M) MRICS  
RICS Registered Valuer | API Certified Practising Valuer  
Director | Head of Property Valuations

# Desktop Valuation Report

Land Asset

For Market Rental Value Purposes

Prepared for



June 2018

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## **EXECUTIVE SUMMARY**

### **Instructions**

In accordance with instructions received from Mr Garrick Yandle Executive Manager Infrastructure, Governance Officer, *Shire of Dandaragan*, *Griffin Valuation Advisory* has valued the land asset on the basis of *Market Rental Value*.

### **Purpose of Valuation**

*Griffin Valuation Advisory* has prepared this Desktop Valuation Report for Market Rental Value Purposes.

### **Date of Valuation**

This Desktop Valuation Report is dated:

June 2018

### **Location**

The subject ground lease is located at 21 Carmella Street, Jurien Bay within the *Shire of Dandaragan* approximately 3 Kilometres North of the Jurien Bay business district.

### **Valuation**

Subject to the overriding stipulations contained within this Desktop Valuation Report completed by *Griffin Valuation Advisory*, the land asset is valued as follows;

*Market Rental Value*

**\$ 12,000 Per Annum Net**

*Twelve Thousand Dollars*

This Desktop Valuation Report has been completed by John Harvey who has over 31 years professional property valuation experience and holds the following qualifications;

- ❖ Fellow Member of the Australian Property Institute (FAPI)
- ❖ Licensed Property Valuer in Western Australia (#44074)
- ❖ API Certified Practising Valuer (CPV)
- ❖ Professional Member of the Royal Institution of Chartered Surveyors, (MRICS)
- ❖ RICS Registered Valuer

### ***Declaration & Limitations***

*Griffin Valuation Advisory* and their employees have no pecuniary interest in the outcome of this Desktop Valuation Report prepared for *Shire of Dandaragan* or any subsidiaries.

This advice is prepared for internal purposes on the specific instructions of the *Shire of Dandaragan*. This advice should not be relied upon by anyone other than the *Shire of Dandaragan* whether for that purpose or otherwise.

*Griffin Valuation Advisory* accepts no responsibility to third parties nor does it contemplate that this report will be relied upon by third parties. We invite other parties who may come into possession of this report to seek our direct written consent before relying upon or referring to this report and we reserve our rights to review the content and context in which our advice is quoted or referred to in the event that our consent is given.

To any party relying on this valuation report *Griffin Valuation Advisory* advise that this executive summary must be read in conjunction with the body of the report which this executive summary forms part. This Desktop Valuation Report executive summary should not be relied upon in isolation for any other purpose, other than which this report is prepared.

## QUALIFICATIONS

The valuation amounts contained in this report are exclusive of the 10% Goods & Services Tax (GST).

No deduction has been made from our valuation in respect of any outstanding amounts owing under any finance leases or hire purchase agreements. The subject equipment has been valued as being wholly owned and free of all encumbrances.

This valuation has been prepared on the basis that full disclosure of all information and facts which may effect the valuation has been made to us. *Griffin Valuation Advisory* do not accept any liability or responsibility whatsoever for the valuation if full disclosure has not been made. Furthermore, *Griffin Valuation Advisory* do not accept responsibility for any consequential error or defect in the valuation which has resulted from any error, omission or inaccuracy in data or information supplied by the client or its officers and agents.

In reaching our opinion, *Griffin Valuation Advisory* have utilised certain historical facts and relevant market data, available up to the date of our valuation. Our instructions did not require us to consider the effect of gains or losses, which may arise as a result of the future fluctuations in the property market. *Griffin Valuation Advisory* therefore, do not except responsibility whatsoever, for losses caused by such fluctuations.

*Market Movement, "This valuation is current as at the date of valuation. The value assessed herein may change significantly and unexpectedly over a relatively short period (including as a result of general market movements or factors specific to the particular property). We do not accept liability for losses arising from such subsequent changes in value. Without limiting the generality of the above comment we do not assume any responsibility or accept any liabilities where this valuation report is relied after the expiration of three months from the date of the valuation."*

## FORCE MAJEURE

Neither party will be held liable for any delay or failure to perform any of its obligations where such a failure is caused by a Force Majeure Event (other than the obligation to pay money) if, as soon as reasonably possible after the beginning of the Force Majeure Event the affected party gives a notice to the other party which complies with the following:

- (i) Specifies the obligations that the party cannot perform,
- (ii) Fully specifies the nature of the Force Majeure Event,
- (iii) Estimates a time by which the Force Majeure Event may cease, and
- (iv) Specifies the measures that are to be adopted to remedy or abate the Force Majeure Event.

The party prevented from performing its obligations due to the Force Majeure Event must:

- (i) Remedy the Force Majeure Event to the extent reasonably practicable and resume performance of the obligations as soon as reasonably possible, and
- (ii) Take all reasonable action to mitigate any losses that may be suffered by the other party as a result of the failure of the first mentioned party to carry out its obligations imposed by this Contract.

Where the Force Majeure Event prevents that Contractor from performing its obligations under the Contract, the Principal may obtain the Goods or Services from another source at its own cost

An amendment to the Delivery Date or Service Completion Date (as relevant) is the Contractor's sole remedy for any delays resulting from a Force Majeure Event. The Contractor will not be entitled to payment of any damages, costs or expenses of the Contractor relating to the Force Majeure Event.

If the Force Majeure Event proceeds for a continuous period of 30 days or for successive periods totalling more than 30 days in a 60 day period, the Principal may, at its absolute discretion, terminate the Contract. In the event of such termination the Principal will not be liable to the Contractor for any Claims, liability or damage resulting directly or indirectly from the termination.

Neither the whole nor any part of this valuation nor any reference thereto may be included in any documents, circular or statement without our approval of the form and context in which it will appear.

*Griffin Valuation Advisory*

Griffin Valuation Advisory

Date: 15 June 2018 (Date of signing of report)

Ref: 112-18A



## INSTRUCTIONS

In accordance with instructions received from Mr Garrick Yandle Executive Manager Infrastructure, Governance Officer, *Shire of Dandaragan*, Griffin Valuation Advisory has valued the land asset on the basis of *Market Rental Value*.

## PURPOSE OF VALUATION

Griffin Valuation Advisory has prepared this Desktop Valuation Report for Market Rental Value Purposes.

## DATE OF VALUATION

This Desktop Valuation Report is dated June 2018, based on our last physical site inspections of the depot in March 2017.

## LOCATION

The subject ground lease is located at 21 Carmella Street, Jurien Bay within the *Shire of Dandaragan* approximately 3 Kilometres North of the Jurien Bay business district



Source Landgate

### Site Identification:

Griffin Valuation Advisory has not sighted a survey plan however based upon information provided by *Shire of Dandaragan*, we are satisfied that we have correctly identified the subject leased area.

### Services and Amenities:

All the usual services including water, electricity, sewerage and telephone are available to the subject site.

## LEGAL DESCRIPTION & ENCUMBRANCES

Title not searched.

## BASIS OF VALUATION

### Market Rental Value

Market Rental Value is defined as “The estimated amount for which a property, or space within a property, should lease on the date of valuation between a willing lessor and a willing lessee on appropriate lease terms in an arm’s-length transaction, after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion”.

## VALUATION METHODOLOGY

### Highest and Best Use

The Market Value of the land has been determined on the basis of highest and best use. This method involves sourcing comparable rental evidence of similar type properties within the same or similar localities as the subject. This method takes into consideration factors such as location, zoning, land area, development potential and topography. Comparisons can be made in many forms including straight comparison, or analysis on a rate per area.

### Valuation Approaches

In order to estimate the price implied by the appropriate Basis of Value, the Valuer will need to apply one or more valuation approaches. A valuation approach or method refers to generally accepted analytical methodologies that are in common use.

### Market based valuation approaches include:

Market based valuations normally employ one or more of the valuation approaches by applying the economic principle of substitution, using market derived data. This principle holds that a prudent person would not pay more for a good or service than the cost of acquiring an equally satisfactory substitute good or service, in the absence of the complicating factors of time, greater risk, or inconvenience. The lowest cost of the best alternative, whether a substitute or the original, tends to establish Market Value.

### Sales/Rentals Direct Comparison Approach

This comparative approach considers the sale/rental of similar or substitute properties and related market data, and establishes a value estimate by processes involving comparison. In general, a property being valued is compared with sales/rentals of similar properties that have been transacted in the market. Listings and offerings may also be considered.

### Market Rental Value

The Market Rental Value for the proposed subject Ground Lease has been determined on the basis of comparable rental evidence with similar market characteristics where possible, taking into consideration the size, type of leased area, zoning, current use, quality of the improvements and the location.

### Methodology Conclusions

In determining the current market rental value of the property, Griffin Valuation Advisory has considered the market rental comparison approach on a per annum and per square metre basis, taking into consideration the commercial location, current use and quality of the improvements. The market comparison method takes into consideration the current land use.

### TOWN PLANNING

The subject property is currently zoned industrial and located within the Local authority municipal boundaries of the *Shire of Dandaragan*. The specific asset has been valued in accordance with its permitted use as outlined within the *Shire of Dandaragan* Local Planning Scheme.

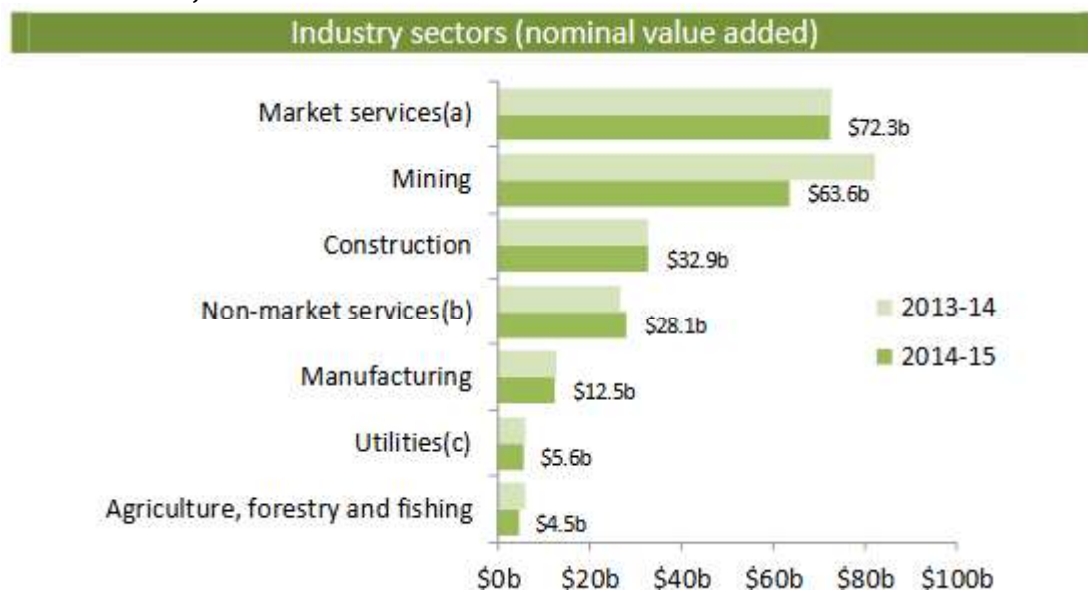
### IMPROVEMENTS

Land value only.

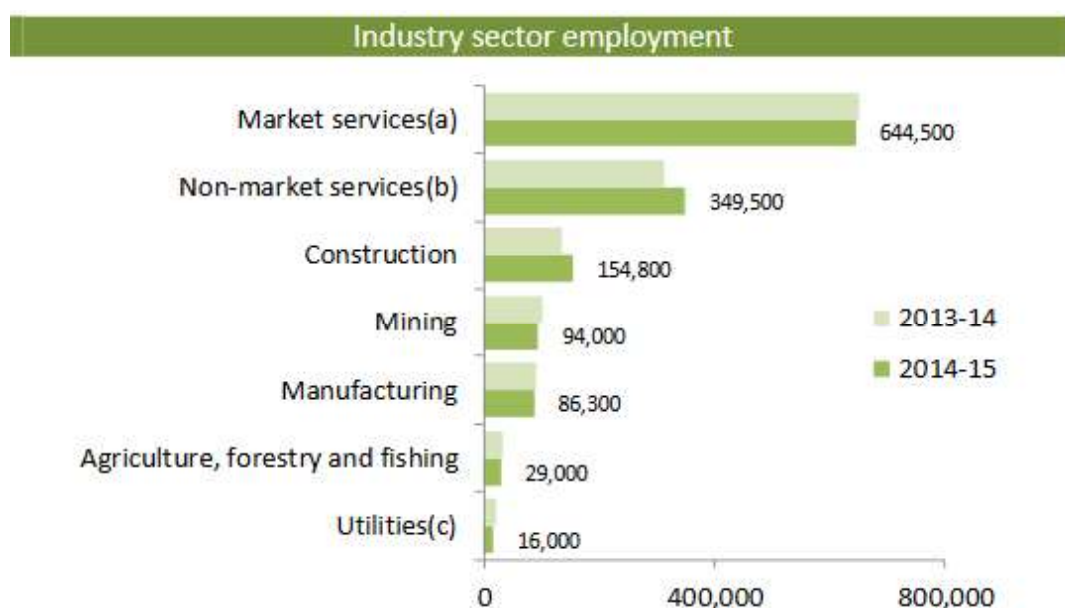
### MARKET OVERVIEW <sup>(1)</sup>

The following excerpt is from the *Government of Western Australia - Department of State Development* which outlines the major contributors to the WA economy, current and projected population growth, the current state of the WA labour market and the sectors of the market that are providing that employment.

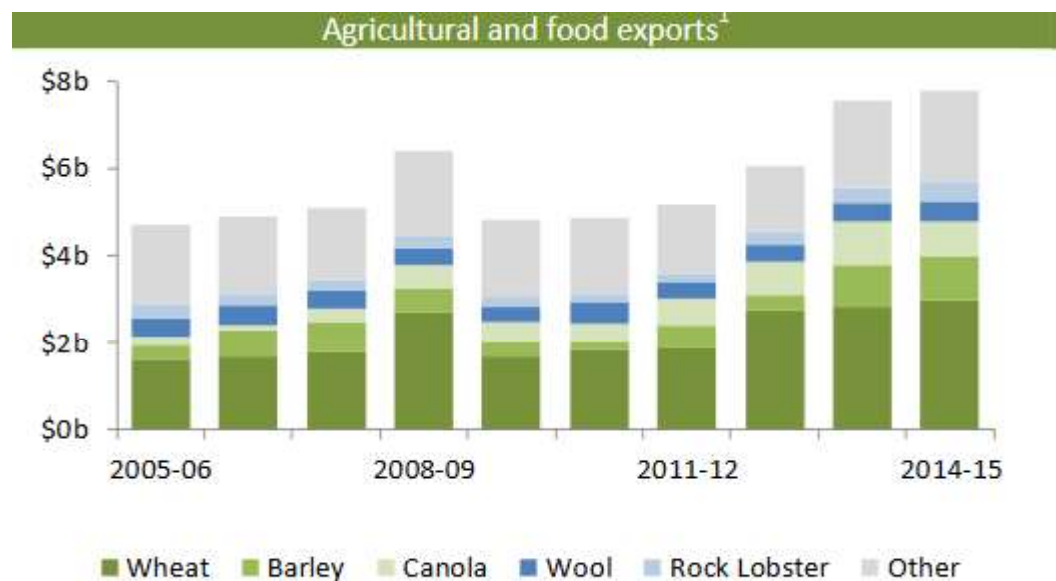
- ❖ The mining industry accounted for 26% of Western Australia's GSP and 58% of Australia's mining gross value added in 2014 - 15.
- ❖ Mining industry gross value added fell 23% to \$63.6 billion in 2014 - 15, despite a 10% rise in volumes.
- ❖ Construction gross value added rose 1% to \$32.9 billion in 2014 - 15, despite a 5% fall in volumes.
- ❖ Agriculture, forestry and fishing gross value added fell 23% to \$4.5 billion and volumes fell 16% in 2014 - 15.



- ❖ Western Australia's population was 2.60 million in the December quarter 2015, 11% of the national population.
- ❖ The 2015 WA Tomorrow report forecasts a population of 3.27 million by 2026.
- ❖ Population rose 1.2% (30,980) in 2015, below annual average growth of 2.5% over the past ten years.
- ❖ Natural increase (20,683) and net overseas migration (up 14,610) offset falling net interstate migration (down 4,313) in 2015.
- ❖ WA Treasury forecasts annual average population growth of 1.3% in 2016-17.
- ❖ Western Australia's employment fell 0.04% (500) to 1.36 million in May 2016.
- ❖ Western Australia's employment rose 0.3% (1,003) through the year to May 2016, compared with Australia's growth of 1.9% (224,700).
- ❖ Western Australia's unemployment rate was 5.7% in May 2016, up from 5.6% in the previous month and 5.1% a year ago.
- ❖ Australia's unemployment rate was 5.7% in May 2016.
- ❖ WA Treasury forecasts annual average employment growth of 0.25% in 2016-17, with an average unemployment rate of 6.75%
- ❖ In 2014-15, Western Australia's total employment comprised market services (47%), non-market services (25%), construction (11%), mining (7%), manufacturing (6%), agriculture, forestry and fishing (2%) and utilities (1%).
- ❖ The State's total employment rose 3% (34,000) to 1.37million in 2014-15.
- ❖ Non-market services (up 37,700 or 12%) and construction (up 20,100 or 15%) offset falls in market services (down 7,900 or 1%), mining (down 6,300 or 6%), manufacturing (down 3,900 or 4%), utilities (down 3,900 or 20%) and agriculture, forestry and fishing (down 1,700 or 6%) in 2014-15.



- ❖ Western Australia's agricultural and food exports rose 3% to \$7.8 billion in 2014-15, including wheat (38%), barley (13%), canola (10%), wool (6%) and rock lobster (6%).
- ❖ Wheat exports rose 6% to \$3 billion in 2014-15, in line with annual average growth of 6% over the past ten years.
- ❖ Western Australia's major agricultural and food export markets in 2014-15 were China (23%), Indonesia (14%), Japan (9%), Korea (6%) and Vietnam (4%).
- ❖ Western Australia's agricultural and food exports to China rose 30% to \$1.8 billion in 2014-15.



(1) Source: [www.dsd.wa.gov.au](http://www.dsd.wa.gov.au) (Government of Western Australia - Department of State Development)

## MARKET RENTAL EVIDENCE

### Rental Evidence Availability

This Desktop Valuation Report is based on information and market rental evidence reasonably available to us at the date of valuation in accordance with standard valuation practice.

In some cases, the latest available rental evidence is provided verbally by real estate agents and other industry sources. It is specifically assumed that the information received by such sources in these instances is factually accurate.

### Goods and Services Tax Status

In analysing sales evidence relied upon in undertaking this desktop valuation report, we have attempted to ascertain whether or not the sale prices are inclusive or exclusive of the Goods and Services Tax (GST). In regard to sales evidence, the Land Titles Offices (Landgate) in Western Australia, do not currently differentiate between or record whether or not the sale price is inclusive or exclusive of the GST. Where we have not been able to verify whether or not the GST is included, then we have assumed that it is inclusive of any GST payable. Should this not be the case, we reserve the right to amend this desktop valuation report.

### Privacy Issues

Due to privacy laws and or confidentiality agreements, we may not have been able to access personal details or parties involved in the transactions considered in connection with the preparation of this desktop valuation report. Where this information is not available, we may not be able to confirm whether such dealings are arm's length transactions. This desktop valuation report has been prepared assuming any such transactions are on an arm's length basis.

We further note that due to privacy laws and or confidentiality agreements, we may not have had access to information on recent transactions which have not yet become public knowledge. In the event that other transactions have taken place, this information may affect our opinion and we reserve the right to amend this desktop valuation report.

#### Rental Evidence:

Detailed as follows is a summary of the rental evidence we have relied on in assessing the current market rental value of all the subject proposed ground lease. Some of these properties have been inspected whilst others are based on information provided by various agents. We have made sufficient enquires to verify the rental evidence, we have then made comparisons with the subject property to arrive at our final valuation.

#### Ground Lease Evidence

##### 1 Kalgoorlie-Boulder Airport Terminal (BP)



Rental:	\$ 21,414.84 pa net
Date:	Reviewed 1 July 2016
Lettable Area:	2,569 m2
Description:	Aviation fuel supply
Analysis:	Shows \$ 8.34/m2 plus outgoings comprises of land and air side access.

*Comments:* Large regional airport the subject leased area is partially air side regarded as better than subject.

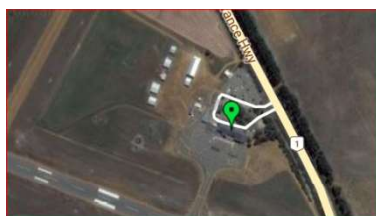
##### 2 Albany Airport Albany Highway



Rental:	\$ 2,322 per annum net
Date:	2017
Lettable Area:	270 m2
Description:	Ground Rental
Analysis:	Shows \$8.60 per m2 per annum smaller area than subject

*Comments:* The City of Albany recently reviewed all their ground rentals within the airport precinct and adopted an overall rate of approximately \$8 per m2 per annum plus outgoings and GST.

##### 3 Esperance Airport Goldfields Esperance Highway



Rental:	\$ 5.13 per m2
Date:	2017
Lettable Area:	Various Locations
Description:	Ground Rental
Analysis:	Shows \$5.13 per m2 per annum

*Comments:* Advised by the Shire of Esperance that their overall rate per annum plus out goings are \$5.13 per m2.



#### 4. Carnarvon Airport Hanger 134



Rental:	\$ 8,400 per annum
Date:	2017
Lettable Area:	1,400 m2
Description:	Ground Rental
Analysis:	Shows \$6.0 per m2 per annum

*Comments: Ground rental assessed in 2017 for the Shire of Carnarvon, smaller area than subject*

For Lease.

#### 14 Bradford Street Wonthella Geraldton



Asking Rental:	\$ 22,000 per annum
Date:	2018
Lettable Area:	3,548 m2
Description:	Ground Rental
Analysis:	Shows \$6.20 per m2 per annum

*Comments: Property was leased at \$38,000 per annum \$10.71 per m2 per annum larger than subject, with two street frontages.*

#### 33 Steel Loop Wedgefield Port Hedland



Asking Rental:	\$ 28,800 per annum
Date:	2018
Lettable Area:	2,437 m2
Description:	Ground Rental
Analysis:	Shows \$11.82 per m2 per annum

*Comments: Regular shaped level lot in well established industrial location, better than subject.*

### MARKET VALUE METHODOLOGY & CALCULATIONS

The Market Rental Value of the subject properties has been determined on the basis of comparable rental evidence of similar type rental properties within as near similar locality as the subject. This method of valuation is referred to as the Direct Comparison Approach that takes into consideration

factors such as location, condition and lettable area. Comparisons can be made in many forms including straight comparison or analysis on a rate per area (m2) basis.

Griffin Valuation Advisory have determined the net Market Rental value of the specific property on the basis of vacant and to let, no consideration or allowance has been allowed for existing sitting tenants

### Rental Value

Our assessment of the proposed subject property ground rental value is based on the best available market rental evidence from country locations as documented in the above market rental evidence, that shows net lettable rates per square metre for ground rental space of between \$ 5.13 to \$ 11.82 per m2 for various areas.

Given the subject's lease proximity with all services provide. We are therefore of the opinion that a rate per m2 for the proposed tenancy of approximately 2,000 m2 to be \$ 6 per m2 Pa plus out goings.

Our final analysis of the proposed ground lease is based on the above market evidence on a vacant and to let basis is:

#### Calculations:

Leased Area Approximately 2,000m2 @ \$ 6/m2	\$ 12,000 per annum
Adopt Net Market Rental Value	\$ 12,000 per Annum

### ASSUMPTIONS, CONDITIONS & LIMITATIONS

Griffin Valuation Advisory has completed a physical site inspection of the subject land assets in March 2017. Where we have been unable to, our valuation has been based on the information provided by the client.

Should further information be supplied after this Desktop Valuation Report has been completed resulting in a significant variation to our original valuation, Griffin Valuation Advisory reserve the right to amend our valuation amounts accordingly.

Real Estate values vary from time to time in response to changing market circumstances and it should therefore be noted that this valuation is based on information available at the date of valuation. No warranty can be given as to the maintenance of this value into the future. It is therefore recommended that the valuation be reviewed periodically.

### GOODS AND SERVICES TAX

The Goods and Services Tax (GST) was introduced on the 1<sup>st</sup> July 2000, at which time rental payments for commercial leases are generally subject to the GST, except where deferred under transitional provisions which would expire on the 1<sup>st</sup> July 2005, at which time all commercial rental payments would be subject to the GST.

#### GST Liability

Liability for the GST on the purchase of property dependent upon:

1. Whether the vendor is registered for GST,
2. Whether the real property was sold as part of conducting and "enterprise",
3. If the sale of the real property can be classified as the sale of a "going concern", and
4. For residential property whether the real property has previously been sold.

Griffin Valuation Advisory recommend that clients seek further information regarding the nature of the transaction, the parties involved and confirmation from a professional qualified accountant, in relation to any potential GST liability.



### GST Basis of Valuation

The valuation amounts provided within this valuation report are exclusive of the 10% GST and assumes that there is no GST payable on the sale of the real property.

## ENVIRONMENTAL

### Site Contamination <sup>(2)</sup>

As a consequence of the Contamination Sites Act 2003, a public register is now maintained in Western Australia on land that has been classified as being either contaminated or requires remedial work.

Griffin Valuation Advisory has searched the register and as at the date of our valuation the subject land was not classified as being contaminated or requiring remedial work.

### Native Title:

*Native title is the recognition in Australian law that some Indigenous people continue to hold rights to their lands and waters, which come from their traditional laws and customs. Native title exists as a bundle of rights and interests in relation to land and waters where the following conditions are met:*

- *the rights and interest are possessed under the traditional laws currently acknowledged and the traditional customs currently observed by the relevant Indigenous people*
- *those Indigenous people have a 'connection' with the area in question by those traditional laws and customs; and*
- *the rights and interests are recognised by the common law of Australia.*

*The Australian legal system does not recognise native title rights in some areas where things have been done that extinguish native title. These areas include:*

- *residential freehold*
- *farms held in freehold*
- *pastoral or agricultural leases that grant exclusive possession*
- *residential, commercial or community purpose leases*
- *public works like roads, schools or hospitals*

*As at the date of valuation, Griffin Valuation Advisory were unable to fully establish if any native title claim exists on the land.*

*(2) Source: Native Title Tribunal ([www.nntt.gov.au](http://www.nntt.gov.au))*

## SPECIFIC VALUATION COMMENTS

We believe the rate of \$6 per m<sup>2</sup> would still be applicable for a variance in lettable area of plus or minus 20%. based on an area of 2,000m<sup>2</sup>.

### DECLARATION / DISCLAIMER

Griffin Valuation Advisory and their employees have no pecuniary interest in the outcome of this Desktop Valuation Report prepared for the *Shire of Dandaragan* or any subsidiaries.

This advice is prepared for internal purposes on the specific instructions of the *Shire of Dandaragan*. This advice should not be relied upon by anyone other than the *Shire of Dandaragan* whether for that purpose or otherwise.

Griffin Valuation Advisory accepts no responsibility to third parties nor does it contemplate that this report will be relied upon by third parties. We invite other parties who may come into possession of this report to seek our direct written consent before relying upon or referring to this report and we reserve our rights to review the content and context in which our advice is quoted or referred to in the event that our consent is given.

### VALUATION

Subject to the overriding stipulations contained within this Desktop Valuation Report completed by Griffin Valuation Advisory; the proposed ground lease of approximately 2,000m<sup>2</sup> is valued as follows;

Market Rental Value

\$ 12,000 Per Annum Net

Twelve Thousand Dollars

This Desktop Valuation Report has been completed by John Harvey who has over 31 years professional property valuation experience and holds the following qualifications;

- ❖ Fellow Member of the Australian Property Institute (FAPI)
- ❖ Licensed Property Valuer in Western Australia (#44074)
- ❖ API Certified Practising Valuer (CPV)
- ❖ Professional Member of the Royal Institution of Chartered Surveyors, (MRICS)
- ❖ RICS Registered Valuer



John Harvey FAPI (Val) (P&M) MRICS  
RICS Registered Valuer | API Certified Practising Valuer  
Director | Head of Property Valuations

## ***ADDENDUM A.***

### ***Letter of Instruction***

30 May 2018

Griffin Valuation Advisory  
PO Box 535  
Wembley WA 6913

***Re: Instructions for Professional Desktop Valuation Service - of Land Asset for Ground Lease Purposes***

Further to your recent proposal regarding provision of professional valuation services, we confirm the following instructions as follows:

Client	<i>Shire of Dandaragan</i>
Location	<i>21 Carmella Street, Jurian Bay</i>
Asset Class	<i>Land Asset</i>
Basis of Valuation	<i>Market Rental Value; Please refer to definitions</i>
Purpose of Valuation	<i>For Ground Lease Purposes</i>
Date of Valuation	<i>June 2018</i>
Reporting	<i>Desktop Valuation Report</i>

***Definitions***

***Market Rental Value***

*Market Rental Value is defined as "The estimated amount for which a property, or space within a property, should lease on the date of valuation between a willing lessor and a willing lessee on appropriate lease terms in an arm's-length transaction, after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion".*

***Valuation Approaches <sup>(1)</sup>***

In order to estimate the price implied by the appropriate Basis of Value, the Valuer will need to apply one or more valuation approaches. A valuation approach or method refers to generally accepted analytical methodologies that are in common use.

Market based valuations normally employ one or more of the valuation approaches by applying the economic principle of substitution, using market derived data. This principle holds that a prudent person would not pay more for a good or service than the cost of acquiring an equally satisfactory substitute good or service, in the absence of the complicating factors of time, greater risk, or inconvenience. The lowest cost of the best alternative, whether a substitute or the original, tends to establish Market Value. Market based valuation approaches include:

### *Sales Comparison Approach*

This comparative approach considers the sales of similar or substitute properties and related market data, and establishes a value estimate by processes involving comparison. In general, a property being valued (a subject property) is compared with sales of similar properties that have been transacted in the market. Listings and offerings may also be considered.

### *Income Capitalisation Approach*

This comparative approach considers income and expense data relating to the property being valued and estimates value through a capitalisation process. Capitalisation relates income (usually a net income figure) and a defined value type by converting an income amount into a value estimate. This process may consider direct relationships (known as capitalisation rates), yield or discount rates (reflecting measures of return on investment), or both. In general, the principle of substitution holds that the income stream which produces the highest return commensurate with a given level of risk leads to the most probable value figure.

### *Cost Approach*

This comparative approach considers the possibility that, as an alternative to the purchase of a given property, one could acquire a modern equivalent asset that would provide equal utility. In a real estate context, this would involve the cost of acquiring equivalent land and constructing an equivalent new structure. Unless undue time, inconvenience, and risk are involved, the price that a buyer would pay for the asset being valued would not be more than the cost of the modern equivalent. Often the asset being valued will be less attractive than the cost of the modern equivalent because of age or obsolescence. A depreciation adjustment is required to the replacement cost to reflect this.

(1) Source: *Australian and New Zealand Valuation and Property Standards - Sixth Edition (2008)*

### *Highest and Best Use <sup>(2)</sup>*

Griffin Valuation Advisory always considers the Highest & Best Use approach in determining market based properties which are consistent with AASB 116 Property Plant & Equipment, Fair Value.

*"The concept of "Highest and Best Use" is fundamental to the assessment of Market Value. IVSC has defined Highest and Best Use (General Valuation Concepts and Principles, para 6.3) as:*

*...the most probable use of vacant or improved land which is physically possible, appropriately supported legally permissible, financially feasible, and which results in the highest value.*

*Recognition of the potential of a parcel of land for a higher use is inherent to any consideration of Market Value where the asset is surplus to requirements or would not be replaced. If, as in the case of the assessment of Deprival Value, the valuer is required to measure the contribution of the asset to the purpose of the business or government agency, such potential will be irrelevant. In such cases, the existing use must be regarded as the highest and best use of the asset and any latent potential must be disregarded."*

(2) Source: *Valuation Principles and Practice 2<sup>nd</sup> Edition- Published by the Australian Property Institute (2007)*

Should you require any further information regarding this matter, please do not hesitate to contact us.

Yours sincerely,

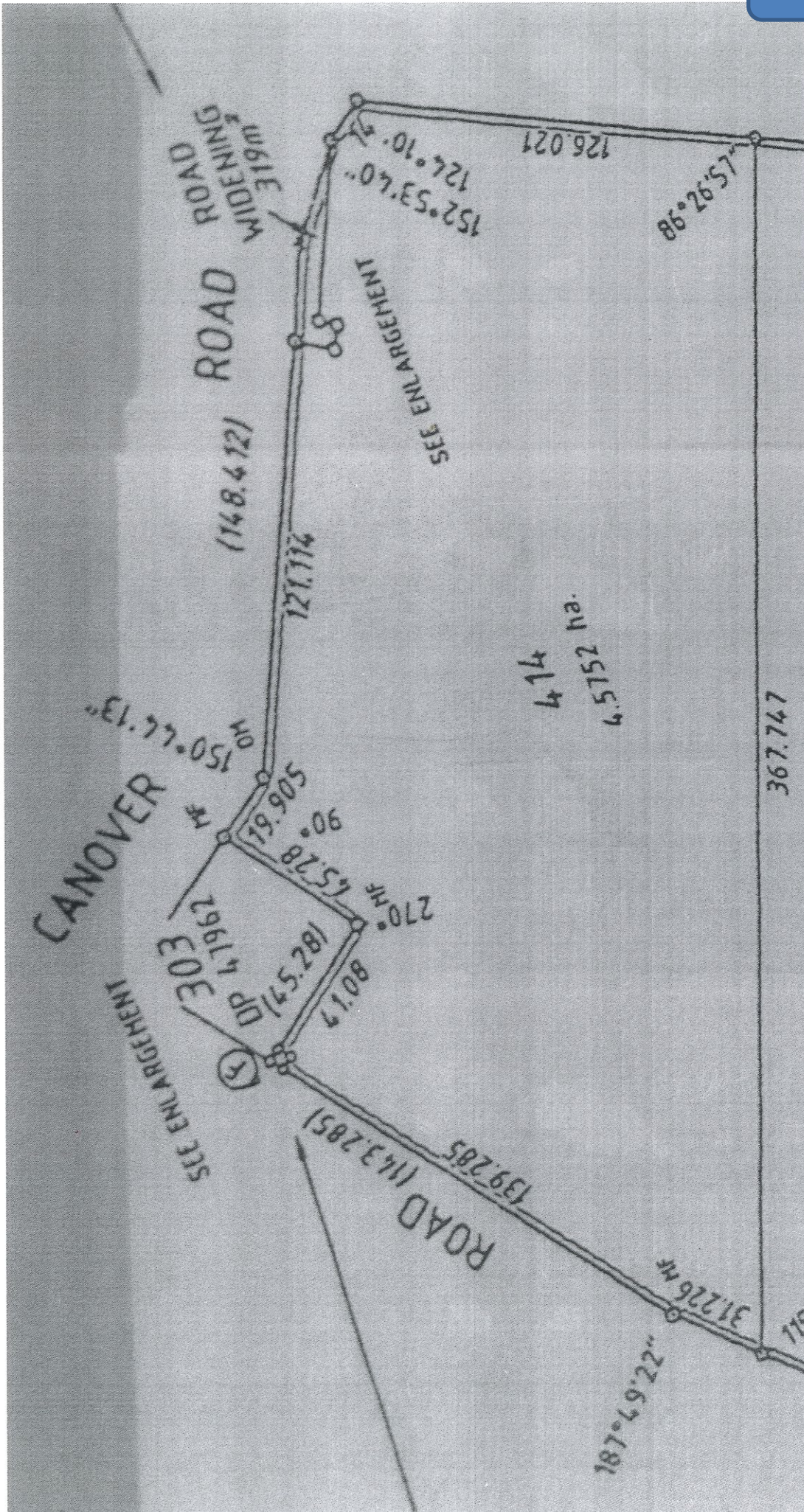
GJY  
Signature

GARRICK YANDLE  
Name

SHIRE OF DANDARAGAN  
Company

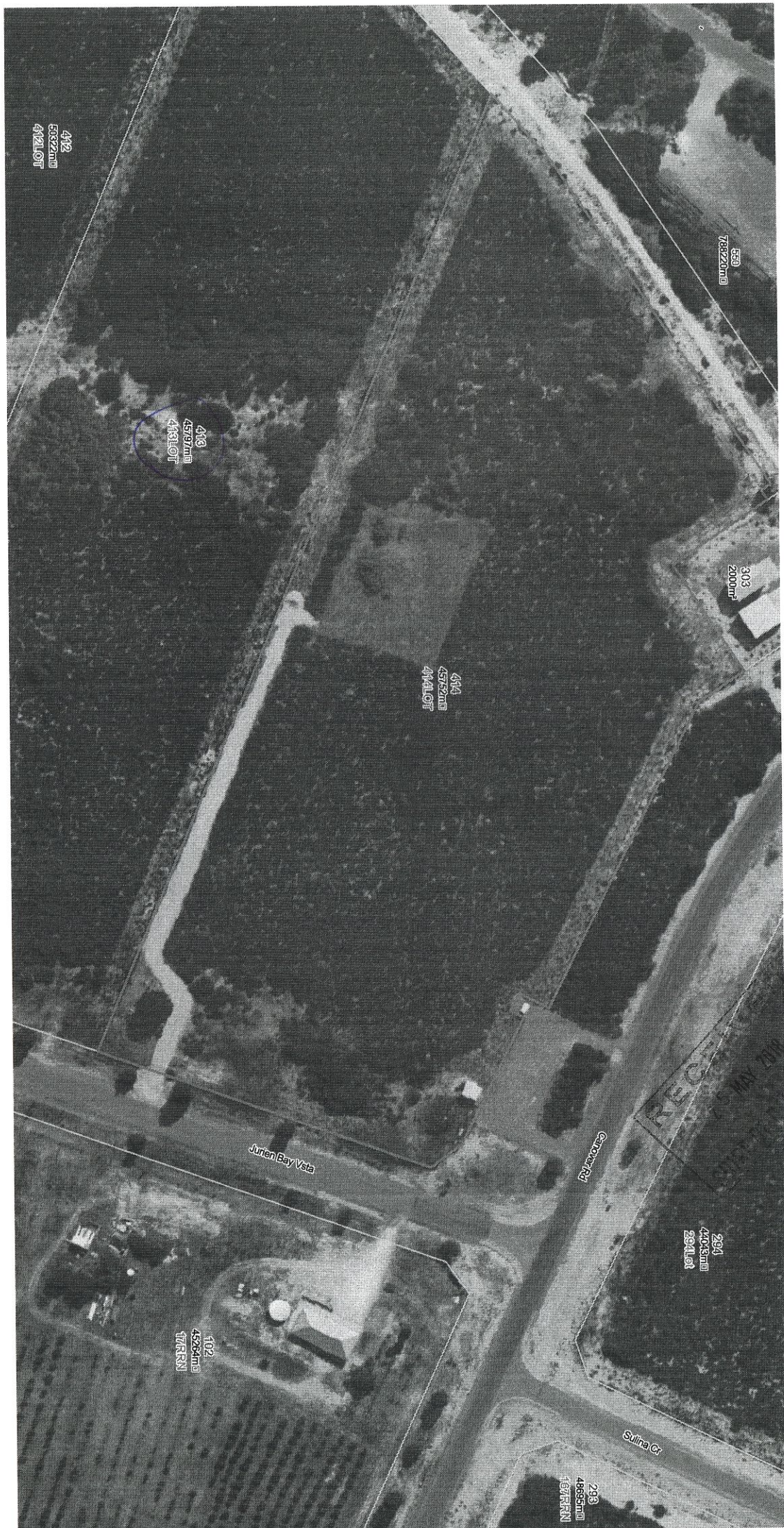
EM  
Position





RECEIVED  
25 MAY 2013  
SHIRE OF DANDARAGU

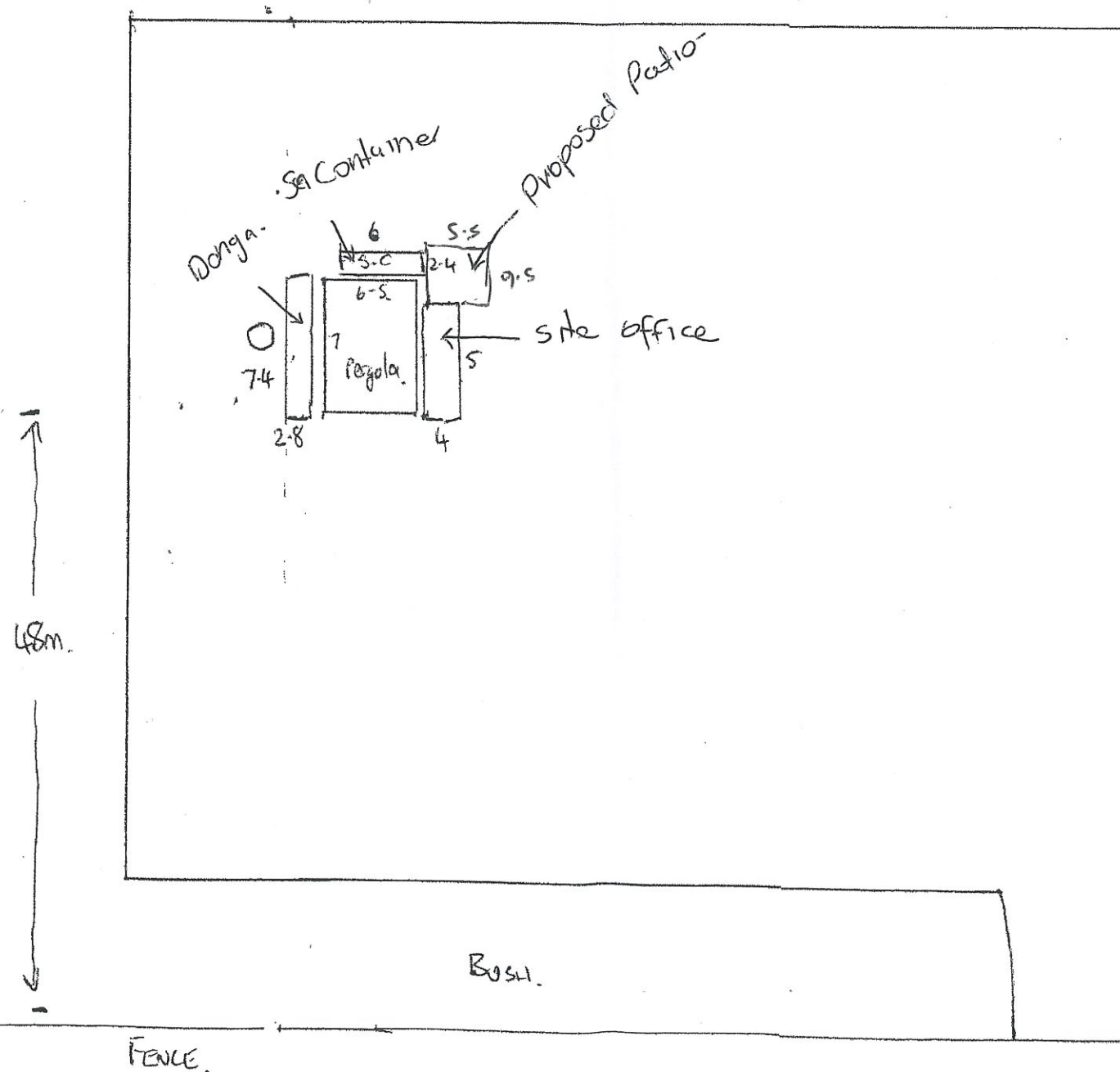




North



RECEIVED  
25 MAY 2011  
CHIEF OF DEFENSE



# STRUCTURE DIMENSIONS

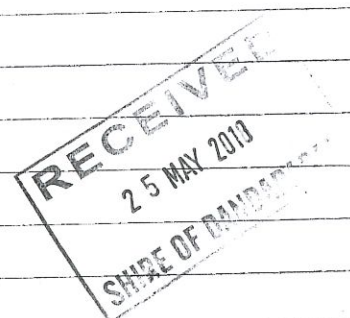
DONGA  
 LENGTH 7.4m  
 WIDTH 2.8m  
 HEIGHT 2.7m

SEA Container  
 LENGTH 6m  
 WIDTH 2.4m  
 HEIGHT 2.5m.

OLD SITE OFFICE  
 LENGTH 5m  
 WIDTH 4m  
 HEIGHT 2.7m  
 GABLE 3.3m.

PERGOLA  
 LENGTH 7m  
 WIDTH 6.5m  
 HEIGHT. 3m.

PATIO  
 Length 5.6m  
 width. 5.5m  
 Height. 3m



Pergola FREE STANDING

Poles treated pine 150 mm round  
800 in ground footings 600 x 600 mm

Roof sheets 4.2 m x .08 thickness

MAIN BEAMS 240 x 45 Treated Pine.

RAFTERS 140 x 45 Treated Pine.

GALVANISED FITTINGS

BRACING 70 x 30 TREATED PINE

Toilet  
Shower  
Vanity Sink } in Donga

STORM WATER COLLECTED OF PATIO ROOF  
INTO 9000L storm water Tank. excess  
FARMED INTO. NATURAL BushLANDS.

12 x GROUND ANCHORS 1200 x 50 mm

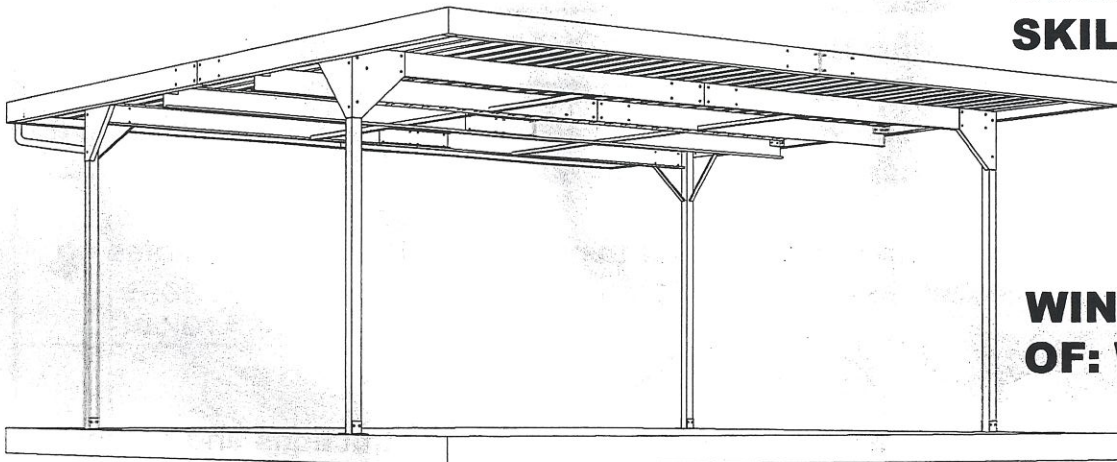
STAINLESS 8mm Cable





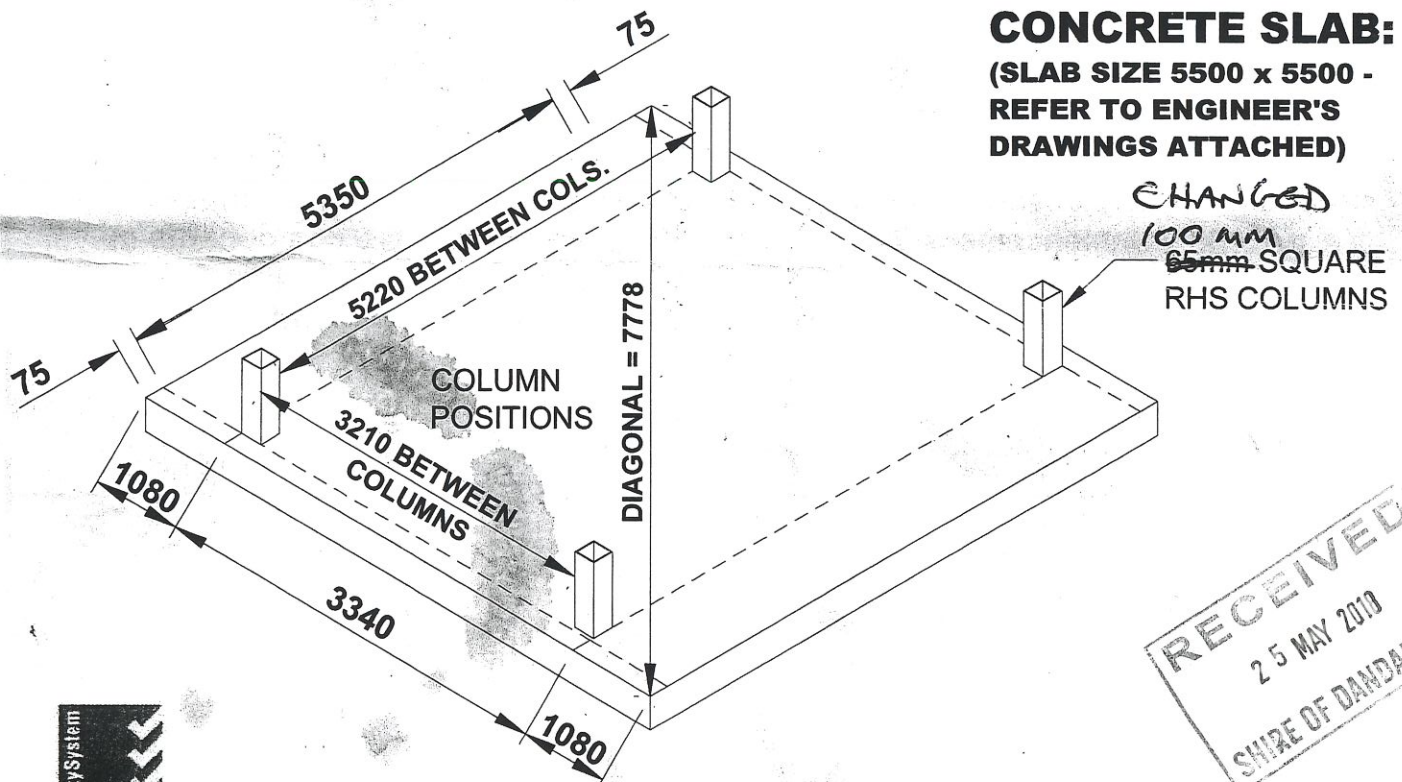
# Absco Carports Assembly Instructions Model: CPDW33-41

## DOUBLE CARPORT- SKILLION ROOF



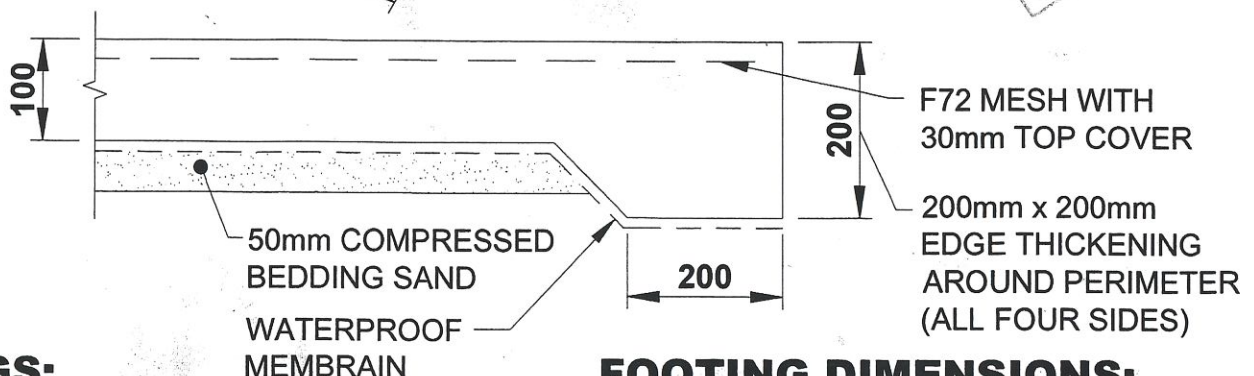
**WIND LOADINGS  
OF: W33/41**

**CONCRETE SLAB:**  
(SLAB SIZE 5500 x 5500 -  
REFER TO ENGINEER'S  
DRAWINGS ATTACHED)



**RECEIVED**  
25 MAY 2010  
SHIRE OF DANDARACRA

QualitySystem  
Quality  
Endorsed  
Company  
ISO9002  
LIC NO. 155  
STANDARDS AUSTRALIA



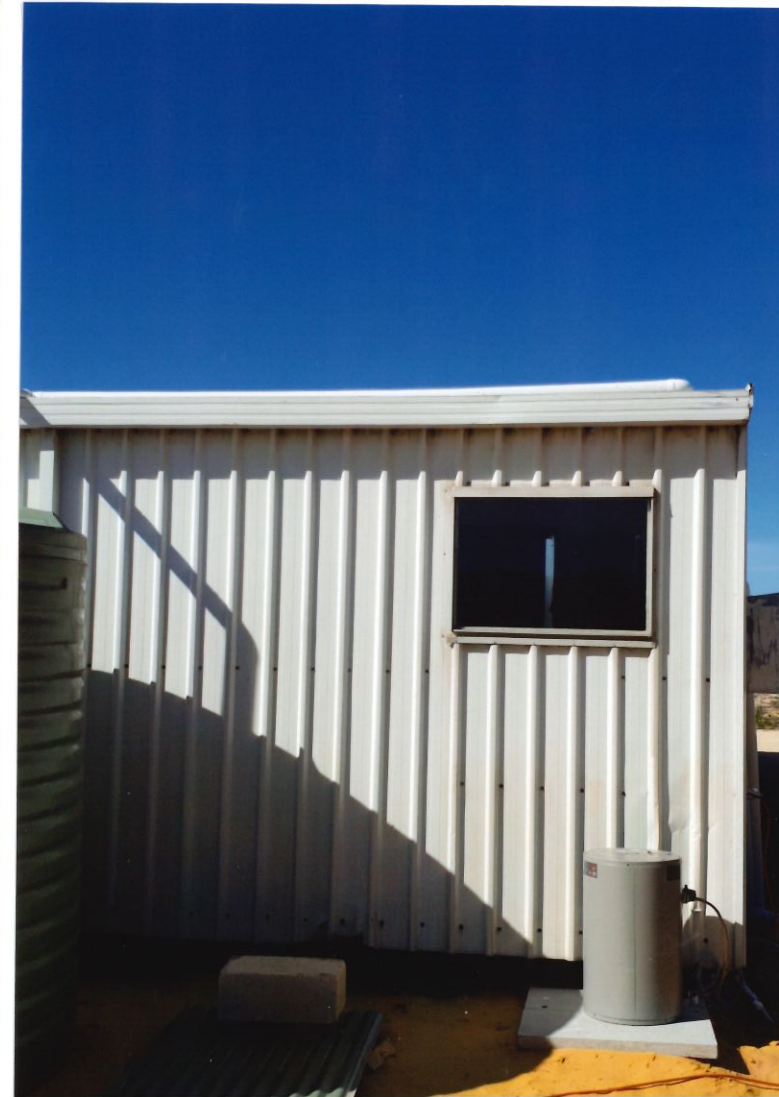
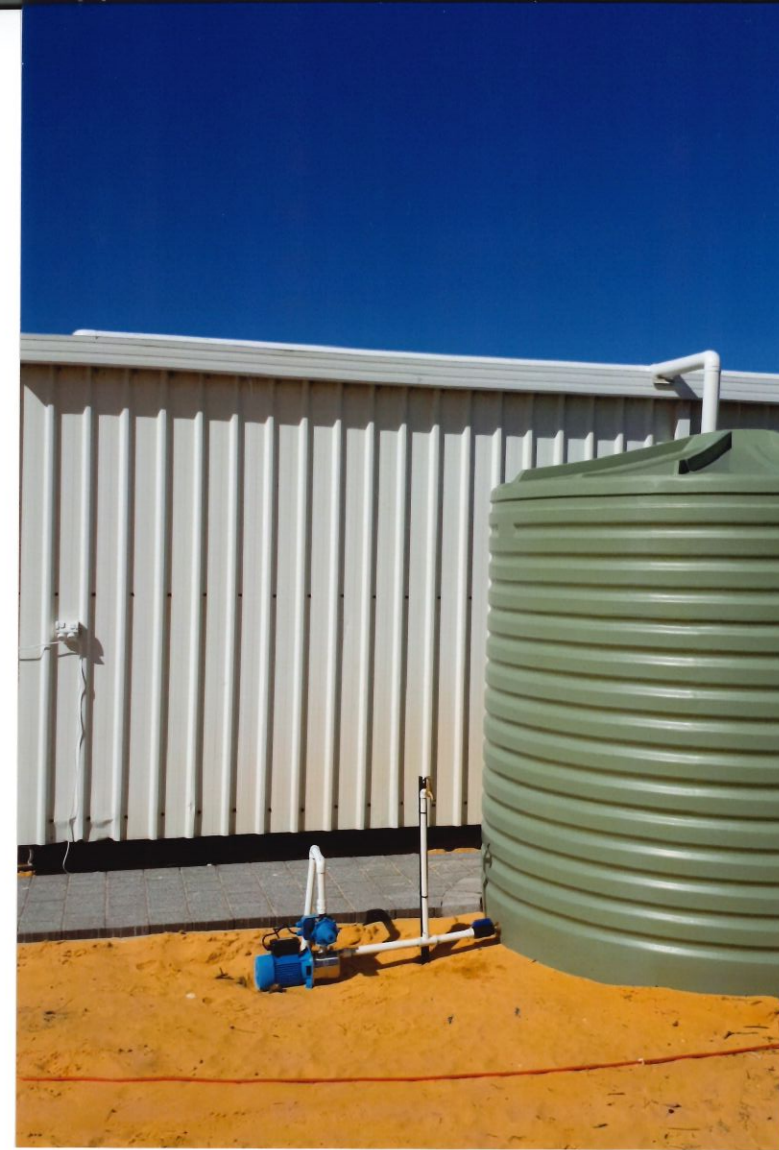
### FOOTINGS:

WHERE NO CONCRETE SLAB IS PROPOSED,  
CONCRETE FOOTINGS WITH DIMENSIONS  
SHOWN ON THIS PAGE MAY BE USED.

### FOOTING DIMENSIONS:

W33 - 650 SQUARE x 550 DEEP  
W41 - 800 SQUARE x 600 DEEP







← INDIAN OCEAN

Attachment: 9.3.2

19 HOMESTEAD LOOP

2.2198 HA

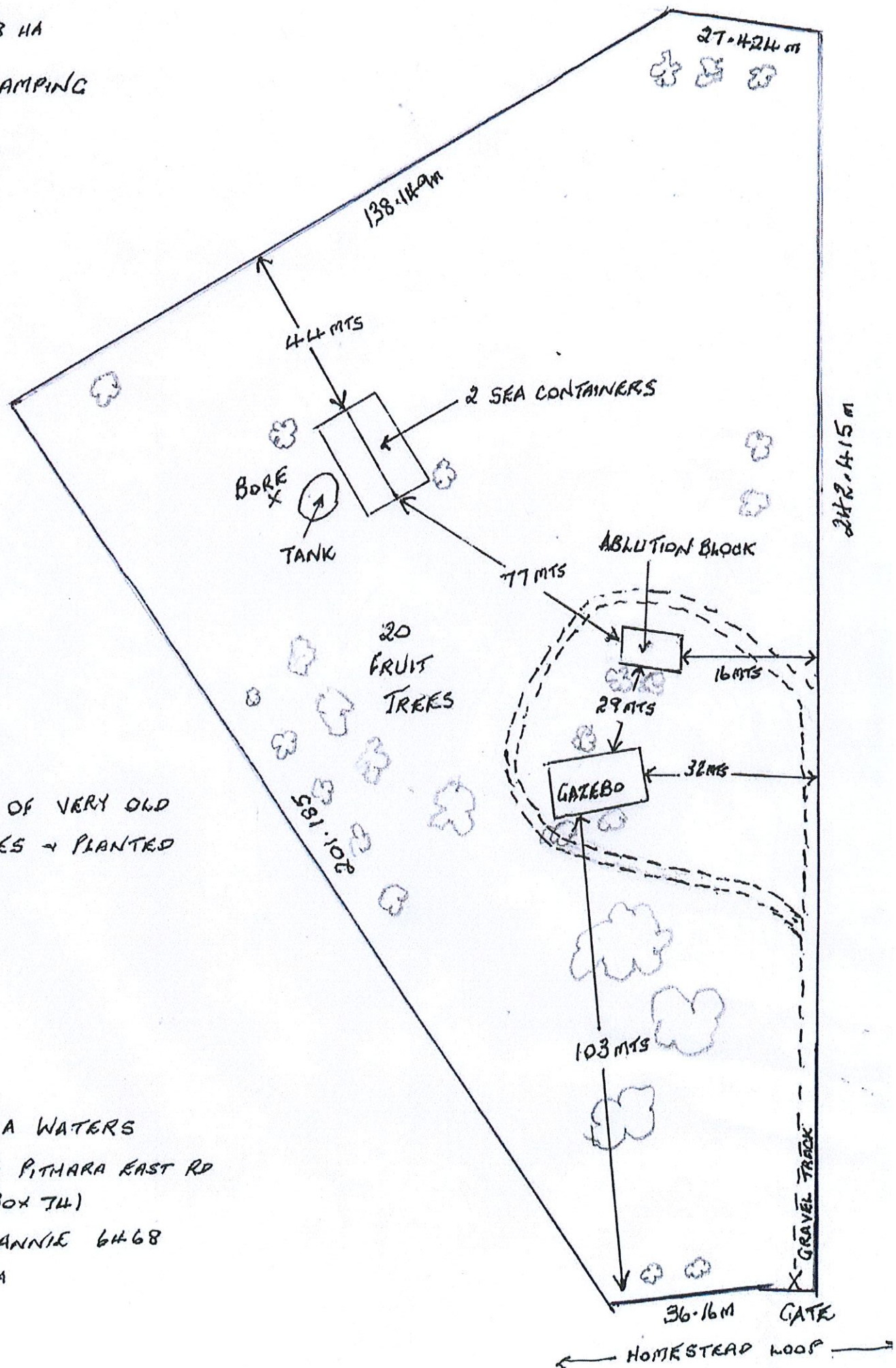
USE - CAMPING

A MIXTURE OF VERY OLD  
LARGE TREES + PLANTED  
TREES

ANGELA WATERS

4278 PITMARA EAST RD  
(PO BOX 74)

KALANNIE 6468  
WA



## DIMENSIONS - 19 HOMESTEAD LOOP

TANK + BORE - 50000 LITRES

SEA CONTAINERS - 2 IDENTICAL SIZE PLACED SIDE BY SIDE

WEIGHT - 5 TONNE EACH

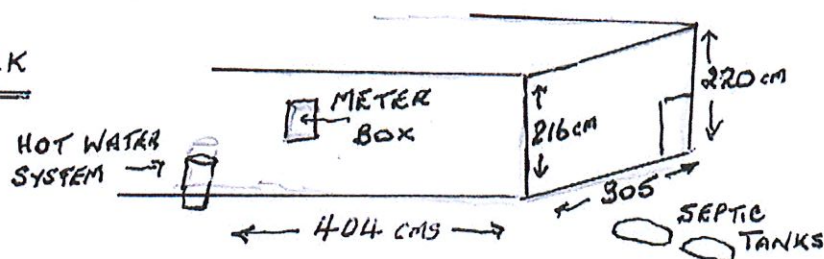
ROOF WITH WHIRLIES

HEIGHT - 258 CMS

WIDTH - 246 CMS

LENGTH - 8 MTS

### ABLUTION BLOCK



### CONSTRUCTION

GALV RHS CONCRETE  
TRIMDECK FLOOR

SHOWER  
BASIN  
SEPTIC TOILET

1. NEEDS LEACH DRAIN

2. PLUMBING - NOT DONE BY A QUALIFIED PLUMBER  
BUT ALL PIPES, FITTINGS & SEPTIC TANKS  
WERE COMPLIANT.

IT ALL WORKS LIKE A DREAM !!!

3 ELECTRICITY - ORIGINAL WORK - ELECTRICAL DALWALLING

LIC NO EW 142872

2ND HOT WATER SYSTEM - JIM REES - JURIE

WA ELECTRICAL & COMPLIANT SERVICES

### GATEBO

PITCHED ROOF

ROOF & TWO ENCLOSED SIDES - ALSONITE

HEIGHT AT PITCH 315 CMS

HEIGHT AT SIDES 225 CMS

WIDTH - 405 CMS

LENGTH - 1216 CMS

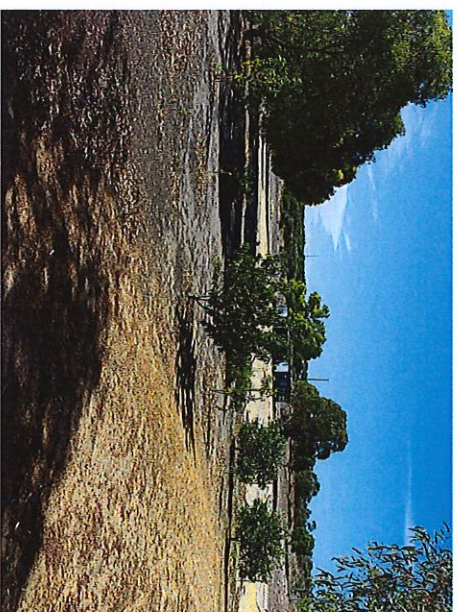
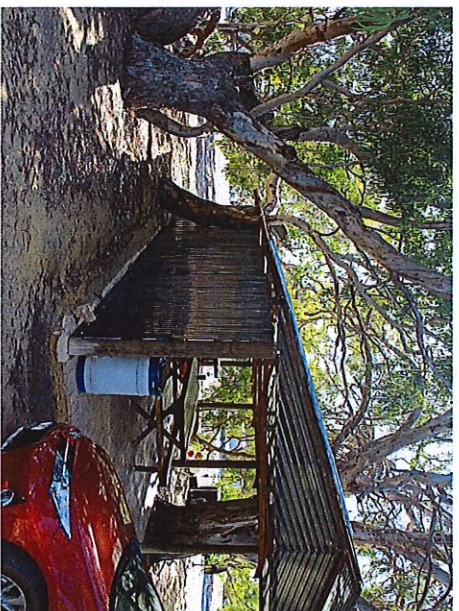
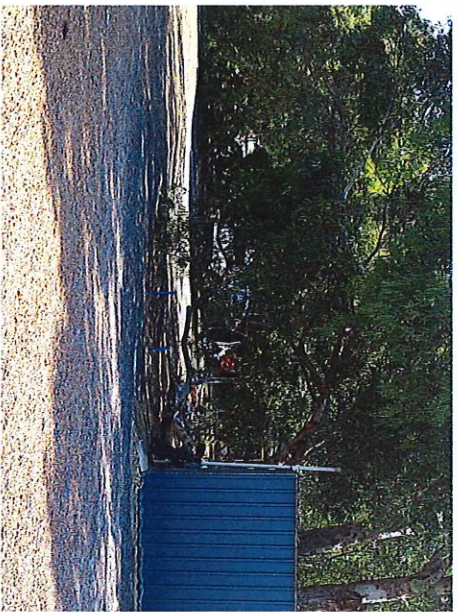
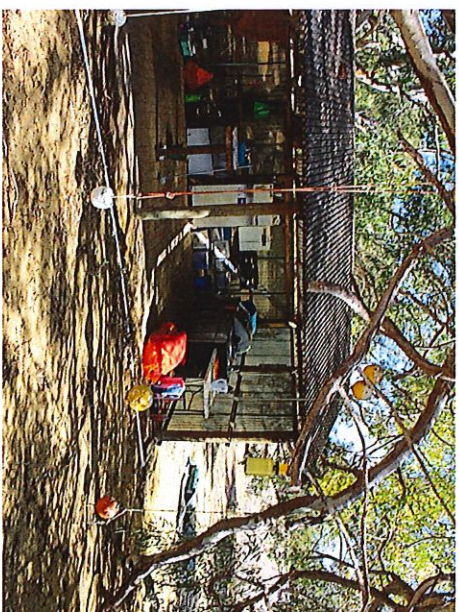
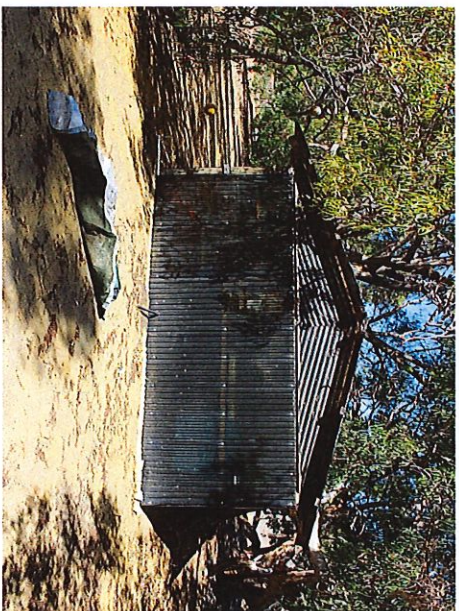
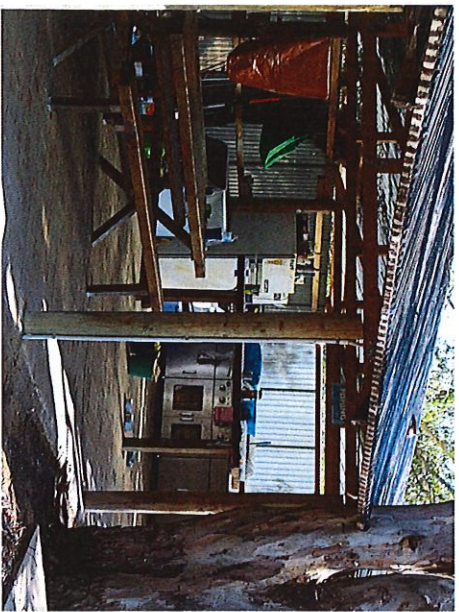
### USE

- CAMPING WITH TENTS

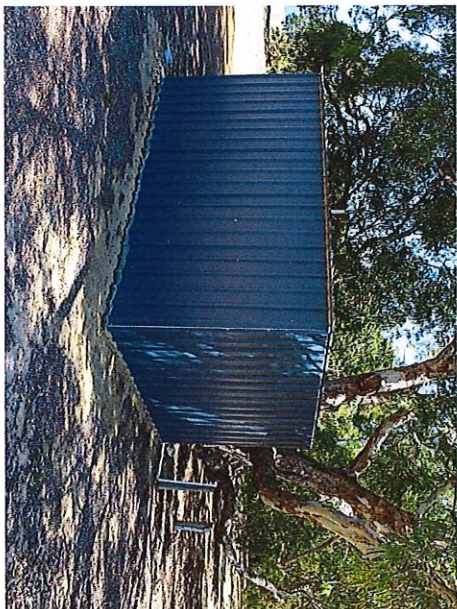
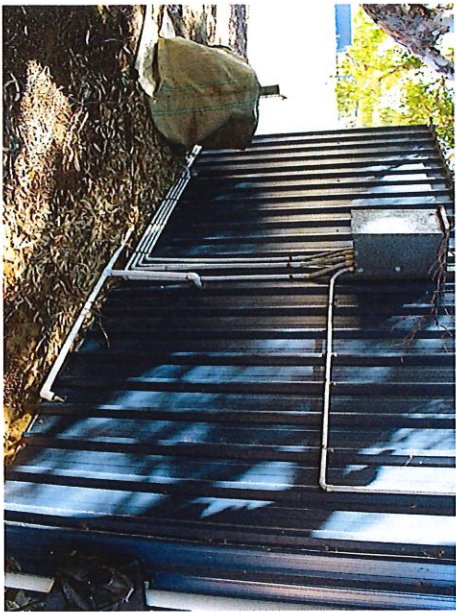
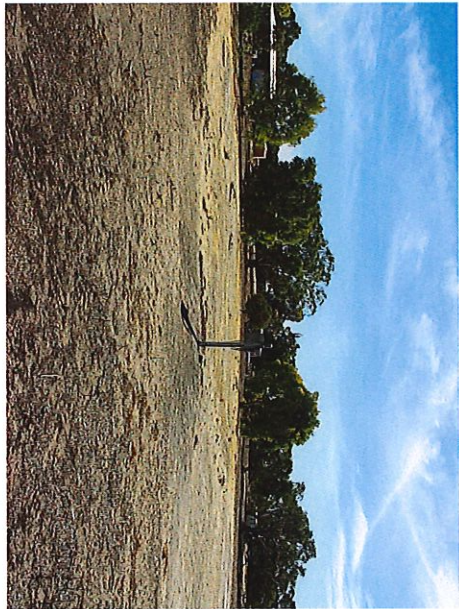
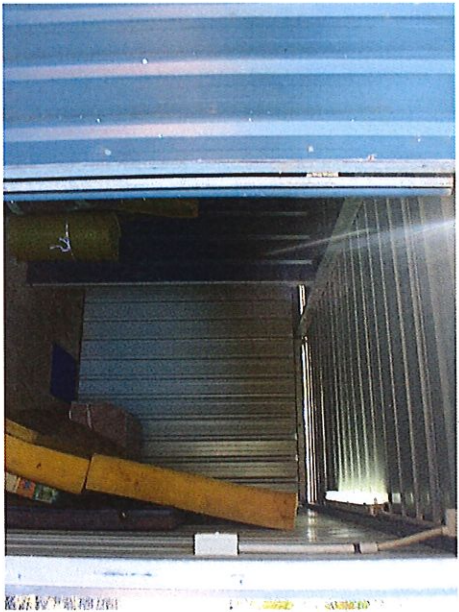
I COME ONCE OR TWICE A MONTH

FAMILY (6-8) SOME PUBLIC HOLIDAYS

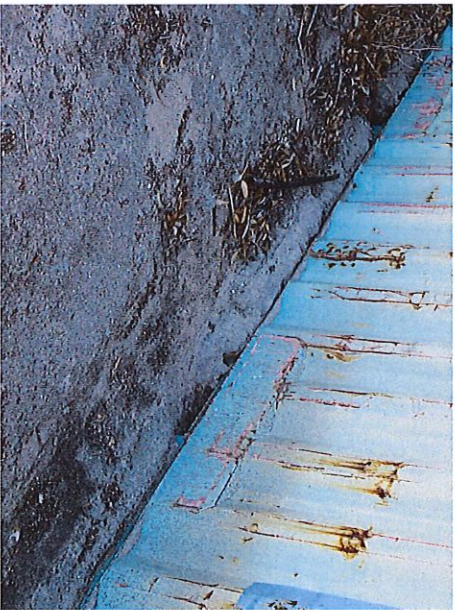
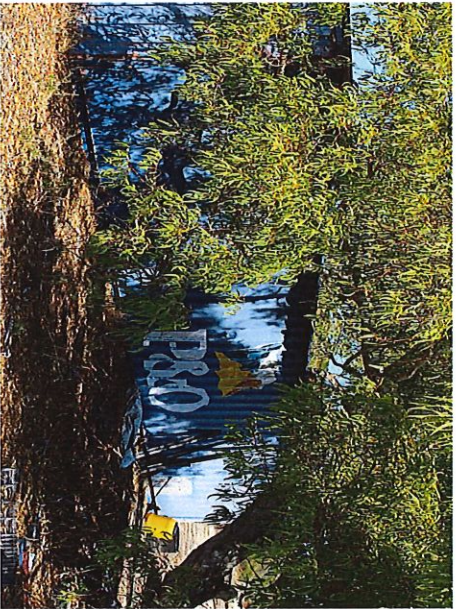
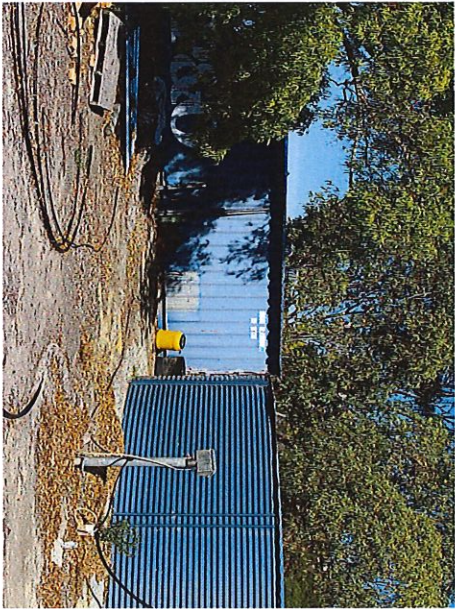
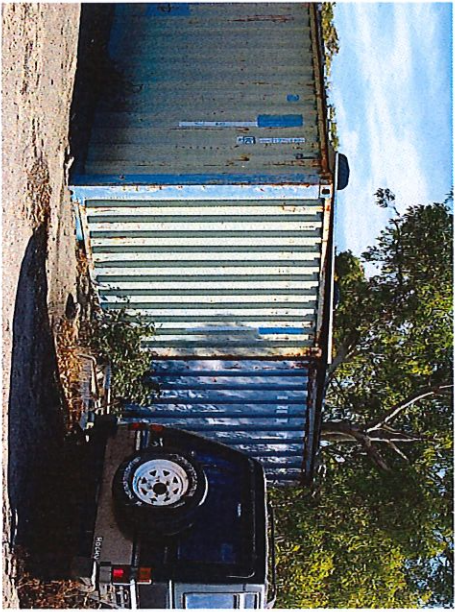
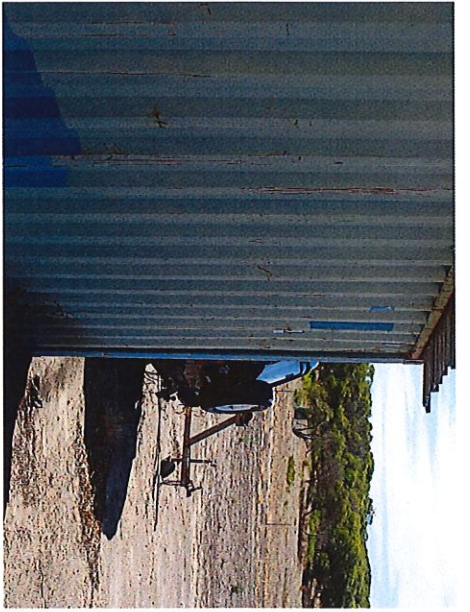




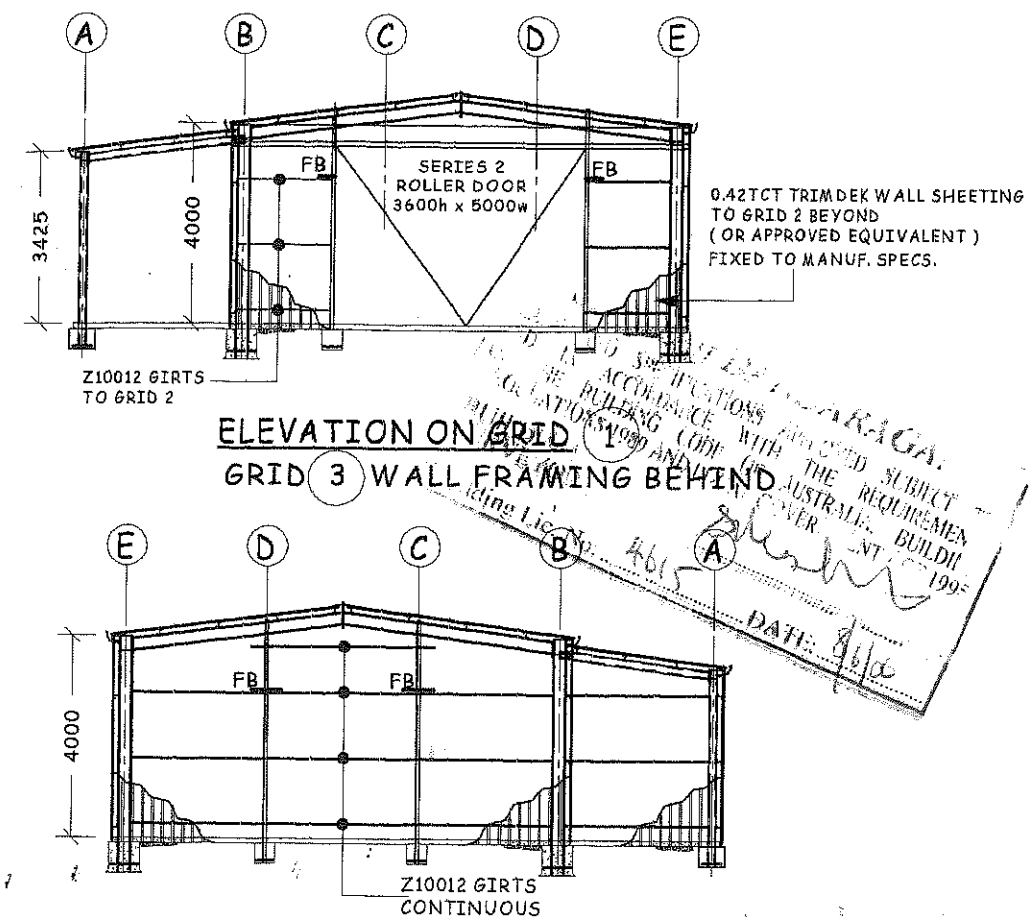
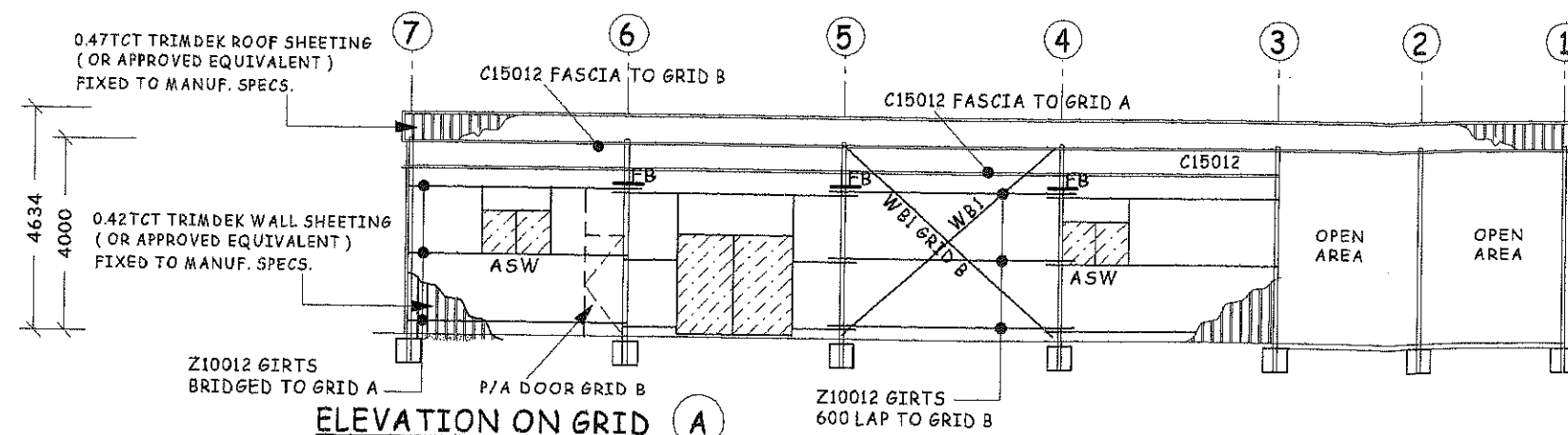
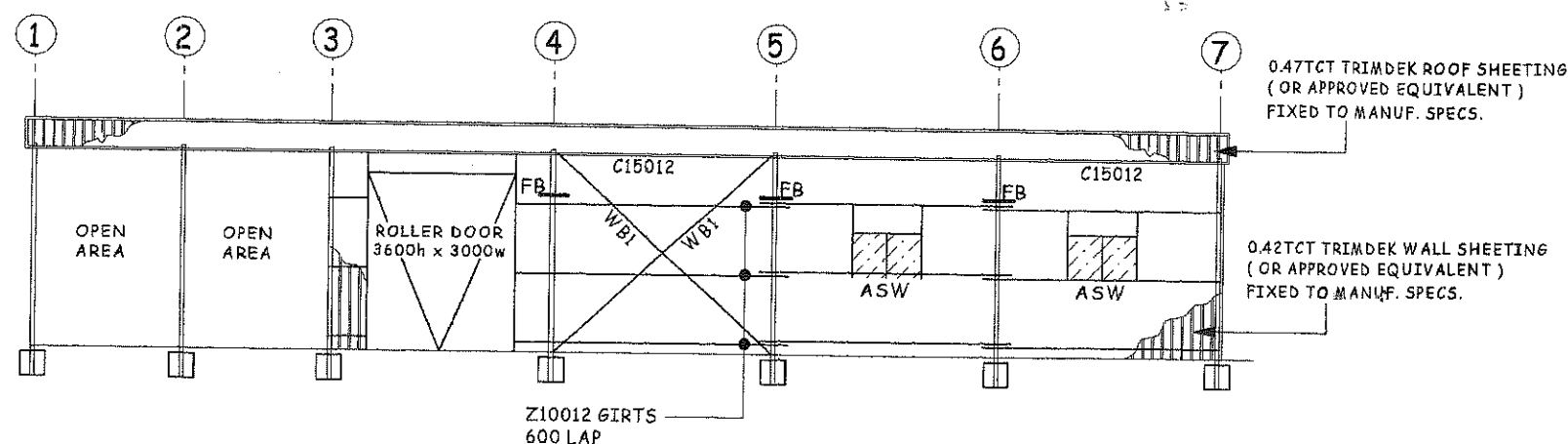
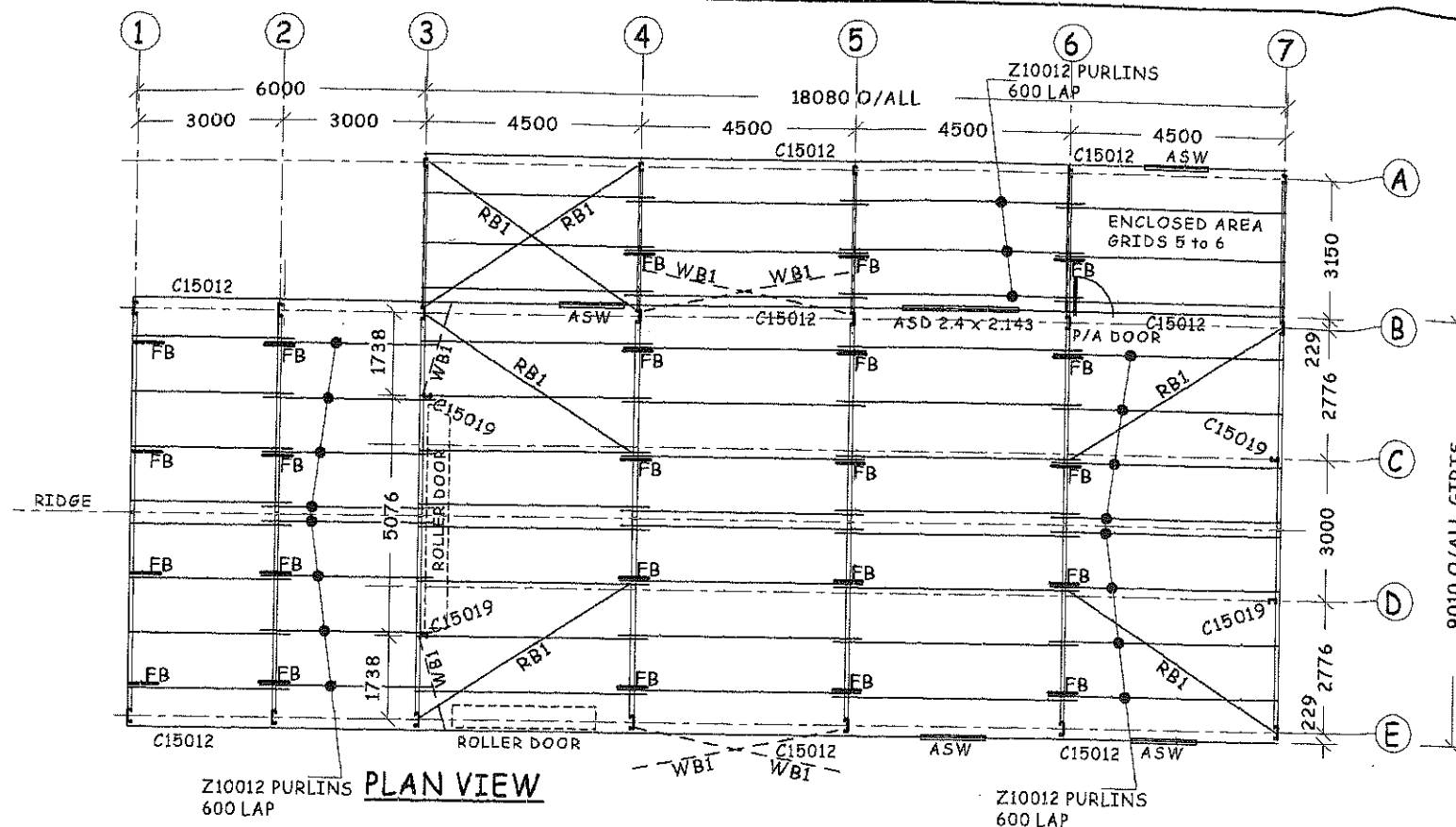












### GENERAL NOTES

- DESIGN CRITERIA : NON-CYCLONIC 50 YR RETURN, REGION A1 TERRAIN/CAT 3 TO AS1170 PART 2
- SITE PREPARATION : THE DESIGN ASSUMES THE SITE TO BE CLASS A OR S TO AS2870. IF IT DOES NOT SATISFY EITHER CLASSIFICATION REFER TO THE ENGINEER. THE SITE SHALL BE COMPACTED TO 95% MDD TO AS1289 WHICH CORRESPONDS TO A MINIMUM OF 7 BLOWS/300MM TO A DEPTH OF 750MM USING SPP TEST. FOOTINGS AND SLABS HAVE BEEN DESIGNED USING AN ALLOWABLE BEARING PRESSURE OF 200Kpa
- CONCRETE : SLAB 25 MPa & FOOTINGS 20 MPa CONC. 20 A66, 80 SLUMP U.O.N. TO AS3600
- STEELWORK : 450 MPa COLD FORMED MAIN FRAMEWORK SUPPLIED TO AS/NZS4600  
450 MPa B.H.P. PRODUCTS SUPPLIED TO AS/NZS4600
- WELDING : ALL WELDING TO AS1554 SP ALL WELDS 6CWF U.O.N.
- BOLTING : FRAMEWORK M16 OR M20 8.8S U.O.N. PURLINS ETC. M12 GRADE 4.6S.
- CLADDING : TRIMDEK HI-TEN 0.42BMT FIXED AS PER MANUFACTURERS DETAILS FOR NON-CYCLONIC CONDITIONS U.O.N.

### COLOURS

WALLS - SANDBANK  
ROOF - JASPER  
GUTTERS AND D/PIPES - SANDBANK  
WINDOWS - CHARCOAL

### BRACING LEGEND

RB1 - 50 X 2.5 GAL STRAP WITH 10MM TURNBUCKLE  
WB1 - 60 X 2.5 GAL STRAP WITH 10MM TURNBUCKLE  
ALL WITH 1-M12 4.6/S BOLT EACH END  
FB - FLYBRACE

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REV	BY	DATE	DESCRIPTION
B	mc	27/04/2006	open and revised
A	mc	11/04/2006	ISSUED FOR APPROVAL

MULTI PURPOSE PORTAL BUILDING  
FOR: S & D DEVITT  
AT Lot : Crn Marine Dr & Homestead Loop  
Cervantes

PLAN AND ELEVATIONS

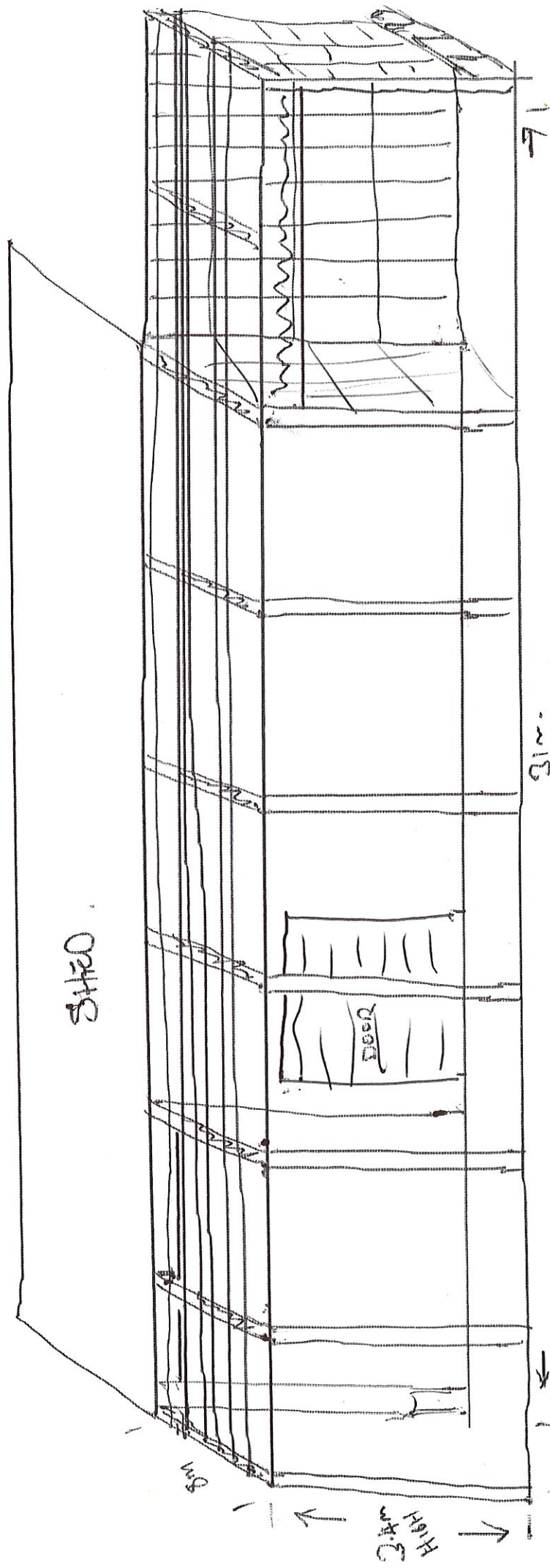
SCALE	DATE	CHECKED	DRAWN	BY	REV
1:150	11/04/2006	rmc	rmc	SA-SAD-S01	B

**DIGBY SIVERTSEN**  
M.E. (AUST) C.P. Eng. B.Sc. Eng.  
Reg. No. 4281 DBPB SIES 3165  
TEL 035 807 917 FAX 035 807 917 Email dsi@digby.net.au

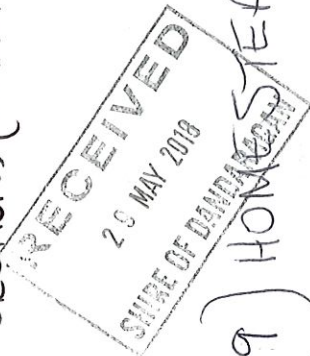
**R & V McINTOSH DRAFTING CONTRACTOR**  
Phone 9309 1013 Fax 9309 6235  
Email: rvmc@bigpond.net.au

**SWAN AUSSIE SHEDS**  
1 ZIRCON STREET  
JURIE BAY

MARK BELLEMORE: 0417957756

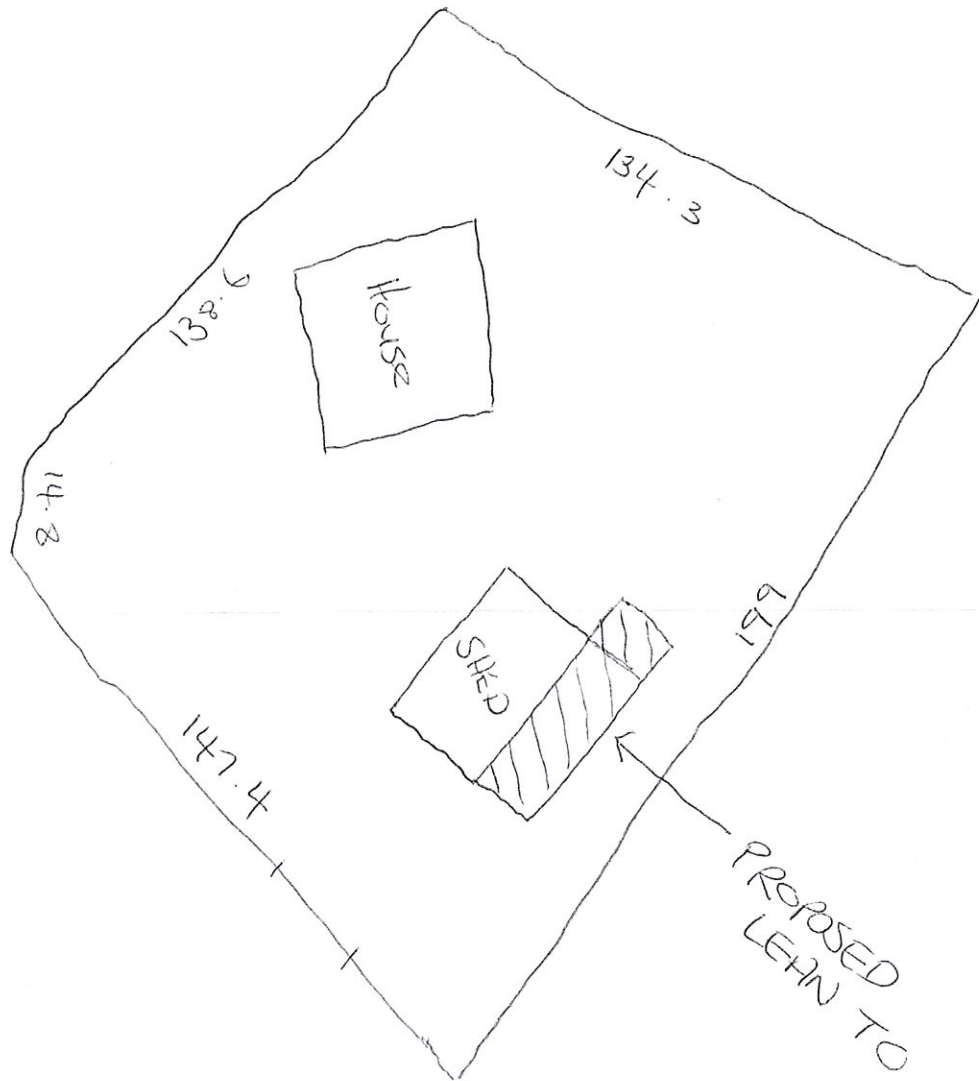


LEAN-TOO 31m LONG x 8m WIDE.  
 8 200 x 75 C-SECTION UPRIGHTS (POSTS).  
 9 300 x 8m LONG HOPEY TRUSSES WITH FIXING BRACKETS  
 MAX OF 4.5m SPAN BETWEEN POSTS.  
 1m SPACING ON Z PURLINS (100 x 50) ALL BOLTED TO SHED POSTS + TRUSSES.  
 900 x 500mm FOOTINGS.  
 ALL TRUSSES ARE FITTED TO ALL C-SECTIONS (UPRIGHTS) INSIDE SHED.



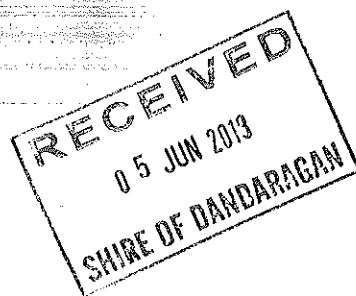
LOT 139 (9) HONEYSTEAD LOOP, JURIE BAY

LOT 139 (9) MARINE DRIVE,  
JURIEN BAY.





5<sup>th</sup> June 2018



W George  
Manager Building Services  
Shire of Dandaragan  
JURIEN BAY WA 6516

Dear Will,

Thank you for your letter dated 16<sup>th</sup> April 2018 with regards to our unauthorised building work at 9 Marine Drive, Jurien Bay.

On 29<sup>th</sup> May 2018 I attended the Shire Office and completed and paid for a building application.

I would like to add the following to our application:

- The lean to will not be easily seen from the road once completed as I will be planting hibiscus red cottonwood trees to the front and side of the lean to. Please see plan attached.
- I am also in the process of obtaining written notification from the owner of the neighbouring property who we have spoken to about the lean to. Angela Waters has indicated that she has no issues with the lean to and has said that she thinks it will make the view from her side of the property better as all items will be neatly stored away.
- The lean to has been built from new material so this blends in with the original shed.
- I believe that the lean to does not affect the streetscape or the amenity of the area as I feel the appearance of our property from the road verge is very good. We work very hard to present our property to its full potential and the lean to will present the property even better as there will be no items laying around the extremities of the property.

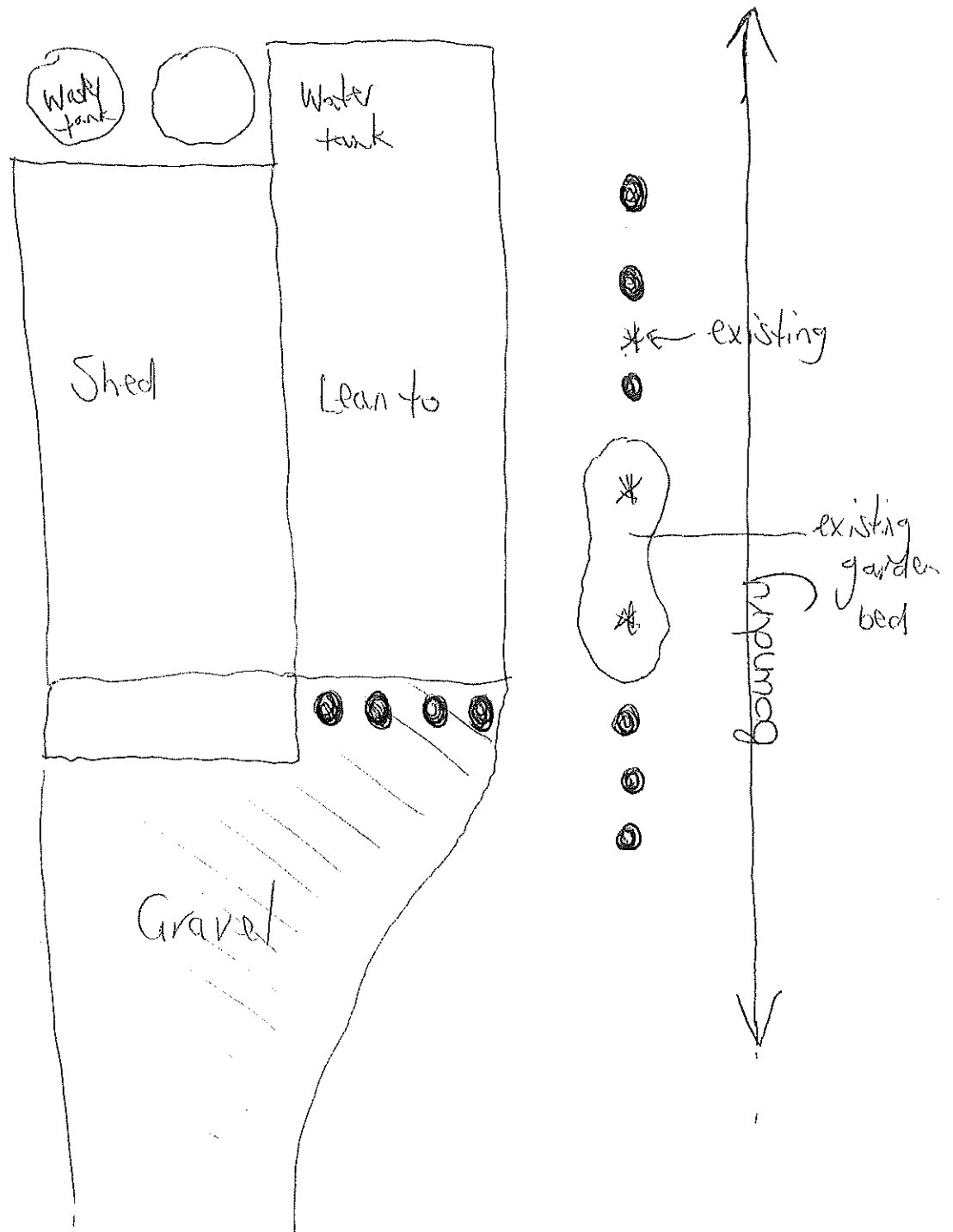
If you require any further information, please let me know as I would like to be given every opportunity to provide any further information before the application may be declined.

Yours faithfully,

Antoinette Devitt

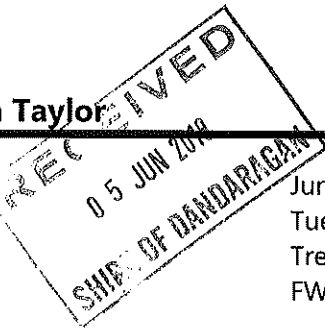
# Lot 139 (9) Marine Drive

● proposed planting of red cottonwoods



**Trevena Taylor**

**From:** Jurien Bayview Realty <jurienbayviewrealty@bigpond.com>  
**Sent:** Tuesday, 5 June 2018 3:44 PM  
**To:** Trevena Taylor  
**Subject:** FW: Storage area - Steve & Antoinette Devitt



Hi Travena,

Can you add this as well. If it needs to be a written letter please let me know.

Thanks

Antoinette Devitt  
0429024959

**From:** Angela Waters <kaltrees@bigpond.com>  
**Sent:** Tuesday, 5 June 2018 3:42 PM  
**To:** 'Jurien Bayview Realty' <jurienbayviewrealty@bigpond.com>  
**Subject:** storage area - Steve & Antoinette Devitt

To Whom It May Concern

I was recently at my block next to the Devitt property on the weekend & we discussed their plans for a storage area for their equipment. As far as I am concerned I think it is a great idea & I have no problems with it.

Angela Waters

0407 388 614

PO Box 74 Kalannie 6468





Shire of Dandaragan  
Local Planning Scheme No. 7

Amendment No. 36

*Summary of Amendment Details*

*Standard Amendment - Inserting a new Special Control Area No.1 – Public Drinking Water Source Areas*

Planning and Development Act 2005

**RESOLUTION TO ADOPT AMENDMENT  
TO LOCAL PLANNING SCHEME**

*SHIRE OF DANDARAGAN LOCAL PLANNING SCHEME NO. 7  
Amendment Number 36*

Resolved that the Local Government pursuant to section 75 of the *Planning and Development Act 2005*, amend the above Local Planning Scheme by:

1. Deleting Clause 4.20 Protection of Water Sources.
2. Deleting Clause 5.1.1 (i) Special Control Area No.1 – Bassendean Precinct and inserting Clause 5.1.1 (i) Special Control Area No.1 – Public Drinking Water Source Areas.
3. Deleting Clause 5.2 Bassendean Precinct Special Control Area and inserting Clause 5.2 Public Drinking Water Source Special Control Areas as follows:

*“Applications for planning approval for a use or development involving the following within or in close proximity of the Public Drinking Water Source Areas shall be referred to the Department of Water and Environmental Regulation for comment:*

- a) the potential increased nutrient loading, particularly having a point source for nutrients, such as a poultry farm or piggery;*
- b) intensification of the application of fertilisers and pesticides;*
- c) storage of chemicals, fuels and other potentially polluting substances;*
- d) a substantial increase in runoff;*
- e) any other impact which the local government considers to have an impact on the quality of public drinking water; and*
- f) all development proposals within the water source areas that are inconsistent with the DoWER’s Water Quality Protection Notes and Guidelines, Land Use Capability Tables or recommendations in current Drinking Water Source Protection Plans.*

*In determining any application for planning approval within or in close proximity of the Public Drinking Water Source Areas, the Council shall*

- a. have regard to the DoWER’s Water Quality Protection Notes and Guidelines;*

- b. *have regard to State Planning Policy No 2.7 (Public Drinking Water Source Policy);*
- c. *have regard to any advice from the DoWER; and*
- d. *endeavour to ensure that the proposed use or development will not have a detrimental impact on water resources.*

*Notwithstanding that a use or development may be classified as 'P', 'A' or 'D' on the Zoning Table, where the DoWER advises that a use or development should be refused on the basis of potential impact on surface and/or groundwater resources, the Council shall refuse the use or development."*

4. Amending the Scheme Maps accordingly.

The amendment is standard under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* for the following reason(s):

- The Amendment to the Scheme is consistent with a Local Planning Strategy for the Scheme that has been endorsed by the Western Australian Planning Commission and does not result in any significant environmental, social, economic or governance impacts on land in the Scheme area.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2018

---

(Chief Executive Officer)

## 1.0 INTRODUCTION

This report has been prepared to amend the Shire of Dandaragan Local Planning Scheme No.7 (LPS7) in relation to Special Control Area No.1 – Bassendean Precinct.

The Bassendean Precinct is a predictive area of a central coast environmental unit of the Shire of Dandaragan as designated on the Scheme Maps by means of a dotted line.

The proposed amendment seeks to delete Special Control Area No.1 and all reference to such from the Scheme as recommended by the *Shire of Dandaragan Local Planning Strategy – Rural Land Use and Rural Settlement 2012* and *Shire of Dandaragan Draft Local Planning Strategy 2016*. In deletion it is proposed a new Special Control Area No.1 be inserted into the Scheme for the protection of Public Drinking Water Source Areas within the Shire.

## 2.0 BACKGROUND

### Local Planning Scheme No.7:

#### **4.20 Protection of Water Sources**

##### **4.20.1 Public Drinking Water Source Reserves**

*Public Drinking Water Reserves are located close to existing townsites and are covered by Water Source Protection Plans prepared by the Water and Rivers Commission (now Department of Environment and Conservation - DEC). Guidelines are available from DEC which establish whether a proposed use is compatible, incompatible or could be approved with conditions to protect water quality and supply.*

*In considering any development within a Public Drinking Water Source Area (PDWSA) Local government will have due regard for the potential impact on water supplies and the compatibility of the proposed use. Any development in conflict with the DEC guidelines must be referred to DEC for comment to ensure water quality protection of the public drinking water reserves.*

##### **4.20.2 Groundwater Areas**

*Groundwater protection areas have been established by the Water and Rivers Commission (now DEC) known as the Jurien Groundwater Area and Gingin Groundwater Area.*

*Landowners and developers are required to obtain a licence prior to the construction of a bore or well on any property for groundwater extraction except for stock or domestic purposes.*

## **5.2 Bassendean Precinct Special Control Area**

### **Major Values**

*The Bassendean Precinct Area is an important environmental unit in the central coast region. The area comprises deep porous sands that are hydrologically connected to a number of wetlands in the area. The area is noted as a significant area of internal drainage which is particularly vulnerable to the use of fertilizers.*

### **Purpose of the Special Control Area**

- 1. To preserve the ecological values of the Bassendean Precinct and interrelated wetlands.*
- 2. To avoid development and land uses which would negatively impact on the environmental values of the area.*
- 3. To ensure that future land use in the area, including agriculture, mining and recreational activities does not degrade the area.*
- 4. To ensure that any development takes place in such a manner so as to safeguard the environmental values of the area.*

### **Application Requirements for Subdivision and Development**

*Development approval is required for any other development (as defined below).*

### **Relevant Considerations**

*In considering any rezoning request, subdivision or development application the Local government will have regard to the following:*

- There is a presumption against rezoning of land within the Bassendean Precinct for more intensive land uses, such as horticulture, intensive animal stocking and rural residential.*
- Subdivision applications for land within the Bassendean Precinct will generally not be supported by the Local government to avoid creating the potential for additional development.*
- The Local government may consider supporting subdivision applications within the Bassendean Precinct where:*
  - i. the subdivision is for the use of land which will not create the potential for additional development;*
  - ii. the subdivision is for a boundary realignment, rationalization of landholdings or lots created for management purposes, which will not create the potential for additional development within the area; and*
  - iii. the subdivision is consistent with the policies of the Western Australian Planning Commission.*
- Development applications for land within the Bassendean Precinct should not be approved where the development may result in an increase of nutrient release into the soil. The impacts of proposals for aquaculture, commercial tree plantations, earthworks (such as filling and excavation) and intensive agriculture will be carefully assessed.*
- Public works (for example, road construction) or community facilities may be permitted within the area, subject to advice from the Department of Environment*

*and Conservation that such public works or development can be designed and located in a manner so as to minimize impact on the environment.*

### **Referral of Applications**

*Consultations regarding any rezoning request, subdivision or development application will be referred to the Department of Environment and Conservation for comment.*

## **3.0 LOCAL PLANNING CONTEXT**

Section 75 of the *Planning and Development Act 2005* gives a local government the power to amend its local planning scheme.

Pursuant to Regulation 35(2) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, Amendment No.36 is a standard amendment as it is consistent with a Local Planning Strategy for the Scheme that has been endorsed by the Western Australian Planning Commission and does not result in any significant environmental, social, economic or governance impacts on land in the Scheme area.

## **4.0 PROPOSAL**

The amendment seeks the following:

1. Deleting Clause 4.20 Protection of Water Sources.
2. Deleting Clause 5.1.1 (i) Special Control Area No.1 – Bassendean Precinct and inserting Clause 5.1.1 (i) Special Control Area No.1 – Public Drinking Water Sources.
3. Deleting Clause 5.2 Bassendean Precinct Special Control Area and inserting Clause 5.2 Public Drinking Water Source Special Control Areas.
4. Amending the Scheme Maps accordingly.

### **Local Planning Justification**

#### **Local Planning Strategy – Rural Land Use and Rural Settlement 2012:**

##### **8.3.2 Bassendean Precinct Special Control Area**

*The Bassendean Precinct Special Control Area (BPSCA) was introduced to the Scheme as the land was considered in some areas to have very low capability for agriculture due to the low nutrient holding ability of the sand and potential for winter water logging.*



*The Shire had sought to remove this SCA because it was considered unnecessary in that any proposal for the intensification of land use such as irrigated horticulture or rural living development anywhere in the municipality is subject to environmental assessment. The landowners within the BPSCA believed their property values are adversely affected by inclusion in this area. A number of other factors supporting removal of the BPSCA were also presented.*

*Council were unsuccessful in seeking to amend the Scheme to remove the BPSCA in 2007 however in its refusal the WAPC advised that;*

- i. The future deletion of the Bassendean Precinct Special Control Area from the Scheme could be considered in conjunction with the introduction of a special control area for the Jurien water reserve (in accordance with State Planning Policy 2.7), and the additional provisions in Part 5 of the Scheme to guide development in areas with vulnerable soils.*

*As the LPS proposes the inclusion of public drinking water source areas as Special Control Areas in the LPS and the Scheme together with other land resource management measures the DoW have no objection to the removal of the BPSCA subject to:*

- adequate planning mechanisms being inserted in the Scheme to ensure that land use development does not degrade the environmental values of the area;*
- considering requiring all 'A' and 'D' uses in the Rural zone to be assessed against the factors listed in Appendix 2 (in the LPS); and*
- that the changes be made by an Amendment prepared in consultation with the DoW.*

*The Scheme should be amended to remove the Bassendean Precinct Special Control Area subject to the inclusion in the LPS of adequate alternative mechanisms to ensure that land use and development does not degrade environmental values. The Shire will consult DoW regarding appropriate provisions to be included in the LPS and the composition of the Amendment.*

## **Draft Local Planning Strategy 2016:**

### **5.7.4.5 Water protection and management and the Local Planning Scheme**

*The protection and management of water resources including groundwater abstraction should be reinforced in the Scheme.*

*The following modifications to the Scheme should be initiated (see Annexure 1):*

- introduce Special Control Areas to protect PDWSAs and to show these areas on the Scheme Maps;*
- introduce a new clause to the Scheme to reinforce existing provisions '5.22 Protection of Water Sources' and '5.23 Water Management and Protection' with a*

*new clause to require the landowner to show the acceptability of an application for intensive agriculture; and*

- *provide guidelines for the assessment of an application in a Priority area of a PDWSA by Council.*

*In addition Council intends to remove the Bassendean Precinct Special Control Area from the Scheme and to have all rural land to be treated in the same way. This acknowledges that the whole shire is within Proclaimed Groundwater or Surface Water areas and any application in the Rural zone would be dealt with appropriately.*

*With the inclusion of Special Control Areas in the Scheme to protect PDWSAs, activities in areas with Bassendean Sands and other soil types would still be managed to specifically protect ground water resources.*

### **Local Planning Scheme No.7:**

Aspects of the Scheme Amendment are somewhat reinforced in the Deemed Provisions of Local Planning Scheme No.7 as follows:

#### ***Part 9 – Procedure for dealing with applications for development approval***

##### ***Clause 67: Matters to be considered by local government***

*(o) the likely effect of the development on the natural environment or water resources and any means that are proposed to protect or to mitigate impacts on the natural environment or the water resource.*

*(q) the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bush fire, soil erosion, land degradation or any other risk.*

### **State Planning Justification**

#### **State Planning Policy 2.7 Public Drinking Water Source:**

##### ***2. Introduction and Background***

*Priority 1 (P1) source protection areas are defined and managed to ensure there is no degradation of the water resource in these areas. This is the highest level of protection for the water source and normally will apply to land owned by the State, and that is characterized by low-intensity and low-risk land use, such as forestry. Protection of the public water supply outweighs virtually all other considerations in respect to the use of this land. P1 source protection areas are managed in accordance with the principle of risk avoidance.*

*Priority 2 (P2) source protection areas are defined to ensure that there is no increased risk of pollution to the water source. P2 areas are declared over land where low-risk development already exists. Protection of public water supply sources*

*is a high priority in these areas. P2 areas are managed in accordance with the principle of risk minimisation and so conditional development is allowed.*

*Priority 3 (P3) source protection areas are defined to manage the risk of pollution of the water source. P3 areas are declared over land where water supply sources need to co-exist with other land uses such as residential, commercial and light industrial developments, although there is some restriction on potentially highly polluting land uses. Protection of P3 areas is otherwise achieved through management guidelines for land use activities. If the water source does become contaminated then water may need to be treated or an alternative water source found.*

*The WRC has published a Water Quality Protection Note on Land Use Compatibility in Public Drinking Water Source Areas which shows the compatibility of different land uses within the different priority source protection areas. The guidelines contain a table which lists land uses which are compatible, incompatible, and conditional with or in regard to the management objectives of the priority source protection areas. These land uses are recommended as permitted, not permitted, or discretionary uses respectively within each priority source protection area, and may be incorporated into the provisions of the proposed special control areas. These guidelines should be used in conjunction with any endorsed water source protection plan or land use and water management strategy.*

## **5. Policy Measures**

**5.4:** *Outside the Perth Metropolitan Region, all priority source protection areas in PDWSAs should be shown as special control areas in region schemes and in local government schemes in accordance with the recommendations of any relevant land use and water management strategy published by the WAPC, or any water source protection plan approved by the WRC. The special control area provisions should provide for referral of applications to the WRC for advice and comment, and set out the relevant considerations in determining planning applications within these areas, guided by the WRC Water Quality Protection Note on Land Use Compatibility and Public Drinking Water Source Areas.*

**5.5:** *Land uses and developments in all priority source protection areas that have the potential to impact detrimentally on the quality and quantity of public drinking water supplies should not be permitted unless it can be demonstrated, having regard to advice from the WRC, that such impacts can be satisfactorily managed. The WRC will have regard to the relevant parameters, standards and criteria set out in the Australian Drinking Water Guidelines (1996) published by the National Health and Medical Research Council in providing advice on land use and development proposals.*

## **State Planning Policy 2.9 Water Resources:**

### **5. Policy Measures**

*Planning should contribute to the protection and wise management of water resources by ensuring local and regional planning strategies, structure plans,*

*schemes, subdivisions, strata subdivision and development applications adopt the following measures.*

### **5.1 General Measures**

*(i) Protect significant environmental, recreational and cultural values of water resources.*

*(ii) Aim to prevent or, where appropriate, ameliorate the following potential impacts:*

- any adverse effects on water quality and quantity and, as a minimum, proposed development should aim to maintain water quality and ensure water quantity is compatible with the receiving waters;*
- increased nutrient loads into receiving waters;*
- increased acidity and leaching of acid sulfate soils;*
- the removal of associated native vegetation important for long-term management of the water resource, particularly vegetation associated with wetlands and waterways respectively;*
- increased erosion, sedimentation and turbidity, particularly at the construction phase of development;*
- any potential adverse effects on environmental water requirements and, as a minimum, proposed development should aim to maintain natural flow regimes and variability;*
- excessive build-up of organic matter;*
- pollution and contamination;*
- salinity over and above the natural levels; and*
- any potential cumulative impacts.*

*(iii) Promote improved outcomes such as:*

- environmental repair and rehabilitation of the water resource;*
- improved water quality;*
- reduction in nutrient export to receiving waters to a level lower than existing;*
- restoration of natural flow regimes and variability; and*
- use of site works such as fencing, revegetation or water monitoring.*

*(iv) Inform planning actions by identifying all water resources above and below ground in the subject area, and mapping and prioritising them in terms of state, regional or local significance. Water resources to be identified include wetlands, waterways (such as rivers, streams and creeks), estuaries, groundwater and surface water catchments, dams, floodplains, foreshores and existing and future surface and groundwater drinking water catchments and sources.*

*(v) Take into account potential impacts the water resource may have on a land use when determining the compatibility of locating a land use near natural or artificial water resource/s (for example, flooding or disease vector and nuisance insects such as mosquitoes and midges).*

*(vi) Recognise and take into account State Government management strategies for water resource issues such as water protection areas, wetland protection, water*

*provisions for environmental flow requirements, riparian management and water allocation plans.*

*(vii) Recognise and take into account water resource management plans as required by the Rights in Water and Irrigation Act 1914.*

*(viii) Recognise and take into account relevant accredited natural resource management strategies, endorsed by state government statutory authorities, that contain recommendations to address water resource matters.*

## **5.2 Surface and Groundwater Resources**

*(i) Recognise the hydrological importance of groundwater and surface catchments with regards to water management and the associated value of catchment planning on a regional, district and local scale.*

*(ii) Protect, manage, conserve and enhance surface and groundwater catchments and recharge areas supporting significant ecological features or having identified environmental values, by ensuring, where possible, appropriate management or limiting inappropriate land use/s to maintain water quality and quantity for existing and future environmental and human uses.*

*(iii) Ensure the availability of water resources is compatible with the future requirements of the proposed and surrounding land use through an assessment of quantity and quality requirements for both the development and the environment.*

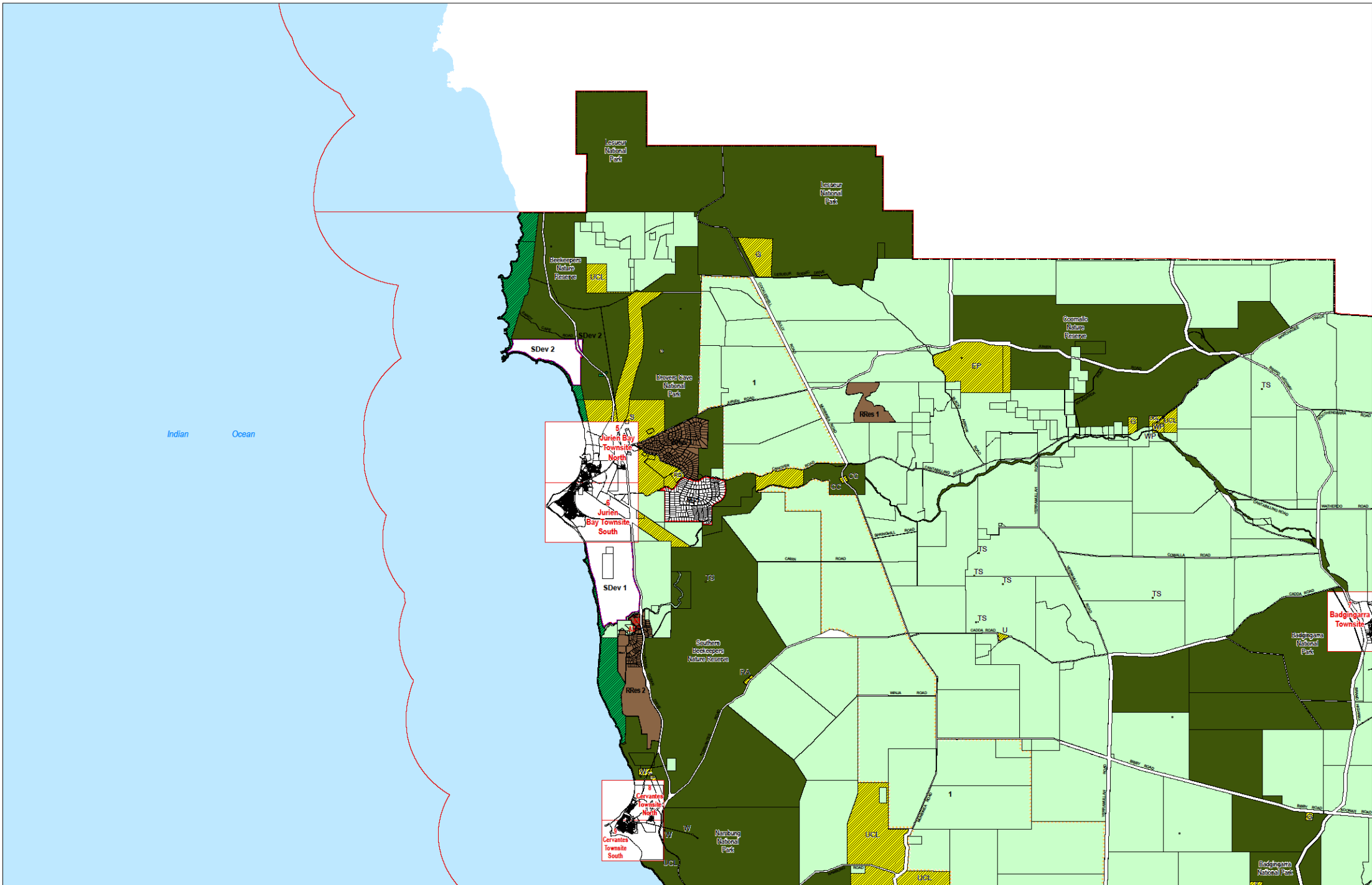
*(iv) Take into account the potential adverse impacts that development may have on catchment areas and encourage development to participate in catchment management activities.*

## **5.0 CONCLUSION**

As recommend by the current adopted and draft local planning strategies for the Shire, the proposed amendment provides greater protection for Public Drinking Water Source Areas of the Shire as required by SPP2.7 by ensuring sufficient planning controls are in place to prevent adverse impacts on vulnerable groundwater and surface water resources. This acknowledges that any planning application within or in close proximity to Proclaimed Groundwater or Surface Water areas would be dealt with appropriately.

**APPENDIX A – EXISTING SPECIAL CONTROL AREA 1 – BASSENDEAN  
PRECINCT**





## LEGEND

### LOCAL SCHEME RESERVES

(see scheme text for additional information)

Conservation	Public purposes : Emergency service
Local road	EQP Public purposes : Equestrian purposes
Parks and recreation	F Public purposes : Fire services
Public purposes	G Public purposes : Gravel
AS Public purposes : Air safety marker	LDG Public purposes : Landing ground
C Public purposes : Camping	LG Public purposes : Local government
CC Public purposes : Camping and conservation of flora	RA Public purposes : Rest area
CEM Public purposes : Cemetery	RD Public purposes : Rubbish disposal
CH Public purposes : Church	S Public purposes : School
COM Public purposes : Commonwealth	TS Public purposes : Trigonometrical station
CF Public purposes : Communications facility	UCL Public purposes : Unvested crown land
EP Public purposes : Education purposes	U Public purposes : Utility
	W Public purposes : Water
	WP Public purposes : Watering place

### LOCAL SCHEME ZONES

(see scheme text for additional information)

Commercial	Rural
Harbour	Rural residential
Industrial	Special development
Marine services	Special use
Ocean	APA Special use : Aged persons accommodation
Residential	SA Special use : Special accommodation
	Tourist

### OTHER CATEGORIES

(see scheme text for additional information)

Scheme boundary	SD1 Special development area
Local Government boundary	SCA2 Waste Water Infrastructure
R20 R Codes	No zone
A1 Additional uses	Waterbodies
R1 Restricted uses	
RRes1 Rural residential area	
SH1 Special use area	
1 Bassendean sand special control area	

VERSION No 1



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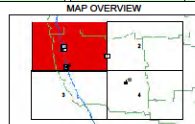
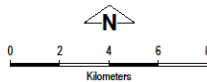
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## Shire of Dandaragan

Local Planning Scheme No. 7

( District Scheme )



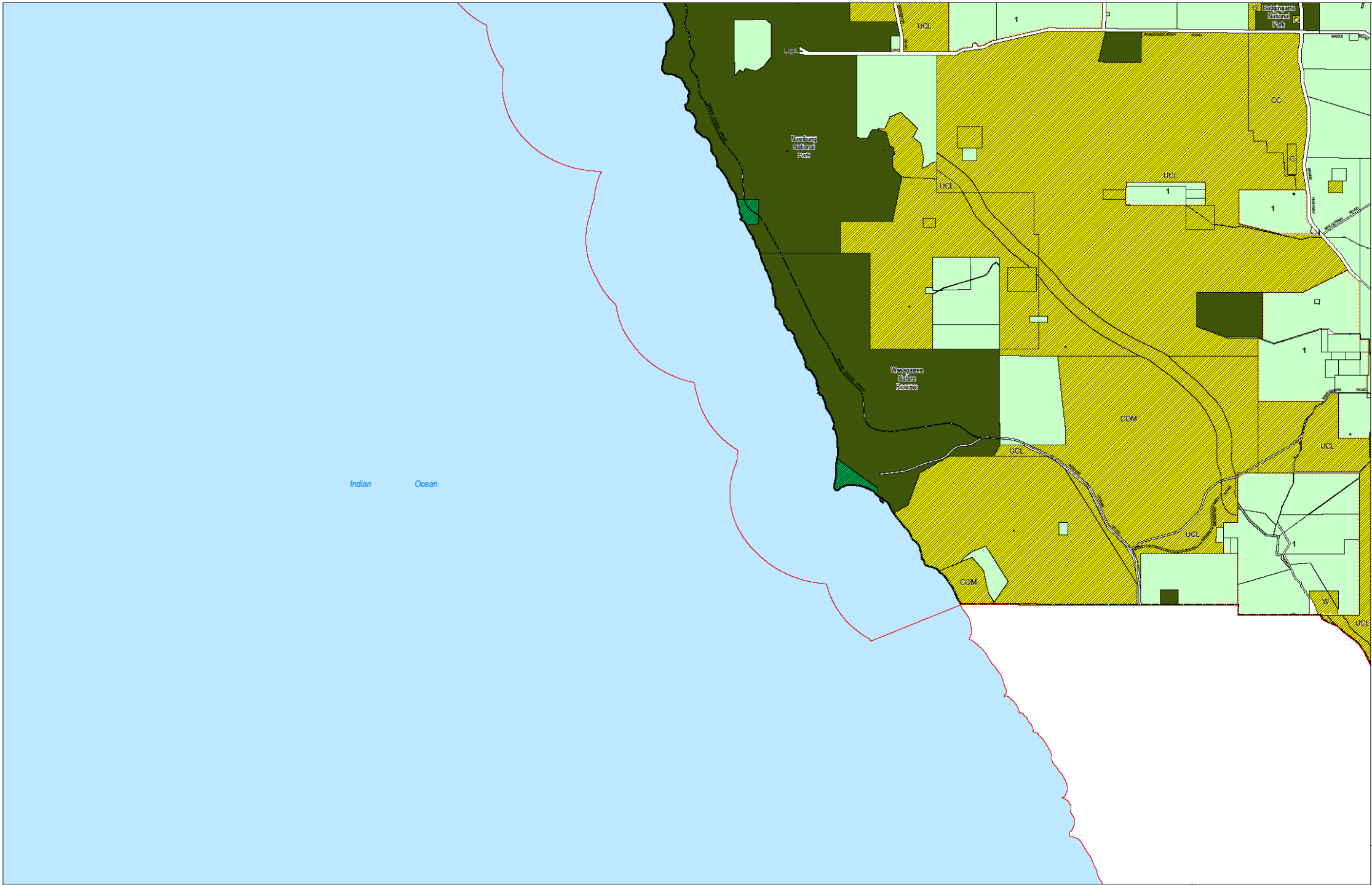
Authorised: T.Servaas  
Plot Date: 16 December 2015  
G.Gazette: 24 November 2000

Local Planning Scheme Map No. 1 of 10  
MAP: Jurien Bay Townsite Surrounds

## Shire of Dandaragan

Local Planning Scheme No. 7


















( District Scheme )



**LEGEND**

**LOCAL SCHEME RESERVES**

(see scheme text for additional information)

	Conservation		EQP	Public purposes : Equestrian purposes
	Local road		F	Public purposes : Fire services
	Parks and recreation		G	Public purposes : Gravel
	Public purposes		LDG	Public purposes : Landing ground
	AS	Public purposes : Air safety marker	LG	Public purposes : Local government
	C	Public purposes : Camping	RA	Public purposes : Rest area
	CC	Public purposes : Camping and conservation of flora	RD	Public purposes : Rubbish disposal
	CEM	Public purposes : Cemetery	S	Public purposes : School
	CH	Public purposes : Church	TS	Public purposes : Trigonometrical station
	COM	Public purposes : Commonwealth	UCL	Public purposes : Unvested crown land
	CF	Public purposes : Communications facility	U	Public purposes : Utility
	EP	Public purposes : Education purposes	W	Public purposes : Water
			WP	Public purposes : Watering place

**LOCAL SCHEME ZONES**

(see scheme text for additional information)

	Commercial		Rural
	Harbour		Rural residential
	Industrial		Special development
	Marine services		Special use
	Ocean		APA Special use : Aged persons accommodation
	Residential		SA Special use : Special accommodation
			Tourist

**OTHER CATEGORIES**

(see scheme text for additional information)

	Scheme boundary		SD1	Special development area
	Local Government boundary		SCA2	Waste Water Infrastructure
	R20 R Codes		No zone	
	A1 Additional uses		Waterbodies	
	R1 Restricted uses			
	RRes1 Rural residential area			
	SU1 Special use area			
	1 Bassendean sand special control area			

VERSION No 1

**Shire of Dandaragan**  
Local Planning Scheme No. 7  
( District Scheme )



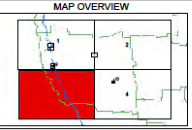
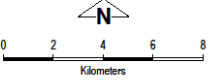
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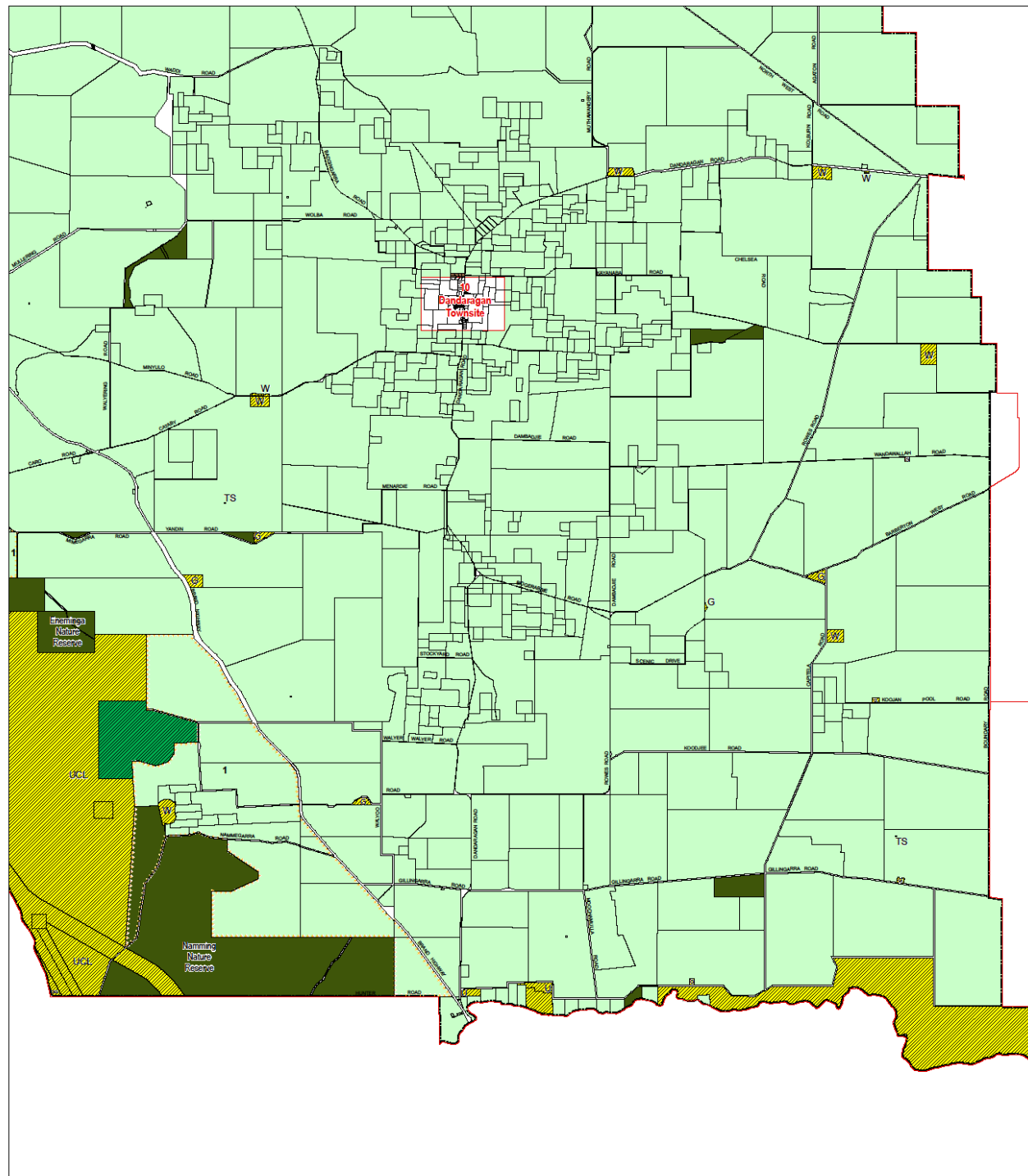
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**Shire of Dandaragan**  
Local Planning Scheme No. 7  
( District Scheme )



Authorised: T.Servaas  
Plot Date: 16 December 2015  
G.Gazette: 24 November 2000

Local Planning Scheme Map No. 3 of 10  
MAP: Dandaragan South West



## LEGEND

### LOCAL SCHEME RESERVES

(see scheme text for additional information)

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Local road	Public purposes : Camping	EQP	Public purposes : Equestrian purposes
Parks and recreation	Public purposes : Camping and conservation of flora	F	Public purposes : Fire services
Public purposes	Public purposes : Cemetery	G	Public purposes : Gravel
AS	Public purposes : Church	LDG	Public purposes : Landing ground
C	Public purposes : Commonwealth	LG	Public purposes : Local government
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CEM	Public purposes : Education purposes	RD	Public purposes : Rubbish disposal
CH		S	Public purposes : School
COM		TS	Public purposes : Trigonometrical station
CF		UCL	Public purposes : Unvested crown land
EP		U	Public purposes : Utility
		W	Public purposes : Water
		WP	Public purposes : Watering place

### LOCAL SCHEME ZONES

(see scheme text for additional information)

Commercial	Rural
Harbour	Rural residential
Industrial	Special development
Marine services	Special use
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Residential	SA Special use : Special accommodation
	Tourist

### OTHER CATEGORIES

(see scheme text for additional information)

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R20 R Codes	No zone	
A1 Additional uses	Waterbodies	
R1 Restricted uses		
RRes1 Rural residential area		
SD1 Special use area		
1 Bassendean sand special control area		

VERSION No 1

## Shire of Dandaragan

Local Planning Scheme No. 7

( District Scheme )



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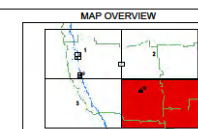
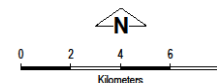
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## Shire of Dandaragan

Local Planning Scheme No. 7

( District Scheme )



Authorised: T.Servaas  
Plot Date: 16 December 2015  
G.Gazette: 24 November 2000

Local Planning Scheme Map No. 4 of 10  
MAP: Dandaragan Townsite Surrounds

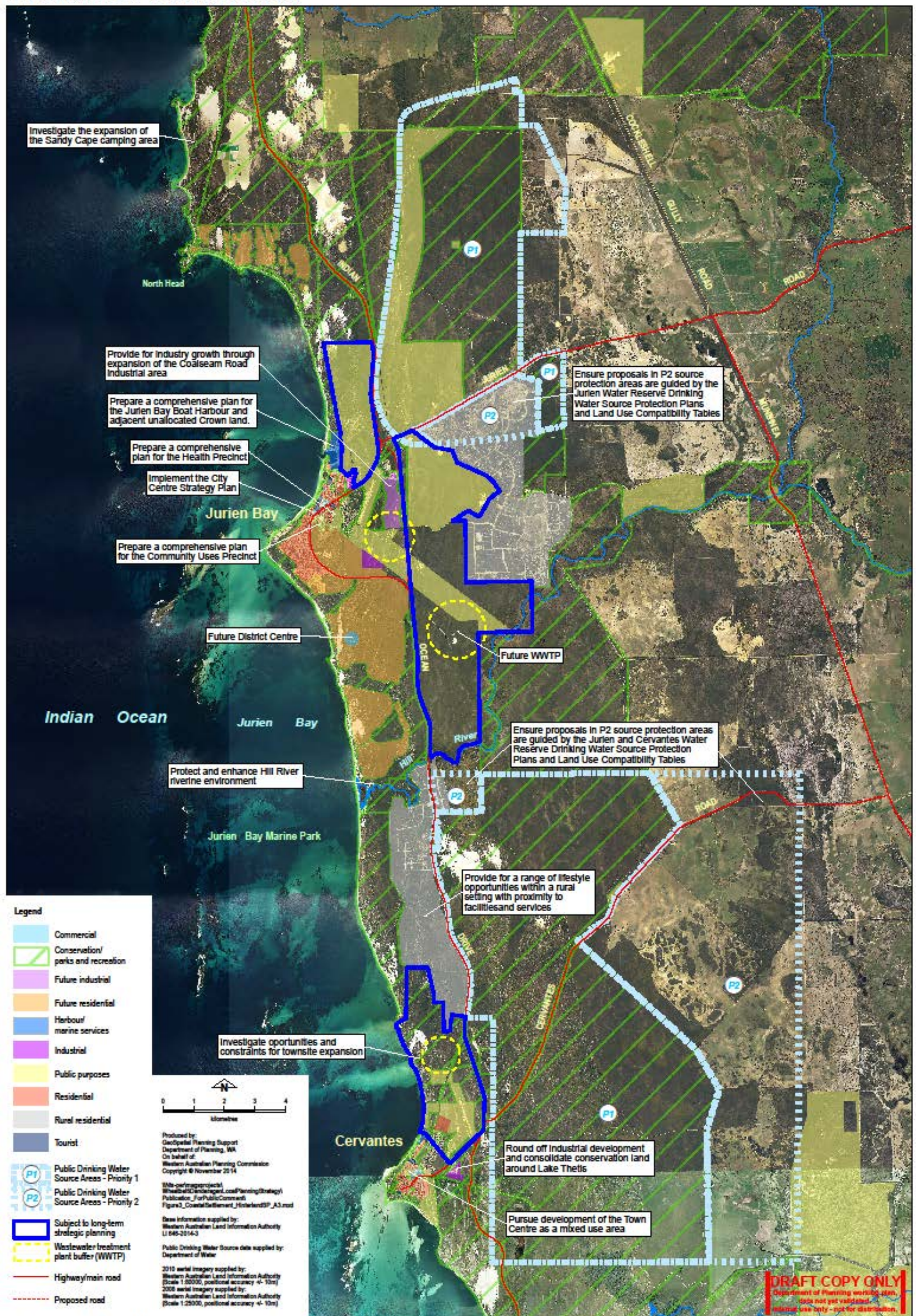
**APPENDIX B – PROPOSED SPECIAL CONTROL AREA 1 – PUBLIC DRINKING  
WATER SOURCE AREAS**



[illegible]

Figure 2

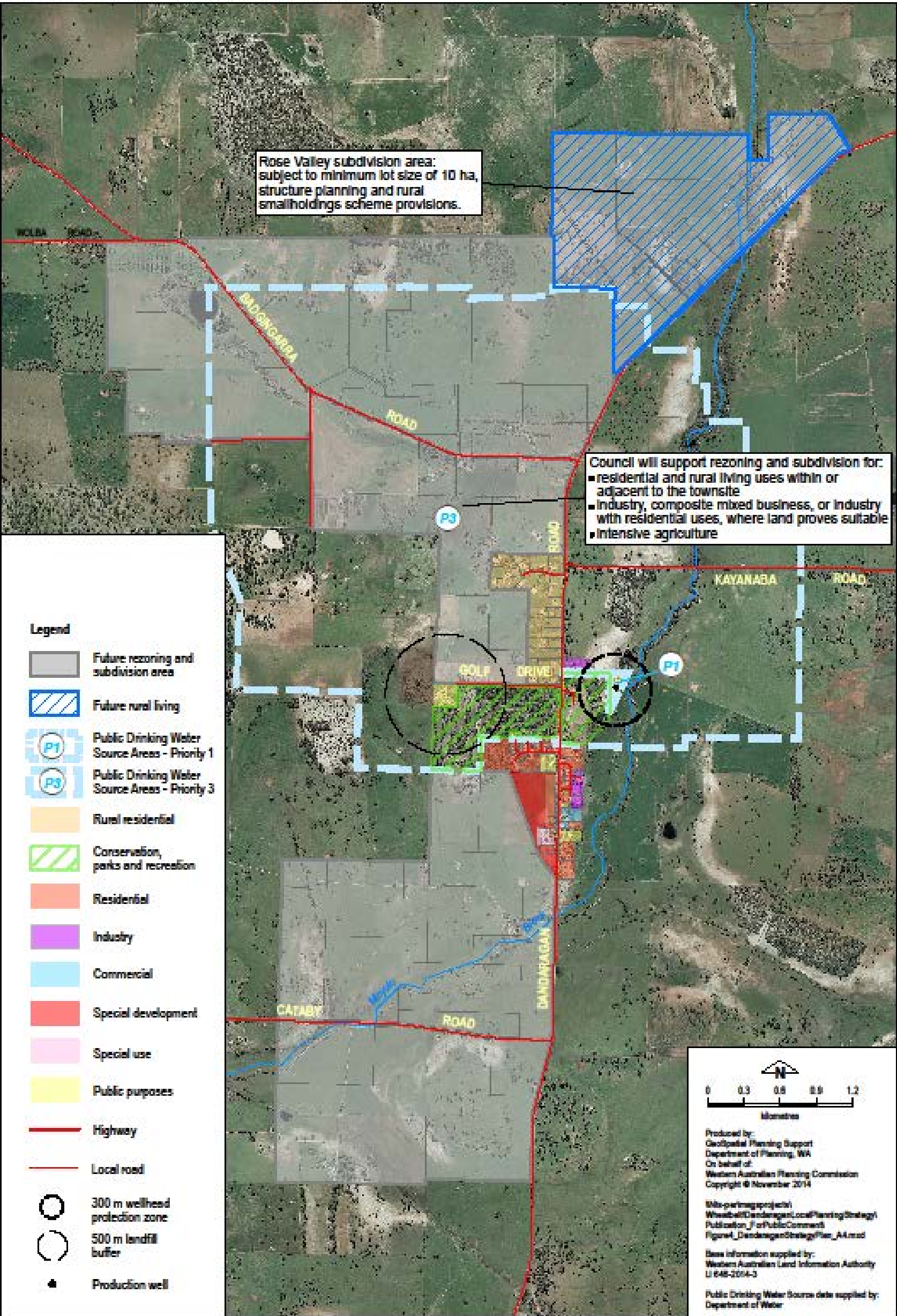




Coastal Settlement and Coastal Hinterland Strategy Plan

Figure 3





Dandaragan Strategy Plan

Figure 4

Figure 5

## **COUNCIL ADOPTION & RESOLUTION TO ADVERTISE**

This Standard Amendment was adopted for purposes of advertising by resolution of the Council of the Shire of Dandaragan at the Ordinary Meeting of the Council held on the \_\_\_\_\_ day of \_\_\_\_\_, 2018.

.....  
SHIRE PRESIDENT

.....  
CHIEF EXECUTIVE OFFICER

## **COUNCIL RECOMMENDATION**

This Standard Amendment is recommended for approval by resolution of the Shire of Dandaragan at the Ordinary Meeting of the Council held on the \_\_\_\_\_ day of \_\_\_\_\_, 2018 and the Common Seal of the Shire of Dandaragan was hereunto affixed by the authority of a resolution of the Council in the presence of:

(Seal)

.....  
SHIRE PRESIDENT

.....  
CHIEF EXECUTIVE OFFICER

## **WAPC RECOMMENDATION FOR APPROVAL**

.....  
DELEGATED UNDER S.16 OF  
THE P&D ACT 2005

DATE.....

## **APPROVAL GRANTED**

.....  
MINISTER FOR PLANNING

DATE.....

# Coastal Hazard Risk Management and Adaption Plan

Shire of Dandaragan

59917806



Prepared for  
Shire of Dandaragan

21 June 2018

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## Executive Summary

The Shire of Dandaragan is preparing for the threats of climate change and sea level rise to the coastal settlements of Cervantes and Jurien Bay. Historically, the coastal towns were established to service fishing industry, agricultural activities, and are popular holiday destinations and retirement locations. This Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) has been prepared to provide a long term view of the potential future coastal erosion impacts to the townships of Cervantes and Jurien Bay and highlight possible strategies to adapt to the changing future oceanic and coastal conditions.

Development of the Dandaragan CHRMAP has followed the requirements of Western Australian State Planning Policy No. 2.6: State Coastal Planning Policy (SPP2.6) and supporting guideline documents. Previous work had highlighted the two coastal townships within the Shire as being at risk of coastal erosion and these areas form the focus for this CHRMAP. The coastal zones of each township were divided into management units (four at Cervantes and four at Jurien Bay) with similar asset types and exposure to coastal hazards. The risk and vulnerability assessment was applied to each management unit and results highlighted the most vulnerable management unit located at Cervantes, for which more detailed assessment of adaptation options were investigated.

A range of options for addressing the challenges of coastal erosion and its effects on the coastal zone over the next decade and century have been outlined. While it is natural that local communities would prefer to protect and preserve the current features of the coastal zone, the reality is that unless some new and innovative protection methods are developed, the costs of maintaining current features will likely become prohibitively expensive at some point in the future, given current sea level rise predictions. The interim nature of protect options needs to be recognised across the community and, the potential adaption solutions optimised for social, environmental and economic (affordability) drivers.

The complex planning issues around setting the intent and establishing controls such as Special Control Areas, to either restrict development within currently developed areas and/or rezone currently undeveloped land to avoid future development, are discussed. A number of options were identified that aim to protect developed areas under imminent threat of a storm erosion event. An object of the state policy is to implement a beneficiary pays principle to apportion costs for protecting assets within defined coastal hazard areas. It is recommended that a comprehensive community and beach users engagement program be instigated to identify the key beneficiaries of any proposed protection option and its decommissioning at some future trigger, so the costs for implementation can be apportioned appropriately.

The recently released draft Planned and Managed Retreat Guidelines (WAPC, 2017) suggests the process for implementing future managed retreat may include compensation under provisions in the *Land Administration Act (1997)*. In reality, this is unlikely to occur in the Shire unless the State or Commonwealth Governments provide the majority of funding to acquire property. There is no obligation on Government to adopt a strategy that may invoke a requirement to compensate land owners for loss due to erosion. It is important to note that while the managed retreat option is recommended in this CHRMAP its future implementation will need further investigation of the implications for both Government and Private stakeholders. For Landowners who may be considering purchasing or developing lands in designated Hazard areas it is important to note that they should not assume any funds will be forthcoming to support future retreat.

A plan for implementation of recommended adaptation options over the next decade, to 2030 with a strategic view on the likely adjustments over the next century, to 2110 is outlined in the Gantt chart below.



Task Name	Start	Finish	Cost Estimate \$1,000s
<b>Planning and Development Controls Review</b>	<b>1 Jan '18</b>	<b>28 Oct '20</b>	<b>\$155</b>
Review Planning and Development Controls and Recommend Amendments as required	1 Mar '18	27 Sep '19	\$80
Amend current zone and SCA boundaries	1 May '18	31 Oct '18	\$15
Update SCA special provisions	29 Nov '18	30 Jan '19	\$20
Dandaragan LPS 7 Update and Endorsement by WAPC	17 Jan '20	30 Jun '20	\$40
<b>Monitoring</b>	<b>1 May '18</b>	<b>14 May '29</b>	<b>\$410</b>
Horizontal Shoreline Datum (Aerial Photo Analysis)	1 May '18	2 May '22	\$70
Annual Beach Profile Surveys	4 May '18	14 May '29	\$300
Post wave erosion Event (>2 yr ARI wave) Beach Profiles	11 Jan '19	17 Jan '19	\$30
Cyclone storm surge flooding Event	15 Mar '20	18 Mar '20	\$10
<b>Specialist Investigations</b>	<b>4 Feb '19</b>	<b>28 Jul '26</b>	<b>\$415</b>
Comprehensive investigation of each community and visitors be undertaken to identify beneficiaries of proposed protection areas	4 Feb '19	8 Nov '19	\$150
Investigate allowance for coastal foreshore reserve width to extend the 2110 Hazard line a sufficient distance to accommodate future relocation of foreshore assets	15 Mar '19	2 Jul '19	\$15
Assess Current and Future Sediment Budget in the Secondary Cell	1 Jul '19	30 Jun '22	\$80
Analysis of Storm Surge Inundation and Erosion event monitoring	14 May '20	5 Aug '20	\$40
Investigate Storm Surge and Coastal Processes Interactions to reassess triggers, set FFL, CHRMAP, Water Management Plans and Emergency Management Plan overlaps	25 Mar '26	28 Jul '26	\$50
Undertake economic analysis of options	17 May '20	17 Sep '20	\$80
<b>Operational</b>	<b>1 Feb '18</b>	<b>28 Apr '20</b>	<b>\$80</b>
Establish Data Management and GIS system (time series, spot levels and remote sensing) relating to shoreline monitoring and general flooding in each Township to allow identification of trends over time, and Trigger assessment	1 Feb '18	26 Mar '19	\$50
Update Asset database to incorporate end of life date to facilitate future management of assets	1 Feb '19	30 Sep '19	\$20
Notifications on property titles - Potentially affected land owners to be contacted directly	2 Jul '18	28 Apr '20	\$10
<b>CHRMAP Review and Update (2023)</b>	<b>18 Feb '22</b>	<b>30 Nov '23</b>	<b>\$210</b>
Review Hazard line estimates (S1, S2, S3 and S4)	18 Feb '22	21 Apr '22	\$25
Review Risk Assessment and Future Pathway Options	29 Apr '22	30 Jun '22	\$40
Community and Stakeholder Consultation	1 May '22	30 Jan '23	\$50
Update CHRMAP	24 Jun '22	2 Mar '23	\$80
CHRMAP 2022 Endorsement by WAPC	7 Jul '23	30 Nov '23	\$15
<b>CHRMAP Review and Update (2028)</b>	<b>1 Feb '28</b>	<b>23 Nov '29</b>	<b>\$210</b>
Review Hazard line estimates (S1, S2, S3 and S4)	1 Feb '28	27 Mar '28	\$25
Review Risk Assessment and Future Pathway Options	1 May '28	1 Nov '28	\$40
Community and Stakeholder Consultation	1 Feb '28	9 Oct '28	\$50
Update CHRMAP	10 Jul '28	16 Mar '29	\$80
CHRMAP 2027 Endorsement by WAPC	23 Jul '29	23 Nov '29	\$15

## Abbreviations and Acronyms

Abbreviation	Description
<b>AEP</b>	Annual Exceedance Probability
<b>ARI</b>	Average Recurrence Interval
<b>AS</b>	Australian Standard
<b>CHRMAP</b>	Coastal Hazard Risk Management and Adaption Plan
<b>DoP</b>	Department of Planning (now part of DoPLH)
<b>DoPLH</b>	Department of Planning, Lands and Heritage
<b>DoT</b>	WA Department of Transport
<b>HSD</b>	Horizontal Shoreline Datum (see SPP2.6)
<b>IPCC</b>	International Panel on Climate Change
<b>LAA</b>	Land Administration Act
<b>LGA</b>	Local Government Area
<b>LIDAR</b>	Light detection and ranging
<b>LPS</b>	Local Planning Strategy
<b>MCA</b>	Multi-criteria analysis
<b>MRA</b>	M P Rogers and Associates
<b>MSL</b>	Mean sea level
<b>NACC</b>	Northern Agricultural Catchments Council
<b>SCA</b>	Special Control Area
<b>SLR</b>	Sea Level Rise
<b>SPP</b>	State Planning Policy
<b>SPP2.6</b>	State Planning Policy No 2.6: State Coastal Planning Policy (2013)
<b>The Shire</b>	Shire of Dandaragan
<b>WA</b>	Western Australia
<b>WAPC</b>	Western Australian Planning Commission
<b>Wheatbelt PIF</b>	<i>Wheatbelt Planning and Infrastructure Framework 2015</i>

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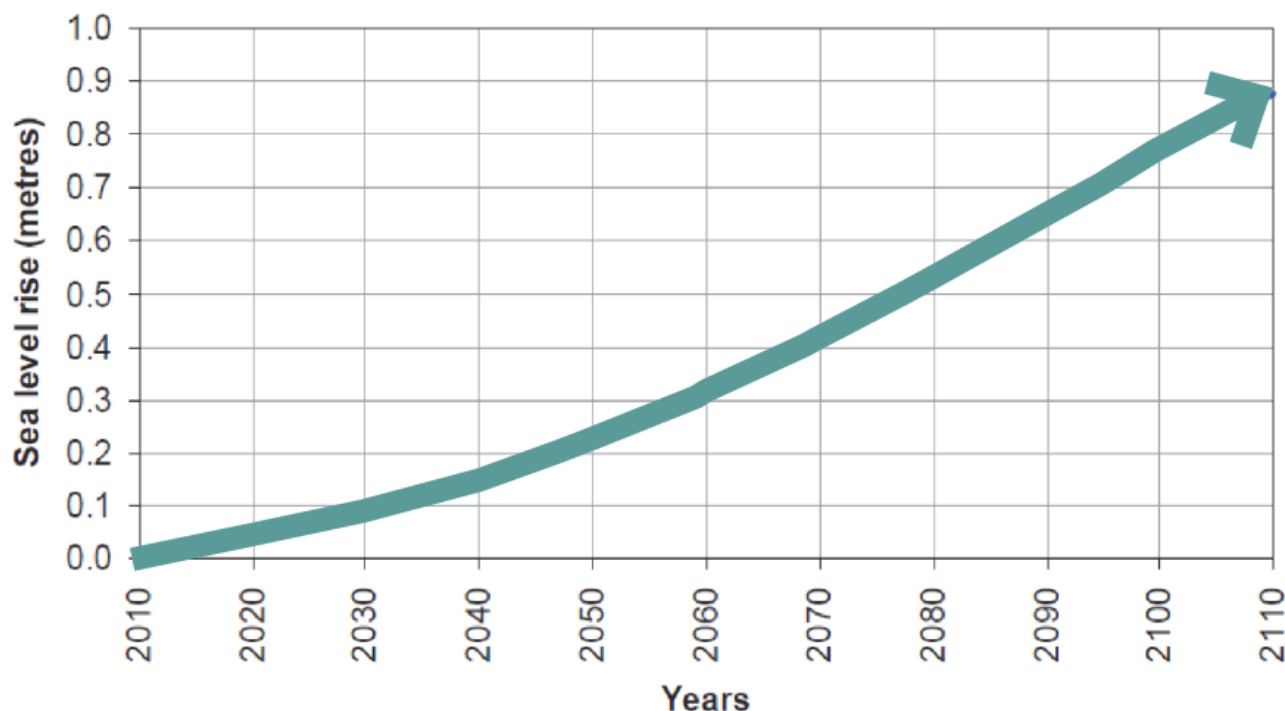


# 1 INTRODUCTION

## 1.1 Purpose

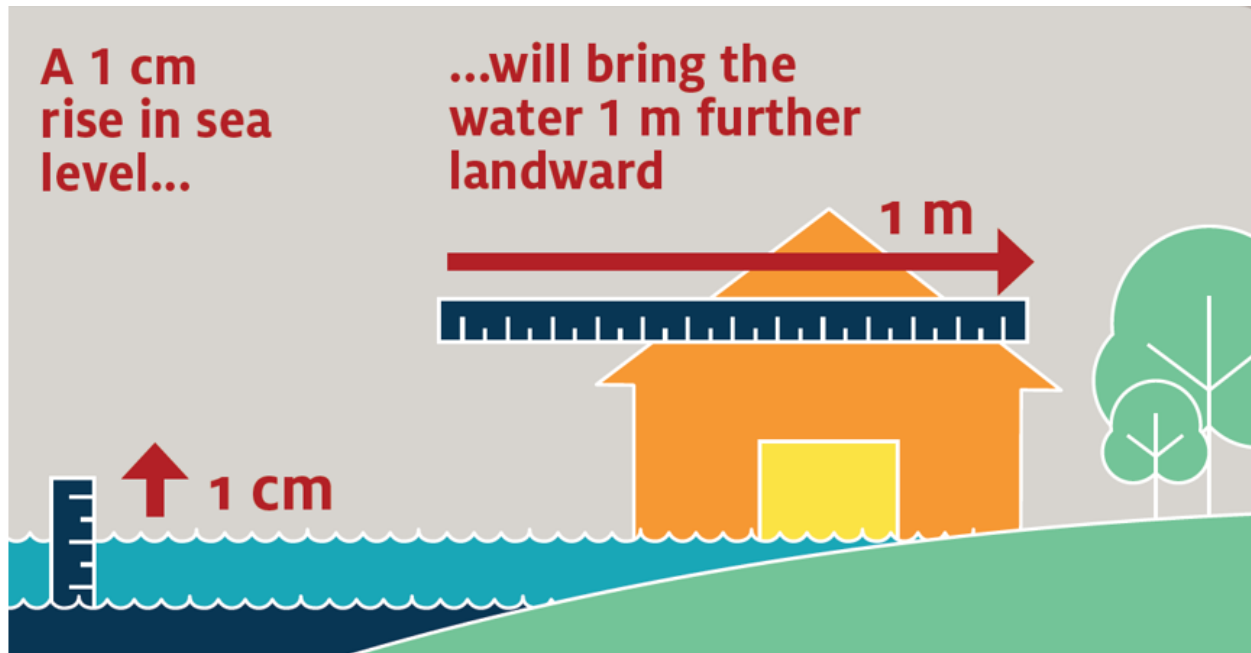
Globally, mean sea level (MSL) has risen since the nineteenth century and is predicted to continue to rise, at an increasing rate, through the twenty first century (Intergovernmental Panel on Climate Change [IPCC], 2014), bringing changes to the Western Australian (WA) coastline over the coming decades. To prepare for sea level rise (SLR) induced coastal hazards, such as coastal erosion and inundation, all levels of government are putting processes in place to ensure that communities understand the risks to values and assets on the coast, and to plan to adapt over time.

Changes to MSL over the past century have been observed for the coastline between Fremantle and Jurien Bay. *Sea Level Change in Western Australia – Application to Coastal Planning* (DoT, 2010) reviews information relating to SLR at a local scale and recommends an allowance for SLR be adopted for planning purposes. The WA State Government revised the State Planning Policy (SPP2.6) in 2013 to incorporate the projected SLR for WA of 0.9 m between 2010 and 2110 (**Figure 1-1**).



**Figure 1-1 Recommended allowance for SLR in coastal planning for WA (source: DoT, 2010)**

Dandaragan's coastline is low lying and sandy, featuring coastal dunes, nearshore reefs and islands, seagrass meadows, fishing stocks and rare vegetation communities. Eliot et al. (2012) identifies that the coastline of the Hill Primary Coastal Compartment (Guilderton to Jurien Bay) features low lying sandy coastal landforms, that were identified as being at risk to the impacts of coastal processes (Eliot et al., 2012) and hence, the town sites located on these landforms are vulnerable to changing coastal processes as sea level rises. Coastal processes include a complex set of interactions between atmosphere (climate change) and ocean scale phenomena that interact with the coastal landforms resulting changes to beach shape and form. These processes are often summarised as coastal erosion events associated with short-lived intense storms, shoreline recession associated with climate change-induced sea level rise and oceanic extreme water level events that cause flooding of the coastal areas by sea water. For sandy coastlines, increases in local MSL generally result in shoreline recession, with a "rule of thumb" often used, that a 1 cm rise will result in 1 m of landward recession of the shoreline (**Figure 1-2**; CoastAdapt, 2017).



**Figure 1-2 Influence of sea level rise on coastal erosion (source: CoastAdapt, 2017)**

Development of this Coastal Hazard Risk Management and Adaption Plan (CHRMAP) is being undertaken by Cardno on behalf of the Shire of Dandaragan (hereafter called 'the Shire') to identify risks and plan adaptation responses to natural variability and the expected impacts of SLR for the Shire's coastline.

The purpose of the CHRMAP is to:

- > Ensure that development and the location of coastal facilities takes into account coastal processes, landform stability, coastal hazards, climate change and biophysical criteria;
- > Guide the identification of appropriate areas for the sustainable use of the coast for housing, tourism, recreation, ocean access, maritime industry, commercial and other activities;
- > Provide for public coastal foreshore reserves and access to them on the coast; and
- > Protect, conserve and enhance coastal zone values, particularly in areas of landscape, biodiversity and ecosystem integrity, indigenous and cultural significance.

This CHRMAP focuses on the impacts of coastal erosion and shoreline recession processes while the impacts of coastal inundation caused by high sea level events associated with, for example, cyclones tracking down the west coast will be addressed by the Shire in future.

## 1.2 Overview of the CHRMAP Process

The key policy governing coastal planning in WA is the *State Planning Policy No. 2.6: State Coastal Planning Policy* (Western Australian Planning Commission [WAPC], 2013a) (herein referred to as 'SPP2.6'). The SPP2.6 policy recommends that management authorities develop a CHRMAP using a risk mitigation approach to planning, that identifies the hazards associated with existing and future development in the coastal zone. SPP2.6 (WAPC 2013a) and the SPP2.6 Guidelines (WAPC 2013b) contain prescriptive details, for example in relation to scales of assessment, storm event types and sea-level rise allowances.

The WAPC (2014a) has also developed the *Coastal hazard risk management and adaptation planning guidelines* which are less prescriptive, but are aimed to ensure that planning is carried out using a risk based approach with due regard to stakeholder engagement, community consultation and education, and that a full range of adaptation options is considered. An overview of the CHRMAP process is shown in **Figure 1-3**.

Coastal planning in accordance with SPP2.6 also needs to take into consideration the requirements of other planning policies, including *Statement of Planning Policy No. 2: Environment and Natural Resources Policy* (WAPC, 2003) and *Statement of Planning Policy No. 3: Urban Growth and Settlement* (WAPC, 2006).

## 1.3 Guiding Principles and Concepts

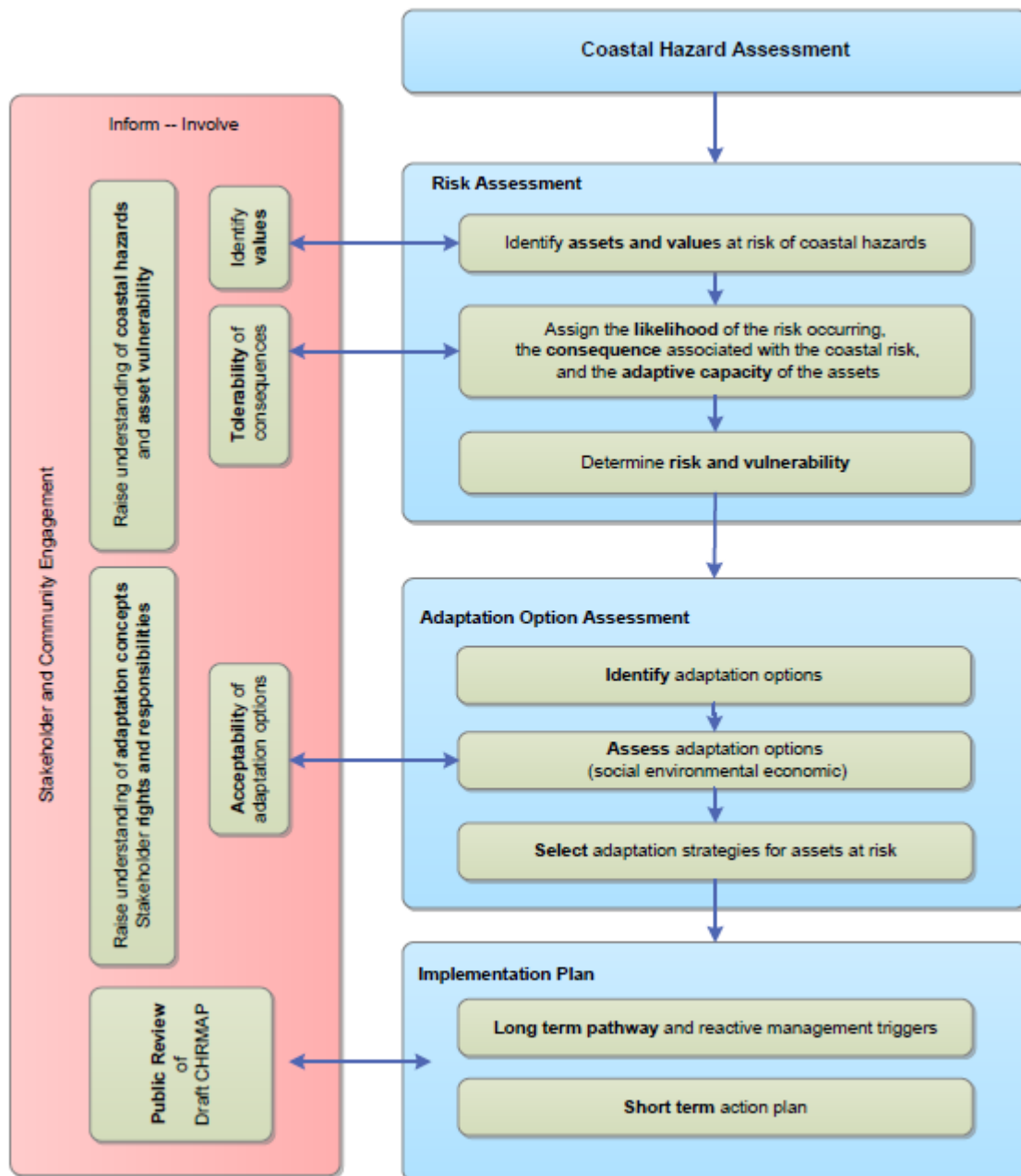
Underlying the CHRMAP process are a number of guiding principles and concepts that are fundamental to understanding the purpose and outcomes of the process.

### 1.3.1 Equity

Equity is a concept that is central to the purpose of the CHRMAP process. Australia's coastline is highly valued by the community as a public asset, with stakeholders ranging from individual property owners adjacent to the coast, to all levels of government, ratepayers within the local government area (LGA), taxpayers in general and users both within and outside of jurisdictional boundaries.

Responsibility for coastal planning lies with both the State and Local Governments, and in making decisions these authorities need to consider equity of access, equity of enjoyment and equity in terms of who benefits, who pays and the allocation of public resources.

Equity is also relevant to considerations about how a protection structure (for example a groyne) might impact on coastal processes. Protection structures may exacerbate erosion immediately adjacent to the structure, and limit sediment availability for maintaining beaches and community values some distance from the protected area. Protection structures can also result in significant impacts to coastal ecosystems, well beyond the local area in which the structures are installed (Gittman et al., 2016). Coastal protection creates beneficiaries (those who are protected from hazards) and potentially creates disadvantage to others who may be considered to be affected parties. In this regard, coastal management has similarities to the management of water rights, if one user takes all the water upstream and leaves none for downstream users then this is not considered fair and equitable. In a future of eroding coastlines due to SLR, sand can be a valuable commodity. The challenge is to ensure that planning and management is as transparent and equitable as possible.



**Figure 1-3 CHRMAP methodology flow chart (adapted from the CHRMAP Guidelines (WAPC, 2014a))**

### 1.3.2 Coastal Foreshore Reservation

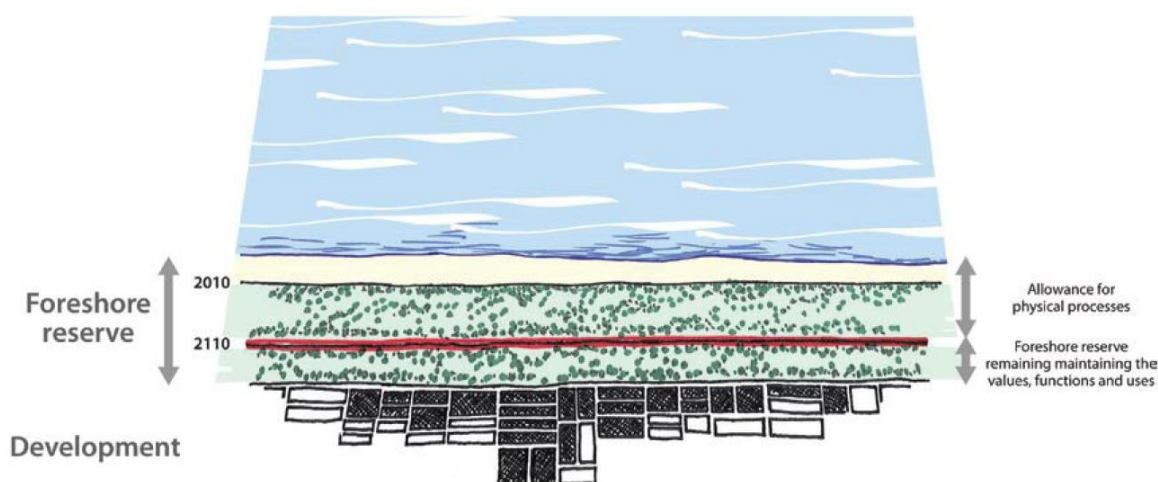
The coastal foreshore provides beach access, public space for recreation and conservation, is a tourist attraction and provides habitat for native flora and fauna. Importantly, it can also provide a buffer to protect built assets, such as buildings and infrastructure, from coastal hazards.

SPP2.6 Schedule One provides guidance for calculating the component of the coastal foreshore reserve required to allow for coastal processes, to be contained in an appropriate coastal foreshore reserve (determined in accordance with SPP2.6 Clause 5.9) of greater width. This should ensure that, at the end of the planning timeframe, a coastal foreshore reserve is still present and not exposed to the adverse impacts of erosion and inundation. It is behind this reserve that development is able to be considered. Having said this, Schedule One also contains Clause 7 – Variations that outlines specific instances where certain types of

development may be considered appropriate to locate within a coastal foreshore reserve, regardless of the allowance for physical coastal processes.

The allowance for physical processes is based on the 100 year hazard line, determined in accordance with SPP2.6. In addition to the allowance for physical processes, such as erosion, the foreshore reserve includes land allocation for maintaining the values, functions and equitable use of the coast over the 100 year planning timeframe (see **Figure 1-4**).

Permanent and easy public access to the beach and coastal foreshore reserves is a fundamental coastal planning objective. The coast and coastal foreshore reserves are public assets which should not, now or in the future, become the exclusive domain of private landowners by virtue of the erosion of coastal reserves or other coastal processes. Coastal reserves should be wide enough to perform recreation and/or conservation functions (according to the reasons for their initial designation) even if they are affected by coastal erosion or diminution due to SLR.



**Figure 1-4 Coastal foreshore reserve – sandy coast example (source: WAPC, 2013b)**

### 1.3.3 Rights and Responsibilities

In WA, landowners own the rights to develop and use land as granted by land use regulations; they do not own the land itself. There is no law requiring the government (at any level) to provide protection of private property from natural hazards, nor compensation when land is lost to the sea. There are, however, several laws that allow the intervention of governments to enforce eviction if private property becomes uninhabitable, or removal of property if it constitutes a public risk. In the event of coastal erosion causing a property to “fall into the sea”, and the land to disappear below the high water mark, the loss is to be borne by the property owner.

Nonetheless, it is the aim of all levels of government to protect the interests of all Australians, and the CHRMAP process ultimately intends to minimise risks and maximise beneficial use of the coast from an economic, social and environmental perspective. Mechanisms for managed retreat may require public expenditure and in some instances, where public good can also be demonstrated, protection may also be publicly funded. Where the benefits of a particular coastal protection measure are limited to private beneficiaries, there is an expectation that the cost will be borne by those beneficiaries under the “user pays” principle.

### 1.3.4 Hazards and Risks

A hazard is a potential source of harm or adverse impact. Sea level rise is predicted to result in hazardous erosion and coastal inundation along the Dandaragan coastline. Coastal erosion and inundation hazards are calculated in accordance with SPP2.6 and may be used to identify assets and values at risk of coastal hazards (see **Figure 1-3**). This current CHRMAP focuses on coastal erosion hazards. Hazards associated with coastal inundation will be included in future CHRMAP reviews and updates, as resources to carry out these assessments become available.

Details of relevant coastal hazard assessments are provided in the Coastal Erosion Hazard Assessment Reports (MP Rogers and Associates [MRA], 2016 and GHD, 2015). Key outcomes are summarised in **Section 2**, and hazard maps derived from these reports are presented in **Appendix A**.

Risk is defined as a hazardous event or circumstance and the consequences that may flow from it. Risk is measured in terms of a combination of the likelihood of a hazard occurring and the consequence of that hazard occurring (likelihood and consequence) (see **Section 2.8.1**).

### **1.3.5 Assets and Values**

An asset is defined as a useful or valuable entity. In the current CHRMAP, assets include:

- > Natural features such as beaches and native vegetation;
- > Approved buildings and other structures (houses, sheds, shade structures);
- > Infrastructure such as fences, lighting, water and sewerage;
- > Roads, paths and walkways; and
- > Coastal structures, such as jetties, boat ramps, seawalls and groynes.

As defined in *Climate change adaptation for settlements and infrastructure – A risk based approach* (AS 5334-2013) an asset's value can be tangible or intangible, financial or non-financial. Examples of non-tangible assets include ecological function and coastal views. The value of an asset includes consideration of risks and liabilities, and can be positive or negative at different stages of the asset's life. Economic assets can be further categorised as public or private.

Values in the context of the CHRMAP further encompass the economic, social (including heritage) and environmental values of the coastal area.

### **1.3.6 Adaptive Capacity**

Adaptation is defined by SPP2.6 as:

*“an adjustment in natural or human systems in response to actual or expected stimuli or their effects, which moderates harm or exploits beneficial opportunities. Adaptation is the means for maximising the gains and minimising the losses associated with coastal hazards over the planning timeframe.”*

WAPC (2014a) further defines adaptive capacity as reflecting the ability of an asset to change in a way that makes it better equipped to deal with external influences (for example coastal climate change impacts).

In this CHRMAP, adaptive capacity has also been assessed in relation to the ease with which an asset can be modified to reduce risk (for example raising the height of a seawall) or relocated (for example moving a wooden walkway inland).

### **1.3.7 Vulnerability**

Vulnerability has a specific meaning in the context of risk-based approaches to climate change adaptations, in accordance with Australian Standards (AS 5334-2013) and SPP2.6, which defines vulnerability as:

*“the degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity. Systems that are highly exposed, sensitive and less able to adapt are vulnerable”*

This report uses vulnerability as the final outcome of the risk assessment process, combining likelihood and consequence of hazards with the adaptive capacity of assets in a stepwise process (see the 'Risk Assessment' component of **Figure 1-3**).

### **1.3.8 Temporal scales**

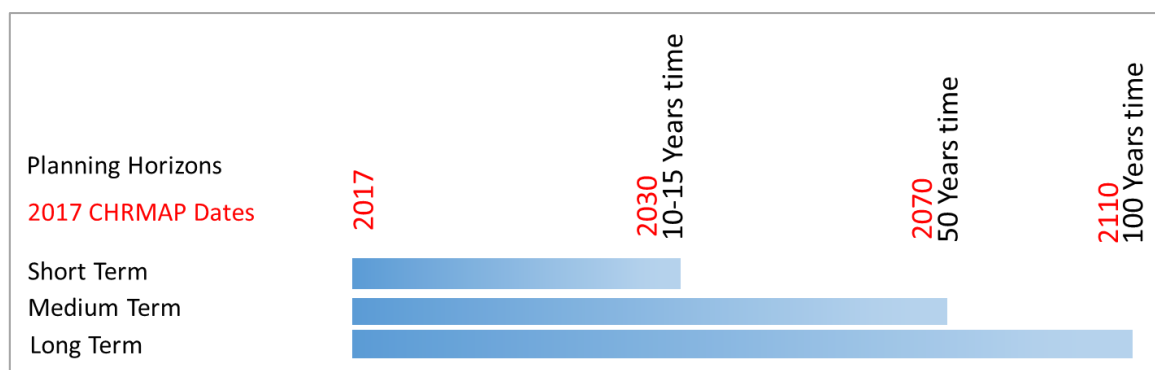
Coastal hazard assessment and management needs to consider a number of different timeframes (**Figure 1-5**). SPP2.6 specifies the need for identifying risks and extending planning considerations out to a one hundred year planning horizon (also described as 'long term' in this report). Practical planning for implementation, from



the Shire's point of view, requires a focus on the 'immediate term' (the next 5 years), and the 'short term' (up to the 2030 planning timeframe). 'Medium term' is also used throughout this report to refer to the period up to the 2070 planning timeframe.

The need for identifying potential long term risks is important to ensure that these risks are taken into consideration in the Shire's asset management strategy and statutory planning framework. The long term perspective is also important for management of community expectations and gives potentially impacted stakeholders prior notice of the associated hazards.

This CHRMAP includes an assessment of immediate to long term vulnerability of coastal assets, associated with predicted sea level rise. Long term adaptation pathways have been developed for all areas of the coast being assessed, as required by SPP2.6. Short term implementation plans have also been developed, focusing on areas where assets have been assessed as vulnerable by the 2030 planning timeframe. These short term implementation plans are designed such that they do not prevent the long term pathway from being realised.



**Figure 1-5 Coastal planning timeframes used in this report.**

### 1.3.9 Spatial scales

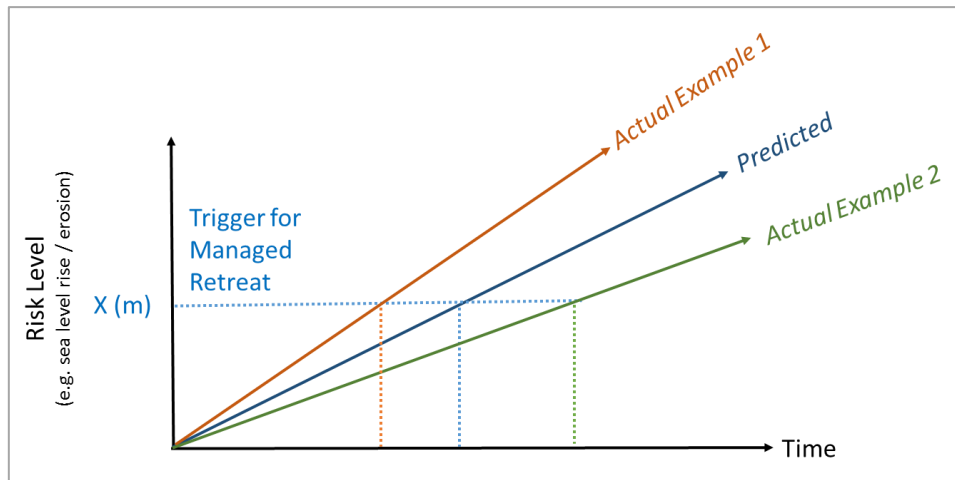
In accordance with SPP2.6, the coastal hazards along the Shire's coastal zone have been identified at a coastal sediment cell scale (MRA, 2016; GHD, 2015). The policy requires assessment at this scale to account for the impact of existing controls and future management techniques on areas of the coast that are away from the direct area of interest (a common example of this is erosion down-current of a groyne or marina). For more information on the classification of coastal sediment cells, and their function, within the Shire see Stul et al., 2014.

Using the hard lines derived for the broader sediment cell scale, this CHRMAP then looks at finer spatial scales to assess the vulnerability of assets and to simplify management planning. 'Management units' have been defined based on the physical attributes of the coast. Within each management unit assets are considered individually or grouped according to the type of asset and in consideration of current land use. The risks and vulnerability of individual or groups of assets within each management unit have then been assessed.

### 1.3.10 Adaptive Management

'Adaptive management' is a term given to a structured, iterative process of robust decision making in the face of uncertainty (Allan & Stankey 2009). In the context of this CHRMAP, it allows for predictions of coastal hazards and the development of long term planning pathways to mitigate against risks, while at the same time acknowledging that predictions are likely to change over time. Management pathways have been developed based on predictions of present and future coastal erosion hazards, but implementation of management techniques should be driven by appropriate triggers (**Figure 1-6**). This approach ensures the timing of management (or changes in management) is appropriate to the actual sea level rise effects as and when they occur in the future (for example, if shoreline retreat is occurring faster than predicted, the management action to retreat may be implemented earlier than previously predicted).

The CHRMAP, therefore, recommends appropriate triggers to guide management. Monitoring programs are also recommended to identify when triggers have been reached, and to validate the current predictions of shoreline recession and the extent of coastal erosion hazards. Recommendations for further investigation and review are also made to better inform the refinement of management pathways in the future.

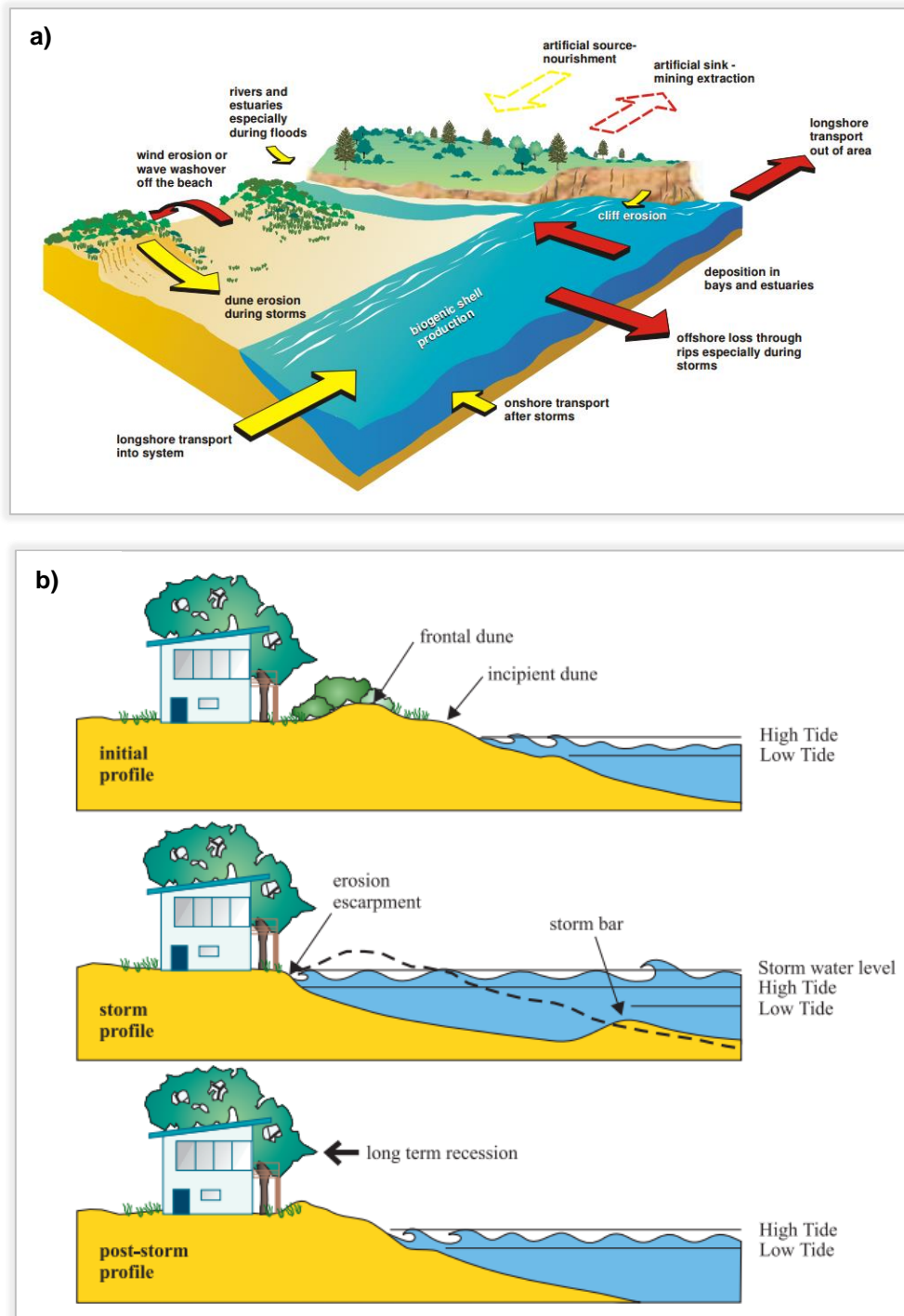


**Figure 1-6 Conceptual timing for managed retreat in relation to predicted coastal hazards**

## 1.4 Key Coastal Processes Concepts

A basic understanding of coastal processes is important for understanding the issues and constraints associated with managing the hazards of sea level rise and coastal erosion. **Figure 1-7 a)** illustrates the multiple processes involved in adding (accretion; yellow) and removing (erosion; red) sediment from the shoreline. The size of the arrows broadly represent the volume of sediment movement involved in each process. **Figure 1-7 b)** shows how a storm can remove sediment from the beach and reshape the shoreline profile, due to a combination of elevated water level and wave action. As mean sea level increases, storms can have a greater inland ‘reach’ and less of the removed sediment returns to the beach, leading to long term recession.

A key step in the coastal hazard identification is the definition of a horizontal shoreline datum (HSD) along the coastline, which “should define the active limit of the shoreline under storm activity” (WAPC, 2013a). Effectively the HSD is the shoreline at a particular point in time that can then be used as a bench mark or reference for assessing historic and future potential shoreline movement. For the Shire’s predominantly sandy coastline, this has generally been determined from the 2012 LIDAR survey data as the point of intersection of the local peak still water level (determined at each town) with the beach/foredune surface level profile. This point is typically close to the seaward margin of coastal vegetation at the time of assessment (see MRA, 2016 and GHD, 2015). The HSD is the bench mark from which the extent of coastal hazards, at each planning timeframe, is measured. The HSD presented in hazard mapping for this CHRMAP has been defined for the ‘present day’ at the time that each coastal hazard assessment was undertaken (generally based on the 2012 LIDAR survey information). The HSD is constantly moving and its position, relative to assets and future monitoring of the shoreline position and determination a future HSD, is one of the key triggers for implementing management responses. It must be noted that future revisions of this CHRMAP will be based on new information, and the HSD and hazard lines will be recalculated accordingly.



**Figure 1-7 Conceptual representation of key coastal erosion concepts; a) sediment transport processes and b) long term beach recession due to permanent sand loss (source: NSW Department of Land and Water Conservation, 2001)**

## 1.5 Previous Assessments

In 2012 the WA Department of Planning commissioned the study *The Coast of the Shires of Gingin and Dandaragan (WA): Geology, Geomorphology and Vulnerability* (Eliot et al, 2012). This study assessed the sensitivity and exposure of coastal landforms from Guilderton to North Head (north of Jurien Bay) and identified that all town sites along this stretch of coast are located on landforms that have a moderate or moderate to high vulnerability to changing coastal processes (winds, tides, currents, waves and sea levels). The study recommended detailed investigations to identify the potential extent of long term coastal erosion and inundation at priority locations.

In 2013 the Shire partnered with the Shire of Gingin and the Northern Agricultural Catchments Council (NACC) to identify the range of data and information required to undertake coastal hazard assessments at the priority locations outlined in the *Hill Primary Coastal Compartment Information and Data Gap Analysis* (Danese, 2013).

In 2014, in accordance with the recommendations made by Danese (2013), the Shire partnered with the Shire of Gingin, the NACC and the WA Department of Transport to undertake a preliminary assessment of coastal hazards at each town site in the study area. The preliminary findings of the assessment identified that:

1. Adaptation planning for coastal erosion is a priority at Seabird, Ledge Point, Lancelin, Cervantes and Jurien Bay town centre. Guilderton and South Jurien Bay (from Island Point south) were identified as low priority areas, mainly due to the relatively large coastal setback distance between the high water mark and built assets at these locations and, therefore, lack of a short term threat from coastal erosion;
2. Adaptation planning for coastal inundation is a priority at Lancelin, Cervantes and Jurien Bay. This is mainly due to the low lying nature of, and proximity of assets to, the shoreline at these locations;
3. Adaptation planning for coastal inundation at Guilderton requires a detailed investigation of the combined effects of inundation from the ocean and inland rainfall events, due to Guilderton's location on the Moore River estuary.

This current CHRMAP addresses the first of these recommendations with a focus on the areas identified at risk from coastal erosion hazards.

## 1.6 CHRMAP Format

This document has been designed to inform the community and provide direction to the Shire for planning for climate change induced coastal erosion risks facing the coastal townships of the Dandaragan Shire. An overview of the CHRMAP process and how it has been covered in the structure of this document is provided in **Figure 1-8**. The structure of the document also allows for the information base and planning context of individual assets or groups of assets to be separated from the main document with Appendices formatted as separate sheets provided for each of the coastal assets. The Appendices are as follows:

- > **Appendix A** – Hazard Maps by Management Unit
- > **Appendix B** – Value Maps
- > **Appendix C** – Asset Information for each of the Management Units
- > **Appendix D** – Technical Note on Risk Assessment Methods
- > **Appendix E** – Risk Assessment Ratings and Results
- > **Appendix F** – Multi-Criteria Analysis Results
- > **Appendix G** – Multi-Criteria Analysis Summary
- > **Appendix H** – Planning Controls Discussion
- > **Appendix I** – Long Term Pathways

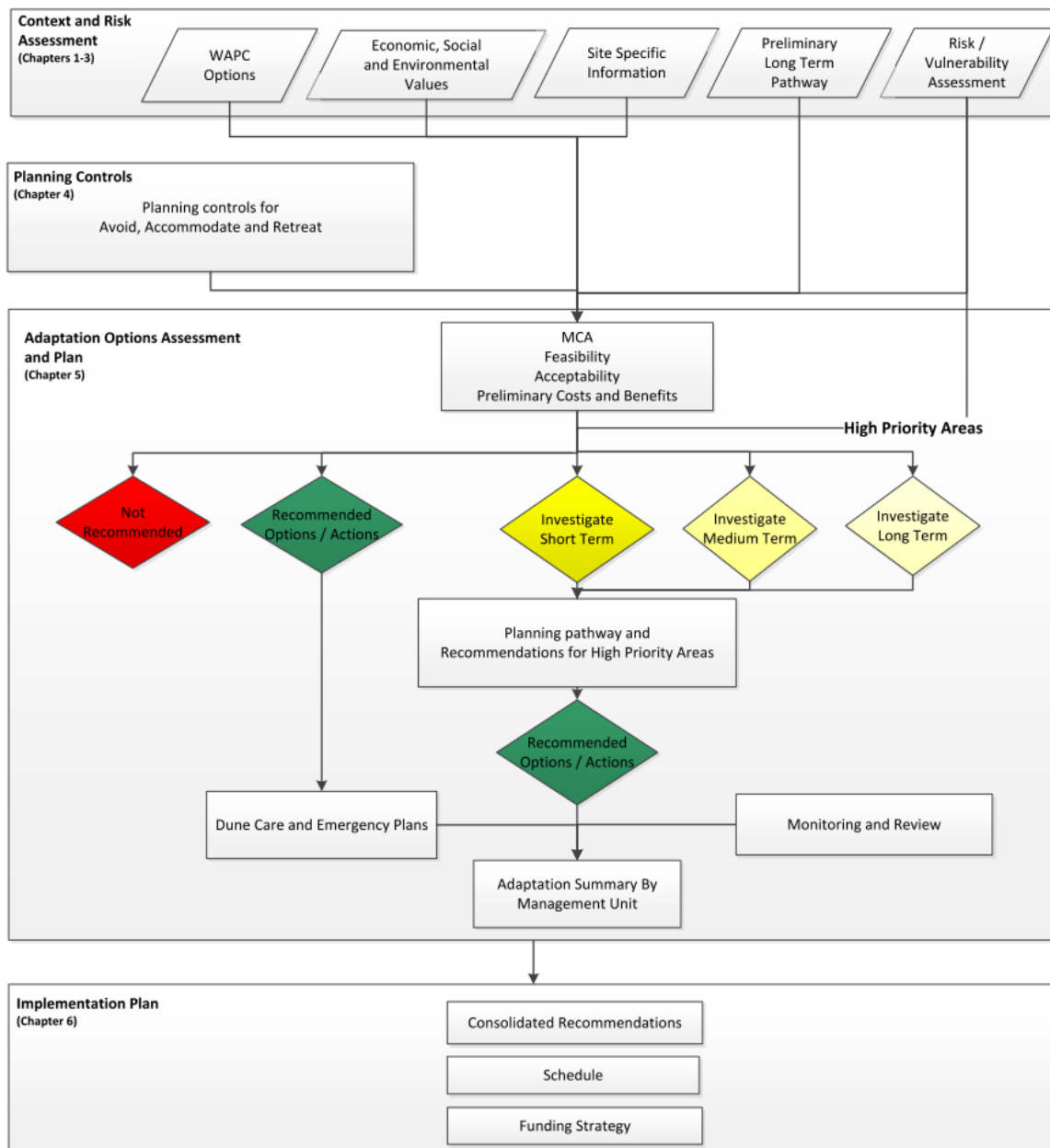


Figure 1-8 Overview of the CHRMAP process and its relationship to the chapters in this document.

## 2 ESTABLISHING THE CONTEXT

### 2.1 Shire of Dandaragan

The Shire of Dandaragan is located approximately 200 kilometres north of Perth. There are four townships within the Shire; the inland towns of Badgingarra and Dandaragan, and coastal towns of Jurien Bay and Cervantes (**Figure 1-2**).

The Shire of Dandaragan has an approximate population of 3,325. The major townships of Jurien Bay and Cervantes have estimated populations of 1,500 and 545 respectively (Shire of Dandaragan, 2016). The coastal areas encounter a large influx of people during the summer months and holiday periods, with the local population rising to approximately 4500-5000.

Mining is the largest industry sector in terms of gross value added to the local economy, however the agricultural, farming and fishing sectors are the major employers in the region. Tourism and hospitality have shown the fastest employment growth rates, but remain subject to the seasonal influx of the holiday periods (Shire of Dandaragan, 2016).

This CHRMAP focuses on the coastal zones within the existing gazetted town sites including future development areas, where the services from human-made and natural assets provide key social, economic and environmental values to the community. Coastal areas outside of the towns may also be exposed to the potential impacts of coastal hazards. Any future development outside of the study areas should avoid potential coastal hazards. The absence of human-made assets in these locations is likely to allow for the natural adaptation of the coastline to sea level rise. A brief description of each of the townships is provided in the following two sub-sections and a summary of their key attributes is presented in **Table 2-1** and the coastal management units boundaries and zoning of properties located seaward of the 2110 Hazard Line are presented in the maps shown in **Appendix A**.

**Table 2-1 CHRMAP location key attributes**

CHRMAP Area	Number of Ratepayers <sup>1</sup>	Estimate Number of Residents <sup>#</sup>	Approximate coastline length assessed (km)	Number of Management Units
Jurien Bay	990	1500	5.5	4
Cervantes	487	545	3.7	4

<sup>1</sup>Estimated as the number of improved blocks, <sup>#</sup>Estimated



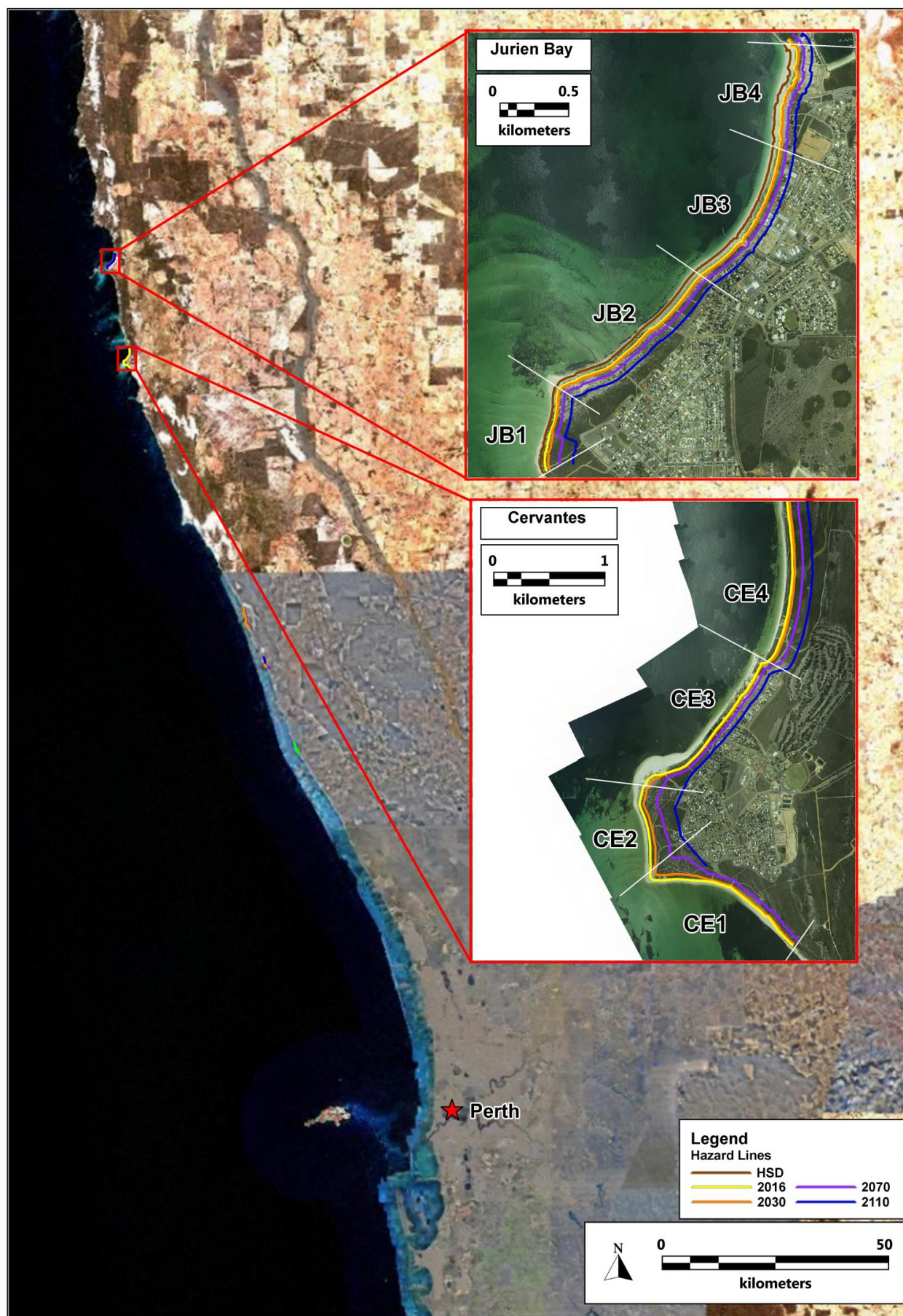


Figure 2-1 CHRMAP location map, townships and management unit boundaries

## 2.2 Cervantes

The township of Cervantes is located approximately 180 km north of Perth (**Figure 2-1**) and was gazetted in 1963. It is a regional centre that services the State's crayfishing industry. Tourism is also important for the town, located nearby the Pinnacles in Nambung National Park, and the saline Lake Thetis, which contains Stromatolites. The local population is around 550 (**Table 2-1**).

The townsite is located on a prominent sand foreland, called Thirsty Point (**Figure 2-2**), which protrudes over one km seaward from the general shoreline alignment and is situated in the lee of shallow offshore reefs (Short, 2006). Cervantes has a line of reef and the Cervantes Islands offshore, running parallel to the general shoreline alignment. These formations provide protection from wave energy to the Cervantes townsite. Sandy cusped forelands, such as Thirsty Point, often form in the lee of such offshore reefs and islands and it is quite common for the shorelines of these forelands to move over decadal time scales. Historical shoreline movement plots indicate that the shoreline of the Cervantes cusped foreland has changed substantially since 1943 (MRA, 2016).

Cervantes is located at the boundary between coastal sediment cells 25 and 26, both of which were assessed as having moderate vulnerability by Eliot et al (2012). Broad scale geological mapping covering the Cervantes townsite indicates Coastal Limestone may be present along the coast in this area; however, no rock was visible on the beach or in the dunes during a site visit undertaken in December 2015 (MRA, 2016). In the absence of detailed geotechnical information, the Cervantes area was classified as a sandy coast for the purpose of coastal hazard assessment (MRA, 2016).

Several man made coastal structures are present along the town's shoreline. A groyne was constructed at the northern end of the Cervantes townsite in 1992. A seawall was constructed in front of the Lobster Shack, and a jetty abutment was constructed approximately 120m south of the Lobster Shack (MRA, 2016).

The hazard assessment extended along approximately six km of the town's shoreline, and for risk assessment and adaptation planning purposes, the CHRMAP has divided this area into four management units (**Figure 2-1**).



**Figure 2-2 Photographs of Cervantes coastline and jetty (source: NAA and DoT)**



## 2.3 Jurien Bay

The township of Jurien Bay is located approximately 200 km north of the Perth Metropolitan area (**Figure 2-1**). It has an estimated population of around 1500 (**Table 2-1**). The first settlement was established in the mid-1850s and a jetty was constructed in 1885–87 due to the success of pastoralism at the time. The townsite was gazetted in 1956 (Landgate, 2017). It is a regional centre that has experienced substantial population growth in recent decades.

Island Point in Jurien Bay is a cusped foreland (**Figure 2-3**) that has formed in the lee of a chain of submerged reefs and island chains consisting of Escape, Whitlock, and Boulanger Islands (GHD, 2015). The long-term stability of the geomorphic landform at Island Point is dependent upon the stability provided by this island chain and the ongoing supply of sand that originates from the lee of these islands as 'sand slugs', which are currently connected to the accretion of the northern side of Island Point (GHD, 2015). Jurien Bay was identified as being located at the boundary between sediment cells 29 and 30, which were assessed as having moderate-high and moderate vulnerability, respectively, by Eliot et al (2012).

Coastal structures in the area include a curved jetty in management area JB3 and the Jurien Bay Marina, located at the northern boundary of the study area.

The hazard assessment extended along approximately four km of the town's shoreline, and for risk assessment and adaptation planning purposes, the CHRMAP has divided this area into four management units (**Figure 2-1**). The southern boundary of the study area is located at Island Point. Development within the coastal zone extends some 1.5 km south-east of Island Pt, including the recent development within about 200 m of the shore which is not included in this CHRMAP.



**Figure 2-3** Aerial view of Jurien Bay (source: Jurien Bay Holiday, <http://www.jurienbayholidays.com/>)

## 2.4 Stakeholder and Community Engagement

### 2.4.1 Objectives

Community and stakeholder engagement is an important element of the CHRMAP process, as depicted in **Figure 1-3**. It is necessary to identify the values provided by the study area, to determine the tolerability of risks and to assess the acceptability of adaptation options designed to preserve the area's value.

The objectives of the community and stakeholder engagement process include:

- > To inform the community about the extent of potential coastal hazards, adaptation strategies available to respond to those hazards and the need for flexibility in response to future environmental, social and economic changes;
- > To explain the State and local governments' responsibilities and capacity to respond to potential coastal hazards;
- > To explain the benefits and challenges of each adaptation strategy, in terms of the meaning for residents and landowners, as well as the broader community;
- > To provide community members with multiple opportunities to provide input into proposed adaptation strategies, and to offer alternative strategies or to voice questions and concerns;
- > To receive and document feedback and concerns regarding each adaptation strategy from community members and affected residents and landowners; and
- > To report on the feedback, including analysis that highlights the level of community understanding, the principal concerns and preferences concerning the proposed adaptation strategies and funding mechanisms, and preferred methods of continued community engagement.

### 2.4.2 Methods

Since 2012, the Shire has worked closely with the Shire of Gingin, the NACC, State Government agencies, coastal specialists and the local community to investigate the hazards and risks to the Shire's coastline, and to develop strategies for adapting to them. In 2013 and 2014 the Shire provided opportunities for the community and stakeholder groups to learn about the Shire's CHRMAP process through workshops with government agencies and public information sessions.

Stakeholder and community engagement undertaken for this CHRMAP has focused on capturing the coastal values of the community, informing the public about coastal hazards and the CHRMAP process, and gauging attitudes towards various adaptation options. A community engagement session was facilitated by the Shire in Jurien Bay on the 27<sup>th</sup> of May 2017 (**Figure 2-4**). This was followed by an online survey that was conducted in June 2017.



**Figure 2-4** Community engagement session at Jurien Bay in May 2017.

## 2.5 Social and Environmental Values

An ecosystems services approach has been used to identify the natural and social values of the coast (**Figure 2-5**). The results of recent community engagement highlighted the strong sentiment regarding the natural values of the beach. Respondents sometimes struggled to find words to describe the importance of the beach to them and their sense of health and wellbeing. When asked if there were any other values the coast provided them, an example answer was:

*“Yes too many to list, e g aesthetics, relaxing, peacefulness, regeneration, good sources for juvenile aquatic animals, space for all animals including those pesky humans, preservation for, & adaptability for climate variability”*

It is difficult to place an economic value on natural coastal assets such as the beach and dune systems. Identifying the value of natural assets through community engagement, and maintaining a focus on these values throughout the CHRMAP process is critical to its success. Maps showing social, cultural and environmental values for the CHRMAP study areas are provided in **Appendix B**. The maps provide a broad indication of threatened ecological communities, rare and endangered flora and fauna potentially present (noting that, as required by government agencies, the locations are only approximate to within the Management Unit).

While the results of the surveys are discussed in the following **Section 2.6** the general sentiment of the community may be summarised as follows:

- Strong disagreement that protection of private property should be prioritised over preservation of beaches,
- Strong support for relocation of assets and let nature take its course,
- Strong support for limiting intensity of development in hazard areas, and
- Strong support for informing landholders of hazard risk.





**Figure 2-5 Ecosystem services approach to defining coastal values**

## 2.6 Survey Results

### 2.6.1 Context

The coastal values survey was completed by 69 respondents. Contextual information results from the online survey are provided in **Figure 2-6**. The results show that more than 50% of respondents visit the beach on a daily or weekly basis, with the most common answer for which beach is visited being “Jurien Bay Main Beach”. Indicative beach usage by management unit based on the survey results is proved in **Table 2-2**.

Most respondents believed they either have some idea of the causes of coastal erosion (35%) or considered themselves to be well informed (35%). The majority of respondents (70%) had viewed the hazard maps, but there was moderate to high level of concern (33% very concerned and 43% somewhat concerned) about the coastal erosion.

The largest group of respondents were aged between 60 – 75, but other age groups were also well represented with around 20% aged from 30 – 39 and a further 25% aged 50 – 59. More than 10 % were aged less than 20, which suggests that the survey captured the sentiments of a wide demographic. Around 65% of respondents were landowners in the Shire, but a majority did not live in areas identified as being vulnerable to coastal erosion.

Of the 58 respondents who provided their postcode, 64% lived in Jurien Bay (6516) and 19% in Cervantes (6511). The majority of the remaining 17% of respondents were from outside the Dandaragan LGA. The inland area of Badgingarra (postcode 6521) had a total of three respondents. The concentration of response from the coastal areas being investigated within the Dandaragan LGA should be noted in interpreting the results of this



community engagement. It should also be considered prior to any funding for coastal management being sought from ratepayers in areas underrepresented in this community engagement process.

**Table 2-2 Indicative beach usage by management unit based on survey results**

Cervantes		Jurien Bay	
Management Unit	Number	Management Unit	Number
Cervantes 1 (CE1)	13	Jurien Bay 1 (JB1)	11
Cervantes 2 (CE2)	7	Jurien Bay 2 (JB2)	13
Cervantes 3 (CE3)	11	Jurien Bay 3 (JB3)	40
Cervantes 4 (CE4)	1	Jurien Bay 4 (JB4)	11

### 2.6.2 Coastal Values

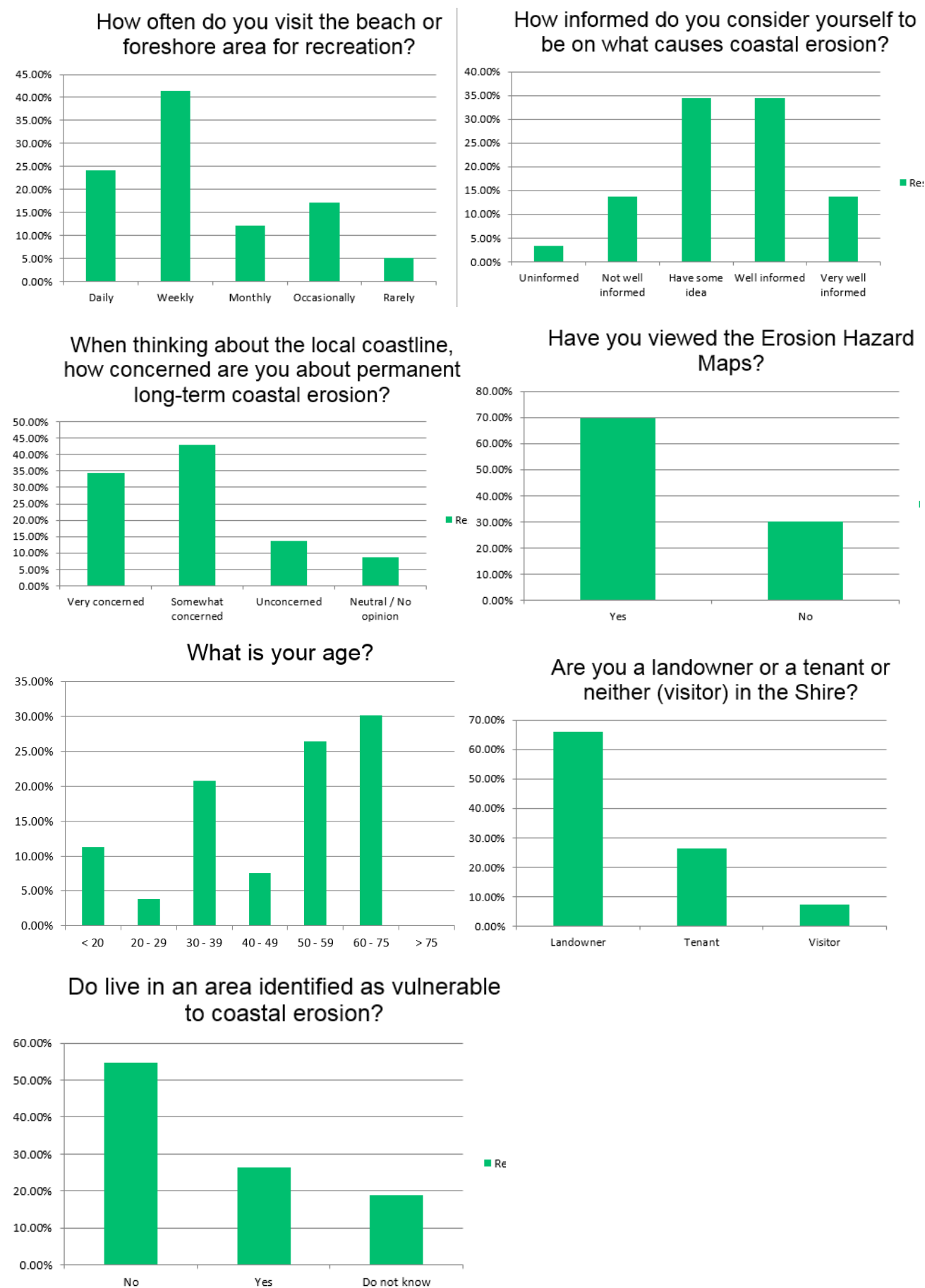
The questions on coastal values showed strongest support for opportunities to use beaches for passive recreation, and ongoing provision of foreshore reserved for current and future generations (**Figure 2-7**). Opportunities for commercial enterprises and active recreations (i.e. boat ramps and jetties) received the least support, but the majority of respondents (around 70%) agreed that these opportunities should be provided.

### 2.6.3 Adaptation Options

The responses relating to adaptation options showed very strong support for retaining public access to beaches and foreshore reserves and preserving coastal dunes and vegetation for future generations (**Figure 2-7**). There was also strong support for not allowing more intensive development (such as units where there is a single house) in hazard areas. Respondents strongly agreed that private landowners should be informed about the risk of erosion when purchasing or developing in hazard areas.

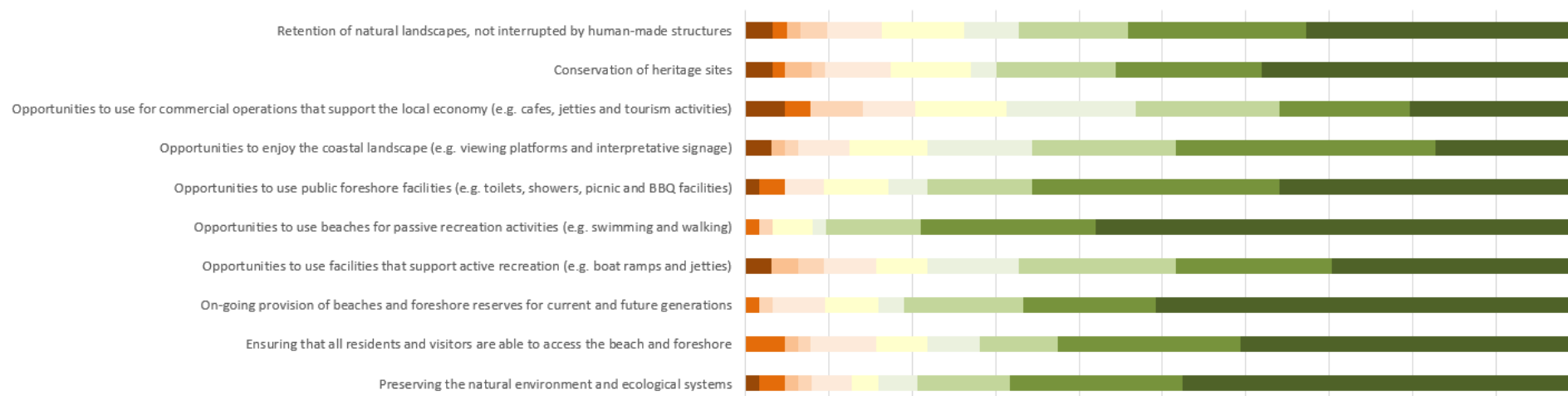
There was a high level of disagreement for protecting private property from erosion, when this results in the loss of the public foreshore reserve and beach access. There was also strong disagreement for allowing the continuation of approved land uses in developed areas until erosion becomes intolerable, suggesting that a “do-nothing” approach is not acceptable.

There was moderate support for allowing private land owners to protect their property where they have demonstrated there will be no impact on the adjoining coast, and moderate support also for relocating assets away from the coast and letting natural processes take their course. The responses to these questions have been taken into consideration in formulating the adaptation plans discussed in **Section 4**.

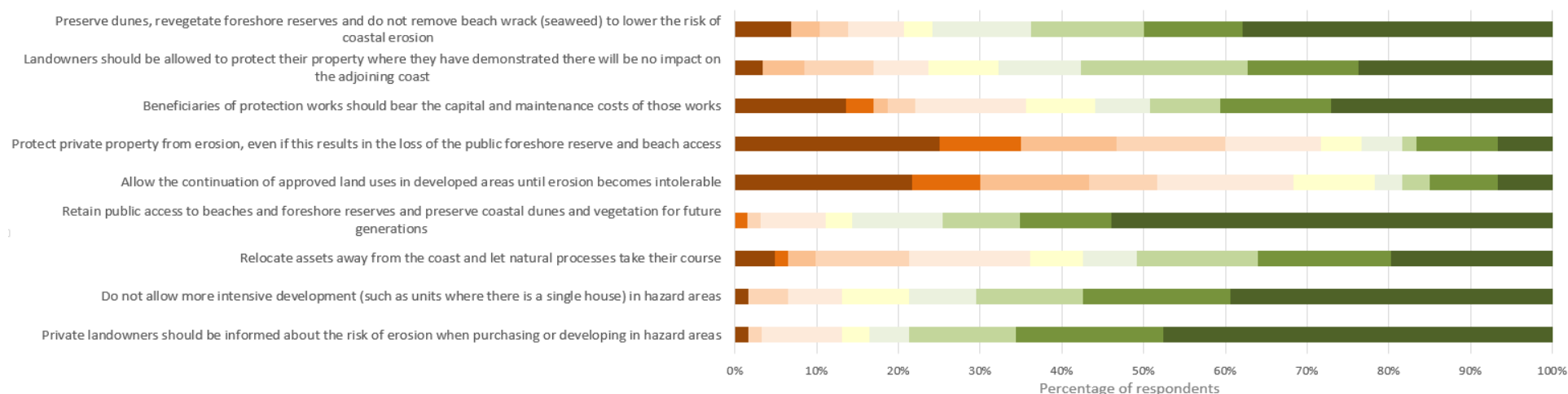


**Figure 2-6 Summary charts of online survey questionnaire responses**

### Coastal Values



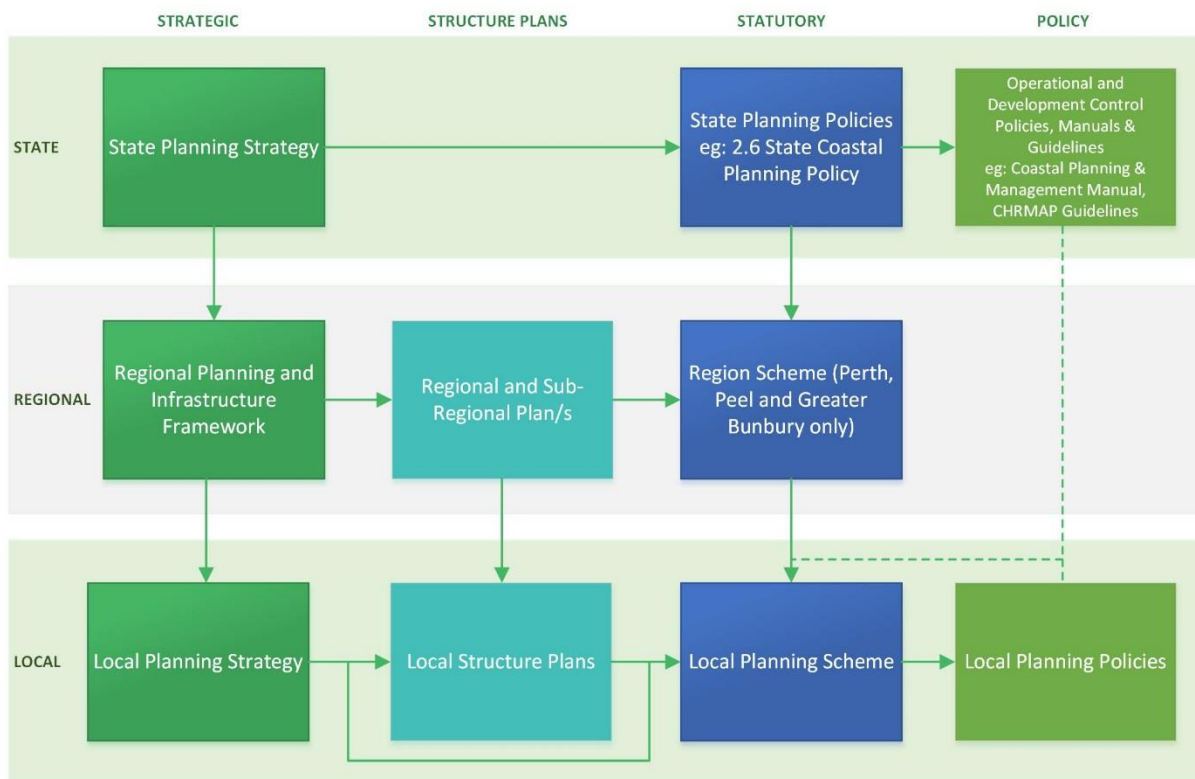
### Adaptation Options



**Figure 2-7 Responses to questions “what do you value about the coast” and “how strongly do you support the following erosion management approaches”. Generally, more green indicates more agreement and more red indicates more disagreement.**

## 2.7 Planning Framework

Planning in Western Australia is guided by the *State Planning Framework*, that outlines the relationships and hierarchy of responsibilities of different levels of government and planning instruments, as summarised in **Figure 2-8**. Strategic plans at State, regional and local levels inform the development of statutory controls.



**Figure 2-8 Planning context overview**

The key strategic planning documents that have guided development of the coastal towns within the Dandaragan Shire are:

- State Planning Strategy 2050 (State)
- Wheatbelt Planning and Infrastructure Framework 2015 – (Regional)
- Local Planning Strategy – Rural land Use and Rural Settlement (Local)

In addition to these strategic guidance documents the following Plans and Policies provide the context for development in the local areas:

- Local Planning Scheme No. 7 (LPS 7)
- State Planning Policy: Coastal Planning Policy (SPP 2.6)
- Jurien Bay Regional Centre Growth Plan (Growth Plan)
- Jurien Bay City Centre Strategy Plan (Centre Plan)
- Local Tourism Planning Strategy (Tourism Strategy)

The requirement for Local governments to produce a CHRMAP is described in SPP2.6 and the WAPC (2014a) guidelines outline the steps for local government to develop the CHRMAP document. The CHRMAP is a local level policy document that can provide recommendations for implementation of local planning adjustments, if required and adopted by the Shire, to bring about change in line with mitigating the future effects of sea level rise and coastal erosion on coastal infrastructure.

The planning process, in relation to Dandaragan, is outlined in the following sections.

### 2.7.1 Strategic Plans

The *State Planning Strategy 2050* provides a strategic framework, principles, strategic goals and strategic directions for planning and development in Western Australia. In relation to climate change, this strategy identifies the Shire of Dandaragan coast as being at risk of coastal landform change. It makes key statements

that are fundamental to the approach taken to coastal hazard risk assessment and adaptation planning, including:

- > *Retaining natural bushland and coastal areas that are accessible is essential to human health and a sense of wellbeing, and*
- > *All decisions about sustained growth and prosperity must strike the appropriate balance between environmental issues, economic conditions and community wellbeing.*

At the regional level the *Wheatbelt Planning and Infrastructure Framework 2015* (Wheatbelt PIF) identifies the following key regional strategic planning initiative:

- > *Identification of required planning responses following completion of the Coastal Hazard Risk Management and Adaptation Planning Study being carried out by the shires of Dandaragan and Gingin, and*

The *Local Planning Strategy*, generally aligns with the Wheatbelt PIF strategy direction, however it is largely silent of the effects of climate change and the hazards associated with coastal processes and SLR.

The *Local Planning Strategy* identifies land along the coast west of Indian Ocean Drive and extending from Cervantes townsite in the south to the northern boundary of the Shire as 'Planning Unit 1 – Coastal Settlement'. A separate local planning strategy for this area was to be prepared for approval by the Minister for Planning. Although not expressly identified as such, the *Jurien Bay Regional Growth Centre Plan* prepared in 2012 as part of the Royalties for Regions SuperTown programme is essentially a planning strategy for Jurien Bay and its immediate surrounds.

A draft revised *Local Planning Strategy* (December 2016) draws together the planning framework for the whole Shire by considering the coastal settlement area and incorporating the substance of the Rural Land Use and Rural Settlement Strategy into a single document combined with the planning elements of the Growth Plan. Once approved, the current Local Planning Strategy (2012) will be superseded. The *draft Local Planning Strategy* (2016) addresses coastal processes, and identifies this CHRMAP as a document that will be modified over time as more detailed and updated scientific information is made available on the climate change and coastal impacts. The draft document acknowledges that appropriate coastal setbacks are important, and that engineering solutions to protect coastal infrastructure or residential/tourist development may be required (matters addressed by this CHRMAP).

The draft strategy includes the following strategic directions for Jurien Bay that are relevant to coastal land:

- Consolidate urban areas and support mixed use sites;
- Acknowledge that there are sufficient vacant lots and land zoned for residential use to satisfy demand beyond 15 years.

For Cervantes the draft strategy aims to recognise the town as a small and discrete town with a coastal character and a focus on tourism, and seeks to:

- Concentrate on development and intensification of existing zoned land; and
- Prevent ad-hoc or fragmented development of land to provide for long term consolidation of Cervantes.

Other strategies in the draft *Local Planning Strategy* include:

- Prepare a strategic plan for land north of the Cervantes townsite identified as that addresses coastal vulnerability, ground and surface water, servicing and infrastructure, conservation, fire management and linkages to the rural residential land (Marine Fields) to the north.
- New development and coastal facilities to be within areas that can be protected from coastal processes and hazards;
- Identify areas in which a detailed Coastal Hazard Risk Management and Adaptation Planning (CHRMAP) needs to be undertaken before rezoning, subdivision or development occur, such as areas that may be subject to coastal inundation and long-term erosion over the planning timeframe;
- Undertake coastal adaptation planning to identify assets, including infrastructure that may be at risk from coastal processes over the planning timeframe, and develop strategies to mitigate or manage risks where appropriate.

The draft *Local Planning Strategy* is expected to be adopted by the Shire in 2018.

### 2.7.2 Statutory Plans & Policies

State Planning Policies (SPPs) provide the highest level of planning policy control and guidance in Western Australia and are prepared under Part 3 of the Planning and Development Act 2005. The State Coastal Policy (SPP 2.6) is an environmental sector policy consistent with the higher order SPP 2 Environmental and Natural Resources Policy.

As there is no statutory region planning scheme applicable to the Shire of Dandaragan the key statutory planning document for the Shire of Dandaragan is *Local Planning Scheme No. 7 (LPS 7)*. This applies zones and reserves to land within the Shire and outlines the permissibility of land uses, the requirements for development and the processes for seeking approval for proposed development. LPS 7 was gazetted on 24 October 2006 and has been amended several times since.

One of the stated aims of LPS 7 set out in clause 1.6 and which can be inferred to relate to sensitive coastal planning is *"Protection and enhancement of the environmental values and natural resources and to promote ecologically sustainable land use and development."*

Deemed provision 67 relates to matters to be considered by local government in considering an application for development approval. Clause 67 requires the local government is to have due regard to a number of matters to the extent that, in the opinion of the local government, those matters are relevant to the development the subject of the application. Amongst those matters, the following can be said to relate directly to matters of coastal planning and coastal hazards:

- (c) *any approved State planning policy;*
- (q) *the suitability of the land for the development taking into account the possible risk of flooding, tidal inundation, subsidence, landslip, bush fire, soil erosion, land degradation or any other risk;*
- (r) *the suitability of the land for the development taking into account the possible risk to human health or safety.*

The only direct reference to coastal hazard planning in LPS 7 at present is in Schedule 4 Special Use Zones, in relation to Special Use Zone No. 4 (SUZ 4). SUZ 4 relates to Lot 62 (No. 20) Roberts Street and a portion of Heaton Road road reserve, Jurien Bay. A range of tourism, recreation, residential and commercial activities are permitted in this zone. Two clauses in particular make reference to coastal hazards, as follows:

- 6. *Prior to the approval of development on the site a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) is to be prepared in accordance with State Planning Policy 2.6 State Coastal Policy and approved by the local government. The CHRMAP should include but not be limited to consideration of inundation, erosion, finished floor levels, setbacks and drainage. Relevant adaptation measures are to be implemented at the time of development.*
- 14. *A notification to the following effect is to be placed on the certificate(s) of title of any proposed lot(s) identified in the Coastal Hazard Risk Management and Adaptation Plan that may be affected by coastal hazards: Vulnerable coastal area – This lot is located in an area likely to be subject to coastal erosion/inundation over the next 100 years.*

### 2.7.3 Local Structure Plans

Local Structure Plans can be made under LPS 7 via the mechanisms provided in Part 4 of the Deemed Provisions set out in the *Regulations*. A structure plan is not a statutory document, but decision makers for applications for development or subdivision approval within a structure plan area must have regard to its content when deciding the application. Decision makers are not bound by the structure plan, but it would require compelling alternative considerations to ignore its intent.

The *Turquoise Coast Structure Plan* (2003) is a district structure plan that comprises approximately 2,000 hectares of land owned by Ardross Estates Pty. Ltd. It extends along the coast from the southern end of the Jurien Bay townsite to Hill River and is bordered by Indian Ocean Drive to the east. The structure plan indicates that foreshore reserves will be reviewed and refined at the development plan stage to address the provisions of the *State Coastal Policy*. Individual local structure plans are being prepared progressively for individual estates within the overall district structure plan area. To date, only one has been endorsed, which is adjacent to the coast.



It can be expected that adequate provision will be made for coastal processes within structure plans prepared on land that is currently undeveloped, with due regard being made to the recommendations of this CHRMAP.

#### **2.7.4      Local Planning Policies**

Local planning policies can be made under LPS 7 via the mechanisms provided in Division 2 of Part 2 of the Deemed Provisions set out in the *Planning and Development (Local Planning Scheme) Regulations 2015* (the *Regulations*).

The Shire of Dandaragan does not currently have any local planning policies that relate specifically to development of coastal land.

#### **2.7.5      Local Planning Horizons**

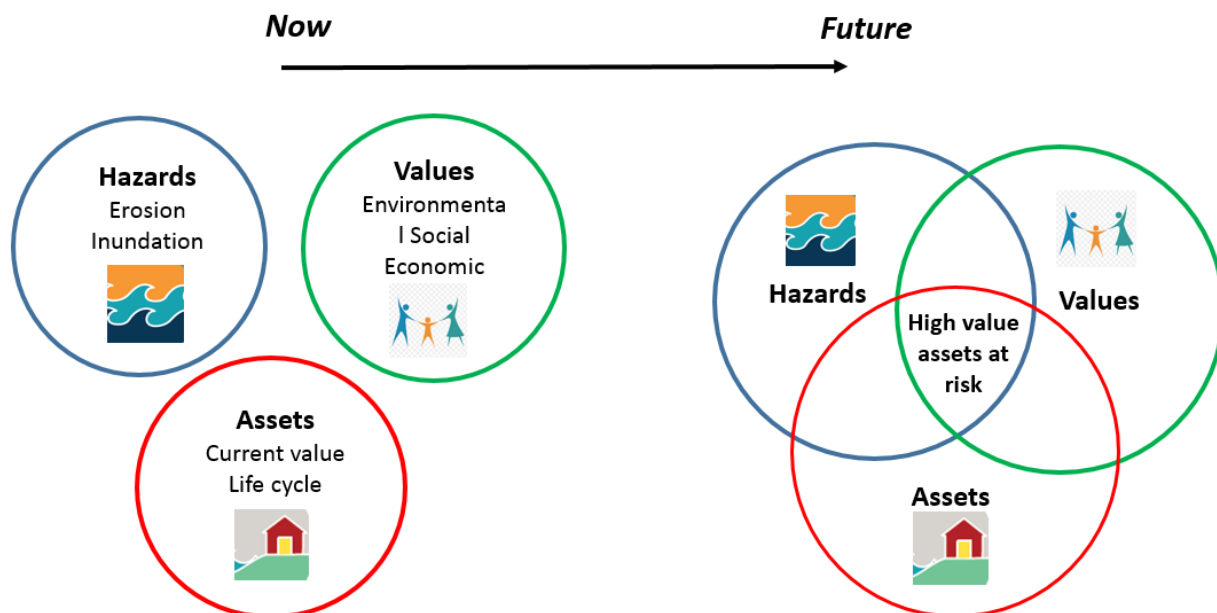
Local planning schemes require a review every five years to ensure the scheme remains current with respect to current issues, trends and policy and the strategy context. Local planning strategies, which provide the broader planning direction within which the local planning scheme operates, typically have a planning horizon of 10 to 15 years. The CHRMAP establishes strategy for adapting to sea level rise and coastal erosion over the next 100 years at a range of time scales from short term (next 5-10 years), medium term (10 to 40 years) and long term (40 to 100 years).

As development itself has a much longer horizon, coastal hazard assessment uses a 100-year horizon. Therefore, when assessments indicate zoned land may be impacted by coastal processes within the next hundred years (even if the likelihood of the hazard having an impact may be beyond the horizon of current planning instruments, including LPS 7) local government has a responsibility to the future community to direct new development away from high risk areas.

## 2.8 Risk Assessment Inputs

To effectively assess the risks and plan for the future management of the coastal zone, as illustrated in **Figure 2-9**, information is needed on:

- > Present and predicted future coastal hazards;
- > Existing assets, their value and lifecycles; and
- > Community and stakeholder values.



**Figure 2-9 Conceptual relationship between key inputs to the coastal risk assessment process**

The changing interrelationship between these components over time is the key to defining the priorities for future adaptation planning.

### 2.8.1 Hazards in each Management Unit

SPP2.6 Schedule One outlines the methodology for defining appropriate physical processes allowances, to ensure the use of coastal land accounts for coastal hazards over the next 100 years. Calculation of these allowances is based on a pragmatic approach to characterising coastal processes and includes four elements: storm erosion from a potential one in 100 year storm event (S1), historical erosion trends (S2) and predicted sea level rise (S3), and an allowance for uncertainty.

Coastal hazard assessments were undertaken for Cervantes by MRA (2016) and for Jurien Bay by GHD (2015). The assessments were reviewed and accepted for adaptation planning purposes by the WA Department of Transport and are available at the Shire's office. In accordance with SPP2.6, coastal erosion hazard lines have been collated for the present day (2016 at Cervantes; 2015 at Jurien Bay), 2030, 2070 and 2110 planning timeframes. The hazard maps are presented in **Appendix A**. A summary of the hazard assessment assumptions and calculated erosion allowances are presented in **Table 2-3** for each management unit. Erosion allowances and horizontal shoreline datum (HSD) were taken directly from the relevant coastal hazard report (MRA, 2016; GHD, 2015) or defined by Cardno where previously missing or incorrect.

**Table 2-3 Coastal processes erosion allowance for present day and predicted conditions**

Management Unit	HSD (m AHD)	S1 Erosion Allowance (m)	S2 Erosion Allowance (m/year)	Total Erosion Allowance (m)			
				Present-day (2016)	2030	2070	2110
Cervantes*							
CE1	+1.6	0 – 22	0.3 – 2.3	0 - 22	15 – 67	67 – 199	138 – 350
CE2	+1.6	22	1.8 – 2.3	22	59 - 67	171 – 199	302 – 350
CE3	+1.3	22 – 41	0 – 1.8^	22 - 41	48 – 78	80 – 190	131 – 321
CE4	+1.5	41 – 48	1	41 - 48	51 - 70	91 - 142	150 – 233
Jurien Bay#							
JB1	+1.6	30 – 40	1	30 - 40	40 - 55	81 – 136	139 – 234
JB2	+1.6	40 – 49	0	40 – 49	50 - 59	91 - 100	149 – 158
JB3	+1.6	49	0	49	59	100	158
JB4	+1.6	49	0	49	59	100	158

\* Values for Cervantes are taken from MRA (2016)

# Values for Jurien Bay are taken from a combination of GHD (2015) and values derived by Cardno

^ All but the southern boundary of this management area has an S2 erosion allowance of 0 m/year

## 2.8.2 Assets

As introduced in **Section 1.3.5**, assets include both natural and built features of coastal areas. Assets at risk of coastal erosion were identified by overlaying the hazard lines on aerial photomaps of each township. Residential property boundaries were drawn from the Shire's GIS cadastral layers, while all other assets were based on interpretation of aerial images only. A site visit was conducted to confirm asset classifications. Information on the assets at risk, existing coastal erosion controls and planning context/controls are provided for each management unit in **Appendix C**.

## 2.8.3 Values

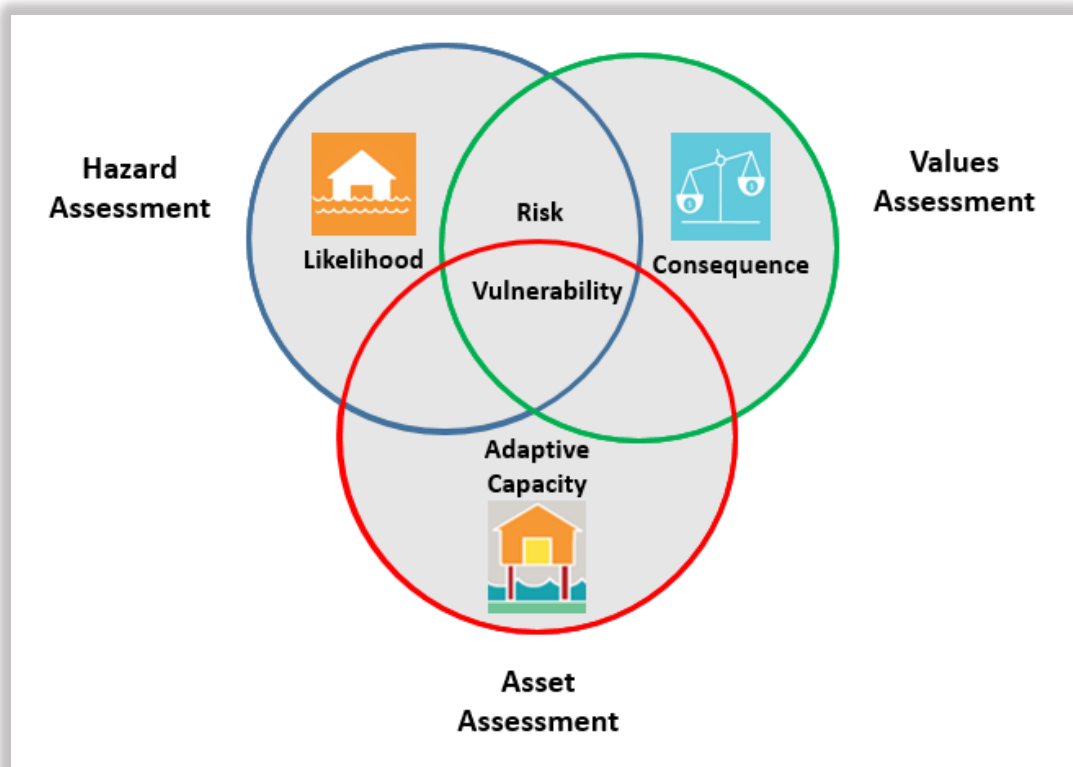
It is clear that the community and visitors to the Shire place a high value on the natural coastal assets and foreshore amenities in each town. These values have been expressed on numerous occasions in the past through formal public consultations with the Shire, such as during the development of local planning documents and through feedback on development proposals. In establishing the values of assets and coastal areas for risk assessment, this social and environmental value has been fully considered, alongside economic value.

A summary of the values associated with assets at risk is provided for each management unit in **Appendix C**.

## 3 COASTAL HAZARD RISK ASSESSMENT

### 3.1 Risk Assessment Framework

To provide a transparent and logical basis for determining adaptation planning priorities, a risk assessment was undertaken based on the Australian Standard guideline *Climate change adaptation for settlements and infrastructure – A risk based approach* (AS5334-2013), and the CHRMAP guidelines (WAPC, 2014a). As illustrated in **Figure 3-1**, risk was assessed in relation to likelihood, consequence and adaptive capacity. Likelihood was assigned using the results of the hazard assessment and consequence ratings were informed by public consultation. Risk is considered to be the combination of likelihood and consequence, with consideration of adaptive capacity determining an asset's, or group of assets', overall vulnerability to climate change (as defined previously in **Section 2.8**).



**Figure 3-1 Conceptual relationship between risk assessment elements**

Consequence and adaptive capacity criteria used in this assessment are presented in **0**. A full description of the risk assessment process is provided in **Appendix D**. A summary of the assigned likelihood, consequence and adaptive capacity ratings, as well as the resultant risk and vulnerability profiles over time are provided in **Appendix E** for assets within each management unit.

**Table 3-1 Consequence and adaptive capacity criteria used in the risk assessment**

Consequence			
Scale	Safety and Social	Economic	Environment and Heritage
<b>Catastrophic</b>	Loss of life and serious injury. Large long-term or permanent loss of services, public access/amenity, employment, wellbeing or culture. No suitable alternative sites exist within the LGA.	Permanent and/or entire loss or damage to property, plant and equipment, finances >\$10 million	Permanent loss of flora, fauna, conservation or heritage area (no chance of recovery).
<b>Major</b>	Serious injury. Medium term disruption to services, public access/amenity, employment, wellbeing or culture. Very limited suitable alternative sites exist within the LGA.	Permanent and/or large scale loss or damage to property, plant and equipment, finances > \$2 - \$10 million	Long-term and/or large scale loss of flora, fauna, conservation or heritage area (limited chance of recovery) with local impact.
<b>Moderate</b>	Minor injury. Major short term or minor long-term disruption to services/public access/amenity, employment, wellbeing or culture. Limited suitable alternative sites exist within the LGA.	Permanent loss or damage to property, plant and equipment, finances > \$100,000 - \$2 million	Medium-term and/or medium scale loss of flora, fauna, conservation or heritage area (recovery likely) with local impact.
<b>Minor</b>	Small to medium disruption to services, public access/amenity, employment, wellbeing or culture. Many suitable alternative sites exist within the LGA.	Permanent loss or damage to property, plant and equipment, finances > \$10,000 - \$100,000	Short-term and/or small scale loss of flora, fauna, conservation or heritage area (strong recovery) with local impact.
<b>Insignificant</b>	Minimal short term inconveniences to services, public access/amenity, employment, wellbeing or culture. Many suitable alternative sites exist within the LGA.	Permanent loss or damage to property, plant and equipment, finances < \$10,000	Negligible to no loss of flora, fauna, conservation or heritage area (strong recovery) with local impact.

Adaptive Capacity			
Scale	Physical / Engineering	Economic	Social and Environmental
<b>Low</b>	Little or no adaptive capacity. Potential impact would destroy all functionality. Not possible to relocate asset.	Cost to relocate or modify design of property, plant and equipment >\$10 million	Adaptation would significantly damage or negate current environmental and or social values
<b>Moderate</b>	Small amount of adaptive capacity. Difficult but possible to restore functionality through repair, redesign or relocation.	Cost to relocate or modify design of property, plant and equipment > \$2 - \$10 million	Limited natural adaptive capacity. Current environmental / social values would be negatively impacted.
<b>High</b>	Decent adaptive capacity. Functionality can be restored, although additional adaptive measures should still be considered. Natural adaptive capacity restored slowly over time under average conditions.	Cost to relocate or modify design of property, plant and equipment > \$100,000 - \$2 million	Current environmental / social values may be affected. Natural adaptive capacity restored over time under average conditions.
<b>Very High</b>	Good adaptive capacity. Functionality restored easily by repair, redesign or relocation.	Cost to relocate or modify design of property, plant and equipment > \$10,000 - \$100,000	Adaptation has little or no impact on current environmental and or social values.
<b>Insignificant</b>	Potential impact has insignificant effect on asset. Controls are re-established naturally or with ease before more damage would likely occur.	Cost to relocate or modify design of property, plant and equipment < \$10,000	Adaptation has may improve current environmental and or social values.

## 3.2 Risk Assessment Outcomes

The outcomes of the risk assessment are discussed for each management unit in the sub-sections below. The inputs to the risk assessment and the tabulated outcomes of the risk assessment process are presented in **Appendix E**.

### 3.2.1 CE1 – South of Thirsty Point

The South of Thirsty Point management unit contains predominantly natural assets such as the beach and vegetated dunes (**Figure 3-2**). Public infrastructure, including the Thirsty Point carpark and walk trail, lies seaward of the 2110 coastal hazard line. Recent erosion in the Thirsty Point area has necessitated the removal of a toilet block and retreat of the car park area. The Cervantes Lodge lies partially seaward of the 2110 hazard line. See **Appendix C** for more information on assets and their values in this management unit.

Existing physical controls associated with this management unit, which have been considered in the risk assessment process, include extensive offshore reefs, the Cervantes Islands and Thirsty Point at the northern boundary. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, coastal hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).

The Thirsty Point carpark and sections of the walk trail are predicted to be at risk by 2030, and Cervantes Lodge may be at risk by 2110. Due to the relatively low value and high adaptive capacity of the public assets at Thirsty Point, the vulnerability rating is generally low to medium for all assets across the planning timeframes (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The Thirsty Point carpark has a medium vulnerability rating at present;
- > The coastal dunes/vegetation and the walk trail have medium vulnerability ratings towards the end of the century; and
- > Cervantes Lodge has a high vulnerability rating at the 2110 planning timeframe.



**Figure 3-2 South of Thirsty Point CE1 management unit (source: RAC Parks & Resorts, <https://parksandresorts.rac.com.au/cervantes/park-info/things-to-do/>)**

### 3.2.2 CE2 – Cervantes Township South

The Cervantes Township South management unit contains predominantly natural assets such as the beach and vegetated dunes. It contains 12 residential properties that are located partially or fully within the 2110 coastal hazard line, as well as roads and associated public infrastructure (**Figure 3-3**). Public infrastructure includes the carpark and ablution block at Ronsard Reserve. See **Appendix C** for more information on assets and their values in this management unit.

Existing controls associated with this management unit, which have been considered in the risk assessment process, include extensive offshore reefs, the Cervantes Islands and Thirsty Point at the southern boundary. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).



Residential properties and Ronsard Reserve are predicted to be at risk of erosion by 2110. Due to the small number of properties, the consequences are rated as moderate and the properties have only medium vulnerability by 2070. Seville Street is highly vulnerable by 2070. Erosion is likely to lead to the degradation of dunes and the vegetated foreshore, impacting on the amenity of the beach and ecological values of the dunes in developed areas. These natural assets are considered to be highly vulnerable by 2110 (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The beach and coastal dunes/vegetation have medium vulnerability ratings by 2070 and very high vulnerability ratings by 2110;
- > Seville Street has a medium vulnerability rating by 2030 and a high vulnerability rating by 2070; and
- > Residential properties and Thirsty Point carpark have high vulnerability ratings by 2110.



**Figure 3-3 Cervantes Township South CE2 management unit (source: NACC)**

### **3.2.3 CE3 – Cervantes Township Central**

The Cervantes Township Central management unit contains 49 residential properties that are located partially or fully within the 2110 coastal hazard line, as well as roads and associated public infrastructure. Natural assets include the beach and foreshore reserve, which are bounded to various extents on the landward side by development, throughout the management unit. Commercial assets include the RAC Holiday Park, the light industrial area (Indian Ocean Lobsters and the Men's Shed) and the Seashells Café (**Figure 3-4**). It should be noted that the light industrial area is currently being rezoned to "Special Use – Tourism and Industry". The DoT-managed jetty and onshore fuel facilities lie at the northern end of the management unit. See **Appendix C** for more information on assets and their values in this management unit.

Existing physical controls associated with this management unit, which have been considered in the risk assessment process, include extensive nearshore and offshore reefs, the Cervantes Islands and the headland feature at the southern boundary. Manmade controls include the small seawall and jetty abutment near the crayfish factory, and a groyne at the northern boundary of the management unit. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).

The beach, coastal dunes/vegetation and Light Industrial Area are all seen to be at high risk at present. For the Light Industrial Area this translates to a very high vulnerability rating at present. The beach and coastal dunes/vegetation are rated as highly vulnerable at present and have a very high vulnerability rating by 2070. The foreshore recreation area and residential areas west of Catalonia Street are at risk in 2070 and due to their high value and low adaptive capacity, they are considered to be very highly vulnerable by that time. Residences on Corunna Street and on the east side of Catalonia Street are at risk by 2070 (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The Light Industrial Area has a very high vulnerability rating at present;
- > The beach and coastal dunes/vegetation have high vulnerability ratings at present and very high vulnerability ratings by 2070; and
- > All other assets or groups of assets in the management unit have high or very high vulnerability ratings by 2070.



**Figure 3-4 Cervantes Township Central CE3 management unit and Catalonia Street (source: Western Australia for Everyone and view.com.au)**

#### **3.2.4 CE4 – Cervantes Township North**

The Cervantes Township North management unit contains predominantly natural assets such as the beach and vegetated dunes. There are also unsealed tracks and a sailing club (which has recently been leased and taken over by the Fin Fishers Club) lying seaward of the 2110 coastal hazard line. There are also two residential properties at the southern end of the management unit, lying partially or fully seaward of the 2110 hazard line (**Figure 3-5**). See **Appendix C** for more information on assets and their values in this management unit.

Existing physical controls associated with this management unit, which have been considered in the risk assessment process, are extensive nearshore and offshore reefs, the Cervantes Islands and a groyne at the southern boundary of the management unit. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).

Although the beach in its current state and the vegetated dune system is likely to be eroded over time, the lack of development landward of these areas means the consequence of the erosion is considered insignificant to minor. The adaptive capacity of these natural assets is also considered high through their ability to migrate inland. The risk profile and vulnerability of assets in this area are therefore low to medium across the planning timeframes. The medium rating is based on the assumption that inland migration of the dune habitat is likely, but it is not certain that all ecological functions will be retained (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The beach has a low vulnerability rating across the planning timeframes and the coastal dunes/vegetation have a low vulnerability rating to 2030 and medium vulnerability rating by 2070;
- > Residential properties have a medium vulnerability rating by 2070; and
- > The Sailing Club has a medium vulnerability rating by 2030.



**Figure 3-5 Cervantes Township North CE4 management unit (source: Peter Bellingham Photography)**



### 3.2.5 JB1 – South of Island Point

The South of Island Point management unit contains predominantly natural assets such as the beach and vegetated dunes (**Figure 3-6**). As noted in Section 2.3 development within the coastal zone extends some 1.5 km south-east of Island Pt which is beyond the southern boundary of the study area and is not included in this CHRMAP. There is a sealed pedestrian trail running along the length of the management unit, that lies mostly seaward of the 2030 coastal hazard line. See **Appendix C** for more information on assets and their values in this management unit.

Existing physical controls associated with this management unit, which have been considered in the risk assessment process, include extensive offshore reefs and islands and the headland formations at both boundaries. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).

Although the beach in its current state and the vegetated dune system is likely to be eroded over time, the lack of development landward of these areas means the consequence of the erosion is considered insignificant to minor. The adaptive capacity of these natural assets is also considered high through their ability to migrate inland. The risk profile and vulnerability of assets in this area are therefore low to medium across the planning timeframes. The medium rating is based on the assumption that inland migration of the dune habitat is likely, but it is not certain that all ecological functions will be retained (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The beach and the coastal dunes/vegetation have a low vulnerability rating for the first half of the century, changing to a medium vulnerability later in the century; and
- > The pedestrian trail has a medium vulnerability rating by 2030 and a high vulnerability rating by 2070.



**Figure 3-6 South of Island Point JB1 management unit (source: Ray White, <https://www.raywhite.com/wa/jurien-bay/1435853/>)**

### 3.2.6 JB2 – Jurien Bay Township South

The Jurien Bay Township South management unit contains predominantly natural assets such as the beach and vegetated dunes. There is a sealed pedestrian trail running along the length of the management unit that lies mostly seaward of the 2030 coastal hazard line in the southern portion (**Figure 3-7**). Public assets include Casuarina Park and an unsealed carpark. See **Appendix C** for more information on assets and their values in this management unit. It is worth noting that a substantial portion of the Jurien bay township lies inland of the 2110 coastal hazard line in this area.

Existing physical controls associated with this management unit, which have been considered in the risk assessment process, include extensive offshore reefs and islands and a headland formation at the southern

boundary. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).

Due to existing development landward of natural assets, the consequence of predicted erosion has been deemed moderate and the adaptive capacity decreases from very high to high over time. Erosion is predicted to degrade the dunes and foreshore vegetation in the north of the management unit over the planning timeframes, affecting the amenity of the beach and ecological functions of the dunes adjacent to developed areas. These natural assets are predicted to be highly vulnerable by 2070 (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The beach has a medium vulnerability rating by 2070;
- > The coastal dunes/vegetation have a high vulnerability rating by 2070; and
- > The pedestrian trail and carpark have medium vulnerability ratings by 2030.



**Figure 3-7 Jurien Bay Township South JB2 management unit (source: Birdseye View Photography)**

### **3.2.7 JB3 – Jurien Bay Township Central**

The Jurien Bay Township Central management unit contains 29 residential properties that are located partially or fully within the 2110 coastal hazard line, as well as roads and associated public infrastructure. Natural assets include the beach and vegetated dunes, which are bounded inland by development, along the length of the management unit (**Figure 3-8**). There are various public assets along the foreshore including recreation areas (such as Dobbyn Park), sealed walkway and jetty. Commercial assets include the Jurien Jetty Café and Jurien Bay Tourist Park. See **Appendix C** for more information on assets and their values in this management unit.

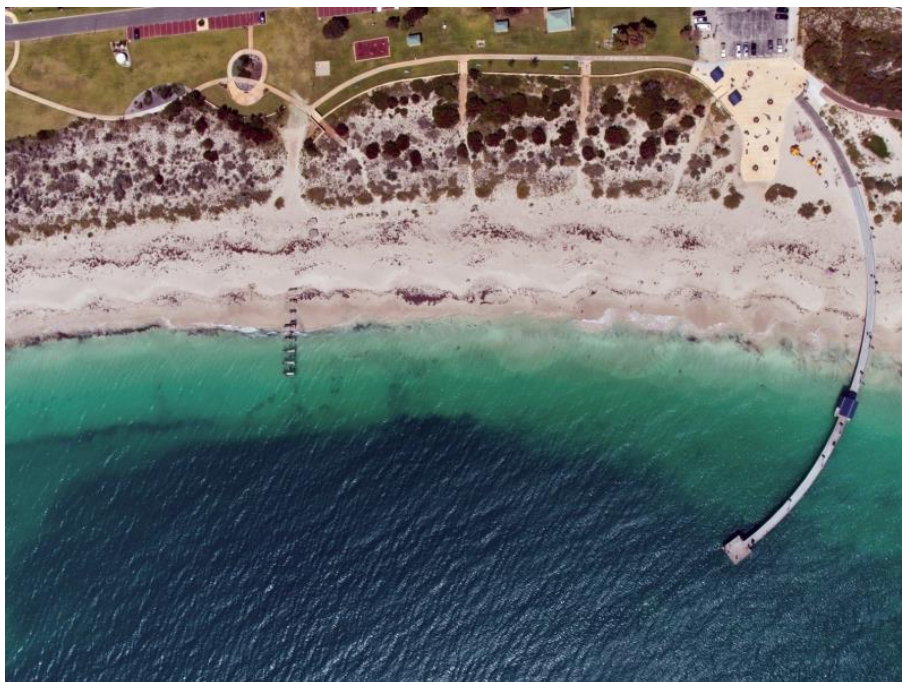
Existing controls associated with this management unit, which have been considered in the risk assessment process, are extensive offshore reefs and islands. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).

Due to existing development landward of natural assets such as the beach and foreshore area, their vulnerability increases into the future as their adaptive capacity decreases, becoming very high by 2070. Residential properties, Dobbyn Park and the Snorkel and Dive Trail are all predicted to be highly vulnerable by 2070, due to their significant value and the increasing risk of erosion (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The beach and foreshore area have very high vulnerability ratings by 2070;
- > Residential properties and Dobbyn Park have high vulnerability ratings by 2070 and very high vulnerability ratings by 2110;

- > The Snorkel and Dive Trail has a medium vulnerability rating by 2030 and a high vulnerability rating by 2070; and
- > Other assets such as Roads, Jurien Bay Tourist Park, Jurien Jetty Café and the pedestrian trail have low and/or medium vulnerability ratings across the planning timeframes.



**Figure 3-8 Jurien Bay Township Central JB3 management unit (source: Trails WA)**

### **3.2.8 JB4 – Jurien Bay Township North**

The northern end of the Jurien Bay Township North management unit contains residential land lying partially seaward of the 2110 coastal hazard line. Natural assets include the beach and vegetated dunes, which are bounded inland by development at the northern and southern ends of the management unit. Public assets include Federation Park and a sealed walkway extending along the length of the management unit (**Figure 3-9**). See **Appendix C** for more information on assets and their values in this management unit.

Existing physical controls associated with this management unit, which have been considered in the risk assessment process, include extensive offshore reefs and islands. Another significant existing control is the Jurien Bay Marina, which has its southern breakwater at the northern boundary of the management unit. The coastline has been treated as sandy for the purpose of coastal hazard assessment (MRA, 2016) and, subsequently, hazard lines advance steadily landward over the assessed planning timeframes (see **Appendix A** and **Table 2-3**).

Due to existing development landward of natural assets such as the beach and coastal dunes/vegetation in the north of the management unit, their vulnerability increases into the future as their adaptive capacity decreases, becoming very high by 2070. Residential properties at the north and south of the management unit have a high vulnerability rating by 2030 and very high vulnerability rating by 2070, as the risk of erosion increases over time (see **Appendix E**).

Key outcomes of the risk assessment for this management unit are as follows:

- > The beach and coastal dunes/vegetation have medium vulnerability ratings by 2030 and very high vulnerability ratings by 2070;
- > Residential properties have a high vulnerability rating by 2030 and very high vulnerability rating by 2070; and
- > The pedestrian trail and Federation Memorial Park have high vulnerability ratings by 2070.





**Figure 3-9 Jurien Bay Township JB4 management unit (source: Domain Group)**

### **3.3 Prioritisation of Assets based on Risk Assessment**

The risk assessment process has resulted in predictions of vulnerabilities for the assets within each management unit at the two townships, discussed in the preceding sections.

Priority management units are those with assets assessed as having 'High' or 'Very High' present day vulnerability and/or 'Very high' vulnerability by 2030. Only one management unit within the Shire met these criteria and has been identified for prioritisation:

- > CE3: Cervantes Township Central (Light Industrial Area).

## 4 PLANNING CONTROLS

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The risk assessment process highlighted the key areas vulnerable to coastal erosion over the next decade to 2030 as well the longer term threat to 2070 and 2110. The Shires Local Planning Strategy requires that development within the coastal zone follow the requirements of the SPP2.6 and the WAPC (2014a) guidelines for development of a CHRMAP that effectively focuses on two time scales:

- the long term strategic pathway over the next 100 years, and
- planning for implementation of management actions in the shorter term, the next decade, for priority management units.

As discussed in **Section 2.8** and in greater detail in **Appendix H** there exists a complex set of documents and rules that have influenced the evolution of the Shire's coastal townships. Historically, it was assumed that cadastral boundaries enclosed reasonably permanent areas suitable for developing residential and commercial assets ad-infinity. The notion that the land and assets within these boundaries is now subject to erosion and potentially becomes unusable triggered the establishment of SPP2.6 and the need for careful planning to determine future development directions of coastal townships.

The essential aim of SPP2.6 is to recognise that sea level rise and coastal erosion are threatening currently fixed, coastal zone assets at an increasing rate, and to commence the process of adjusting community expectations about life in the future, diminishing coastal zone. Preliminary estimates of protecting property and beach amenity across the State into the future are prohibitively expensive and hence the SPP2.6 policy aims to implement responsible long term planning strategies to develop affordable solutions that satisfy a range of key drivers including intergenerational equity.

As per the SPP2.6 policy and WAPC (2014a) guidelines and recent *draft Planned or Managed Retreat Guidelines* (DoPLH, 2017c) the long term priority is to adopt a strategy hierarchy of:

- *Avoid*,
- *Managed Retreat*,
- *Accommodate* and as a last resort,
- *Protect* (to be funded under the beneficiary pays principle).

Ultimately, the aim is to manage the retreat of significant assets from threatened areas before damage occurs. This will require a shift in the strategy from, for example, initially protect to managed retreat. The *Protect* strategy proposes that protection be funded by the beneficiaries while the transition from a *Protect* to *Retreat* strategy may trigger funding for removal or relocation under the LA Act. A number of issues arise out of these strategies, for example;

- Who are the beneficiaries?
- What is a reasonable method for apportioning costs to the beneficiaries?
- Who is responsible for funding managed retreat, in accordance with the mechanisms described in the *draft Planned and Managed Retreat Guideline*?

It is recommended that a comprehensive analysis of each community and visitors be undertaken to identify beneficiaries of proposed protection areas, economic stimulus provided by tourism, mechanisms for recouping costs from beneficiaries (e.g. parking fees, visitor entry fee, increased Shire rates or levy and other options) be investigated to inform the future review of the strategies options outlined in this CHRMAP.

The following planning framework is similar to that outlined in the *draft Planned or Managed Retreat Guideline*, is to be adopted for this CHRMAP and can be modified as clarity around financial implications of options and funding arrangements evolve. This planning framework includes the following instruments and considerations:

*Special Control Area*, to ensure discretion over development proposed in hazard areas. The SCA will show on the scheme map, as required by the *Planning and Development (Local Planning Scheme) Regulations 2015*, Schedule 1, Part 5.

Notifications on Title, to inform current and future landholders of coastal hazard risk, as recommended by State Planning Policy 2.6: State Coastal Planning Policy.

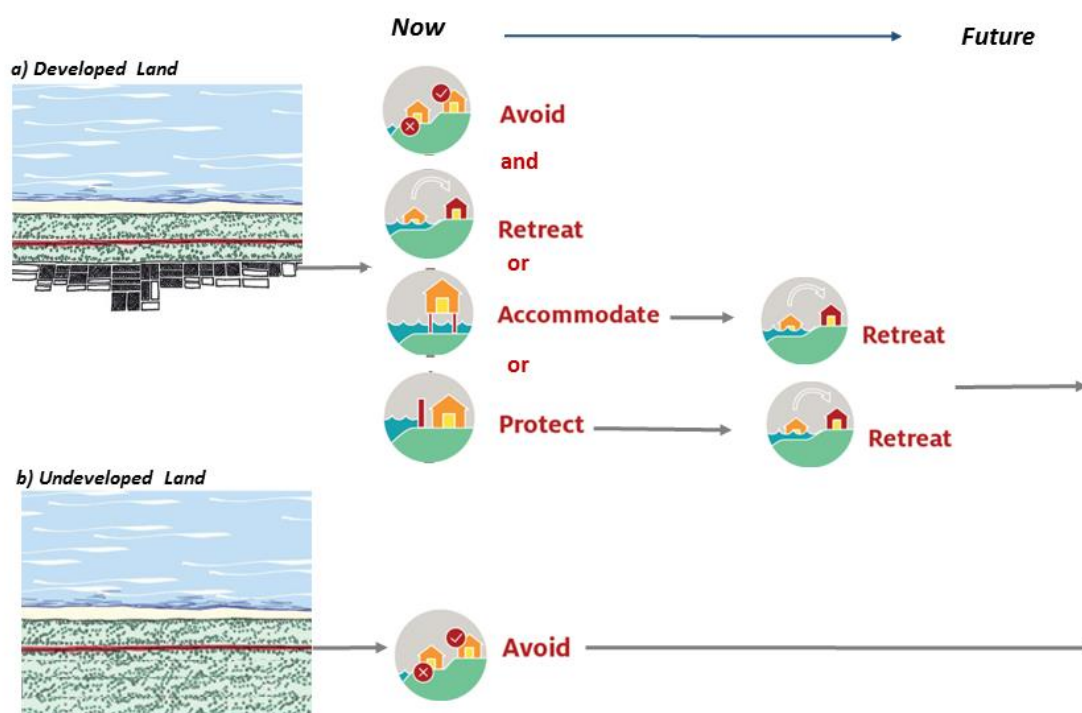
*Time Limited Planning Consent Conditions*, to allow where appropriate, the temporary use of land in hazard areas until hazards materialise, while ensuring that Councils maintain a level of discretion over development in these areas. Time limits would be identified using coastal hazard mapping projections. If the consent expires before hazards materialise, the proponent may apply for an extension to the consent. If hazards materialise before the time limit expires, Council will consider requiring the demolition or removal of compromised structures under relevant legislative provisions.

*Interim Coastal Protection*, where development is proposed behind a protection structure, the design life of the protection structure would determine the time limit permitted on planning consents. Maintenance and capital costs of protection are to be funded by the beneficiaries of protection works. Protection would only be considered as a last resort where all other options have been considered, as per SPP2.6: State Coastal Planning Policy.

*Assessment Criteria*, to ensure consistency when assessing applications for development proposed in hazard areas, for inclusion into a Local Planning Policy.

*Development applications for subdivision and zoning* beyond existing scheme allowances, are not encouraged and will generally not be approved.

Ultimately the aim of the CHRMAP is to develop a plan for adapting to the effects of rising sea levels and coastal erosion. The general strategy shifts that are likely to be required in future, as assets currently situated in the eroding coastal zone become unviable, is outlined in **Figure 4.1**.



**Figure 4-1 Long-term pathways for a) developed and b) undeveloped land**

From a practical perspective implementation of managed retreat as suggested in the recent *Draft Planned or Managed Retreat Guidelines* (DoPLH, 2017c) would require the State or Commonwealth to provide the majority of funding to acquire property likely to be required under the compensation provisions of the LAA and/or PDA. Clearly, there is no obligation to adopt a policy that effectively forces government to compensate. The general public and landowners should be aware of the risks in any decisions they make about purchasing or developing lands in these coastal areas. The potential financial burden of a Managed Retreat policy are more likely to see Local Government adopt an 'Avoid' or 'Do Nothing' policy that effectively shifts the burden of costs of sea level rise and coastal erosion impacts to landowners and beach users.

The Planning Framework outlined above recognises the complexity of the issues surrounding the adaptation to sea level rise and coastal erosion. The framework:

- allows for the continued use of hazard areas,
- allows landholders to propose development to suit their own needs and recognise the future risks,
- limits future hazard and liability risk to the Shire and State government,
- considers the limited public funding available,
- largely accords with SPP2.6 Policy and Guidelines and the Planning & Development Regulations 2015, and
- is cognisant of community feedback and other local governments.

## 5 ADAPTATION OPTIONS

### 5.1 Adaptation Options Overview

Effective adaptation planning involves the identification, development and evaluation of options suitable to manage the risk of coastal hazards. Adaptation options were evaluated in relation to each of the management units, with multiple options identified as potentially suitable for implementation within each unit. For the longer term strategic planning options are discussed while options for the 3 priority managements units are considered in more detail.

In accordance with SPP2.6 and the CHRMAP guidelines (WAPC, 2014a), potential options have been identified under the risk management categories of 'Avoid', 'Managed retreat', 'Accommodate' and 'Protect' (**Table 5-1**). Note that the government has no obligation to protect private assets from coastal erosion and hence the Protect management category is deemed the least preferred option for implementation, as recommended by the guidelines (see **Flowchart** below, adapted from CoastAdapt, 2017). The range of adaptation and management options were based on WA's CHRMAP guidelines (WAPC, 2014a) and are described in **Table 5-1**.

'Avoid' is seen as the preferred option and is applicable to undeveloped coastal land and areas of the coast where intensification of development in hazardous areas might be proposed. This option is underpinned by the implementation of planning controls, which should prevent inappropriate use of land in areas identified as potentially at risk from coastal hazards.

'Managed retreat' is a preferred option for areas where there is existing development at risk and, ultimately, should be part of the long terms strategy for all such areas. Although it can involve significant expenditure during implementation, this option removes assets from the risk of coastal hazards and is economically responsible over the long term. The planning mechanisms around implementing 'avoid' and 'managed retreat options' have been discussed in detail in **Section 4**.



'Accommodate' options aim to re-design existing infrastructure to mitigate potential impacts as they occur, and allow for land use of a low risk (for example temporary) nature. This option is not applicable to all areas, assets and coastal hazards. The option has better applicability to areas prone to coastal inundation, where assets can be elevated above flooding to maintain land use in a hazardous area. The ability for substantial, built assets to be redesigned to accommodate coastal erosion hazards is generally limited.

'Protect' options range from temporary 'soft' protection, such as sand nourishment, to semi-permanent 'hard' protection options, such as groynes and seawalls. It should be noted that no protection option is considered permanent, and all have associated ongoing expense to implement or maintain. This ongoing expense and the inability of protection options to permanently mitigate the risks associated with coastal hazards are the primary reasons why these options are considered the least favourable in the preferential planning hierarchy. Hard protection options also have the potential to divert coastal erosion hazards elsewhere, increasing risk for other areas or assets and potentially creating liability for those responsible for the structures.

SPP2.6 Clause (5.5 (iii)) states that the employment of protection options should be sought where:

*"sufficient justification can be provided for not avoiding the use or development of land that is at risk from coastal hazards and accommodation measures alone cannot adequately address the risks from coastal hazards, then coastal Protection works may be proposed for areas where there*



*is a need to preserve the foreshore reserve, public access and public safety, property and infrastructure that is not expendable.”*

Although protection measures are the least favoured option, particularly as a long-term mitigation measure, they remain the most commonly employed coastal risk mitigation strategy globally. There are several effective protection techniques, that can be employed to manage the risks of coastal erosion in the short to medium term. **Table 5-2** below provides additional detail on protection options available.

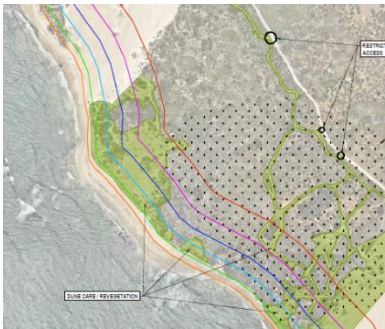
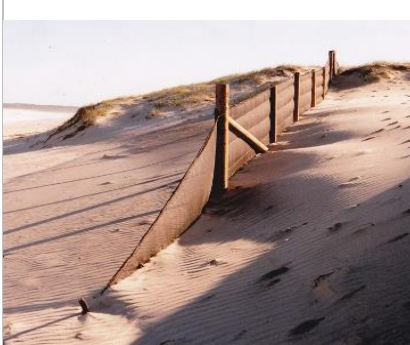




**Table 5-1 Adaptation and Management Options (adapted from WAPC, 2014a)**

Option Category	Option Name	Option Code	Description
Avoid	Avoid development	<b>AV</b>	Avoidance of freehold residential or commercial development within the coastal foreshore reserve.
Managed Retreat	Leave unprotected / repair	<b>MR1</b>	Assets are left unprotected and loss is accepted following hazard event. Repairs may be implemented to extend life and for public safety in the short term. In the case of natural assets, such as beaches and vegetation, allow the impacts of hazards to occur.
	Remove / relocate	<b>MR2</b>	Assets located in the hazard zone are permanently removed or relocated. For residential and commercial property, this option may require voluntary or compulsory acquisition of land, transferrable development rights and land swaps.
	Planning controls for Managed Retreat	<b>MR3</b>	Use of planning controls to allow continued use of the current infrastructure until such time that impacts arise, but restrict the development of further infrastructure (densification) as the area/asset is known to be vulnerable. This option also includes mechanisms for ensuring that Local Government, land owners and prospective buyers are made aware of the risk.
Accommodate	Planning controls for accommodation	<b>AC1</b>	Indicates to current and future landholders that an asset is at risk from coastal hazards over the planning timeframe. Helps owners to make informed decisions about the level of risk they are/may be willing to accept and that risk management and adaptation is likely to be required at some stage.
	Emergency plans and controls	<b>AC2</b>	Implement plans for assets/areas that are at risk of coastal erosion. Have procedures in place for before, during and after the events for safety. E.g. signage/barriers to prevent access.
Protect	Dune care / sand management	<b>PR1</b>	Development of a long term program for revegetation and rehabilitation of the dune system. Sand fencing to manage wind-blown erosion also falls under this category (also see <b>Table 5-2</b> ).
	Beach nourishment / sand management	<b>PR2</b>	Addition of sand to the beach, dune and/or nearshore area to replace lost material and/or create additional buffer. This option is a temporary measure and can be more effective in association with hard protection options, such as groynes. The sand may be from an external source or from a nearby part of that coastal area (i.e. via sand bypassing or back passing) (also see <b>Table 5-2</b> ).
	Groyne	<b>PR3</b>	Construct groynes along the beach to restrict longshore sediment movement and stabilise sections of shoreline. This option is often accompanied by beach nourishment. Hard protection generally diverts erosion issues elsewhere, such as to the down drift side of a groyne, and can have significant impact on coastal ecosystems (also see <b>Table 5-2</b> ).
	Nearshore reef / breakwater	<b>PR4</b>	Construct offshore reef(s)/breakwater(s) or raise existing natural nearshore reef structure to maintain level of protection as sea level rises. Hard protection generally diverts erosion issues elsewhere, such as to beaches either side of the nearshore structures, and can have significant impact on coastal ecosystems (also see <b>Table 5-2</b> ).
	Seawall	<b>PR5</b>	Construct seawall in front of assets or along length of coastline to protect them from coastal hazards. Hard protection generally diverts erosion issues elsewhere, such as to beaches either side of, and directly in front of, a seawall. They can also have significant impact on coastal ecosystems (also see <b>Table 5-2</b> ).

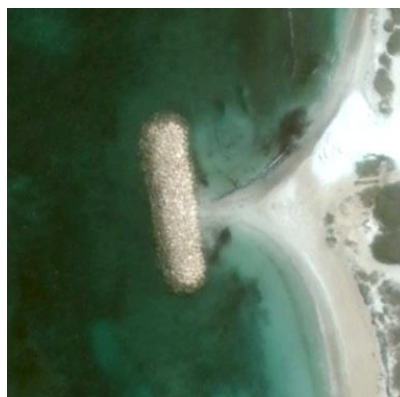
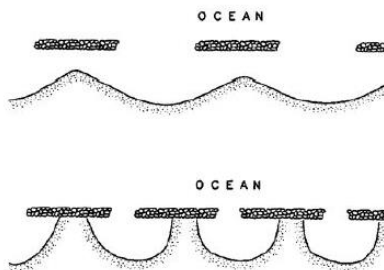


Option Category	Option Name	Option Code	Description
Do nothing	Do nothing	<b>DN</b>	Take no action. No limitations on development or implementation of adaptation planning. Accept risk.

**Table 5-2 Overview of protection options considered in the CHRMAP**

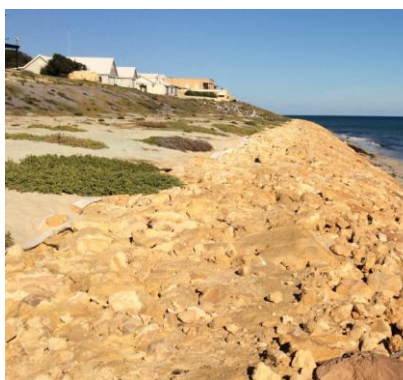
<b>a) Dune Care</b>		
		Dune care is a “soft” protection option that is relatively low cost and can assist by stabilising dune systems. It involves actively revegetating dunes or preventing degradation by restricting access, for example with fencing and signage. Dunes form a natural buffer to coastal erosion, which can protect areas and assets located behind them. Dune vegetation helps to prevent wind-blown erosion of dunes and stabilises the dune structure. Dune care is often undertaken by local volunteer groups.
<b>b) Beach Nourishment</b>		
		Beach nourishment is a “soft” protection option that provides temporary protection against coastal erosion. Sand can be sourced from another area of the beach, from an inland source, such as inland dunes or a sand quarry, or from offshore. Nourishment generally involves placement of sand on the upper beach face to act as a buffer during extreme events. Nourishment is often combined with other protection options such as groynes or offshore protection, which enhance its longevity. A nourished beach profile may provide protection for between 18 months and five years, before the beach returns to its original state. The cost of nourishment may vary from \$10/m <sup>3</sup> to \$50/m <sup>3</sup> , depending on the source and its location.
<b>c) Groynes</b>		
		Groynes are “hard” protection options that extend from above the high water mark, across the active shoreline and into the nearshore area. They are usually constructed perpendicular to the beach and can take various shapes such as T or L shapes. They can be constructed of rock, geotextile sand containers, timber or concrete. Groynes act to interrupt alongshore sediment transport which results in a build-up of sand on the up drift side of the groyne and an erosion on the down drift side. Groynes may be constructed as single groynes or in a groyne field to protect a larger area. Groynes have minimal impact on cross-shore sediment transport, such as that associated with storm-based erosion, outside of their immediate vicinity. Groynes are often complimented by additional beach nourishment, to increase the beach width on their up drift side. A rough estimate for the cost of a typical rock groyne is \$5000/m.

#### d) Nearshore Reef / Breakwater



Artificial nearshore reefs or breakwaters are “hard” protection options. They can be constructed of rock, concrete or geotextile sand containers. They function by diverting wave energy either side of the structure, which pushes sediment onto the shore inside of the structure. This results in the formation of a salient or even a tombolo in the lee of the structure, which results in an increase in beach width and an increased buffer against coastal hazards. Nearshore reefs or breakwaters affect both longshore and cross-shore sediment transport but do not fully interrupt either. Their feasibility is often determined by the nearshore water depth and the bottom type. They are generally more expensive to construct (per metre) than groynes, due to deeper water requiring a larger volume of construction material and leading to higher construction costs.

#### e) Seawall



A seawall is a “hard” protection option, which can be constructed of rock, geotextile sand containers or concrete, and can be either exposed or buried to improve visual amenity. A seawall is a solid barrier constructed parallel to the coast at the land-sea boundary, which functions by acting as a physical barrier to coastal erosion, protecting areas and assets on its landward side. Seawalls can also provide protection against inundation. Seawalls generally focus wave energy in front of them and to their sides, due to reflection off the structure. This usually leads to a more rapid loss of beach in the vicinity of the structure, leading to a “hardened” shoreline with poor useability and public amenity. The cost to construct a seawall may range from \$3000/m to \$6000/m, depending on a variety of factors, including construction material, required size and existing foundations.

## 5.2 Adaptation Option Assessment Process

Each of the adaptation options presented in **Table 5-1** has been considered for the Cervantes Township Central priority management unit. As recommended in the State's CHRMAP Guidelines, a multi-criteria analysis has been used as a preliminary step to identify potentially suitable adaptation options for each management unit, as well as to discount unviable options. The analysis uses a broad range of criteria and a simple 'traffic light' rating system to evaluate the acceptability of each option. The assessment considers the effectiveness of options at reducing risk and performing their function in relation to governance, environmental, social and economic aspects. Information gained through the stakeholder and community engagement process has been used to reflect the community's values in the assessment. Options have also been assessed in terms of their potential restriction on future planning and risk management opportunities, with options that allow for a wide range of future strategies considered more favourably. The analysis takes into consideration the following criteria:

Preliminary feasibility:

- > Effectiveness;
- > Governance, legal implications and approval risk; and
- > Reversibility / adaptability.

Preliminary acceptability:

- > Environmental and social impact; and
- > Community acceptability.

Preliminary financial implication:

- > Financial gain / avoidance of cost;
- > Capital cost; and
- > Ongoing cost.

The criteria and a description to guide the assignment of a rating for each criteria is presented in **Table 5-3**. Ratings have been assigned by taking into account information gathered prior to, and during, the CHRMAP process. This information includes feedback from ongoing stakeholder and community consultation, planning considerations (outlined in **Section 4**), previous investigations of the study areas and the outcomes of the coastal hazard assessments and risk assessment process. The analysis has also been guided by coastal engineering, management and planning expertise, and knowledge of other coastal management projects and techniques.

Based on the ratings assigned under each criteria for a particular adaptation option, a qualitative judgement is then made as to whether that option is recommended, not recommended or requires further investigation. It should be noted that red lights do not necessarily exclude an option, and it still may be recommended that such an option be investigated further. The outcomes of the multi-criteria analysis, for each management unit, are presented and discussed in **Section 5.3**, below.

For the priority management unit (as defined in **Section 3.3**) those options recommended for further investigation have been assessed in greater detail. This additional detail is discussed for the priority management unit in **Section 5.4**. Recommendations as to whether these options should be implemented and, if so, the details around this implementation are discussed in the Implementation Section (**Section 6**). Recommended options for long term pathways across all management units are also considered in **Section 6**.

**Table 5-3 Multi-criteria assessment and qualitative cost benefit input ratings and assessment outcome categories**

	Preliminary Feasibility			Preliminary Acceptability		Preliminary Financial Implication			Outcome
	Effectiveness	Governance / Legal / Approval Risk	Reversibility / Adaptability	Environmental / Social Impact	Community Acceptability	Financial Gain / Avoidance of Cost	Capital Cost	Ongoing Cost	Recommendation
<b>Unlikely to be acceptable</b>	Likely to be ineffective	Not likely to be approved / likely to result in legal risk /	Not likely to be reversible. Limits future options once implemented	Likely to have unacceptable negative impacts	Unlikely to meet most success criteria	No financial gain or avoidance of loss	Very expensive	Very expensive	Not Recommended
<b>May be acceptable</b>	May be effective	May not be approved / may present governance or legal risk	Likely to be reversible / adaptable at high costs	Some impacts that can be managed to an acceptable level	Mixed response, may meet some success criteria but not others	Some financial gain / small number of benefactors	Moderately expensive	Moderately expensive	Investigate / detailed option assessment
<b>"No regrets"</b>	Likely to be effective	Likely to be approved / minimal governance or legal risk	Easily reversible or adaptable for the future, no negative impacts in the future	Not likely to have negative impact, may have positive impacts	Likely to meet most acceptability criteria	Large financial gain / public benefit	Low cost	Low cost	Recommended
<b>Not Applicable</b>									



### 5.3 Multi-criteria Analysis Results

The detailed results of the multi-criteria analysis for each management unit are presented in **Appendix F**, with the final recommendations for each option in the prioritised management unit (CE3) summarised in tables presented in **Appendix G**. The following subsections discuss the outcomes of the analysis, with respect to the assets and their vulnerabilities, at each town site.

#### 5.3.1 Cervantes

##### CE1 and CE4

South of Thirsty Point (CE1) and Cervantes Township North (CE4) management units are similar in containing predominantly natural assets. The outcomes of the multi-criteria analysis are consistent for the two management units. It is recommended that substantial residential and commercial development is avoided (AV) in the management units. Planning controls (MR3, AC1) are recommended for implementation to prevent inappropriate development. Low cost protection options such as dune care and sand management (PR1) are recommended for implementation within the management units. Beach nourishment (PR2) and hard protection options (PR3, PR4 and PR5) have been assessed as expensive and inappropriate with respect to the existing assets and nature of the risk in these management units, so have not been recommended.

##### CE2 and CE3

Cervantes Township Central (CE3) has been identified as a priority management unit through the risk assessment process. Therefore, identifying suitable adaptation options and determining an adaptation pathway for this management unit is considered urgent. The outcomes of the multi-criteria analysis are consistent for this management unit and the Cervantes Township South management unit (CE2).

The multi-criteria analysis has recommended that the process of implementing managed retreat of assets (MR2) be further investigated. The protection options of beach nourishment (PR2), groyne(s) (PR3), nearshore breakwater(s) (PR4) and a seawall (PR5) have all been recommended for further investigation to assess their suitability.

The options of avoiding further development (AV) in hazardous areas and implementing planning controls to facilitate future managed retreat (MR3) from these areas have both been recommended. Planning controls to accommodate risk (AC1) and the preparation of emergency plans and controls (AC2) have also been recommended. Low cost protection options such as dune care and sand management (PR1) are recommended for implementation.

An assessment of adaptation options recommended for further investigation within priority management unit CE3 is provided in **Section 5.4** below. Details around the implementation of adaptation options, for each management unit, are presented in **Section 6**.

#### 5.3.2 Jurien Bay

##### JB1 and JB2

South of Island Point (JB1) and Jurien Bay Township South (JB2) management units are similar in containing predominantly natural assets. The developed area south of this CHRMAP study area boundary is located within 200m of the present day shoreline. This compares to the maximum 2110 hazard line width of 234 m (**Table 2-4**) at the southern boundary of the study area (southern boundary of JB1) and hence further investigation of this coastal area would be warranted. The outcomes of the multi-criteria analysis are consistent for the two management units. It is recommended that substantial residential and commercial development is avoided (AV) in the management units. Planning controls (MR3, AC1) are recommended for implementation to prevent inappropriate development. Low cost protection options such as dune care and sand management (PR1) are recommended for implementation within the management units. Beach nourishment (PR2) and hard protection options (PR3, PR4 and PR5) have been assessed as expensive and inappropriate with respect to the existing assets and nature of the risk in these management units, so have not been recommended.

##### JB3 and JB4

The outcomes of the multi-criteria analysis are consistent for Jurien Bay Township South management unit (JB3) and the Jurien Bay Township North management unit (JB4).



The multi-criteria analysis has recommended that the process of implementing managed retreat of assets (MR2) be further investigated. The protection options of beach nourishment (PR2), groyne(s) (PR3), nearshore breakwater(s) (PR4) and a seawall (PR5) have all been recommended for further investigation to assess their suitability.

The options of avoiding further development (AV) in hazardous areas and implementing planning controls to facilitate future managed retreat (MR3) from these areas have both been recommended. Planning controls to accommodate risk (AC1) and the preparation of emergency plans and controls (AC2) have also been recommended. Low cost protection options such as dune care and sand management (PR1) are recommended for implementation.

Details around the implementation of adaptation options, for each management unit, are presented in **Section 6**.

## **5.4 Adaptation Options – Cervantes Township Central (CE3)**

### **5.4.1 Introduction**

There are 49 residential properties lying seaward of the 2110 coastal hazard line in this management unit, with commercial property and public facilities also identified as vulnerable (**Appendix A**). The economic value associated with these properties has led to their high vulnerability rating at present, meaning immediate implementation of adaptation measures should be considered. The commercial property at highest risk is currently occupied by Indian Ocean Rock Lobsters which is a major employer in Cervantes and which requires access to seawater as it is a “live” facility. There is currently minimal beach buffer between the shoreline and commercial infrastructure and a lack of public access along the beach seaward of the commercial property.

As described in **Section 2.2**, a small section of seawall has been constructed adjacent to the existing jetty abutment in front of the commercial property which is shown in **Figure 5-1** below. The design basis and expected future performance of this seawall is uncertain. There are also existing groynes and jetty abutments along this section of coast which influence sediment transport processes in the area, particularly the Department of Transport groyne (built in 1992) which is the largest of the features and helps retain sand to its south.



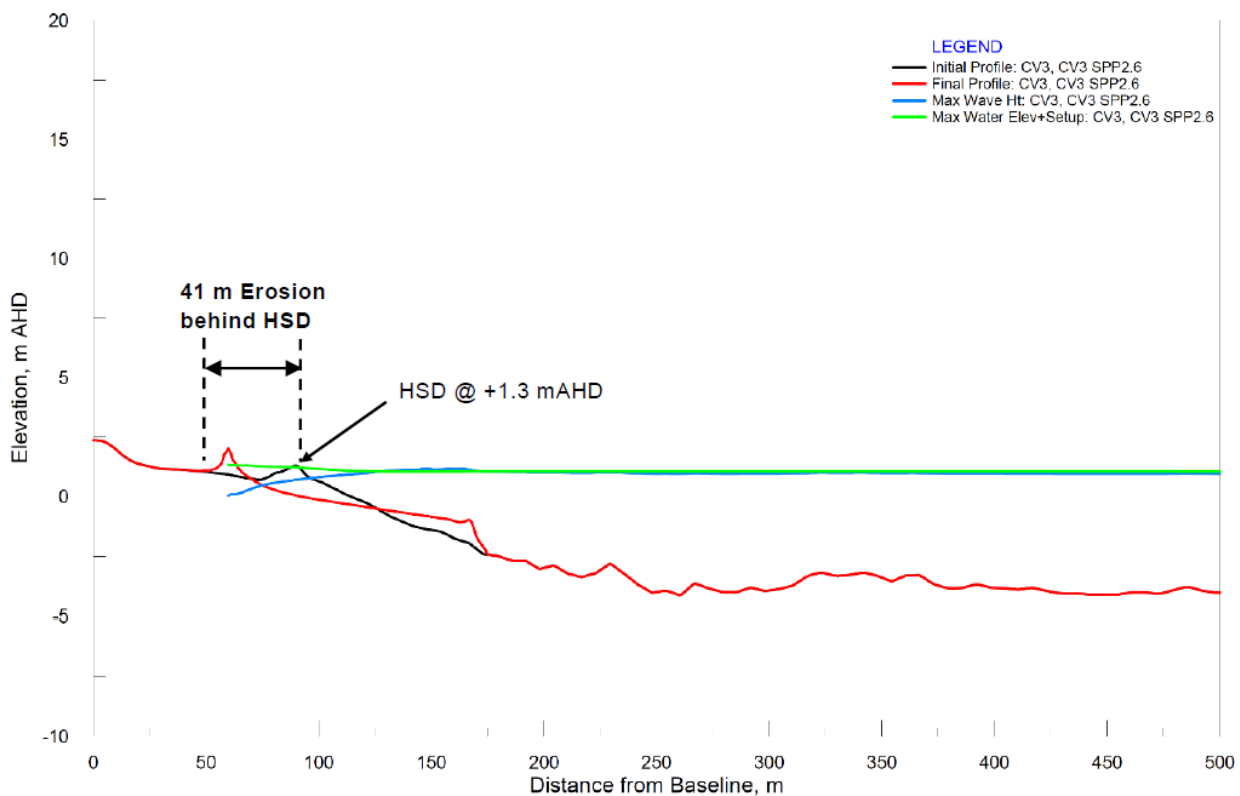
**Figure 5-1 Small section of seawall in front of Indian Ocean Rock Lobster property**

The public park areas and residential property to the south of the commercial property lie behind a low-lying, narrow and relatively sparsely vegetated dune which is unlikely to provide a significant degree of protection during an extreme erosion event (e.g. the 100 year ARI event modelled to determine S1).

The S1 erosion allowance calculated for this area (MRA 2016) is 41 m as shown in **Figure 5-2** (reproduced from MRA, 2016) which highlights the low-lying nature of the land adjacent to the current shoreline and demonstrates how the infrastructure in the area is currently at risk of damage in a large erosion event. In addition to coastal erosion risk, the area is low-lying and is likely to be prone to coastal inundation, which will be included in the next revision of the CHRMAP in approximately 5 years.

The historical shoreline movement in management area CE3 was analysed in MRA (2016) and showed that the shoreline in this area typically experienced erosion between 1943 and the mid-1990s but then stabilised and has accreted since, most likely in response to the construction of the DoT groyne in 1992.

The Indian Ocean Rock Lobster facility has been in operation since 2008. It contains holding tanks for live lobsters and also operates as a tourism attraction showcasing the live facility and selling seafood products (including a fast food outlet). Recently the decision was made by the Shire to amend the Local Planning Scheme to rezone the area used by the facility from “Residential/Industry” to “Special Use – Tourism and Industry”. Conditional to the rezoning is that the development have due regard to coastal hazards (as per SPP2.6) and be responsive to measures identified in this CHRMAP.



**Figure 5-2 S1 results for CE3 (MP Rogers and Associates 2016, Cervantes Zone 3)**

#### 5.4.2 Value of Assets at Risk

An estimate of the economic value in 2015 dollars (2015 \$) of built assets lying seaward of the 2030 coastal hazard line is presented in **Table 5-4**. Note that this table only includes assets in CE3. To provide context for subsequent discussion of the application of a beneficiary pays system to fund future coastal management the Shire’s revenue base (2015 \$) for the 15-year period (2015 to 2030) is also estimated in **Table 5-4**.

**Table 5-4 Summary of estimated value (2015 \$) of vulnerable built assets in Cervantes**

Asset type	unit	Rate(\$)	2030	
			#	value (\$)
Roads (main)	m	800	0	-
Roads (secondary)	m	500	96	\$ 48,000
Footpaths / Cycleways / Beach Access	m	350	560	\$ 196,000
Carpark	m <sup>2</sup>	70	11304	\$ 791,280
Private properties: residential				
- land vacant	#	250,000	1	\$ 250,000
- houses and improvements	#	250,000	0	-
Private properties: commercial, holiday accommodation				
- land	m <sup>2</sup>	150	3000	\$ 450,000
- improvements (chalets)	#	180,000	0	-
<b>Total</b>				<b>\$ 1,735,280</b>
Rate Base Revenue over 15 years, 2015 to 2030 (in 2015 \$)				
Affected properties	#	\$1000 <sup>#</sup>	49	\$735,000
Township	#	\$1000 <sup>#</sup>	990	\$14,850,000
Shire	#	\$1000 <sup>#</sup>	2000 <sup>#</sup>	\$30,000,000

<sup>#</sup>Estimated

### 5.4.3 Accommodate (AC2)

Redevelopment of the Indian Ocean Rock Lobster facility offers the opportunity to ensure that the erosion and inundation risks are accommodated as far as is practicable. It is easier to accommodate inundation through development controls, such as ensuring finished floor heights are adequate for expected flood levels, than it is to accommodate erosion. However, as part of the development, the company hopes to build and maintain a private jetty in addition to the informal seawall and jetty abutment which have already been put in place. Any plans to accommodate coastal hazards through the redevelopment should be underpinned by the investigations undertaken as part of the CHRMAP process, as well as other scientific investigations in the area.

### 5.4.4 Remove and Relocate (MR2)

Removal or relocation of properties at risk of erosion is an option for management area CE3.

There are currently no specific mechanisms for government funded managed retreat in the CHRMAP context, however voluntary or compulsory acquisition may be implemented under the provisions the LAA or the P&D Act (See **Section 4.1**).

It is reasonable to assume that triggers for retreat might include:

- > Distance of the asset from the HSD is less than S1 (i.e. 41m for CE 3);
- > Loss of legal access to property; or
- > Loss of essential services.

The distance of the commercial infrastructure from the HSD datum is less than 10 m for this area, so the need for retreat in relation to S1 (and possibly in relation to a set distance) would already be triggered as these structures could be impacted by a single storm event. The adjacent residential buildings are located further from the HSD (generally 50-60m) so would not currently trigger the need for retreat in relation to S1. The public park areas are located closer to the HSD (generally 10-20m) however the nature of these assets means they should remain in place until unserviceable.

The majority of infrastructure within the 2030 hazard line is public infrastructure, however in the event of voluntary or compulsory acquisition of private properties, this could be estimated as costing up to around \$1 M.

**R\_CE3.1:** It is recommended that a comprehensive economic study, including detailed economic analysis and proposed costs apportionment to identified beneficiaries, be undertaken by the Shire and the State to guide eventual managed retreat from hazardous areas.

#### **5.4.5 Beach Nourishment (PR2)**

Sand nourishment aimed at increasing the width of the beach and increasing the buffer against coastal erosion in management area CE3 is an option for reducing the risk of erosion, but may be of limited value without being used in conjunction with groynes as outlined below. Although sand nourishment as a standalone option has not been costed, nourishment providing an offset for shoreline recession has been estimated by MP Rogers in 2015 as 144,000 m<sup>3</sup>. At a unit rate of \$35/m<sup>3</sup> from terrestrial sources this equates to a cost of approximately \$5 million. It appears the DoT groyne at the northern end of this management area may already be saturated at present and either the nourishment may be scheduled for a period following the erosion of sand from the groyne area, or if extending the beach buffer zone is desired then the groyne structure may be extended further offshore.

Sand nourishment of a much smaller scale is also an option, particularly as an interim short term solution in response to erosion events or to protect infrastructure at risk while long term solutions are investigated and implemented.

#### **5.4.6 Groynes (PR3)**

A preliminary costing of structural protection options for Cervantes was undertaken for the Shire by MP Rogers in 2015 (MRA, 2016). A best practice approach was adopted which recommended the following groyne and nourishment characteristics for protection of Cervantes (not just CE3) up to 2030:

- > 2 additional groynes;
- > Additional width of beach profile required: 20 m;
- > Total length of 140 m; and
- > Sand nourishment volume 144,000 m<sup>3</sup>.

The total cost of using groynes as a protection measure for the 15 year period was estimated at approximately \$9 million. Note that the above approach and costing is of a preliminary nature and that detailed design would need to be carried out based on site specific data (assuming this is available), and the impacts on adjoining areas would need to be investigated. The above costings are also representative of “best practice” and it is possible that more cost effective options may be adequate for shorter term protection of assets.

In addition to the capital cost, the cost of maintenance of the groynes was estimated by MP Rogers to be approximately \$200,000 per decade.

#### **5.4.7 Seawall (PR5)**

A preliminary costing for construction of a seawall at Cervantes was undertaken for the Shire by MP Rogers in 2015 (MRA, 2016). A best practice approach was adopted which recommended a 600 m long rock seawall. The estimated cost of constructing a seawall was \$2.3 million. Additionally, ongoing seawall monitoring and maintenance costs need to be considered, and these are likely to be between \$100,000 and \$300,000 per decade.

The installation of a seawall is likely to be seen as unacceptable to many members of the community, due to the likely loss of beach access and amenity in the area it is installed. The potential to divert and exacerbate erosion issues elsewhere will likely lead to additional coastal management costs, which have not been accounted for in estimating the cost implications of the seawall protection method.

**R\_CE3.2:** Unless significant sources of external funding become available, it would not be recommended that hard protection options are implemented to manage coastal erosion hazards in this area. Available funding should be directed at managing the retreat of built infrastructure from this area as it becomes vulnerable.

**R\_CE3.3:** It is recommended that major coastal management investment decisions are reserved until the hazards associated with coastal inundation have been incorporated into the CHRMAP.



## 6 IMPLEMENTATION

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A range of options for addressing the challenges of coastal erosion and its effects on the coastal zone over the next decade and century have been outlined in the preceding chapters. In general, the threat to significant assets is predicted to occur only after 2030 and become progressively more severe into the latter part of the century. While it is natural that local communities would prefer to protect and preserve the current features of the coastal zone, the reality is that unless some new and innovative protection methods are developed, the costs of maintaining current features will likely become prohibitively expensive at some point in the future. The interim nature of protect options needs to be recognised across the community and, the adaption options developed and solutions optimised for social, environmental and economic (affordability) drivers. This section first discusses the issues around funding and equity, then addresses the plan for implementation of recommended adaptation options up to the 2030 timeframe with a strategic view on the likely adjustments over the next century, to 2110.

### 6.1 Funding and Equity

In accordance with the CHRMAP guidelines, equity implications are considered with a particular focus on identifying who may benefit and who may be disadvantaged by proposed management options. This then raises the question of who would be expected to bear the cost of implementation.

#### 6.1.1 Cervantes CE3

As introduced in **Section 2.2**, a small section of seawall has been constructed adjacent to the existing jetty abutment in front of the Indian Ocean Rock Lobsters property, providing temporary protection. There is currently minimal beach buffer between the shoreline and commercial infrastructure and a lack of public access along the beach seaward of the commercial property. Redevelopment of the Indian Ocean Rock Lobster facility should be explored to accommodate erosion and inundation risks. The facility provides benefits to the local community, being a major employer in the town and, as such, the equitable apportionment of costs across beneficiaries will require further investigation.

The complex coastal processes around Cervantes and its offshore reefs will need to be monitored to inform the need for sand nourishment in future within CE3. Both the local community and visitors to the township would benefit from sand nourishment and it is recommended that the mechanisms available to generate revenue from these beneficiaries be investigated. The cost for sand nourishment is estimated at around \$5M, but would likely only be considered in conjunction with the construction of additional groynes costing an estimated \$9M. These items would provide protection for some 15 years only. For the longer term, and given current day knowledge of coastal processes and protection measures, the implementation plan aims to exercise the retreat option and it is recommended that detailed implementation of the draft Guidelines for Planned or Managed Retreat (DoPLH, 2017c) be investigated.

#### 6.1.2 Jurien Bay

One row of housing, Grigson St and Heaton St fall within the 2110 hazard line in JB3. Should a protect strategy be adopted then the capital cost for a seawall or groynes may be spread over a larger group of beneficiaries within the local community. If adopted, it is likely that a protect strategy would transition to retreat at the end of the design life of the seawall/groynes around 2070, by which point the removal/relocation of the streets and utility infrastructure would need to be considered.

The complex coastal processes around Jurien Bay and its offshore reefs will need to be monitored to inform the need for sand nourishment in future, within JB3 and JB4. Sand management would benefit the local community and visitors to the township. It is recommended that the mechanisms available to generate revenue from these beneficiaries be investigated.

### 6.2 Long Term Pathways and Short Term Implementation

The information collated through the various stages of the CHRMAP process, including outcomes of the risk assessment and subsequent analyses summarised in the preceding sections, have been used to define priority actions for implementation by the Shire and other stakeholders. The proposed implementation

actions are intended to reduce the risk posed by coastal hazards in the immediate to short term (up to 2030), with consideration of the long term 100 year planning horizon.

The implementation plan has been structured to group actions in accordance with the WAPC (2014a) adaptation hierarchy. In addition, adaptation responses can be defined as being related to either, planning and development or to engineering as discussed by the Planning Institute of Australia's (PIA) National Land Use Planning Guidelines for Disaster Resilient Communities (2015).

The long-term pathway for each management unit is both an input and an output to the adaptation option assessment. For example, in a management unit containing few built assets the long term strategic pathway is one of avoiding development. By contrast, in areas containing built assets under threat in the long term decisions about when to transition from a protect strategy to a retreat strategy need to be made.

It is clear that planning decisions made decades and even centuries in the past, prior to understanding the implications of sea level rise and coastal erosion, are a key contributor to the current situation where assets are now at risk.

**R1** - It is recommended that a comprehensive investigation of each community and visitors be undertaken to identify beneficiaries of proposed protection areas. The investigation should assess the economic stimulus provided by tourism and mechanisms for recouping costs from identified beneficiaries (e.g. parking fees, visitor entry fee, increased shire rates or levies, etc.) to inform the future review of the strategies and options outlined in this CHRMAP.

In the shorter term, roughly the next decade up to 2030, there are a number of specific recommendations that may be implemented. These range from investigations to provide more detailed analyses to inform balanced decisions, monitoring to assess whether the predicted threats of coastal erosion actually occur, community consultation to better educate the community about the impending threats and need to plan for their eventuality and consequences.

### 6.3 Triggers

The Draft Guidelines for Planned or Managed Retreat (DoPHL, 2017c) provide a guidance on the appropriate triggers or criteria to commence actioning a particular management response. The guidelines suggest the following:

*Planned retreat allows development to remain and be safely used until the coastal hazard risk becomes unacceptable. Initiation of the process to remove at risk development can be controlled by triggers such as:*

*Trigger 1. Where the most landward part of the Horizontal Shoreline Datum (HSD) is within 40 metres of the most seaward point of a development or structure.*

*Trigger 2. Where a public road is no longer available or able to provide legal access to the property.*

*Trigger 3. When water, sewage or electricity to the lot is no longer available as they have been removed/ decommissioned by the relevant authority due to coastal hazards.*

*The trigger distance determines when planned retreat is activated for a particular development.*

For the specific sites within The Shire the criterion outlined in Trigger 1 has already been exceeded. Triggers 2 and 3 are relevant to sections of management units CE3 and JB3 where public roads and potentially utilities services are located seaward of the 2110 Hazard line, but landward of the 2070 hazard line. Given that the projected risk to these assets is half a century away, and there appear to be more pressing issues in the shorter term, it is prudent to adopt a set of triggers based on the immediate term recommendations and around the HSD shoreline movement criteria. For the purpose of this CHRMAP the following triggers have been adopted and applied to each management unit (**Appendix I**):

Trigger 1: CHRMAP recommendation

Trigger 2: HSD plus S1 reaches 2030 vulnerability line

Trigger 3: HSD plus S1 reaches 2070 vulnerability line



#### Trigger 4: Minor Infrastructure becomes damaged or unsafe

In the above triggers it is assumed that the HSD line will be determined annually or at least soon after major storm erosion events to inform the ongoing assessment of the Trigger criteria. Hazard line estimates for interim planning horizons at 2050 and 2090 have also been generated. Finer temporal resolution of the triggers may be implemented using these lines during future revision of the CHRMAP, each 5-10 years. At this time it is important to agree the concepts and implementation process before getting too detailed on the trigger values.

Specific long term pathways and short term implementation recommendations for the priority management units are discussed in the following sections.

## 6.4 Cervantes

### 6.4.1 Long Term Pathway

The long term pathway for the Cervantes Township should aim for the eventual managed retreat and accommodation of built infrastructure, as it becomes vulnerable to coastal hazards and/or interferes with the maintenance of an appropriate coastal foreshore reserve (as defined in Section 5.9 of SPP2.6). The development of emergency plans and controls should occur for the management of coastal hazards. For major infrastructure, such as residential and commercial property, managed retreat should occur when the risk to infrastructure becomes intolerable and it is no longer viable or acceptable to the Shire's community to implement protection measures. For undeveloped areas, the long term pathway should focus on avoiding inappropriate development, to prevent unnecessary future cost and potential liability for the Shire.

Proposed long term pathways for the individual Management Units within Cervantes (CE1, CE2, CE3 and CE4) are provided in **Appendix I**. The key tools that will underpin the achievement of these long term pathways are planning controls, which were discussed in **Section 4**. Protection mechanisms using hard structures for the Township should be carefully assessed and guided by appropriate triggers to determine their suitability for implementation, particularly given they are likely to provide interim protection only.

### 6.4.2 Short Term Implementation – Cervantes Township Central (CE3)

The following adaptation pathway is proposed:

**Short to Medium term:** Protect in a manner that maintains existing social values and within budgetary constraints, until such time as triggers for retreat are exceeded following which the planned retreat strategy be implemented.

Recommendations arising from the above assessment for CE3 are provided in **Table 6-1**.

**Table 6-1 Recommendations and adaptation planning recommendations for CE3**

ID	Recommendation
R_CE3.1	The Shire and State to undertake a comprehensive economic study, including detailed economic analysis and proposed costs apportionment to identified beneficiaries, to guide eventual managed retreat from hazardous areas.
R_CE3.2	Unless significant sources of external funding become available, it would not be recommended that hard protection options are implemented to manage coastal erosion hazards in this area. Available funding should be directed at managing the retreat of built infrastructure from this area as it becomes vulnerable.
R_CE3.3	Major coastal management investment decisions are reserved until the hazards associated with coastal inundation have been incorporated into the CHRMAP.
R_CE3.4	Avoid further residential or commercial development within the 100 year hazard line.
R_CE3.5	Ensure that coastal hazard management commitments in the redevelopment application for the Indian Ocean Lobster facility are consistent with this CHRMAP.

R_CE3.6	Ensure that conditions of re-zoning re-development of the Indian Ocean Lobster facility are met and independently audited.
R_CE3.7	Ensure that any coastal protection structures gain appropriate environmental approvals, are designed by appropriately qualified engineers and the decommissioning at end of design life is consistent with the long term plan of this CHRMAP.
R_CE3.8	Allow ongoing use of public park, pathway and picnic facilities until it is unsafe to continue to do so.
R_CE3.9	Major investment decisions with regards to coastal infrastructure should be reserved until after coastal inundation projections have been incorporated into the CHRMAP.

## 6.5 Jurien Bay

### 6.5.1 Long Term Pathway

The long term pathway for the Jurien Bay Township should aim for the eventual managed retreat of built infrastructure, as it becomes vulnerable to coastal hazards and/or interferes with the maintenance of an appropriate coastal foreshore reserve (as defined in Section 5.9 of SPP2.6). For major infrastructure, such as residential and commercial property, this retreat should occur when the risk to infrastructure becomes intolerable and it is no longer viable or acceptable to the Shire's community to implement protection measures. For undeveloped areas, the long term pathway should focus on avoiding inappropriate development, to prevent unnecessary future cost and potential liability for the Shire.

Proposed long term pathways for the individual Management Units within Jurien Bay (JB1, JB2, JB3 and JB4) are provided in **Appendix I**. The key tools that will underpin the achievement of these long term pathways are planning controls, which were discussed in **Section 4**. Protection mechanisms using hard structures for the Township should be carefully assessed and guided by appropriate triggers to determine their suitability for implementation.

### 6.5.2 Short Term Implementation

The following adaptation pathway is proposed:

**Short to Medium term:** Investigate hard protection options ensuring that it maintains existing social values and within budgetary constraints; investigate the mechanism for planned retreat of vulnerable assets; and implement planning changes to avoid future development in currently undeveloped areas.

## 6.6 Shire of Dandaragan Monitoring Plan

Monitoring of the ongoing changes in actual shoreline movements and the response to storm erosion events is critical to assess compliance with trigger criteria for the management actions, to inform the future revisions of hazard lines and the CHRMAP. A monitoring plan should be developed for the townships, prioritising monitoring activities based on available funding. The *Seabrid, Ledge Point, Lancelin – Coastal Monitoring Action Plan* (Seashore Engineering, 2017) provides a high level of detail on coastal monitoring techniques. It is applicable to different areas than those assessed in this CHRMAP, but deals with similar coastal environments and the proposed monitoring is generally transferable to sites within the Shire. In general the monitoring, data collation and analysis may include:

- > Annual Beach Profile Surveys;
- > Horizontal Shoreline Datum determination from aerial photos;
- > Post wave erosion event (>2 yr ARI wave) beach profiles;
- > Cyclone storm surge flooding event inundation levels; and
- > Seawall, groyne and shoreline protection devices condition monitoring.

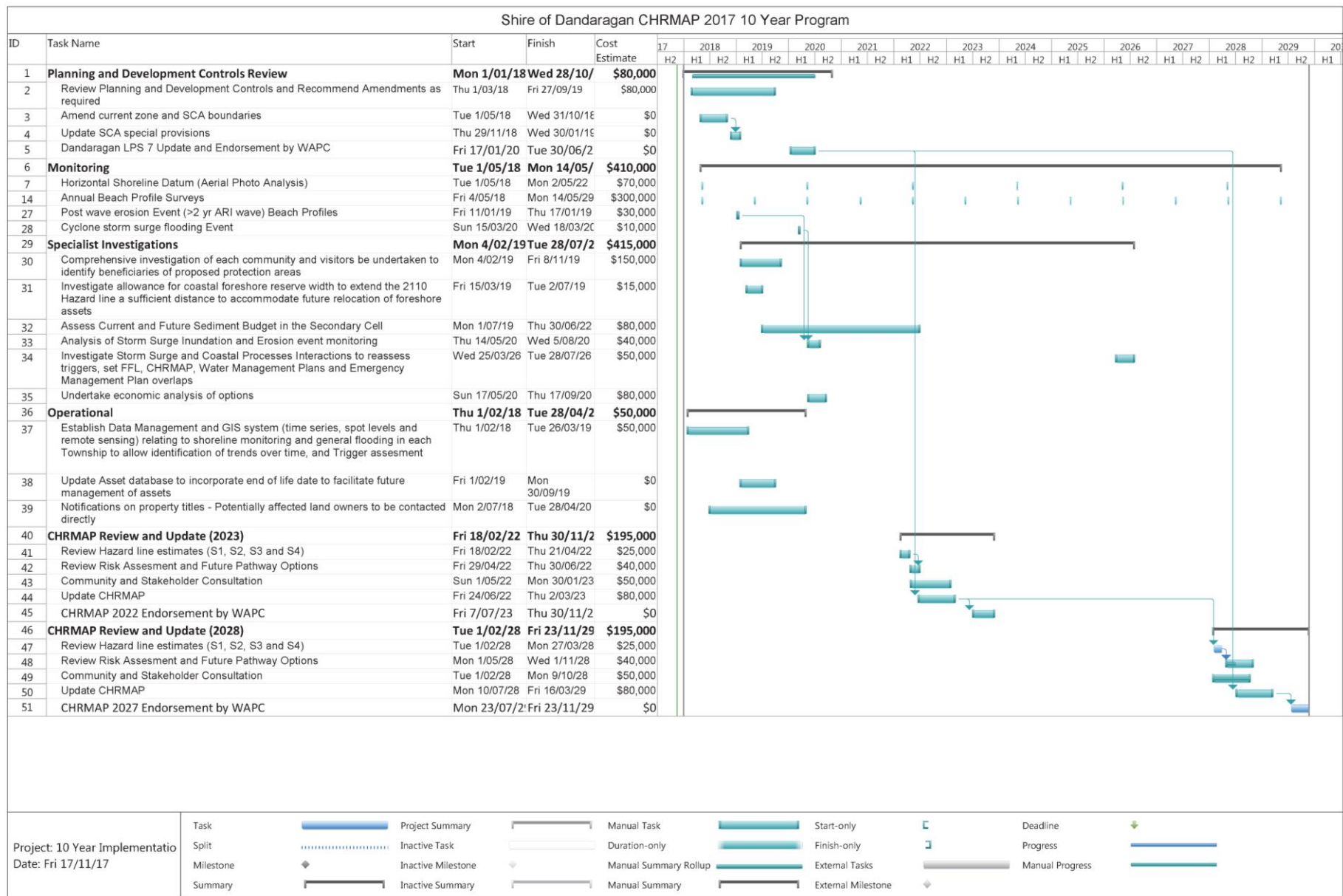
The Shire may also require data from updates from the State and Federal programs providing offshore wave data, winds and rainfall, ecological community information and threatened species registers and other data sets. This information needs to be collated to inform the updates to hazard line projections and revise CHRMAP adaptation strategies as appropriate.

## 6.7 Shire of Dandaragan Implementation Plan (to 2030)

The implementation plan for the next decade up to 2030 is shown in the Gantt chart presented in **Figure 6-1** and Tasks listed below in **Table 6-2**.

**Table 6-2 Tasks for Implementation up to 2030, schedule start and end dates and approximate costs**

Task Name	Start	Finish	Cost Estimate \$1,000s
<b>Planning and Development Controls Review</b>	<b>1 Jan '18</b>	<b>28 Oct '20</b>	<b>\$155</b>
Review Planning and Development Controls and Recommend Amendments as required	1 Mar '18	27 Sep '19	\$80
Amend current zone and SCA boundaries	1 May '18	31 Oct '18	\$15
Update SCA special provisions	29 Nov '18	30 Jan '19	\$20
Dandaragan LPS 7 Update and Endorsement by WAPC	17 Jan '20	30 Jun '20	\$40
<b>Monitoring</b>	<b>1 May '18</b>	<b>14 May '29</b>	<b>\$410</b>
Horizontal Shoreline Datum (Aerial Photo Analysis)	1 May '18	2 May '22	\$70
Annual Beach Profile Surveys	4 May '18	14 May '29	\$300
Post wave erosion Event (>2 yr ARI wave) Beach Profiles	11 Jan '19	17 Jan '19	\$30
Cyclone storm surge flooding Event	15 Mar '20	18 Mar '20	\$10
<b>Specialist Investigations</b>	<b>4 Feb '19</b>	<b>28 Jul '26</b>	<b>\$415</b>
Comprehensive investigation of each community and visitors be undertaken to identify beneficiaries of proposed protection areas	4 Feb '19	8 Nov '19	\$150
Investigate allowance for coastal foreshore reserve width to extend the 2110 Hazard line a sufficient distance to accommodate future relocation of foreshore assets	15 Mar '19	2 Jul '19	\$15
Assess Current and Future Sediment Budget in the Secondary Cell	1 Jul '19	30 Jun '22	\$80
Analysis of Storm Surge Inundation and Erosion event monitoring	14 May '20	5 Aug '20	\$40
Investigate Storm Surge and Coastal Processes Interactions to reassess triggers, set FFL, CHRMAP, Water Management Plans and Emergency Management Plan overlaps	25 Mar '26	28 Jul '26	\$50
Undertake economic analysis of options	17 May '20	17 Sep '20	\$80
<b>Operational</b>	<b>1 Feb '18</b>	<b>28 Apr '20</b>	<b>\$80</b>
Establish Data Management and GIS system (time series, spot levels and remote sensing) relating to shoreline monitoring and general flooding in each Township to allow identification of trends over time, and Trigger assessment	1 Feb '18	26 Mar '19	\$50
Update Asset database to incorporate end of life date to facilitate future management of assets	1 Feb '19	30 Sep '19	\$20
Notifications on property titles - Potentially affected land owners to be contacted directly	2 Jul '18	28 Apr '20	\$10
<b>CHRMAP Review and Update (2023)</b>	<b>18 Feb '22</b>	<b>30 Nov '23</b>	<b>\$210</b>
Review Hazard line estimates (S1, S2, S3 and S4)	18 Feb '22	21 Apr '22	\$25
Review Risk Assessment and Future Pathway Options	29 Apr '22	30 Jun '22	\$40
Community and Stakeholder Consultation	1 May '22	30 Jan '23	\$50
Update CHRMAP	24 Jun '22	2 Mar '23	\$80
CHRMAP 2022 Endorsement by WAPC	7 Jul '23	30 Nov '23	\$15
<b>CHRMAP Review and Update (2028)</b>	<b>1 Feb '28</b>	<b>23 Nov '29</b>	<b>\$210</b>
Review Hazard line estimates (S1, S2, S3 and S4)	1 Feb '28	27 Mar '28	\$25
Review Risk Assessment and Future Pathway Options	1 May '28	1 Nov '28	\$40
Community and Stakeholder Consultation	1 Feb '28	9 Oct '28	\$50
Update CHRMAP	10 Jul '28	16 Mar '29	\$80
CHRMAP 2027 Endorsement by WAPC	23 Jul '29	23 Nov '29	\$15



**Figure 6-1 Shire of Dandaragan CHRMAP 2017: 10 year suggested program of work**

## 7 REFERENCES

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Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

A

HAZARD MAPS BY  
MANAGEMENT UNITS



Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

B

VALUE MAPS AND LIST OF KEY STAKEHOLDERS



Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

C

ASSET INFORMATION FOR EACH OF  
THE MANAGEMENT UNITS





Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

D

TECHNICAL NOTE ON RISK  
ASSESSMENT METHODS



Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

E

RISK ASSESSMENT RATINGS  
AND RESULTS



Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

F

MULTI-CRITERIA ANALYSIS RESULTS





Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

G

MULTI-CRITERIA ANALYSIS SUMMARY



Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

H

PLANNING CONTROLS DISCUSSION



Shire of Dandaragan  
Coastal Hazard Risk Management  
and Adaptation Plan

APPENDIX

I

LONG TERM PATHWAYS







## Application for Approval of Freehold or Survey Strata Subdivisions

Lodgement ID: 2018-211771

Your Reference	21307
Location of Subject Property	Lot 62 (#136) Cambewarra Drive, Jurien Bay
No. of applicants	1
Are you applying on your own behalf?	Yes
Are you the primary applicant?	Yes
Do you have consent to apply from all landowners?	Yes
Lodgement Type	Subdivision
Submitted by	Aaron Gibson
Email	aaron.gibson@denada.net.au

DEPARTMENT OF PLANNING, LANDS  
AND HERITAGEDATE  
08-Jun-2018FILE  
156771

## About the land

Number of current lots on the land	1	Total number of proposed lots on the land including balance lots	2
Drainage Reserves	0	Public Access Ways	0
Recreation Reserves	0	Right of Ways	0
Road Reserves	0	Road Widening	0
Number of fee paying lots	2	Number of fee exempt lots	0

## What is the proposed use/development?

Proposed Use	Lot size	Number of Lots
Rural	2 HA - 5 HA	2
Local Government	Shire Of Dandaragan	Existing dwellings
Is common property proposed	No	Yes

## Applicants

## Primary applicant (1)

Is the applicant a company/organisation?	Yes	Is the applicant a landowner?	No
Name/Company	De Nada Surveys	ABN / ACN	81606090788
Email	solutions@denada.net.au	Phone number	93448885

## Address

Street address	Unit 4 14 Halley Road	Town / Suburb or City	Balcatta
State	WA	Post Code	6021
Country	AUSTRALIA	OR Non-Australian Address, P.O. Box, & etc	N/A

## Certificate of Title Details

## Lots with certificate (1)

Volume	2184	Folio	896
Lot Number	62	Plan Number	P23980
Total land area	8.7075	Land Area Units	Hectares
Reserve number (if applicable)	N/A	No. of landowners	1
Is the Landowners name different to that shown on the Certificate of Title?			No

## Landowners

## Landowner (1)

Full name	Melissa Phillipson	Company / Agency	N/A
ACN / ABN	N/A	Landowner type	Registered Proprietor/s

## Address

Street address	19C Peppering Way	Town / Suburb or City	Westminster
State	WA	Post code	6061
Country	AUSTRALIA	OR Non-Australian Address, P.O. Box, & etc	N/A

## Subdivision detail

Number of dwellings	1	Dwelling retained	Yes
Dwelling description	Residence on concrete foundations.		
Number of outbuildings/structures	1	Structure/s retained	Yes
Other description	N/A		
Structure description	Shed		
Is a battleaxe lot/s proposed?			No
Does plan show the width and length of the access leg, the area of the access leg and total area of the rear lot			Not applicable
Has the land ever been used for potentially contaminating activity			No
Does the land contain any sites that have been classified under the Contaminated Sites Act 2003			No
Does the land contain any sites that have been reported or required to be reported under the Contaminated Sites Act 2003			No
Is the land located in an area where site characteristics or local knowledge lead you to form the view that there is a significant risk of acid sulfate soils in this location			No
Is this application to be assessed under the Liveable Neighbourhoods policy and is supporting documentation attached?			No
Is the development within a Bushfire Prone Area?			Yes
Are there any dewatering or drainage works proposed to be undertaken			No
Is excavation of 100 cubic metres or more of soil proposed			No
If yes did the Acid Sulfate Soils investigation indicate acid sulfate soils were present			No

#### Fee & Payment

Fee amount	\$3,280.20	Payment Type	By Anyone
------------	------------	--------------	-----------

#### Attachments

Attachment name	Attachment type
1. 21307ap-001b-3.pdf	Subdivision Plan
2. AS 3959 BAL Assessment Report-8.pdf	Bushfire Attack Level(BAL) assessment
3. BoreWater Bacteriological testing-5.pdf	Other supporting plans/documentation
4. Chemical water testing-6.pdf	Other supporting plans/documentation
5. consent-2.pdf	Authorised Letter of Consent
6. Exemptions for sewerage-4.pdf	Correspondence from other authorities
7. T 2184-896-1.pdf	Certificate of Title
8. WAPC Cover letter (sig)-7.pdf	Other supporting plans/documentation

Perth	Albany	Bunbury	Geraldton	Mandurah
140 William Street	PO Box 1108	Sixth Floor	Regional Planning and Strategy	Unit 2B
Perth	Albany	Bunbury Tower	Office 10	11-13 Pinjarra Road
Western Australia, 6000,	Western Australia, 6330	61 Victoria Street	209 Foreshore Drive	Mandurah
Locked Bag 2506 Perth, 6001		Bunbury	Geraldton	Western Australia, 6210
		Western Australia, 6230	Western Australia, 6530	
Tel: (08) 6551 9000	Tel: (08) 9892 7333	Tel: (08) 9791 0577	Tel: (08) 9960 6999	Tel: (08) 9586 4680
Fax: (08) 6551 9001	Fax: (08) 9841 8304	Fax: (08) 9791 0576	Fax: (08) 9964 2912	Fax: (08) 9581 5491





Thursday, 7 June 2018  
Our reference: 21307

The Western Australian Planning Commission  
C/- Planning Administration  
The Department of Planning  
140 William Street  
PERTH WA 6000

Dear Planning Administration Team Leader

**RE – ADDITIONAL INFORMATION FOR SUBDIVISION**

I refer to the application to subdivide the land known as 136 Cambewarra Drive in Jurien Bay more fully described as Lot 62 on Plan 23980 contained within Certificate of Title Volume 2184 Folio 896 (**"the Application"**).

As a part of this application the owner has done a large amount of correspondence in relation to the subdivision and we have outlined below their correspondence. We can provide copies of the email chains if required, however the relevant contacts are listed below with the information they provided.

Contact: Tim Reed and Emily Burton - Department of Planning, Lands and Heritage

1. Bushfire Prone Areas - The client has obtained a BAL certificate for the site (included in the subdivision application).
2. Water supply - The client has had water testing on the bore water that services the site on the 15/12/2016 (report included in application) and the report notes that the water is suitable for domestic, irrigation and stock usage. In regard to potential firefighting, it would be the client's preference to utilise online storage with tanks if required.
3. Effluent disposal - The site is not connected to reticulated sewerage, however it is the client's belief that, since there is already on-site sewerage disposal for lots surrounding this one there shouldn't be any issues complying with the requirements of the Draft Government Sewerage Policy section 6.4.

Contact: David Chidlow - Executive Manager Development Services, Shire of Dandaragan

David indicated on the 23<sup>rd</sup> of April 2018 that the subdivision has merit and the planning officer in the Shire of Dandaragan would be supportive of the application.

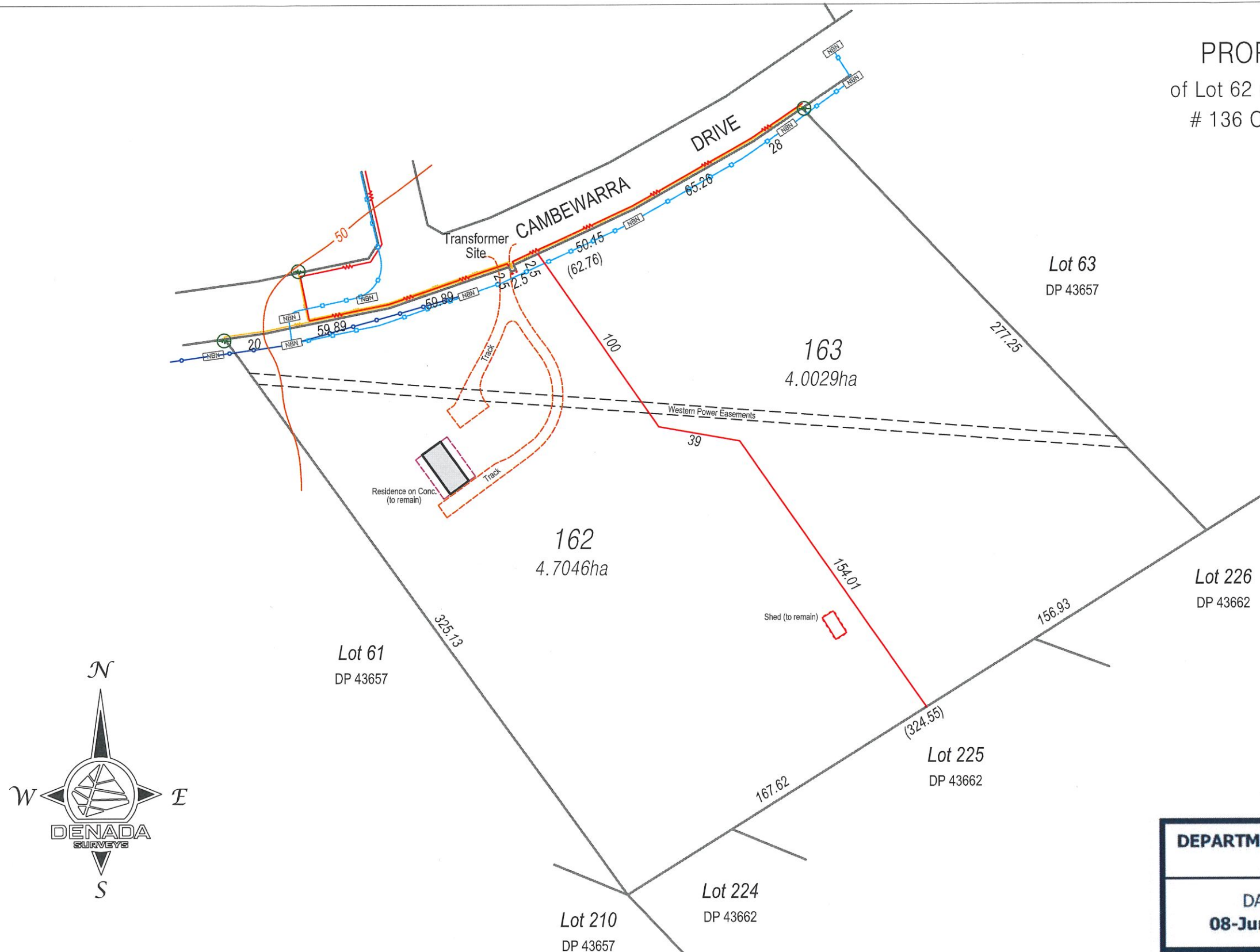
If you have further queries about correspondence please let us know and we will speak to the owner in reference to them. If you wish to speak to the owner directly Melissa can be contacted on 0401 290 463.

Regards,

A handwritten signature in black ink that reads 'Gibson'.

Aaron Gibson  
Licensed Surveyor

PROPOSED SUBDIVISION  
of Lot 62 on Plan 23980 – C/T 2184/896  
# 136 Cambewarra Drive, Jurien Bay



DEPARTMENT OF PLANNING, LANDS AND HERITAGE	
DATE	FILE
08-Jun-2018	156771

NOTE: CONTOUR INFORMATION FROM WATER CORPORATION DATA

CLIENT : PHILLIPSON	SURVEYED ON : N/A
AUTHORITY : SHIRE OF DANDARAGAN	PROCESSED BY : A.M.
MAP REF : N/A	SURVEYED BY :

**IMPORTANT NOTE:**  
The boundaries depicted on this plan were not re-established as part of this survey, therefore this plan does not guarantee their accuracy. Re-establishment of the cadastral boundaries is recommended for any proposed works on or near existing boundaries. The sole purpose of this plan is for presentation to the W.A.P.C. for process of conditional approval.

SCALE : 1:2000  
SHEET A3 LANDSCAPE

<b>STATISTICS:</b> No. OF EXISTING LOTS 1 No. OF PROPOSED LOTS 2 TOTAL AREA 8.7075ha	<b>LEGEND</b> PROPOSED BOUNDARIES EXISTING BOUNDARIES ZONING: RURAL
LICENSED LAND & ENGINEERING SURVEYORS Unit 4 / 14 Halley Road, BALCATT, WA, 6021 Telephone: (08) 9344 8885 Fax: (08) 9344 8889 Email: solutions@denada.net.au ABN: 81 606 090 788	
JOB No : 21307	DWG No: 21307ap-001a REV: B

TABLE OF REVISIONS			
REV	DATE	BY	CHANGES MADE
A	1/06/2018	AM	Initial Issue
B	5/06/2018	AG	Boundary Line Change

**LEGEND**  
SERVICES  
NBN PIT  
ELECTRICITY DOME  
U/G HIGH VOLTAGE CABLE  
U/G LOW VOLTAGE CABLE  
DESIGNED/CONSTRUCTED:  
CABLE/DUCT/TRENCH  
IN-SERVICE:  
CABLE/DUCT/TRENCH



**ChemCentre**  
**Inorganic Chemistry Section**  
**Report of Examination**



Purchase Order: PAID  
ChemCentre Reference: 16S1465 R0

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

4C Belton Place  
Balcatta WA 6021

**Attention: Melissa Phillipson**

**Report on: 1 sample received on 15/12/2016**

<u>LAB ID</u>	<u>Material</u>	<u>Client ID and Description</u>
16S1465 / 001	water	Bore

LAB ID	001
Client ID	Bore
Sampled	14/12/2016

Analyte	Method	Unit	
Alkalinity, total	iALK1WATI	mg/L	144
Aluminium	iMET1WCICP	mg/L	<0.005
Arsenic	iMET1WCMS	mg/L	<0.001
Barium	iMET1WCICP	mg/L	0.005
Bicarbonate	iALK1WATI	mg/L	176
Boron	iMET1WCICP	mg/L	0.03
Cadmium	iMET1WCMS	mg/L	0.0001
Calcium	iMET1WCICP	mg/L	62.2
Carbonate	iALK1WATI	mg/L	<1
Chloride	iCO1WCDA	mg/L	152
Chromium	iMET1WCICP	mg/L	0.002
Cobalt	iMET1WCICP	mg/L	<0.005
Copper	iMET1WCICP	mg/L	0.036
Electrical Conductivity	IEC1WZSE	mS/m	82.8
Hardness, total	iHTOT2WACA	mg/L	200
Iron	iMET1WCICP	mg/L	0.010
Lead	iMET1WCMS	mg/L	0.0014
Magnesium	iMET1WCICP	mg/L	10.1
Manganese	iMET1WCICP	mg/L	<0.001
Mercury	iMET1WCMS	mg/L	<0.0001
Molybdenum	iMET1WCMS	mg/L	<0.001
Nickel	iMET1WCMS	mg/L	0.013
Nitrate	iNTA1WFIA	mg/L	11
pH	iPH1WASE		7.9
Potassium	iMET1WCICP	mg/L	3.7
Selenium	iMET1WCMS	mg/L	<0.001
Sodium	iMET1WCICP	mg/L	86.4
Sulphate (from S)	iMET1WCICP	mg/L	17.8
TDS (calculated)	iSOL1WDCA	mg/L	460
Vanadium	iMET1WCICP	mg/L	<0.005



LAB ID 001  
Client ID Bore  
Sampled 14/12/2016

Analyte	Method	Unit	
Zinc	iMET1WCICP	mg/L	0.17

Method	Method Description
iALK1WATI	Alkalinity (as CaCO <sub>3</sub> ) and constituents by acid titration.
iCO1WCDA	Colourimetric analysis by DA (Discrete Autoanalyser).
IEC1WZSE	Electrical conductivity in water compensated to 25C.
iHTOT2WACA	Total Hardness as mg/L CaCO <sub>3</sub> by calculation from calcium and magnesium.
iMET1WCICP	Total dissolved metals by ICPAES.
iMET1WCMS	Total dissolved metals by ICPMS.
iNTA1WFIA	Nitrate in water by FIA expressed as Nitrate.
iPH1WASE	pH in water by pH meter.
iSOL1WDCA	Total Dissolved Solids (TDS) calculated (ECond * 5.5)

Attached is a comparison of this water and drinking water, irrigation and stock water guidelines.

#### Domestic use

This water is suitable for general domestic uses. The attached farmnote on "Water Quality for farm, garden and household use" provides additional information on the water usage.

#### Irrigation

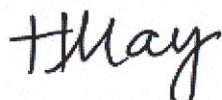
The water is suitable for use on all types of plants under most conditions. In the attached farmnote on "Tolerance of plants to salty water" this water falls into the Water group A.

#### Stock

The water is suitable for cattle and sheep of all ages.

These results apply only to the sample(s) as received. Unless arrangements are made to the contrary, these samples will be disposed of after 30 days of the issue of this report.

This report may only be reproduced in full.



Hanna May  
Environmental Chemistry Team Leader  
Scientific Services Division  
28-Dec-2016



# Bushfire Attack Level Assessment Report

Prepared by a BPAD Accredited Practitioner



Fire Protection Association Australia Life Property Environment



## AS 3959 BAL Assessment Report

This report has been prepared by an Accredited BPAD Practitioner using the Simplified Procedure (Method 1) as detailed in Section 2 of AS 3959 – 2009 (Incorporating Amendment Nos 1, 2 and 3). FPA Australia makes no warranties as to the accuracy of the information provided in the report. All enquiries related to the information and conclusions presented in this report must be made to the BPAD Accredited Practitioner.

### Property Details and Description of Works

Address Details	Unit no	Street no	Lot no	Street name / Plan Reference		
		136	62	Cambewarra Drive		
Local government area	Suburb			State		Postcode
	Jurien Bay			WA		6516
	Shire of Dandaragan					
Main BCA class of the building	Class 1a	Use(s) of the building		Single dwelling		
Description of the building or works	New single dwelling					

### Report Details

Report / Job Number	Report Version	Assessment Date	Report Date
01/10	01	11 November 2016	15 November 2016

### BPAD Accredited Practitioner Details

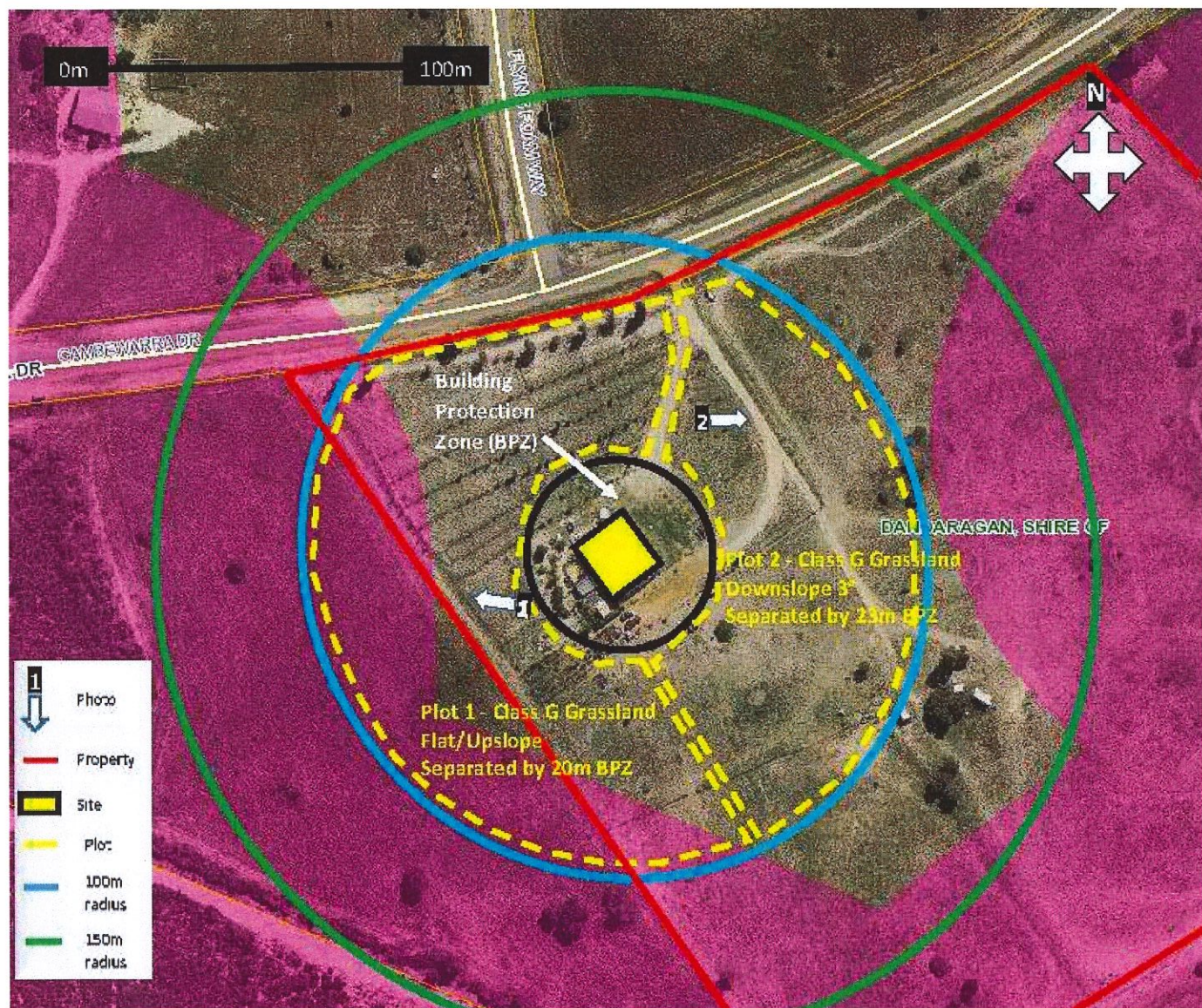
Name Thomas Abbott	<div><p>I hereby declare that I am a BPAD accredited bushfire practitioner.</p><p>Accreditation No. BPAD36788</p><p>Signature <i>Thomas Abbott</i></p><p>Date 15/11/2016</p></div> <div>Authorised Practitioner Stamp</div>
Company Details Greenlight Approvals ABN 23 776 646 753 	

Reliance on the assessment and determination of the Bushfire Attack Level contained in this report should not extend beyond a period of 12 months from the date of issue of the report. If this report was issued more than 12 months ago, it is recommended that the validity of the determination be confirmed with the Accredited Practitioner and where required an updated report issued.



## Site Assessment & Site Plans

The assessment of this site / development was undertaken on 11 November 2016 by a BPAD Accredited Practitioner for the purpose of determining the Bushfire Attack Level in accordance with AS 3959 - 2009 Simplified Procedure (Method 1).





## Vegetation Classification

All vegetation within 100m of the site / proposed development was classified in accordance with Clause 2.2.3 of AS 3959-2009. Each distinguishable vegetation plot with the potential to determine the Bushfire Attack Level is identified below.

<b>Photo ID:</b> 1	<b>Plot:</b> 1	
<b>Vegetation Classification or Exclusion Clause</b>		
Class G Grassland		
<b>Description / Justification for Classification</b>		
Grassland outside of Building Protection Zone. Some large areas have been recently slashed however not maintained in low fuel state. Required to be classified as it is not required to be maintained in a low fuel state under the Council Firebreak notice and therefore could easily become unmanaged in the future.		
<b>Photo ID:</b> 2	<b>Plot:</b> 2	
<b>Vegetation Classification or Exclusion Clause</b>		
Class G Grassland		
<b>Description / Justification for Classification</b>		
Grassland outside of Building Protection Zone. Some large areas have been recently slashed however not maintained in low fuel state. Required to be classified as it is not required to be maintained in a low fuel state under the Council Firebreak notice and therefore could easily become unmanaged in the future.		

**Relevant Fire Danger Index**

The fire danger index for this site has been determined in accordance with Table 2.1 or otherwise determined in accordance with a jurisdictional variation applicable to the site.

**Fire Danger Index**FDI 40 ☐

Table 2.4.5

FDI 50 ☐

Table 2.4.4

FDI 80 ☒

Table 2.4.3

FDI 100 ☐

Table 2.4.2

**Potential Bushfire Impacts**

The potential bushfire impact to the site / proposed development from each of the identified vegetation plots are identified below.

Plot	Vegetation Classification	Effective Slope	Separation (m)	BAL
1	Class G Grassland	Flat / Upslope	20m	BAL – 12.5
2	Class G Grassland	Downslope 3°	23m	BAL – 12.5

Table 1: BAL Analysis

**Determined Bushfire Attack Level (BAL)**

The Determined Bushfire Attack Level (highest BAL) for the site / proposed development has been determined in accordance with clause 2.2.6 of AS 3959-2009 using the above analysis.

**Determined Bushfire Attack Level****BAL – 12.5**



Plans and drawings relied on to determine the bushfire attack level

**Drawing / Plan Description** Site Plan (Sheet 5 of 5); Floor Plan (Sheet 1 of 5); Elevations (Sheet 2 of 5)

<b>Job Number</b> 10816	<b>Revision</b> 2	<b>Date of Revision</b> 31/10/2016
-------------------------	-------------------	------------------------------------

AS3959:2009 s3.5 Shielding Provision does not apply to this development as the determined rating is BAL – 12.5.

The site plan shows Lot 62 (8.7075ha) bounded by Cambewarra Drive to the north and east. To the west is Lot 61 (PLAN 23981) and to the south is Lot 63 (PLAN 23981). The plan includes a proposed residence on an existing concrete slab and footings, a proposed shed (12.0m x 6.0m), a 140,000L water tank, a 2x14,000L leach drain, a 12,000L septic tank, and a 15,000L septic tank. A note indicates that existing septic tanks and leach drains are from a previous building approval. An enlargement of the septic system is shown at the bottom left. The plan also shows easements for power and sewerage, and a gravel drive. A north arrow is located in the top right corner.

**SITE PLAN**  
1:2000

areas	
RESIDENCE	236.26m <sup>2</sup>
VERANDAH'S	182.34m <sup>2</sup>
TOTAL AREA	421.52m <sup>2</sup>
ROOF AREA	421.63m <sup>2</sup>

**NOTE:**  
EXISTING SEPTIC TANKS AND LEACH DRAINS ON PREVIOUS BUILDING APPROVAL

**ENLARGEMENT**  
1:500

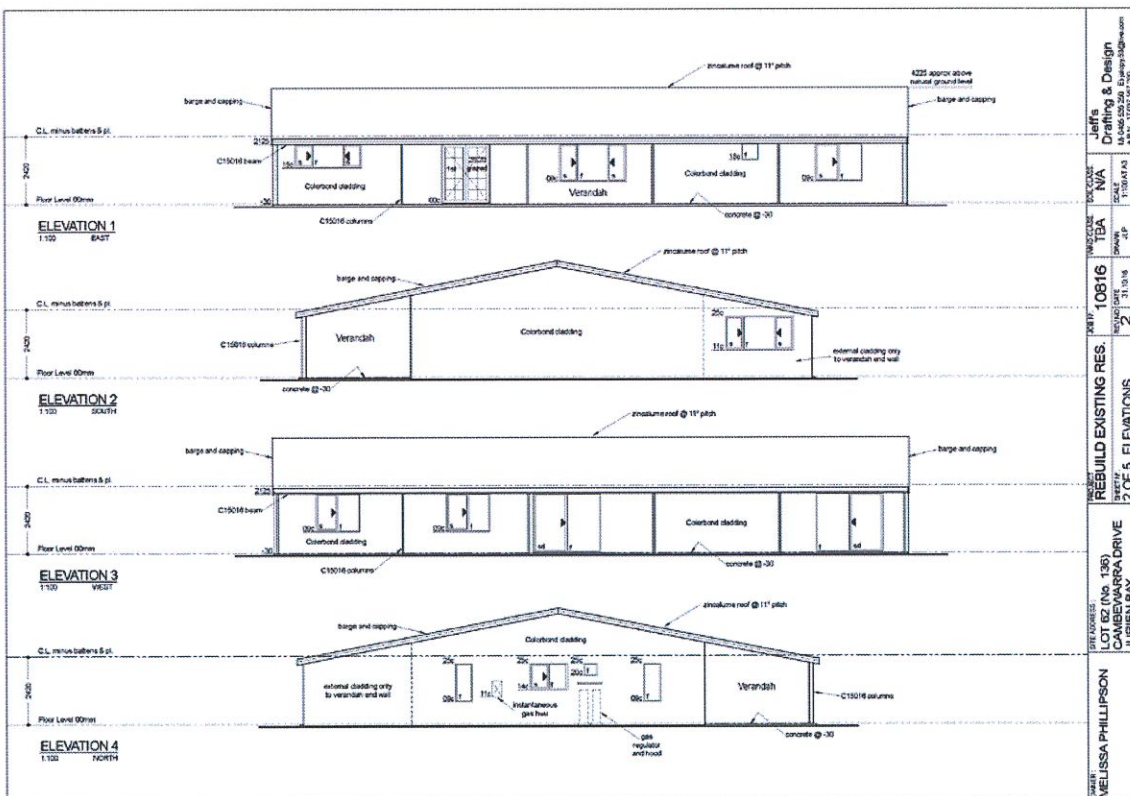
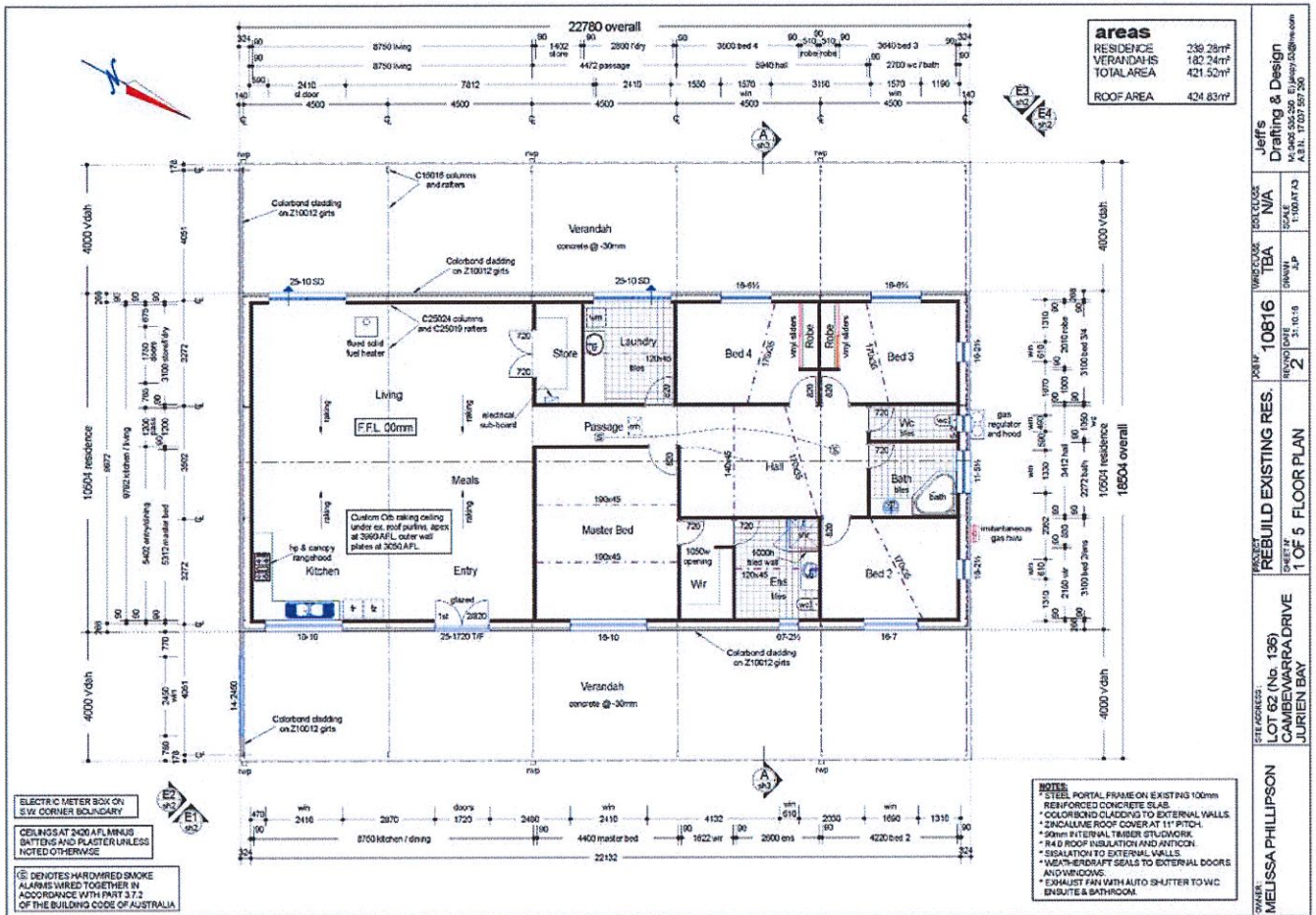
**POWER**  
\* STEEL PORTAL FRAME ON EXISTING 100mm REINFORCED CONCRETE SLAB.  
\* COLORBOND CLADDING TO EXTERNAL WALLS.  
\* ZINC ALUME ROOF COVER AT 11° PITCH.  
\* 30mm INTERNAL TIMBER STUDWORK.  
\* R-4.0 ROOF INSULATION AND VENTILATION.  
\* SEALANT TO EXTERNAL WALLS.  
\* WEATHER-RESISTANT SEALS TO EXTERNAL DOORS AND WINDOWS.  
\* EXHAUST FAN WITH AUTO SHUTTER TO WC EN SUITE & BATHROOM.

**ELECTRIC METER BOX ON S.W. CORNER BOUNDARY**

**JEFF'S Drafting & Design**  
M: 0409 922 226 E: jeff@jddesign.com.au  
N/A  
TBA  
10816  
REBUILD EXISTING RES.  
LOT 62 (No. 136)  
CAMBEWARRA DRIVE  
MELISSA PHILLIPSON

# BAL Assessment Report

Fire Protection Association Australia Life Property Environment





## Appendix 2: Additional Information / Advisory Notes

**Note:** In accordance with advice received from the Shire of Dandaragan – You will be required to install and maintain a 20m Building Protection Zone (BPZ) around the dwelling in accordance with the Shire’s Annual Firebreak Notice. In accordance with advice from the Shire this BPZ has been taken into account to determine the Bushfire Attack Level for the dwelling. Please note that given the downslope of certain vegetation surrounding the site, in accordance with the Firebreak notice the BPZ will need to be extended to 23m in certain areas.

### Bushfire Attack Level explained

The Bushfire Attack Level determined in this report is BAL – 12.5.

Refer to sections 3 and 5 of the construction requirements in AS3959:2009 for buildings assessed in bushfire-prone areas as being BAL – 12.5.

**Note:** The advice provided in this report in relation to the application of the construction provisions detailed in AS 3959-2009 are of an advisory nature only. Queries about the application of the Building Code of Australia bush fire construction requirements should be referred to the building surveyor who will be signing, or has signed, the relevant Certificate of Design Compliance for the building.

For uncertified building permit applications, this may be the building surveyor at the permit authority (local council). For certified building permit applications this may be either the building surveyor at the permit authority (if the permit authority provides that service) or a building surveying contractor (private building surveyor). Your local government will have building surveyors or access to building surveyors; alternatively, you can engage the services of a building surveying contractor (also known as a private building surveyor). The Building Commission’s website provides a list of registered building surveying contractors.

Preceding TPS No.6  
- Amendment No.11  
- Part of Victoria  
Location 10602  
Jurien East Road  
"Alta Mare"

m. Where in the Council's opinion there is a deficiency of tree cover on any particular allotment, the Council may require the planting and subsequent maintenance of no more than 100 trees of a specified type as a condition of development approval. Council may impose conditions on the development approval requiring that the trees are maintained for a specified period to ensure the trees are established.

n. The keeping of livestock for commercial purposes shall not be permitted. The keeping of livestock for domestic purposes will only be permitted to manage areas of cleared pasture and then only to maximum stocking rates permitted under Department of Agriculture guidelines given the soil and vegetation types in the locality. Given Council's preferred aim to revegetate cleared pasture areas, the keeping of livestock for domestic purposes is to be discouraged except on lots identified as equestrian lots.

o. Equestrian lots identified on Plan No. 1 shall have a minimum area of 5.0 hectares. The Council will permit the keeping of a maximum of two horses per equestrian lot, except where the owner can exhibit management measures which would enable more than two horses to be kept on a lot without resultant soil and vegetation degradation.

p. A proven potable water supply by means of a 92000 litre roof water tank, or appropriate licensed bore/well to each new allotment shall be provided to the satisfaction of both the Water Authority of Western Australia (WAWA) and Council.

q. The subdivider shall advise all purchasers of subdivided lots that the lots are located within the Jurien Groundwater Control Area. Purchasers will be required to make application to the Water Authority of Western Australia for a license to sink and



### 3.0 LAND CAPABILITY

The opportunities of the site are;

- The presence of indigenous vegetation in good condition over the majority of the site.
- The undulating nature of the site.
- Proximity to Jurien and the coast.
- There is good access to Jurien Road and the new coastal road.
- The site is set back from Jurien Road.
- Yellow to brown sandy soils and calcareous limestone which have high phosphate retention.
- The availability of groundwater at depth.
- There is no evidence of dieback disease.
- There are resources of limestone and sand on the site.
- The presence of indigenous vegetation in the east that will be preserved.
- The proximity to Drovers Cave National Park.

The constraints of the site are;

- The amount of limestone outcrop in the west will restrict land use.
- The presence of the waste disposal site to the west.
- The presence of at least one cave.

#### 3.1 Soil Capability

The yellow and brown sands are suitable for horticulture due to the presence of goethite coating the sand grains and the underlying calcareous limestone which have the capability of adsorbing significant amounts of phosphate.

The sand in the south east is deeper, and whilst the surface sands may be paler the phosphate retention of the soil profile remains high. Thus the sands are of lower quality grazing land but can be improved through pasture improvement with the introduction of new pasture species and perennial crops such as tagasaste and irrigation.

The limestone ridges particularly through the central and western parts have low capability for agricultural use because of the abundant rock outcrop.

All soils are however suitable for rural living and some stock may be held but will depend on management.

#### 3.2 Water Availability

There is no surface water due to the porosity and permeability of the limestone and sand. Potable water can be provided by 120 000 litre rainwater tanks. With an average rainfall of 627 mm and assuming that 600 mm can be collected, a roof area of 200 m<sup>2</sup> will supply 120 000 litres in an average year.

The site lies within the Jurien Groundwater Area, Cervantes Sub-Area.

Therefore the proposed subdivision will restrict clearing and horticulture.

When compared to the input of nutrients from horticulture the potential input from effluent disposal systems is very small. Some comparisons in nutrient loading are;

Land Use	Kg/P/hectare/year	Kg/N/hectare/year
Carnations	80	1 920
Vegetables	80 - 340	400 - 900
Citrus	30 - 73	68 - 102
1 horse	11	60
Domestic waste water of one household	5 - 6	18

Agriculture WA, 1990, *Horticulture and the environment*, Misc Pub 20/90.  
Lantzke N, 1997, *Phosphorous and nitrate loss from horticulture on the Swan Coastal Plain*, Agriculture WA, Misc Pub 16/97.

Phosphorous is the main nutrient implicated in algal blooms in fresh water bodies. Nitrates are normally taken up by vegetation, denitrified by bacteria under anoxic soil conditions or lost through volatilisation of ammonia. As groundwater under the site may have connections to areas required for water extraction to the west it is important to minimise nutrient loss and the potential loss of chemicals from land use and accidental spills.

Under land systems such as this the main nutrient loss is nitrate, with phosphorous being taken up by the iron oxides in the soil horizons and calcium carbonates and iron oxides in the underlying limestone. This applies even under horticultural landuses. The depth to the water table is a minimum of 20 metres, from Water and Rivers Commission Data and field interpretation, which will provide good protection for the water table. In addition restrictions on land uses will assist groundwater protection. It should be noted that the Shire waste disposal site lies on adjoining land to the south west.

### Effluent Disposal

The soils of the site are coloured sands over limestone which together have moderate to high phosphate retention capability. Even the sandy soils in the south east which in part have paler surface layers have phosphate adsorbing coloured sand at depths of two metres or so.

Microbial purification depends on the thickness of soil. The site has a separation of at least 20 metres from the highest known water table. The low density of waste water disposal systems will ensure the groundwater is not impacted upon. All soils are able to meet Health Department Criteria for Waste Water Systems.

### Nutrient Loadings and Stocking Rates

Agriculture WA stocking rates for these yellow sands is 3 - 5 DSE for dry pasture and where improved with legumes and limited supplemental feed is supplied. The limestone has little stock carrying capacity and is thus not considered. Stock such as horses can only be permitted on nominated lots under Shire of Dandaragan Town Planning Scheme. Sheep may be retained at Agriculture WA recommendations for dryland stocking to manage pasture.



With irrigation pasture could sustain 20 DSE, but this will require water licences which are unlikely to be granted by Water and Rivers Commission bearing in mind the superficial aquifer under the site is used for the Jurien town supply.

Estimations of the actual nutrient input into the ground water can only be made based on denitrification, volatilisation of ammonia, recycling, uptake by vegetation, phosphate absorption by the soils and previous experience.

A typical conventional septic system releases 5.5 kg P year and 18 kg N/year. Allowing for six chickens, a dog and cat and a 250 m<sup>2</sup> area of fertilised horticulture, a further loading of 12.3 kg N/year and 5.2 kg P/year can be added for the dwelling area. (Data from Select Committee on Metropolitan Development and Groundwater Supplies, Legislative Assembly 1994 and Nitrate management in the Jandakot UWPCA, Dames and Moore, undated).

#### Typical nutrient loadings that can be expected from the various soil types

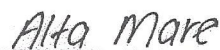
Soil type	Possible lot size and activity	Nitrogen loading per hectare	Phosphorous loading per hectare	Likely nutrient scenario
Yellow or brown sand	4.0 DSE/hectare	42.4 kg/N/ha/year	5.9 kg/P/ha/year	No phosphorous loss No nitrogen loss.
Yellow or brown sand	2.0 hectare, no stock, conventional septic system	15.2 kg/N/ha/year	5.4 kg/P/ha/year	No nutrient loss.
Yellow or brown sand	4.0 hectare, no stock, conventional septic system	7.6 kg/N/ha/year	2.75 kg/P/ha/year	No nutrient loss.
Yellow or brown sand	5.0 hectare, 2 horses conventional septic system	30.0 kg/N/ha/year	6.6 kg/P/ha/year	No nutrient loss.
Yellow or brown sand	10.0 hectare, 2 horses conventional septic system	15.0 kg/N/ha/year	3.3 kg/P/ha/year	No nutrient loss.

	ENVIRONMENTAL ISSUE	MANAGEMENT
5.4.1	Effluent disposal	<ul style="list-style-type: none"> <li>Conventional septic systems are suitable for all soils.</li> <li>Government sewerage guidelines for conventional septic systems are met.</li> </ul>
5.4.2	Land use and stocking	<ul style="list-style-type: none"> <li>Agriculture WA stocking rates are 3 - 5 DSE for dry pasture.. Sheep to Agriculture WA dryland stocking rates may be used to reduce the fire hazard.</li> <li>There is unlikely to be water allocations for more intensive stocking or agriculture..</li> <li>There should be no stocking of remnant vegetation on the limestone..</li> <li>Stock other than for grass control (eg horses) are only permitted on nominated lots in excess of 5 hectares.</li> </ul>



ALTA MARE  
STAGES 4 & 5

lots  
65 to 68  
EQUINESTR



$\checkmark$  = my block & the adjacent block  
are the only ones big enough  
to cut into 2 & retain equestrian  
status.  $\therefore$  not setting precedent



# LOCAL DEVELOPMENT PLAN

LOT 62 (NO.20) ROBERTS STREET &  
PART OF HEATON STREET ROAD RESERVE, JURIE BAY

SHIRE OF DANDARAGAN

JUNE 2018

Issue 3



**BURGESS** | DESIGN  
GROUP  
TOWN PLANNING + URBAN DESIGN

**Lot 62 (No.20) Roberts Street &  
Part of Heaton Street Road Reserve, Jurien Bay**

Shire of Dandaragan

**LOCAL DEVELOPMENT PLAN**

Issue 3: June 2018

Prepared for: **Aliceville Pty Ltd**

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Job code: ALO JUR

File reference: 180615RLGA\_Local Development Plan (v3)

Quality Assurance

Issue/Version:	Date:	Author:	Reviewer:
1	25/02/2016	Zarina MacDonald	Mark Szabo
2	22/09/2017	Zarina MacDonald	Mark Szabo
3	15/06/2018	Zarina MacDonald	Mark Szabo

## EXECUTIVE SUMMARY

This Local Development Plan (LDP) applies to Lot 62 Roberts Street and the adjoining western portion (910m<sup>2</sup>) of the Heaton Street road reserve, Jurien Bay (“subject site”).

The LDP is intended to guide and coordinate development and achieve better built form outcomes.

The subject site is zoned ‘Special Use – Tourist Resort’ under the Shire of Dandaragan Local Planning Scheme No.7 (LPS7) and is subject to the conditions in Schedule 4 – Special Use Zone 4 (SU4). Condition 1 specifies that *‘prior to the submission of an application for planning approval, a Local Development Plan (LDP) for the land is to be prepared and approved by the local government.’*

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# 1. INTRODUCTION

## 1.1 INTRODUCTION AND PURPOSE

This Local Development Plan (LDP) has been prepared by Burgess Design Group on behalf of Aliceville Pty Ltd, the registered landowner of Lot 62 (No.20) Roberts Street, Jurien Bay (subject site).

This Local Development Plan applies to Lot 62 (No.20) Roberts Street and a portion of the Heaton Street Road Reserve, Jurien Bay (refer **Plan 1 – Site Land Use Plan**).

The purpose of this LDP is to guide development and built form outcomes within the site.

The LDP is consistent with Schedule 4 – SU4 of the Shire of Dandaragan Local Planning Scheme No.7 (LPS7) and addresses matters including built form controls, land use, access, and landscaping provisions.

## 1.2 LAND DESCRIPTION

The subject site incorporates Lot 62 Roberts Street, and adjoining western (910m<sup>2</sup>) portion of the Heaton Street Road Reserve, Jurien.

The total area of the subject site is approximately 2.199ha.

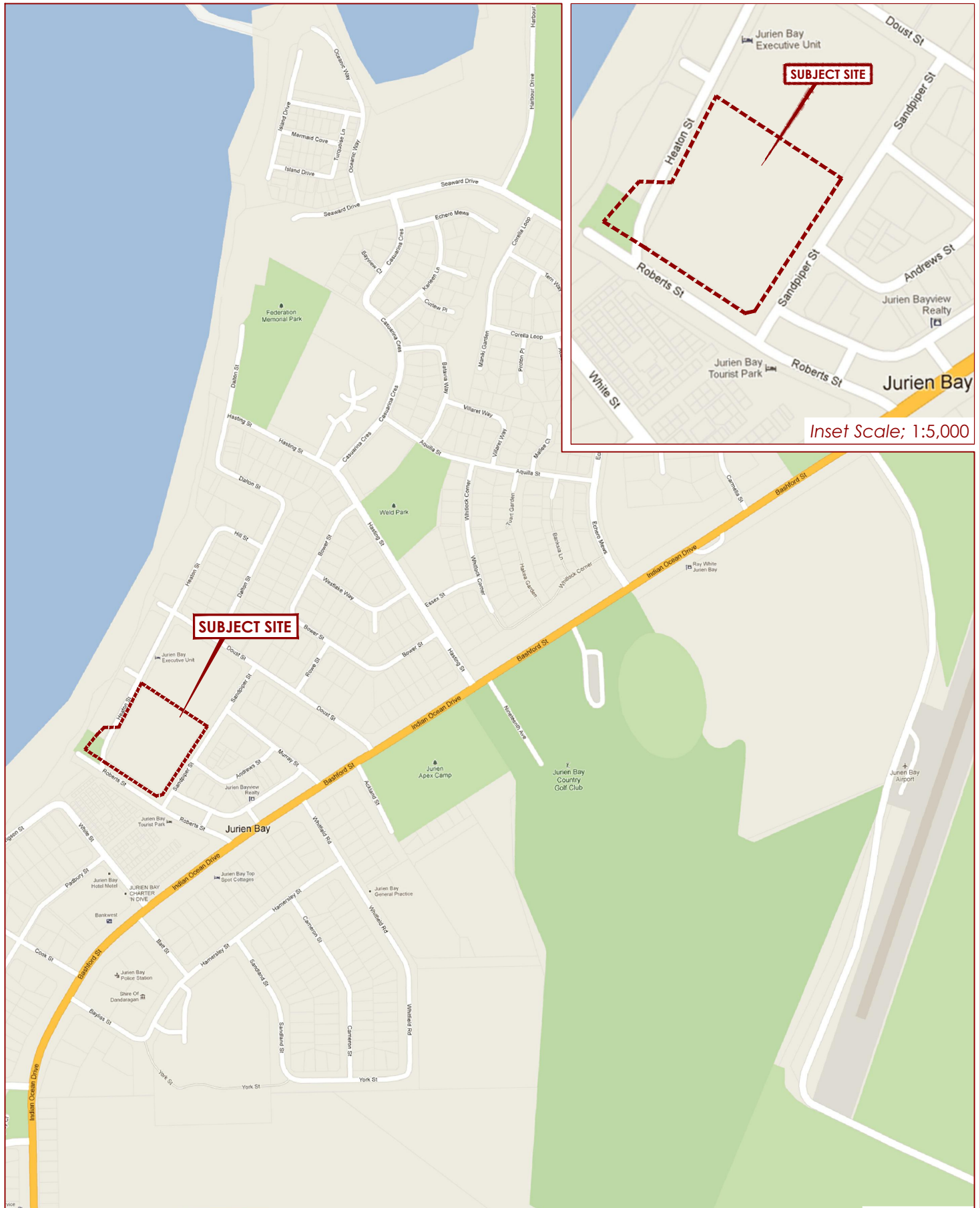
### 1.2.1 Location and Context

The subject site is located within the central Jurien Bay Townsite, approximately 200km north west of Perth (refer **Figure 1 – Location Plan**). The site is bounded by Roberts Street to the south west, Heaton Street to the north west, Sandpiper Street to the south east and Lot 63 Heaton Street to the north east (refer **Figure 2 – Aerial Photograph**).

The site is located less than 2km from Jurien Bay airport, and within 250m of the Indian Ocean Drive, being the main road to Perth. The site has a good aspect and outlook, situated within the Jurien Bay Commercial Centre and 100m of the Jurien Bay Foreshore.

### 1.2.2 Area and Land Use

The subject site is predominantly vacant with limited existing vegetation; and two buildings currently on site. It should be noted that these outbuildings are relatively degraded and are not currently in use.



**FIGURE 1**



NORTH

0 50 100 150 200 250m  
SCALE 1:10,000 (A4)

# **LOCATION PLAN** **LOT 62 ROBERTS STREET &** **PART OF HEATON STREET ROAD RESERVE** **JURIEN BAY**





FIGURE 2



NORTH

0 20 40 60 80 100m  
SCALE 1:2000 (A4)

**AERIAL PHOTO  
LOT 62 ROBERTS STREET &  
PART OF HEATON STREET ROAD RESERVE  
JURIEN BAY**

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Date: 15.06.18 Planner: MS

**SHIRE OF DANDARAGAN**

### 1.3 LEGAL DESCRIPTION AND OWNERSHIP

The subject site is legally described as:

- Lot 62 on Deposited Plan 207149, Volume 1499, Folio 123.

The land is owned by Aliceville Pty Ltd (refer **Appendix 1 – Certificate of Title**).

### 1.4 OPERATION

Pursuant to clause 56 (1) of the Planning and Development (Local Planning Scheme) Regulations 2015 *‘a decision-maker for an application for development approval in an area that is covered by a local development plan that has been approved by the local government must have due regard to, but is not bound by, the local development plan when deciding the application.’*

Pursuant to clause 57 (1) *‘the approval of a local development plan has effect for a period of 10 years commencing on the day on which the local government approves the plan, or another period determined by the local government, unless the local government earlier revokes its approval.’*



## 2. PLANNING FRAMEWORK

### 2.1 ZONING AND RESERVATIONS

#### 2.1.1 Shire of Dandaragan Local Planning Scheme No.7

The majority of the site is zoned 'Special Use No.4 – Tourist Resort' under the Shire of Dandaragan Local Planning Scheme No.7 (LPS7). A portion of the site is reserved 'Local Road'. Refer **Figure 3 – LPS7 Map**.

Pursuant to Clause 4.7.2 *'a person must not use any land, or any structure or buildings on land, in a special use zone except for the purpose set out against that land in Schedule 4 and subject to compliance with any conditions set out in Schedule 4 with respect to that land.'*

This LDP has been prepared in accordance with both the generic Scheme provisions relating to the preparation of Development Plans and also those contained within Schedule 4 – Special Use No.4 (SU4).

### 2.2 PLANNING STRATEGIES

#### 2.2.1 Shire of Dandaragan Jurien Bay Town Centre Strategy (2012)

This strategy aims to provide a clear direction for future development and management within the Jurien Bay Town Centre.

The relevant aims of the strategy are:

*"A vision (and possible theme) for the town centre of Jurien Bay looking forward 10-15 years.*

*Where future commercial, tourist, medium density residential and mixed use development should occur based on physical, social and environmental considerations.*

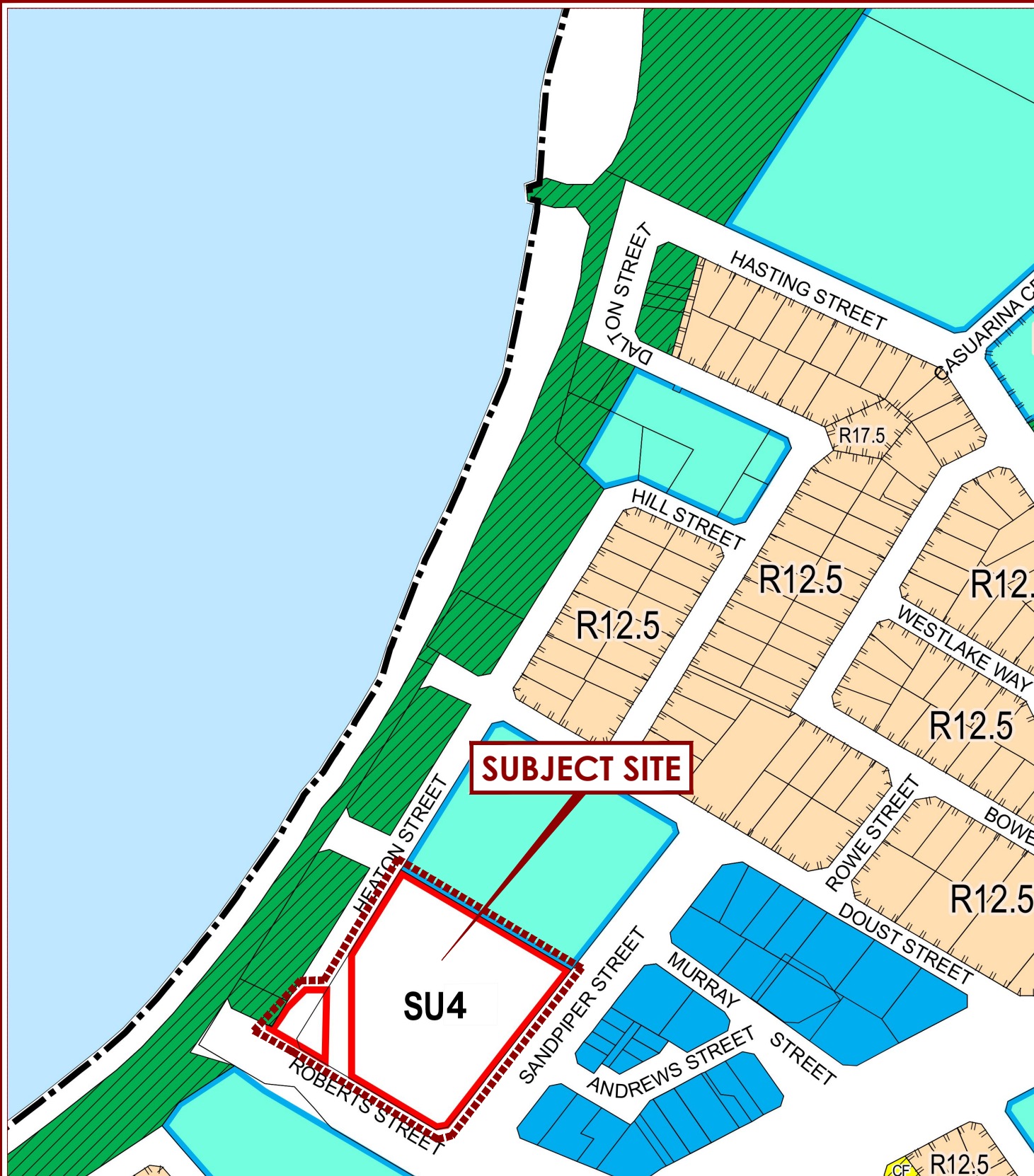
*Appropriate scale and density of development (residential, commercial, tourist) to achieve a sustainable economic benefit, whilst enhancing the quality of well being lifestyle and services for the broader community.*

*Consolidation of land use and establish a framework to deliver a more integrated, sustainable, and functional town centre environment."*

Given that the LDP area is zoned SU4 with the development focusing on a tourism land use, the vision of the Town Centre Strategy Plan will be achieved, by providing:

- A long term economic benefit to the town centre;
- Providing jobs for the local community;
- Establishing a central tourist core for Jurien Bay for the future;
- Providing a bookend development to Roberts Street; and
- Providing an active pedestrian link along Roberts Street to the Jurien Bay Foreshore.





#### LEGEND

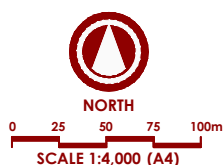
Subject Land

#### LOCAL SCHEME RESERVES

Commercial  
 Tourist  
 Parks & Recreation

#### OTHER

Scheme Boundary  
 Local Government Boundary  
 Special Use  
 Townsite - Land Act



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## LOCAL PLANNING SCHEME NO.7 LOT 62 ROBERTS STREET & PART OF HEATON STREET ROAD RESERVE JURIEN BAY

Planner: MS  
Client: Carl Aloj  
Date: 15.06.18  
Plan No: ALO JUR 7-02-03

**SHIRE OF DANDARAGAN**

## 2.2.2 Jurien Bay Regional Centre Growth Plan

The Jurien Bay Regional Centre Growth Plan has been prepared as part of the Royalties for Regions Regional Centres Development Plan (Super Towns) initiative. Under the Jurien Bay Regional Centre Growth Plan Jurien Bay is identified as having the potential to develop into a Regional City with a population of over 20,000.

The Spatial Growth Plan is a critical component of the overall Growth Plan as it facilitates the spatial requirements for the range and scale of land uses, movement network and both hard and soft infrastructure to ensure that Jurien Bay develops as a Regional City, as it moves towards a population of 20,000. The Spatial Growth Plan identifies the LDP area as Tourism Site that is vacant and provides an opportunity for a major tourism development adjacent to the foreshore.

The Jurien Bay Regional Centre Growth Plan states that the development of an Interpretative Centre and associated café at Dobbyn Park and the development on Lot 62 'would "bookend" and frame the view looking to the coast along Roberts Street, and abut the pedestrian link from Roberts Street to the foreshore and jetty.'

## 2.3 PLANNING POLICIES

### 2.3.1 WAPC State Planning Policy No.2.6 State Coastal Planning Policy

State Planning Policy No.2.6 (SPP 2.6) provides guidance for land use and development decision-making within the coastal zone including managing development and land use change; establishment of coastal foreshore reserves; and to protect, conserve and enhance coastal values.

SPP 2.6 has specific measures that relate to tourism development as follows;

#### 5.1 General Measures

*(i) Local and regional planning strategies, structure plans, schemes, subdivisions, strata subdivision, development applications, coastal planning strategies and foreshore management plans, as well as other planning decisions and instruments relating to the coast should comply with the policy measures.*

#### 5.2 Development and Settlement

*(iii) Ensure that when identifying areas suitable for development, consideration is given to strategic sites for coastal access and commercial development that is demonstrably dependent on a foreshore location including ports, boat harbours and regional boat ramps.*

*(iv) Ensure that use of the coast, including the marine environment, for recreation, conservation, tourism, commerce, industry, housing, ocean access and other appropriate activities, is sustainable and located in suitable areas.*

*(v) Ensure that land use and development, including roads, adjacent to the coast is sited and designed to complement and enhance the coastal environment in terms of its visual, amenity, social and ecological values.*

### 5.4 Building Height Limits

*Maximum height limits should be specified as part of controls outlined in a local planning scheme and/or structure plan, in order to achieve outcomes which respond to the desired character, built form and amenity of the locality.*

### 5.10 Coastal Strategies and Management Plans

*Any structure plan, zoning, subdivision, strata subdivision or development proposal for public purposes, residential, industrial, commercial, tourist, special rural and similar uses on the coast is only approved based on or in conjunction with a current detailed coastal planning strategy or foreshore management plan (whichever is appropriate for the stage and scale of development).*

## **2.3.2 WAPC Planning for Tourism - Planning Bulletin 83-2013**

WAPC Planning for Tourism - Planning Bulletin 83-2013 guides decision making by the WAPC and local government for subdivision, development and scheme amendment proposals for tourism purposes.

The objectives of the policy are as follows:

- Highlight the importance of strategic planning for tourism.
- Recognise local and regional variations in tourism demand and development pressures; and their impacts on the viability of tourism development, in assessing and determining tourism proposals.
- Provide guidance to local government in planning for tourism development to be undertaken as part of the local planning strategy process.
- Provide guidance on the development of non-tourism uses on tourism sites.
- Provide for flexibility in the design and assessment of tourism and mixed use development.

The policy seeks to identify tourism precincts, localities of tourism value or amenity that incorporate the 5 A's into tourism development (these being attractions, accommodation, access, amenities, and activities).

### 3. LOCAL DEVELOPMENT PLAN PROVISIONS

#### 3.1 LAND USES

In accordance with LPS7 Schedule 4 - SU4, the following land uses are permitted and discretionary for the site:

Permitted 'P'	Discretionary 'D'
<ul style="list-style-type: none"> <li>▪ Hotel</li> <li>▪ Tourist resort</li> <li>▪ Motel</li> <li>▪ Serviced apartment</li> <li>▪ Restaurant</li> <li>▪ Cinema/theatre</li> <li>▪ Tavern</li> <li>▪ Grouped Dwelling</li> <li>▪ Multiple Dwelling</li> <li>▪ Office</li> <li>▪ Shop</li> </ul>	<ul style="list-style-type: none"> <li>▪ Caretaker's Dwelling</li> <li>▪ Civic Use</li> <li>▪ Club Premises</li> <li>▪ Convenience Store</li> <li>▪ Reception Centre</li> <li>▪ Fast Food Outlet</li> <li>▪ Art Gallery</li> </ul>

- The only permitted land use on the portion of the site divided by the realignment of Heaton Street (the western portion) is a 'Hotel' and associated ancillary uses;
- The inclusion of residential units for permanent occupancy shall only be permitted on the basis that the site retains a dominant tourism function and character as determined by the Council;
- Areas of the site that provide the highest tourist values will be retained predominantly for tourist purposes and not permanent residential units;
- Any proposed 'Hotel' or 'Motel' on the land shall provide 100% short stay accommodation. For all accommodation units proposed on the land, the maximum proportion of permanent residential units relative to the total number of short stay units on the site shall be equal to or less than 45%; and
- Demonstration that the non-tourist developments (such as commercial, office, retail, reception centre, restaurant) will not detract from the main Jurien Bay commercial centre and will form an integrated part of the tourist resort.

##### 3.1.1 Residential Development

The following provisions of LPS7 Schedule 4 - SU4 apply to residential development in the LDP area:

- Condition 2(ix): Demonstration that the design and scale of any residential component within the site is subsidiary to the tourism component such that the tourism component remains dominant;
- Condition 2(x): Demonstration that the residential accommodation is to be concentrated in an area of the site and located to provide a transition between tourist development and surrounding residential uses;
- Condition 2(xiv): Evidence that the proportion of permanent residential accommodation units relative to the total number of accommodation units on the site will be equal to or less than 45%; and

- Condition 9: Any residential unit for permanent occupation must:
  - (i) form part of a mixed use development proposal;
  - (ii) form an integrated component of the tourist complex in terms of the type, style and character and the landscaping of the building;
  - (iii) shall be in a concentrated area located to provide a transition between tourism development and surrounding residential uses;
  - (iv) be provided with recreation and amenity facilities; and
  - (v) shall be designed to enable management and use on an integrated basis with the overall tourist resort.

### 3.1.2 Concept Development Plan

A Concept Development Plan has been prepared to provide an indication of the potential form development may take within the LDP area. The building footprints shown on the Concept Development Plan show the relationship between future buildings, car parking, and public open space. It should be noted, the Concept Development Plan is provided for information purposes only, and does not form part of this LDP.

The Concept Development Plan comprises a hotel, motel, retail and other commercial activities, short stay and permanent residential development, and associated car parking areas (refer **Plan 2 – Concept Development Plan**).

## 3.2 BUILT FORM CONTROLS

### 3.2.1 Building Height

Development should consider the visual impacts of proposed structures on views from the Jurien Bay Marine Park and appropriate height limitations must be given.

The LDP proposes a range of possible building heights from 2 to 5 storeys adjacent to Roberts and Sandpiper Streets, and Seafront Estate; and 5 to 11 storeys in the centre of the site and towards Heaton Street (refer **Plan 3 – Building Height Plan**).

No structure shall exceed 40 metres in height measured from natural ground level, unless it forms part of any telecommunications infrastructure.

### 3.2.2 Building Orientation & Streetscape

- In accordance with the R-codes, blank walls shall be minimised at street level, and where practical, active frontages incorporated into the development to ensure a suitable level of casual surveillance of the public domain; and,
- All buildings must be designed with windows or balconies facing the street.

### 3.2.3 Landscaping

A Landscape Plan is to be submitted for the approval of the Shire of Dandaragan with any development application.

The exact location, size and configuration of the open space will be determined as part of the Development Application stage.



Development shall comply with the following landscaping provisions:

- Interface between the Hotel and Jurien Bay Foreshore – the rear boundary of the Hotel shall be landscaped to provide a softer edge and to create an appropriate interface between the development and the Jurien Bay foreshore area;
- Internal car parks – at-grade car parking areas shall be landscaped to include shade trees, and break down the expanse of parking;
- Pedestrian Paths – separate pedestrian paths shall be provided connecting all entries to buildings with the public footpath and car parking areas; and
- Lighting – lighting shall be provided along pathways, and communal open space and car parking areas.

### 3.2.4 Access

The LDP depicts the indicative location of roads and car parking areas. These elements will be subject to further refinement and modification at the development application stage.

Development of the site shall be in accordance with the following LDP provisions:

- Provision of public access to areas of high amenity within or adjoining the site;
- Unrestricted access to the Jurien Bay Foreshore area;
- Prior to the commencement of the hotel development the closure, realignment and land transfers of a portion of the Heaton Street road reserve must be finalised to the satisfaction of the local government;
- Prior to the commencement of development, the ceding of a minimum 11 metre wide street along the north east boundary of the land, providing a connection between Heaton and Sandpiper Streets, is to be completed to the satisfaction of the local government;
- The excised portion of Heaton Street road reserve should be amalgamated into Lot 62 for the hotel development;
- Traffic management for the site, including the provision of car parking, vehicle access and circulation, loading and unloading areas, storage yards and rubbish collection closures, pedestrian access and walkways within and from the site;
- A 5.0 metre wide pedestrian link shall be constructed along the north eastern boundary between Sandpiper Street and Heaton Street.

### 3.2.5 Car Parking

Car parking ratios shall be in accordance with the Development Table (Table 2) of LPS7 and Local Planning Policy No.8.8 – Car Parking (LPP 8.8).

The relevant LPS7 and LPP 8.8 standards are as follows:

Land Use	Minimum Number of Car Parking Bays
Hotel/Tavern	1 for every bedroom plus 3 per 25m <sup>2</sup> bar and lounge area plus 1 space per 2 employees
Tourist Accommodation (Resort Units, Chalets, Cabins)	1 bay for each accommodation unit
Motel	1 bay for each unit plus 3 bays for 25 m <sup>2</sup> of service area

Reception Centre	1 bay for every 10 m <sup>2</sup> GFA or 1 bay for every 4 seats provided, whichever is the greater
Shop (Retail)	1 bay for 20 m <sup>2</sup> NLA
Restaurant / Café	1 bay for every 10 m <sup>2</sup> GFA or 1 bay for every 4 seats, whichever is the greater
Office	1 bay for 20 m <sup>2</sup> NLA
Multiple Dwelling	In accordance with the Residential Design Codes
Cinema/Theatre	1 bay per every 4 seats plus 1 bay for each employee

- The majority of car parking shall be provided to the rear of buildings or internally within buildings (e.g. basement level);
- On street parking shall be provided along Heaton Street, Roberts Street and Sandpiper Street; and
- Large areas of car parking shall provide safe and clearly sign-marked pedestrian routes to the building entrances.

### 3.3 NOTIFICATION ON TITLE

In respect of applications for the subdivision of the land the Shire of Dandaragan shall recommend to the Western Australian Planning Commission the preparation and/or implementation of the following:

- a) A notification to the following effect is to be placed on the certificate(s) of title of any proposed lot(s) identified in the Coastal Hazard Risk Management and Adaptation Plan that may be affected by coastal hazards:

Vulnerable Coastal Area — this lot is located in an area likely to be subject to coastal erosion/inundation over the next 100 years.

- b) In accordance with Section 5C of the Strata Titles Act (1985) (as amended) a condition of any future built strata subdivision of tourist accommodation shall include the preparation and submission of a management statement and associated agreements for the local governments approval, that includes:
  - The establishment of a Schedule 1 by-law that requires, as a minimum, a unit management agreement, lease or alternative arrangement between each owner of a strata unit and the common facility manager/operator to provide for common management of all such units for a minimum period of 25 years as a tourist facility;
  - The ability for a Strata Company to terminate a contract with the facility manager/operator at the end of a 5 year contract or lesser period based on performance criteria as determined by the Strata Company;
  - The management agreement, lease or alternative shall cover but not be limited to letting agent (manager) arrangements, resort reception, access, security, maintenance, caretaking, refurbishment, marketing and other services reasonably required for the development to operate as a tourism facility; and

- Any other additions the local government considers appropriate to ensure the ongoing sustainability of the proposal for tourism purposes.

### 3.4 COAST AND FORESHORES

Pursuant to Schedule 4 – Special Use Zone 4, Condition 6:

*‘Prior to approval of development on the site, a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) is to be prepared in accordance with State Planning Policy 2.6: State Coastal Planning and approved by the local government. The CHRMAP should include but not be limited to consideration of inundation, erosion, finished floor levels, setbacks and drainage. Recommended management and adaptation actions are to be implemented at timings indicated within the approved implementation plan.’*

### 3.5 MANAGEMENT PLAN

A Management Plan is to be prepared and implemented to ensure:

- the integration of facilities associated with tourist accommodation such as recreation (e.g. pools, gymnasium, function space), entertainment facilities (e.g. food and beverage facilities) and management facilities into the tourist resort; and,
- the integration of the management and use of recreation and amenity facilities associated with permanent residential accommodation into the tourist resort.

### 3.6 INDICATIVE STAGING

The Staging Plan shows indicative stages for future development (refer **Plan 4 – Staging Plan**). It is expected that stage one will involve the development of the ‘Motel’ site (Building D) and associated car parking.

The Staging Plan is indicative only. The development of the site will be determined based on general development and market conditions.

### 3.7 CONTAMINATION

Pursuant to Schedule 4 – Special Use Zone 4, Condition 5:

*‘Prior to the commencement of development the site is to be remediated to the extent required for its intended use.’*

*Investigations and remediation are to be carried out in compliance with the Contaminated Sites Act 2003 and current Department of Water and Environmental Regulation's Contaminated Sites Guidelines.*

*In accordance with regulation 31(1)(c) of the Contaminated Sites Regulations 2006, a Mandatory Auditor's Report, prepared by an accredited contaminated sites auditor, will need to be submitted to the Department of Water and Environmental Regulation as evidence of compliance with Condition 5.’*

## **4. INFRASTRUCTURE COORDINATION, SERVICING AND STAGING**

Extension to services (wastewater, power, water etc.) will be required to service the proposed LDP area. Servicing requirements will be addressed as part of future development applications.

### **4.1.1 Water Management**

Water Corporation data has confirmed that reticulated water supply runs along Heaton Street, which services the subject site. The required level of water supply shall be assessed and determined during the Development Application approval process.

### **4.1.2 Effluent Disposal**

Water Corporation data has confirmed that reticulated sewer runs along Sandpiper Street, which services the subject site. The required level of sewer supply shall be assessed and determined during the Development Application approval process.

### **4.1.3 Power**

The appropriate level of power supply required to service the proposed development shall be assessed and determined during the Development Application approval process.

### **4.1.4 Telecommunications**

Telecommunication connections for all lots will be accommodated through the existing network. This will be assessed and determined during the Development Application approval process.

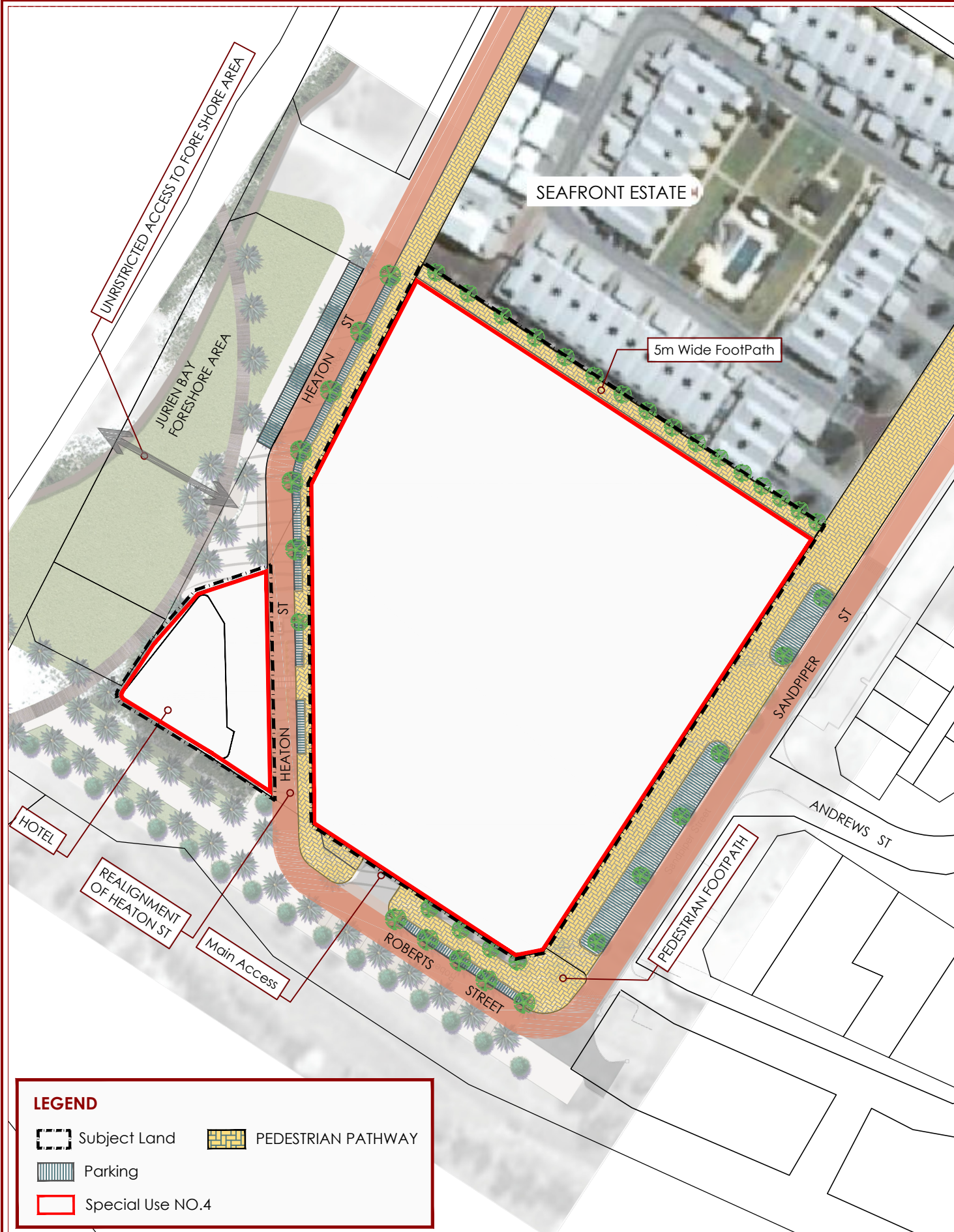
## 5. CONCLUSION

This LDP report and accompanying plans, over Lot 62 (No.20) Roberts Street and a portion of the Heaton Street Road Reserve, Jurien Bay complies with the planning framework adopted by the Shire of Dandaragan and the Western Australian Planning Commission.

The LDP provides guidance and direction on the desired built form outcomes for the subject site. Council in determining a development application/s should consider the key design elements/matters in the LDP to ensure that development provides an appropriate mix of commercial, residential (permanent) and short stay accommodation that is responsive to the site's context.



**PLAN 1:**  
Site Land Use Plan



NORTH

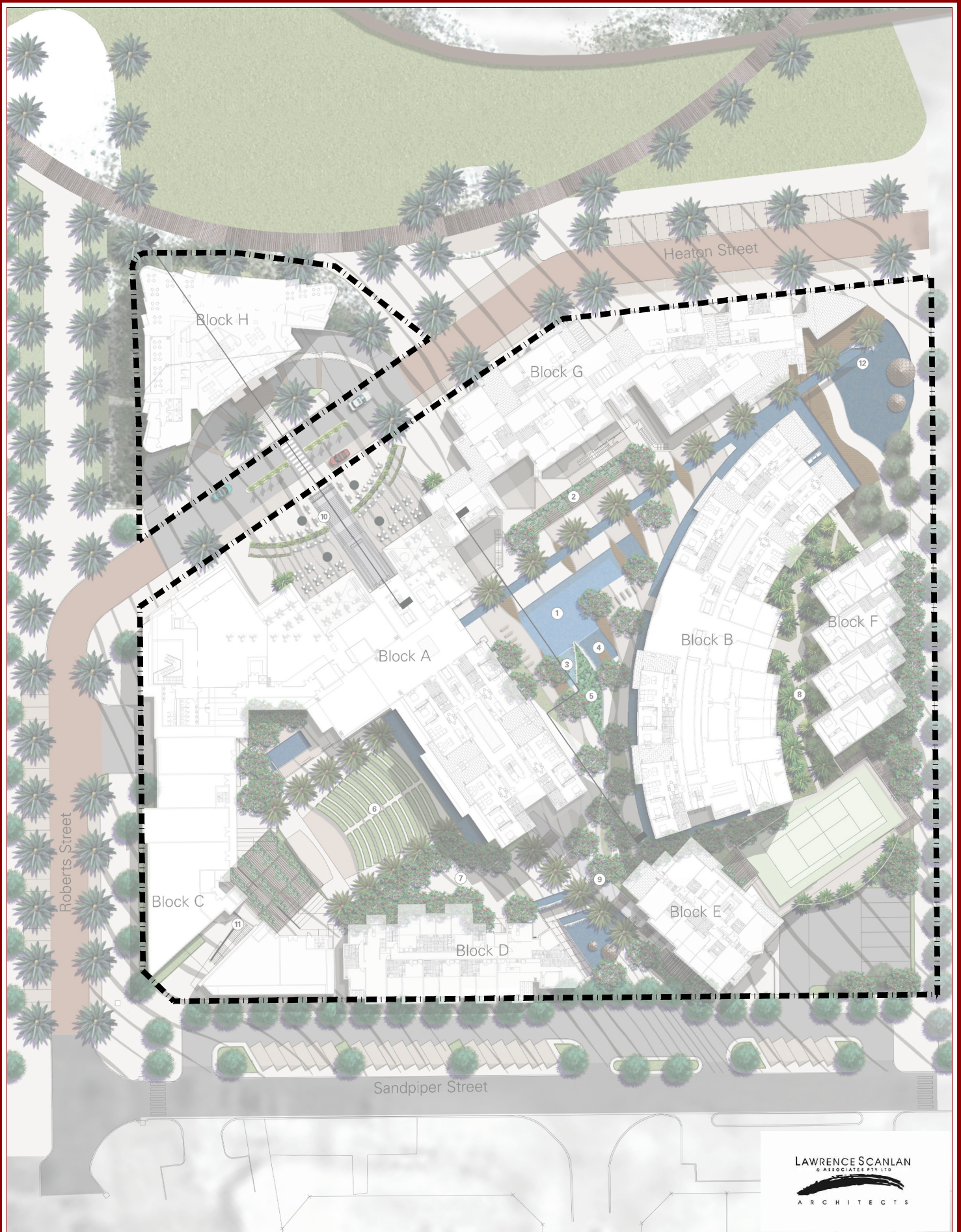
0 10 20 30 40 50m

SCALE 1:1,500 (A4)

**PLAN1- SITE LAND USE PLAN  
LOT 62 ROBERTS STREET &  
PART OF HEATON STREET ROAD RESERVE  
JURIËN BAY**

**PLAN 2:**  
Concept Development Plan





LAWRENCE SCANLAN  
& ASSOCIATES PTY LTD  
ARCHITECTS



#### LEGEND

 Subject Land



NORTH

0 10 20 30 40 50m

SCALE 1:1000 (A4)

## PLAN2- CONCEPT DEVELOPMENT PLAN LOT 62 ROBERTS STREET & PART OF HEATON STREET ROAD RESERVE JURIEN BAY

**burgess design group**  
TOWN PLANNING + URBAN DESIGN

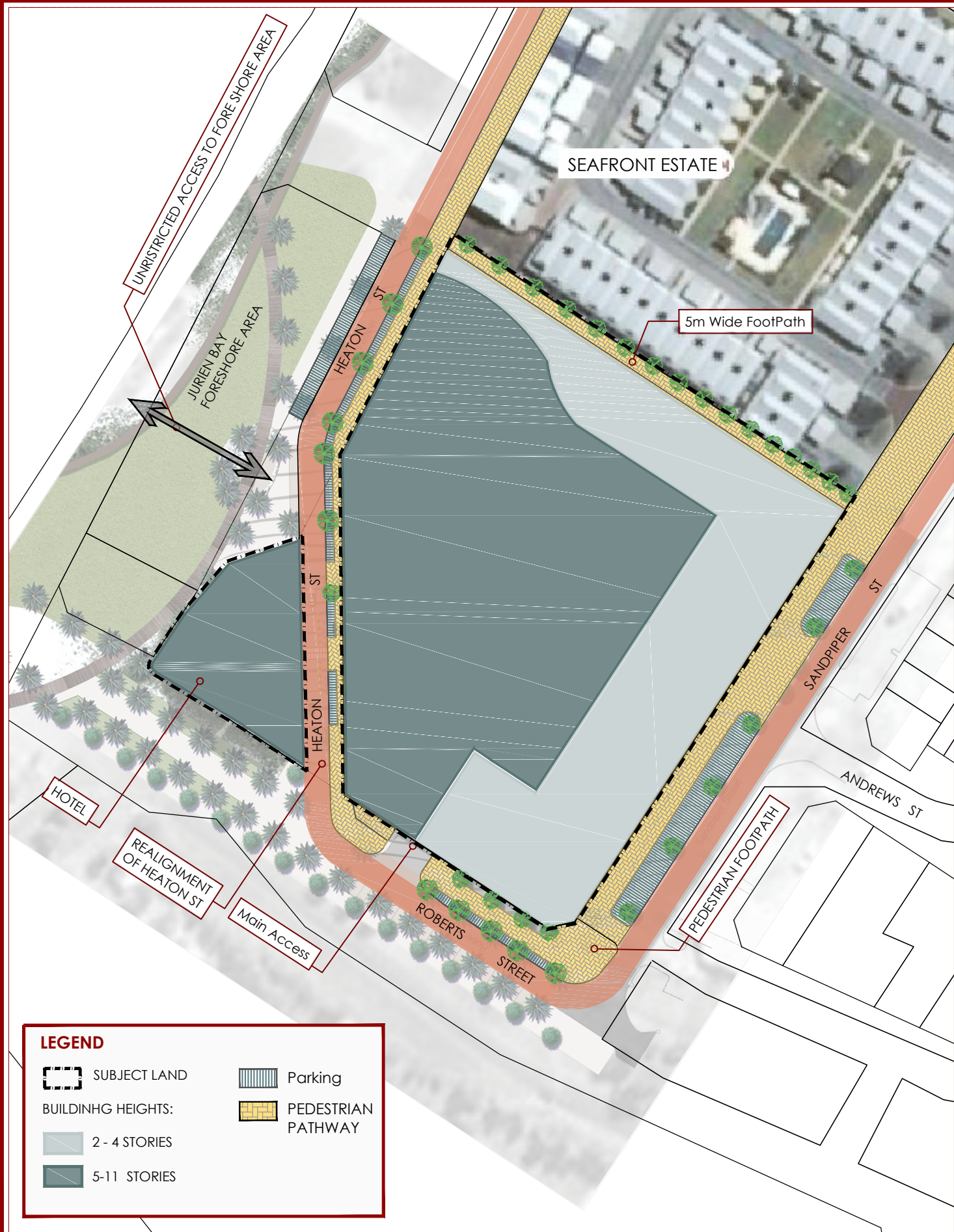
PO Box 8779, Perth Business Centre 6849  
www.burgessdesigngroup.com.au

P (08) 9328 6411 Plan No: ALO JUR 7-04-04 Client: CARL ALOI  
F (08) 9328 4062 Date: 15.06.18 Planner: MS/ ZM

**SHIRE OF DANDARAGAN**

**PLAN 3:**  
**Building Heights Plan**





NORTH

0 10 20 30 40 50m





SCALE 1:1,500 (A4)

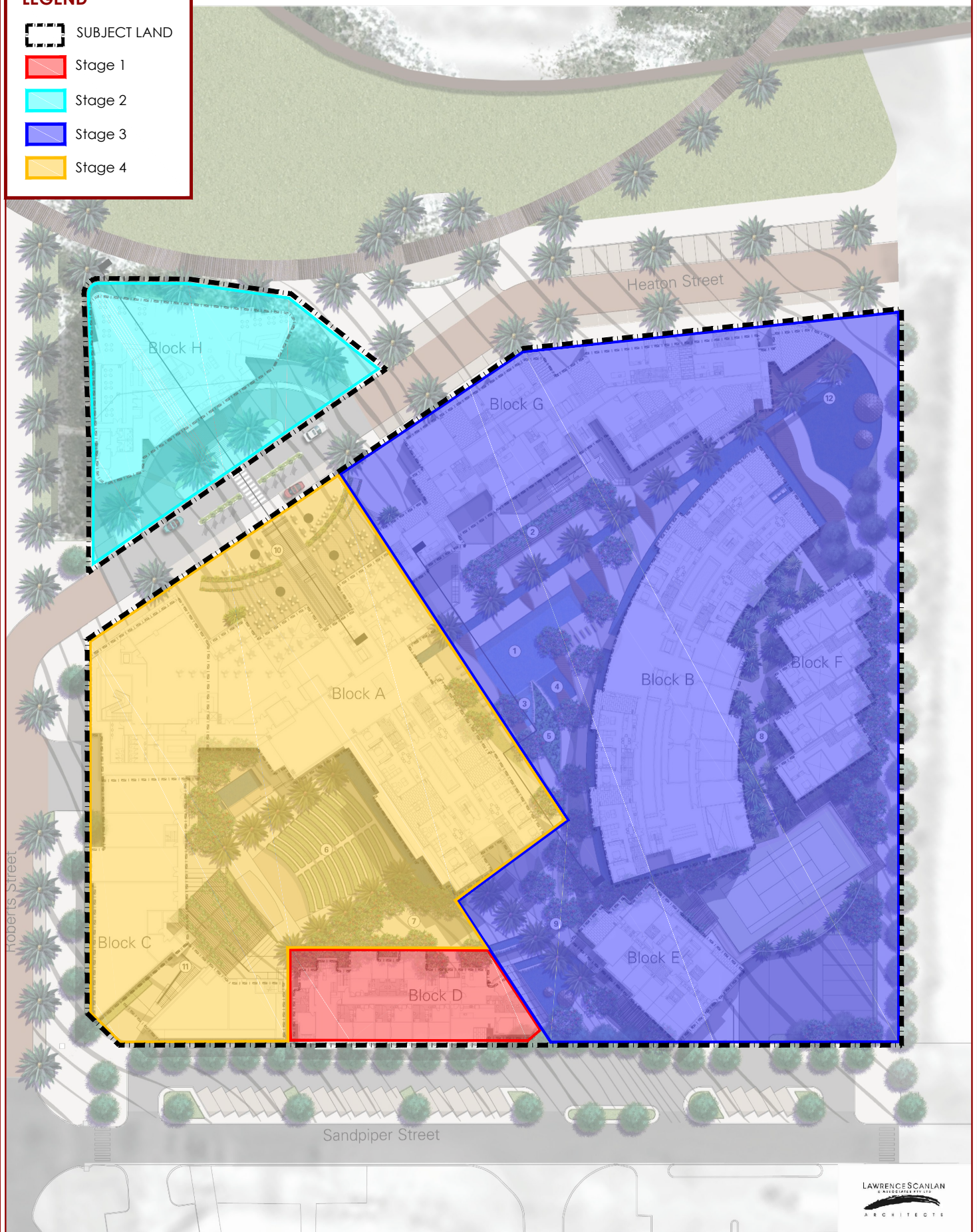
**PLAN3- BUILDING HEIGHT PLAN  
LOT 62 ROBERTS STREET &  
PART OF HEATON STREET ROAD RESERVE  
JURIEN BAY**

**PLAN 4:**  
Staging Plan



## LEGEND

-  SUBJECT LAND
-  Stage 1
-  Stage 2
-  Stage 3
-  Stage 4



LAWRENCE SCANLAN  
ARCHITECTS



NORTH

0 10 20 30 40 50m  
SCALE 1:1000 (A4)

## PLAN 4 - STAGING PLAN LOT 62 ROBERTS STREET & PART OF HEATON STREET ROAD RESERVE JURIE BAY

**BURGESS DESIGN GROUP**  
TOWN PLANNING + URBAN DESIGN

PO Box 8779, Perth Business Centre 6849  
www.burgessdesigngroup.com.au

P (08) 9328 6411  
F (08) 9328 4062

Plan No: ALO JUR 7-04-01 Client: CARL ALOI  
Date: 15.06.18 Planner: MS/ZM

**SHIRE OF DANDARAGAN**

**APPENDIX 1:**  
Certificate of Title

WESTERN



AUSTRALIA

REGISTER NUMBER	
62/DP207149	
DUPLICATE EDITION	DATE DUPLICATE ISSUED
2	14/7/2004

RECORD OF CERTIFICATE OF TITLE  
UNDER THE TRANSFER OF LAND ACT 1893

VOLUME  
1499

FOLIO  
123

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.

  
REGISTRAR OF TITLES 

LAND DESCRIPTION:

LOT 62 ON DEPOSITED PLAN 207149

REGISTERED PROPRIETOR:  
(FIRST SCHEDULE)

ALICEVILLE PTY LTD OF 47 THE CRESCENT, MIDLAND  
(TP I925472 ) REGISTERED 21 JUNE 2004

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

1. \*K969981 MEMORIAL. CONTAMINATED SITES ACT 2003 (CONTAMINATED SITE - REMEDIATION REQUIRED) REGISTERED 11.6.2009.

Warning: A current search of the sketch of the land should be obtained where detail of position, dimensions or area of the lot is required.  
\* Any entries preceded by an asterisk may not appear on the current edition of the duplicate certificate of title.  
Lot as described in the land description may be a lot or location.

-----END OF 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: 1499-123 (62/DP207149).  
PREVIOUS TITLE: This Title.  
PROPERTY STREET ADDRESS: 20 ROBERTS ST, JURIEN BAY.  
LOCAL GOVERNMENT AREA: SHIRE OF DANDARAGAN.

- NOTE 1: A000001A LAND PARCEL IDENTIFIER OF JURIEN BAY TOWN LOT/LOT 62 (OR THE PART THEREOF) ON SUPERSEDED PAPER CERTIFICATE OF TITLE CHANGED TO LOT 62 ON DEPOSITED PLAN 207149 ON 09-APR-02 TO ENABLE ISSUE OF A DIGITAL CERTIFICATE OF TITLE.
- NOTE 2: THE ABOVE NOTE MAY NOT BE SHOWN ON THE SUPERSEDED PAPER CERTIFICATE OF TITLE OR ON THE CURRENT EDITION OF DUPLICATE CERTIFICATE OF TITLE.



Our Ref: TPS/1466  
Your Ref: 40246  
Enquiries: Heather Brooks (655 19436)

SHIRE OF DANDARAGAN	DAVID
DATE RECEIVED	
14 SEP 2015	
DOC ID: .....	CS
Acknowledge	Yes / No

Chief Executive Officer  
Shire of Dandaragan  
PO Box 676  
JURIEN BAY WA 6516

Dear Sir

**TOWN PLANNING SCHEME No 7  
AMENDMENT No 21**

I refer to your letter of 30 September 2014 and advise that the Minister for Planning has granted final approval to the above amendment on 3 September 2015.

In accordance with section 87(3) of the *Planning and Development Act 2005* (the PD Act), the Western Australian Planning Commission (Commission) will cause the amendment to be published in the *Government Gazette*. The Commission has forwarded the notice to State Law Publisher and it is now the Council's responsibility to make arrangements with State Law Publisher for the payment of any costs involved in its publication in accordance with regulation 23(3) of the *Town Planning Regulations 1967 (as amended)*.

Council is also reminded of its obligations under section 87(4B) of the PD Act, that the amendment be advertised in accordance with the regulations and ensure that copies are available to the public.

If you require a purchase order number for payment for the publication of the notice in the *Government Gazette*, please contact State Law Publisher immediately to make arrangements for this, alternatively, if you don't require one you still need to contact State Law Publisher on 655 26012 or fax 9321 7536 to let them know and to go ahead and publish the notice.

State Law Publisher will not publish the notice until you contact them.

# PLANNING AND DEVELOPMENT ACT 2005

## APPROVED LOCAL PLANNING SCHEME AMENDMENT

### SHIRE OF DANDARAGAN

#### LOCAL PLANNING SCHEME No. 7 - AMENDMENT No. 21

Ref: TPS/1466

It is hereby notified for public information, in accordance with section 87 of the *Planning and Development Act 2005* that the Minister for Planning approved the Shire of Dandaragan local planning scheme amendment on 3 September 2015 for the purpose of:

1. Rezoning a portion of Lot 62 Roberts Street from 'Tourist' to 'Special Use - Tourist Resort' as shown on the Scheme Amendment Map;
2. Rezoning a portion of the Heaton Street road reserve to 'Special Use - Tourist Resort' as shown on the Scheme Amendment Map;
3. Rezone a portion of Lot 62 Roberts Street from 'Tourist' to 'Local road' as shown on the Scheme Amendment Map; and
4. Insert a new entry (SU 4) into Schedule 4 for Lot 62 (No.20) Roberts Street and a portion of the Heaton Street road reserve, Jurien Bay that sets out the specific conditions that apply to this land as follows:

No.	Description of Land	Special Use	Conditions
SU 4	Lot 62 (No.20) Roberts Street and a portion of the Heaton Street road reserve, Jurien Bay as designated on the Scheme Map	<b>Permitted</b> <ul style="list-style-type: none"><li>• Hotel</li><li>• Tourist resort</li><li>• Motel</li><li>• Serviced apartment</li><li>• Restaurant</li><li>• Cinema/theatre</li><li>• Tavern</li><li>• Grouped Dwelling</li><li>• Multiple Dwelling</li><li>• Office</li><li>• Shop</li></ul> <b>Discretionary</b> <ul style="list-style-type: none"><li>• Caretaker's Dwelling</li><li>• Civic Use</li><li>• Club Premises</li><li>• Convenience Store</li><li>• Reception Centre</li><li>• Fast Food Outlet</li><li>• Art Gallery</li></ul>	<ol style="list-style-type: none"><li>1. Prior to the submission of an application for planning approval, a Local Development Plan (LDP) for the land is to be prepared and approved by the local government.</li><li>2. Development of the land shall be in accordance with a LDP adopted by the local government. The LDP should provide sufficient information to address the requirements of the Scheme and the following:<ol style="list-style-type: none"><li>(i) the staging of development;</li><li>(ii) the staging of land tenure changes;</li><li>(iii) provision of public, communal and private open spaces and landscaping on the site;</li><li>(iv) provision of public access to areas of high amenity within or adjoining the site;</li><li>(v) unrestricted access to the</li></ol></li></ol>



			<p>Jurien Bay Foreshore area;</p> <ul style="list-style-type: none"> <li>(vi) a connection between Heaton and Sandpiper Streets that incorporates a street of a minimum width of 11 metres along the north eastern boundary of the site;</li> <li>(vii) the integration of the realigned Heaton Street road reserve into the overall site;</li> <li>(viii) utilisation of the western portion of the site (divided by the realignment of Heaton Street) for hotel accommodation and associated ancillary uses;</li> <li>(ix) demonstration that the design and scale of any residential component within the site is subsidiary to the tourism component such that the tourism component remains dominant;</li> <li>(x) demonstration that the residential accommodation is to be concentrated in an area of the site and located to provide a transition between tourist development and surrounding residential uses;</li> <li>(xi) how areas of the site that provide the highest tourist values will be retained predominantly for tourist purposes and not permanent residential units;</li> <li>(xii) the integration of facilities associated with tourist accommodation such as recreation (e.g. pools, gymnasium, function space), entertainment facilities (e.g. food and beverage facilities) and management facilities into the tourist resort;</li> <li>(xiii) the integration of the management and use of recreation and amenity facilities associated with permanent residential accommodation into the tourist resort;</li> <li>(xiv) evidence that the proportion of permanent residential accommodation units relative to the total number of accommodation units on the site will be equal to or less than 45%;</li> <li>(xv) demonstration that the non-tourist developments (such as commercial, office, retail,</li> </ul>
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			<p>reception centre, restaurant) will not detract from the main Jurien Bay commercial centre and will form an integrated part of the tourist resort;</p> <p>(xvi) evidence that physical processes setback are in accordance with <i>State Planning Policy 2.6 Coastal Planning Policy</i>;</p> <p>(xvii) consideration of the visual impacts of proposed structures on views from the Jurien Bay Marine Park and from the land and associated height limitations;</p> <p>(xviii) traffic management for the site, including the provision of car parking, vehicle access and circulation, loading and unloading areas, storage yards and rubbish collection closures, pedestrian access and walkways within and from the site; and</p> <p>(xix) any other relevant matter, which the local government considers to be warranted to ensure properly and orderly planning of the site.</p> <p>3. All development on the land (including change of use) shall be subject to an application to the local government for approval to commence development unless specifically exempted in an approved LDP.</p> <p>4. All development on the land shall be connected to a reticulated water supply and sewerage system.</p> <p>5. Prior to the approval of development the site is to be remediated, in accordance with the <i>Contaminated Sites Act 2003</i>. Validation of remediation of any contamination identified on the site is to be to the satisfaction of the local government and the Department of Environment Regulation.</p> <p>6. Prior to the approval of development on the site a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) is to be prepared in accordance with <i>State Planning Policy 2.6 State Coastal Planning Policy</i> and approved by the local</p>
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			<p>government. The CHRMAP should include but not be limited to consideration of inundation, erosion, finished floor levels, setbacks and drainage. Relevant adaptation measures are to be implemented at the time of development.</p> <p>7. The only permitted land use on the portion of the site divided by the realignment of Heaton Street (the western portion) is a 'Hotel' and associated ancillary uses.</p> <p>8. Any proposed 'Hotel' or 'Motel' on the land shall provide 100% short-stay accommodation. For all other accommodation units proposed on the land, the maximum proportion of permanent residential units relative to the total number of short stay units on the site shall be equal to or less than 45%.</p> <p>9. Any residential unit for use for permanent occupation must:</p> <ul style="list-style-type: none"> <li>(i) form part of a mixed use development proposal;</li> <li>(ii) form an integrated component of the tourist complex in terms of the type, style and character and the landscaping of the building;</li> <li>(iii) shall be in a concentrated area located to provide a transition between tourism development and surrounding residential uses;</li> <li>(iv) be provided with recreation and amenity facilities; and</li> <li>(v) shall be designed to enable management and use on an integrated basis with the overall tourist resort.</li> </ul> <p>10. Prior to the approval of any development on Lot 62, the closure, realignment and land transfers of a portion of the Heaton Street road reserve must be finalised to the satisfaction of the local government.</p> <p>11. Prior to the approval of development, the ceding of a minimum 11 metre wide street along the north east boundary of the land, providing a connection between Heaton and Sandpiper Streets, is to be completed to the satisfaction of the local government.</p>
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			<p>12. No structure shall exceed 40 metres in height measured from natural ground level, unless it forms part of the telecommunications infrastructure, and the height of individual structures will be in accordance with an approved LDP.</p> <p>13. Subdivision of the land will be limited to built or survey strata subdivision.</p> <p>14. A notification to the following effect is to be placed on the certificate(s) of title of any proposed lot(s) identified in the Coastal Hazard Risk Management and Adaptation Plan that may be affected by coastal hazards: <i>Vulnerable coastal area – This lot is located in an area likely to be subject to coastal erosion/inundation over the next 100 years.</i></p> <p>15. For all short-stay accommodation a register of guests showing periods of occupancy is to be kept and made available to the local government on request in order to ensure compliance with the requirement to limit occupation to a maximum of three months in any 12-month period.</p> <p>16. In accordance with Section 5C of the <i>Strata Titles Act (1985)</i> (as amended) a condition of any future built strata subdivision of tourist accommodation shall include the preparation and submission of a management statement and associated agreements for the local governments approval, that includes:</p> <ul style="list-style-type: none"> <li>▪ The establishment of a Schedule 1 by-law that requires, as a minimum, a unit management agreement, lease or alternative arrangement between each owner of a strata unit and the common facility manager/operator to provide for common management of all such units for a minimum period of 25 years as a tourist facility;</li> <li>▪ The ability for a Strata Company to terminate a contract with the facility manager/operator at the end of a 5 year contract or lesser period based on performance</li> </ul>
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			<p>criteria as determined by the Strata Company;</p> <ul style="list-style-type: none"> <li>▪ The management agreement, lease or alternative shall cover but not be limited to letting agent (manager) arrangements, resort reception, access, security, maintenance, caretaking, refurbishment, marketing and other services reasonably required for the development to operate as a tourism facility; and</li> <li>▪ any other additions the local government considers appropriate to ensure the ongoing sustainability of the proposal for tourism purposes.</li> </ul>
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5. Amend the Scheme Map by rezoning Lot 62 (No. 20) Roberts Street and a portion of the Heaton Street road reserve, Jurien Bay from 'Tourist' and 'Local Road' to 'Special Use - Tourist Resort' and 'Local Road'.
6. Insert the following definition into Schedule 1 of the Scheme:

**"Art Gallery"** means premises that are open to the public and where artworks are displayed for viewing or sale.

W GIBSON  
MAYOR

T NOTTLE  
CHIEF EXECUTIVE OFFICER



Shire of Dandaragan  
Local Planning Scheme No. 7

Amendment No. 33

*Summary of Amendment Details*

*Basic Amendment, Modifying Schedule 4 Special Use Zone 4, Condition 5*

Planning and Development Act 2005

**RESOLUTION TO ADOPT AMENDMENT  
TO LOCAL PLANNING SCHEME**

*SHIRE OF DANDARAGAN LOCAL PLANNING SCHEME NO. 7  
Amendment Number 33*

Resolved that the Local Government pursuant to section 75 of the *Planning and Development Act* 2005, amend the above Local Planning Scheme by:

1. Amending Schedule 4 - Special Use Zone 4, Condition 5 to read as follows:

"Prior to the commencement of development the site is to be remediated to the extent required for its intended use."

"Investigations and remediation are to be carried out in compliance with the Contaminated Sites Act 2003 and current Department of Water and Environmental Regulation Contaminated Sites Guidelines."

Advice:

"In relation to Condition 5 and in accordance with regulation 31 (1)(c) of the Contaminated Sites Regulations 2006, a Mandatory Auditor's Report, prepared by an accredited contaminated sites auditor, will need to be submitted to the Department of Water and Environmental Regulation as evidence of compliance with Condition 5. A current list of accredited auditors is available from [www.dwer.wa.gov.au](http://www.dwer.wa.gov.au)."

The amendment is basic under the provisions of the *Planning and Development (Local Planning Schemes) Regulations* 2015 for the following reason(s):

- The Amendment to the scheme text is to correct an administrative error to the timing of the requirement and the current Department of Water and Environmental Regulation Contaminated Sites Guidelines.

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2018

\_\_\_\_\_  
(Chief Executive Officer)

## 1.0 INTRODUCTION

This report has been prepared to amend the Shire of Dandaragan Local Planning Scheme No.7 (LPS7) in relation to Lot 62 (No.20) Roberts Street and a portion of the Heaton Street road reserve, Jurien Bay as designated on the Scheme Map.

The proposed amendment seeks to modify Schedule 4 - Special Use Zone 4, Condition 5 to allow for the condition to be fulfilled at a later stage in the planning process and reflect the intended use, but still 'prior' to commencement of development of the site.

## 2.0 BACKGROUND

### Location

The subject site is located within the central Jurien Bay town site, approximately 200km north west of Perth. The site is bounded by Roberts Street to the south west, Heaton Street to the north west, Sandpiper Street to the south east and Lot 63 Heaton Street to the north east.

### Site Area

The subject site incorporates Lot 62 Roberts Street, Jurien Bay, and adjoining south west (910m<sup>2</sup>) portion of the Heaton Street Road Reserve.

### Ownership

Lot 62 is registered in the ownership of Aliceville Holdings Pty Ltd.

The site is formally described as:

- Lot 62 on Deposited Plan 207149, Volume 1499, Folio 123.

### Current & Surrounding Land uses

The subject site is predominantly vacant with limited existing vegetation. There are currently two buildings on site that are degraded and not currently in use.

- Surrounding land uses are predominantly tourist and commercial activities, including:
- Jurien Bay Commercial Town Centre located immediately east of subject site;
- Jurien Bay Foreshore and small café located immediately west of the site; and,
- Jurien Bay Tourist Park located directly to the southwest of the site.

## 3.0 LOCAL PLANNING CONTEXT

Section 75 of the *Planning and Development Act 2005* gives a Shire the power to amend its local planning scheme.



Pursuant to Regulation 35(2) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, Amendment No.33 is a basic amendment as it proposes to amend the scheme text to correct an administrative error to reflect the timing of the requirement and the current Department of Water and Environmental Regulation Contaminated Sites Guidelines.

#### **4.0 PROPOSAL**

The amendment seeks to modify Condition 5 in Schedule 4 – SU4 by deleting the following text:

*“Prior to the approval of development the site is to be remediated, in accordance with the Contaminated Sites Act 2003. Validation of remediation of any contamination identified on the site is to be to the satisfaction of the local government and the Department of Environment Regulation.”*

And inserting the following text in its place:

*“Prior to the commencement of development the site is to be remediated to the extent required for its intended use.”*

*“Investigations and remediation are to be carried out in compliance with the Contaminated Sites Act 2003 and current Department of Water and Environmental Regulation Contaminated Sites Guidelines.”*

*Advice:*

*“In relation to Condition 5 and in accordance with regulation 31 (1)(c) of the Contaminated Sites Regulations 2006, a Mandatory Auditor's Report, prepared by an accredited contaminated sites auditor, will need to be submitted to the Department of Water and Environmental Regulation as evidence of compliance with Condition 5. A current list of accredited auditors is available from [www.dwer.wa.gov.au](http://www.dwer.wa.gov.au).”*

#### **Planning Justification**

The scheme conditions were the subsequent result of Council consideration of an original development application for a mixed use tourist resort at its meetings of February and December 2011.

The current wording of Condition 5 restricts the ability to obtain 'approval' of any development of the site. Detailed investigations indicate there may be some contamination as a result of off-site soil and groundwater contaminants leaching from the adjacent site. Site validation requires sampling to demonstrate that the remaining soil/sediment, the backfill material, the in-situ remediated material and/or any groundwater/surface water affected by site contamination no longer poses a risk to human health or the environment. As such, DWER cannot currently validate the remediation (removal) of contamination in accordance with the Contaminated Sites Act 2003.

The Department of Water and Environmental Regulation (DWER) has provided advice on the proposed amendment following referral by the Shire (refer Appendix 1). It is recommended that wording suggested by DWER form the basis of a scheme amendment.

The proposed amendment will allow for the condition to be fulfilled at a later stage in the planning process and reflect the intended use, but still 'prior' to commencement of development of the site.

## **5.0 CONCLUSION**

The proposed amendment is necessary to allow for the condition to be fulfilled at a later stage in the planning process and reflect the intended use and development of the site.

The suggested wording for Condition 5 from the Department of Water and Environmental Regulation (DWER) has formed the basis of this amendment.

The proposed modifications to Schedule 4 - Special Use Zone 4, Condition 5 do not alter the intent of the condition and will allow the Shire to assess and conditionally approve a development application.

COUNCIL ADOPTION

This Basic Amendment was adopted and is recommended for approval by resolution of the Council of the Shire of Dandaragan at the Ordinary Council Meeting of the Council held on the 28 day of September, 2017 and the Common Seal of the Shire of Dandaragan was hereunto affixed by the authority of a resolution of the Council in the presence of:

.....

SHIRE PRESIDENT

.....

ACTING CHIEF EXECUTIVE OFFICER

WAPC ENDORSEMENT (r.63)

.....

DELEGATED UNDER S.16 OF  
THE P&D ACT 2005

DATE.....

APPROVAL GRANTED

.....

MINISTER FOR PLANNING

DATE.....



Shire of Dandaragan  
Local Planning Scheme No. 7

Amendment No. 34

*Basic Amendment, Modifying Schedule 4 Special Use Zone 4, Conditions 6, 8, 10 and 11*

Planning and Development Act 2005

**RESOLUTION TO ADOPT AMENDMENT  
TO LOCAL PLANNING SCHEME**

*SHIRE OF DANDARAGAN LOCAL PLANNING SCHEME NO. 7*  
*Amendment Number 34*

Resolved that the Local Government pursuant to section 75 of the *Planning and Development Act 2005*, amend the above Local Planning Scheme by:

1. Amending Schedule 4 – Special Use Zone 4, Conditions 6, 8, 10 and 11 to read as follows:

“6. Prior to the commencement of development on the site, a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) is to be prepared in accordance with State Planning Policy 2.6 State Coastal Planning Policy and approved by the local government. The CHRMAP should include but not be limited to consideration of inundation, erosion, finished floor levels, setbacks and drainage. Relevant adaptation measures are to be implemented at the time of development.”

“8. Any proposed ‘Hotel’ or ‘Motel’ on the land shall provide 100% short-stay accommodation. For all accommodation units proposed on the land, the maximum proportion of permanent residential units relative to the total number of short stay units on the site shall be equal to or less than 45%.”

“10. Prior to the commencement of the hotel development the closure, realignment and land transfers of a portion of the Heaton Street road reserve must be finalised to the satisfaction of the local government.”

“11. Prior to the commencement of development, the ceding of a minimum 11 metre wide street along the north east boundary of the land, providing a connection between Heaton and Sandpiper Streets, is to be completed to the satisfaction of the local government.”

The amendment is basic under the provisions of the *Planning and Development (Local Planning Schemes) Regulations 2015* for the following reason(s):

- The Amendment to the scheme text is to correct an administrative error in the wording of Condition 8 and in the timing of actions in relation to Conditions 6, 10 and 11

Dated this \_\_\_\_\_ day of \_\_\_\_\_ 2017

\_\_\_\_\_  
(Chief Executive Officer)



## **1.0 INTRODUCTION**

This scheme amendment is proposed to address the timing of actions and ambiguous wording of current Scheme Conditions 6, 8, 10 and 11 in relation to Lot 62 (No.20) Roberts Street and a portion of the Heaton Street Road Reserve, Jurien Bay (subject 'site' or 'land').

## **2.0 BACKGROUND**

The scheme conditions were the subsequent result of Council consideration of the original development application for a mixed use tourist resort at its meetings of February and December 2011.

### **Location**

The subject site is located within the central Jurien Bay town site, approximately 200km north west of Perth. The site is bounded by Roberts Street to the south west, Heaton Street to the north west, Sandpiper Street to the south east and Lot 63 Heaton Street to the north east.

### **Site Area**

The subject site incorporates Lot 62 Roberts Street, Jurien Bay, and adjoining south west (910m<sup>2</sup>) portion of the Heaton Street Road Reserve.

### **Ownership**

Lot 62 is registered in the ownership of Aliceville Holdings Pty Ltd.

The site is formally described as:

- Lot 62 on Deposited Plan 207149, Volume 1499, Folio 123.

### **Current & Surrounding Land uses**

The subject site is predominantly vacant with limited existing vegetation. There are currently two buildings on site that are degraded and not currently in use.

- Surrounding land uses are predominantly tourist and commercial activities, including:
- Jurien Bay Commercial Town Centre located immediately east of subject site;
- Jurien Bay Foreshore and small café located immediately west of the site; and,
- Jurien Bay Tourist Park located directly to the southwest of the site.

### 3.0 STATE & REGIONAL PLANNING CONTEXT

Section 75 of the *Planning and Development Act 2005* gives a Shire the power to amend its local planning scheme.

Pursuant to the Regulation 35 (2) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, Amendment 34 is a basic amendment required to correct an administrative error pursuant to Regulation 34 (a).

### 4.0 PROPOSAL

The Amendment seeks to modify Conditions 6, 8, 10 & 11 in Schedule 4 – SU4 by deleting the following text:

“6. Prior to the approval of development on the site a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) is to be prepared in accordance with *State Planning Policy 2.6 State Coastal Planning Policy* and approved by the local government. The CHRMAP should include but not be limited to consideration of inundation, erosion, finished floor levels, setbacks and drainage. Relevant adaptation measures are to be implemented at the time of development.”

“8. Any proposed 'Hotel' or 'Motel' on the land shall provide 100% short-stay accommodation. For all other accommodation units proposed on the land, the maximum proportion of permanent residential units relative to the total number of short stay units on the site shall be equal to or less than 45%.”

“10. Prior to the approval of any development on Lot 62, the closure, realignment and land transfers of a portion of the Heaton Street road reserve must be finalised to the satisfaction of the local government.”

“11. Prior to the approval of development, the ceding of a minimum 11 metre wide street along the north east boundary of the land, providing a connection between Heaton and Sandpiper Streets, is to be completed to the satisfaction of the local government.”

And inserting the following text in its place:

“6. Prior to the commencement of development on the site, a Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) is to be prepared in accordance with *State Planning Policy 2.6 State Coastal Planning Policy* and approved by the local government. The CHRMAP should include but not be limited to consideration of inundation, erosion, finished floor levels, setbacks and drainage. Relevant adaptation measures are to be implemented at the time of development.”

“8. Any proposed 'Hotel' or 'Motel' on the land shall provide 100% short-stay accommodation. For all accommodation units proposed on the land, the maximum proportion of permanent residential units relative to the total number of short stay units on the site shall be equal to or less than 45%.”

“10. Prior to the commencement of the hotel development the closure, realignment and land transfers of a portion of the Heaton Street road reserve must be finalised to the satisfaction of the local government.”

“11. Prior to the commencement of development, the ceding of a minimum 11 metre wide street along the north east boundary of the land, providing a connection between Heaton and Sandpiper Streets, is to be completed to the satisfaction of the local government.”

## **Planning Justification**

The current Scheme conditions were gazetted on 18 September 2015, subsequent to Council approval of a development application on 20 January 2012.

A new development application has been lodged with the Mid-West/Wheatbelt Joint Development Assessment Panel. As part of the Shire’s assessment of this application it is apparent that several of the gazetted conditions require modification to allow some outstanding issues to be resolved later in the planning process. As such, the intent of the Scheme Amendment is to modify the wording of conditions 6, 10 and 11 to allow the Shire to consider the proposed development application.

The current Scheme Conditions 6, 10 and 11 require the following matter/actions to be undertaken ‘prior to approval of development.’

- The preparation of the required Coastal Hazard Risk Management and Adaptation Plan;
- The closure, realignment and land transfers of a portion of the Heaton Street road reserve; and
- Completion of the ceding of a minimum 11 metre wide street along the north east boundary of the land, providing a connection between Heaton and Sandpiper Streets.

The proposed Scheme Amendment will enable these issues to be progressed and completed at a later stage, while the current Development Application is considered, assessed, and if satisfactory, conditionally approved.

There is ambiguity between Condition 8 and Condition 2 (xiv) of the Local Development Plan in relation to the proportion of permanent residential units to short stay units.

Condition 8 specifies:

*“8. Any proposed ‘Hotel’ or ‘Motel’ on the land shall provide 100% short-stay accommodation. For all other accommodation units proposed on the land, the maximum proportion of permanent residential units relative to the total number of short stay units on the site shall be equal to or less than 45%”*

LDP Condition 2 (xiv) specifies:

*“2(xiv). Evidence that the proportion of permanent residential accommodation units relative to the total number of accommodation units on the site will be equal to or less than 45%.”*

The Shire's intent has always been to calculate the totals across the site, to include any hotel and motel units as part of the short-stay unit calculation. This is evident in the original DA approval that recommended the following wording of the condition:

*"The proportion of permanent residential units relative to the total number of accommodation units on the site shall be equal to or less than 45%, unless otherwise approved by the local government."*

However, the final wording of gazetted Condition 8 in the Scheme is ambiguous and inconsistent with the original proposed wording and LDP Condition 2(xiv). As such, this Scheme Amendment is proposed to correct the administrative error by deleting the word "other" to ensure that the Hotel and Motel Units are included in the calculation of the permanent/short stay ratio.

## **5.0 CONCLUSION**

The proposed Scheme Amendment is intended to correct administrative errors in the wording of conditions 6, 8, 10 and 11.

The proposed Scheme Amendment is necessary to modify the wording of Conditions 6, 10 and 11 to allow the Shire to assess a new development application, and defer the completion of these matters prior to commencement of development.

Modification to the wording of Condition 8 is also sought to clarify the intent of this condition, to calculate the proportion of permanent residential units across the whole site.

In light of the above, we respectfully request WAPC endorsement of the proposed scheme amendment at the earliest possible convenience.

## COUNCIL ADOPTION

This Basic Amendment was adopted and is recommended for approval by resolution of the Council of the SHIRE OF DANDARAGAN at the ORDINARY COUNCIL Meeting of the Council held on the 28 day of September, 2017 and the Common Seal of the SHIRE OF DANDARAGAN was hereunto affixed by the authority of a resolution of the Council in the presence of:

.....  
SHIRE PRESIDENT

.....  
ACTING CHIEF EXECUTIVE OFFICER

## WAPC ENDORSEMENT (r.63)

.....  
DELEGATED UNDER S.16 OF  
THE P&D ACT 2005

DATE.....

## APPROVAL GRANTED

.....  
MINISTER FOR PLANNING

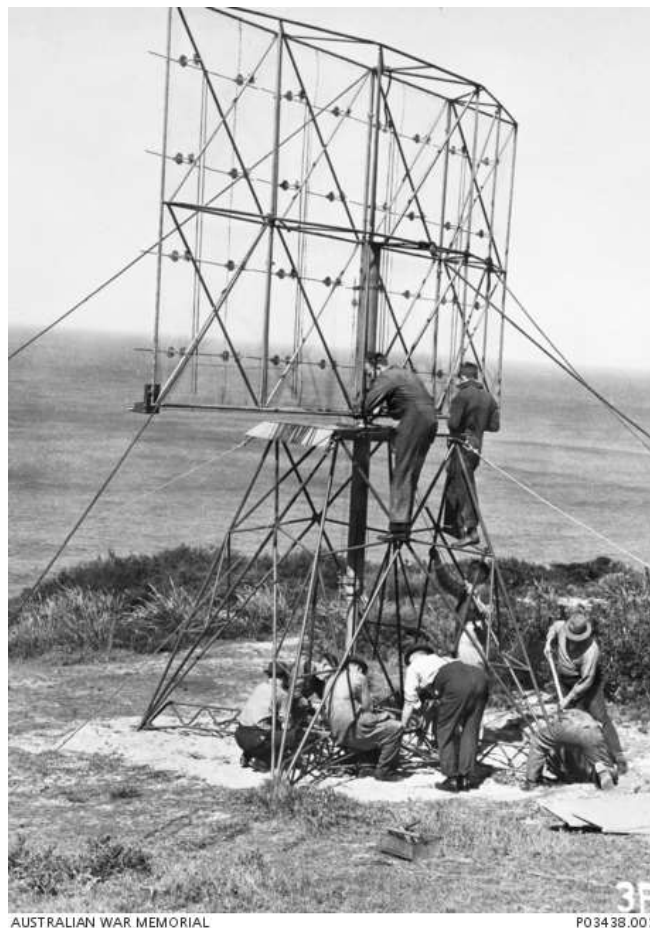
DATE.....



# Report on the archaeological investigations of Radar Station 48, North Head, Jurien Bay for the Shire of Dandaragan.

**May 2018**

Bob Sheppard  
Zack Sheppard  
Steve Wells



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## **Copyright**

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Ownership of material created in the course of research remains the property of HDA.

This report had been created for the exclusive use of HDA's client, the Shire of Dandaragan (SD) and is subject to and provided under the provisions of agreement between HDA and SD. HDA will not accept liability or responsibility for or in respect to any use of or reliance upon this report by any third party.

## **Disclaimer**

HDA has made every effort to ensure all relevant information collected has been presented however the authors cannot be responsible for any omissions or inconsistencies resulting from information which is revealed in the future but was not available at the time of the survey and therefore the recommendations, results and conclusions within the report are based on information available during the survey and the preparation of this report.

## **Spatial Accuracy**

The survey used a Garmin hand held GPS and the Archaeology Sample Collector application to record artefacts and associated deposits. GPS accuracy is subject to the normal variations expected of the technology.

Geoff Royce of Royce Surveys created plans and recorded structures using a Trimble R6 GPS system with accuracy of +or-10mm. Base control used Landgate Geodetic stations SSM North Head and SSM Bartle. These are PWD brass plaques concreted to the limestone sheet rock at North Head adjacent to the Bartle memorial. The coordinate system used for the detailed survey of the site is MGA coordinates Zone 50. Vertical control (heights) used vertical datum AHD71. Future surveyors can access DXF or DWG data files or an Ascii points file by contacting Royce Surveys or HDA.

## **Cover Image**

A 'Doover' similar to the one erected at North Head. Australian War Memorial image.



## Executive Summary

In April 2016 Heritage Detection Australia (HDA) was engaged by the Shire of Dandaragan (SD) to complete a heritage survey of the North Head Radar Station 48 (RS48) and associated structures.

The survey was a follow up to numerous visits to the area by archaeologist Bob Sheppard in 2014-2016 and the creation of *A brief report on a visit to North Head (Jurien Bay) World War Two military site* submitted to SD in 2014 (the 2014 report).

Following the 2016 survey HDA submitted the *Report on a heritage survey of Radar Station 48, North Head, Jurien Bay for the Shire of Dandaragan* (the 2016 report).

In 2018 HDA was engaged by the Shire of Dandaragan to act upon recommendation 2 within the 2016 report.

## Heritage Detection Australia Mission Statement

HDA is a Western Australian owned and operated consultancy employing local archaeologists and heritage professionals. All our employees have experience working and volunteering on local heritage projects.

The HDA team:

- is passionate about history, heritage and archaeology
- believe reports should be written in plain English
- is committed to social history and public engagement
- is innovative.

## Historical Background

In 1942 a coast watch station was established at North Head near Jurien Bay in Western Australia (Davies 1994:80) and Australian War Records show the site was converted to a radar station and operated from August 1943 until August 1945. It was known as Unit 48RS and was one of a number of radar stations on the west coast including those at Gin Gin, Yanchep, Rottnest and Geraldton.

The station consisted of an AWMKII radar array driven by two generators housed in concrete bunkers. Some reports suggest that searchlights were linked to the radar station and there were gun emplacements nearby (Anon 1989:19).

The radar was run by Royal Australian Air Force (RAAF) trained technicians with members of the 13th Infantry Brigade (McConnell et. al, 1993:156) used as guards. Nicholas suggests that much of the coastal surveillance was carried out by the Volunteer Defence Corps (1985:78-98). Edwards (1993:34) was

a member of the 10th Australian Light Horse Regiment and he recalls visiting North Head in World War Two (WW2) and members of the 44th Battalion were camped nearby. The War Diary of the 4<sup>th</sup> Infantry Battalion indicates they were present in the area in 1943.

The radar had a range of around 100 miles with longer ranges possible depending on weather conditions. A ranger and heighter operated the station with information passed to a plotting room. The plots were relayed to a telegraphist and wireless operator who passed the information on to the RAAF Fighter Sector at Pearce. It is believed a phone line was built from the site to Jurien Bay.

Australian war records in the form of a Personnel Occurrence Book, show that more than 100 men were rotated through the site during its two years of operation with around 30 RAAF personnel camped at North Head at a time. Australian Army personnel were camped nearby.

Historical records of the site are sparse and no photographs of the site have come to light. Cameras were not allowed on radar stations. No personnel who served at RS48 have come forward with information about the site. Dandaragan locals, John Grigson and Noel Grigson visited the radar station when it was operational and can remember some details of the site (pers. comm. John Grigson and Noel Grigson 2018). According to the Grigsons, the site was demolished post war and the buildings were sold and salvaged. Some of the material was used on local farms and at Jurien Bay.

The foundations of many of the buildings were incorporated into shacks and camps and the generator bunkers have been used by visiting campers and fishermen.

One of the most unusual claims about the RS48 site was that it was attacked by an unidentified plane during WW2 (Davies 1994:82-83). If this is the case this is the southernmost point of mainland Western Australia which came under enemy fire in this conflict which would make it quite unique.

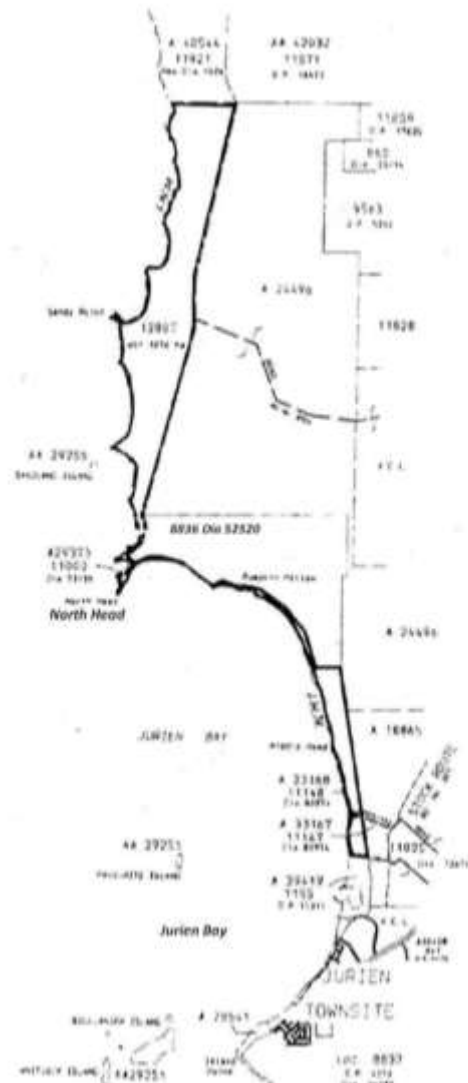
## **Heritage Status**

The site is listed in the *Shire of Dandaragan Municipal Inventory of Heritage Places* (2004:68) which states:

Statement of Significance: 'The Radar Installation Site has high historic significance for the important role it played during World War II. Further, the relative intactness of the concrete shelters, which are representative of the Nissen Hut style of military structures, adds to their significance.'

Management Category: 'Category 1. A place of exceptional cultural heritage to Shire of Dandaragan and the state of Western Australia, that is either in the Heritage Council or Western Australia's Register or worthy of consideration for entry into the register. Retain and conserve the place.'

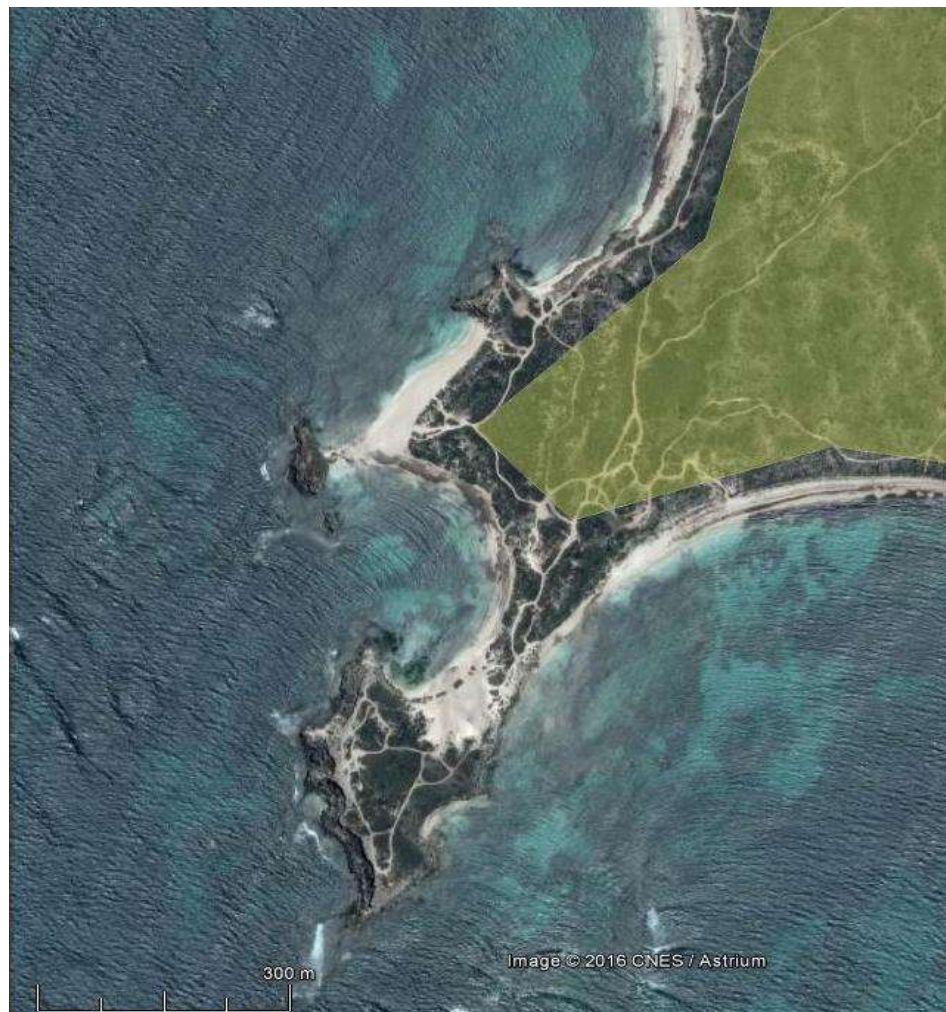
The RS48 is not registered by the State Heritage Office (SHO) (pers. comm. SHO 2016). HDA's brief for the work in 2018 included determining the potential for the site to be registered with the SHO.



RS48 is situated on coastal reserve administered by the SD. WW2 infrastructure associated with the RAAF and Army camps which supported the radar station or WW2 defences, including foundations, drains, building pads, an underground tank, tracks, and camps are within the boundaries of private land.

Permission for the survey team to access and survey the related infrastructure on private land was coordinated by the SD.

The area is a popular campsite with locals, who use the access tracks running through the sand dunes. Vegetation along the peninsula can be described as coastal scrub with coverage ranging from dense to moderate. There is substantial disturbance to the survey area. Vehicles have degraded sand dunes and modern rubbish is scattered throughout the bush and adjacent to the tracks.



*Figure 2. Google Earth image of North Head. The shaded area indicates private land.*

## **Occupational Health and Safety**

All HDA staff and their employees have read, understood and agreed to comply with *HDA Occupational Safety and Health Policy and Procedures*.

## **HDA Personnel**

The Heritage Detection Australia team for the 2018 survey:

*Bob Sheppard*

Bachelor of Arts Honours (Archaeology)

Graduate Certificate of Forensic Anthropology

Honorary Associate Western Australian Museum (Curatorial and Research)

Lead archaeologist of the RS48 excavations

Archaeologist and principal of HDA

*Zack Sheppard*

Bachelor of Arts Honours (Archaeology)

Graduate Certificate of Forensic Anthropology

Diploma of Education

Senior archaeologist HDA

*Steve Wells*

Master of Professional Archaeology

Master of Educational Leadership

Bachelor of Psychology

Senior archaeologist HDA

*Geoff Royce*

Surveyor

*Ian McCann*

Videography, photography and imagery



## **Aims**

The aims of the 2018 investigations were to meet Recommendation 2 of the 2016 report by HDA.

Archaeological excavations be carried out to investigate the functions of individual structures, the extent of the installation (both residential and administrative, as well as other elements such as communications, drainage etc.) and to help determine the nature of what day-to-day life was like for personnel serving at Radar Station 48. The results would strengthen a nomination for state heritage registration.

## **Survey Methodology**

### *Introduction*

Archaeological methodology requires objective collection of data for subjective interpretation. At RS48 the absence of comprehensive historical documentation of the site increases the importance of careful analysis of the archaeological evidence.

At RS48 the archaeological evidence relates to a short time period, being from the establishment of a coast watch post in 1942 to the close of the radar station in 1945. The structures at RS48 were heavily salvaged post WW2. Building foundations and structural material were used by shack owners until 2000. The HDA team established the period of interest for the work in 2018 would be from 1942 to 1945. Cultural material which post-dated 1945 was not regarded to be of interest in the interpretation. Considering the isolation of the area pre WW2 it was not envisaged that the team would locate artefacts from before 1942 and therefore not related to RS48. The team was mindful of obligations in relation to the discovery of Indigenous material.

### *Structural interpretation*

Following the examination of the RS48 environs in 2016 the HDA team devised a methodology for the 2018 work which would fulfil the obligations of Recommendation 2 of that report. To interpret the structures located in 2016 the team created the following methodology:

- pre disturbance inspection and photography of structures
- post site clearing recording and interpretation of structures
- archaeological excavations at selected locations
- interpretation of the evidence collected
- comparison of the interpretation with available literature and oral testimony.

### *Archaeological excavations*

Excavations would use formal archaeological practices and include:

- pre and post excavation photography
- form recording of contextual information, units, artefacts etc.
- use of a 5mm sieve
- post excavation rehabilitation.

### *Shovel test pits*

HDA used shovel test pits (maximum depth 600 mm) to

- define site boundaries
- provide rapid assessment of targets located during archaeo metal detection surveys
- determine locations for formal excavations.

The number of shovel test pits was minimised by using AMD target identification methods and probing using a 10mm x 1.2m metal probe.

### *Archaeo metal detection (AMD)*

Archaeo metal detection is the use of metal detectors as a tool to assist archaeological investigations. The HDA lead investigator Bob Sheppard is a pioneer in the use AMD in Australia and has been a practitioner for over thirty years. Using target identification strategies AMD can aid in determining metal types, shapes and depths of buried metal targets. For these investigations the team used a Minelab CTX 3030 metal detector. The Army camp site was discovered using a metal detector in 2016. The majority of cultural material at this site is sub surface and therefore not visible. AMD was important in finding material related to the stated objective 'to help determine the nature of what day-to-day life was like for personnel serving at Radar Station 48'.

### *Oral history*

The HDA team were fortunate to have the assistance of John Grigson and Noel Grigson who are the only known informants who can recall the radar station operating. The Grigsons were also involved in the post war demolition of the site. Their testimony was invaluable in interpreting the site and in providing details of additional structures which are no longer present. The Grigson family has material salvaged from the

site on their property on Cockleshell Gully Road. HDA recorded this to assist in determining the form of structures partially present at and removed from RS48.

#### *Literature review*

Only two official documents relating to RS46 have so far been found. These relate to personnel and equipment. Literature related to other radar stations from WW2 has been examined to assist in the interpretation of RS48.

#### *Rehabilitation*

At the end of excavations all pits and trenches were back filled and the area 'made good'.

#### *Artefact collection and recording*

All cultural material was handled with care. Artefacts deemed to be outside of the scope of the current research questions were left either in situ or returned close to their original location.

Cultural material relevant to the investigation was recorded photographically and entered into the artefact database. Where multiple items e.g. bullet cartridges were found, a single or representative example may have been photographed and catalogued.

Cultural material kept during the investigation was carefully stored in sealed, labelled plastic bags to ensure the preservation of the artefact and its ready identification and site location.

All cultural material retained as part of the research was delivered to the Shire of Dandaragan offices at the completion of the investigation.

#### *Artefact database explained*

Artefacts were recorded onto a spreadsheet which appears as an appendix. Each artefact was allocated a unique 3 digit number (Column A) and its location was noted according to whether it came from one of the concrete structures (S4 -10) which was denoted in the database as RS48 or D2 which was denoted as RS48A. If the artefact came from a trench then this is indicated by 'T' and the appropriate number. If there is additional recorded detail about a unit within a trench this appears as 'U' followed by the appropriate number (Column B). As an example of the use of the spreadsheet Column B headings, artefact number 062 has a location designation RS48AT5U5. This means its location was RS48A (D2), and came from Trench 5 Unit 5. The material from which the artefact was predominantly constructed was also recorded along

with the number of items consisting a particular artefact (Columns C & D). For example artefact 002 consisted of 12 iron fragments which were considered as one database entry for simplicity.

A functional category for each artefact was allocated according to headings commonly used in archaeology (Column E). The categories used are as follows:

*Domestic:* Materials used in a domestic setting.

*Structural:* Materials used for building of permanent features.

*Subsistence:* Materials used for the consumption for food and drink but not alcohol.

*Medicinal:* Materials used for health purposes.

*Recreational:* Materials used for enjoyment.

*Military:* Materials used for military operations.

*Unknown:* Material with an unknown function.

The type of artefact was also briefly noted as a means of ready identification along with a short description (Columns F & G).

## Survey results

### *Introduction*

For this report two sites are described.

1. The RAAF camp (RS48). This includes the radar station infrastructure at North Head, the accommodation and administration area to the north, and the associated infrastructure such as power, water, communications, roads, effluent and rubbish disposal.
2. The Army camp (RS48A) is in the valley to the west of the RS48 accommodation and administration area. This area was described in the 2016 report as D2.

Each site report is further described as:

- Structures and given an 'S' prefix
- Deposits and given a 'D' prefix
- Features (excavated) 'F' prefix
- Trenches (excavated) given a 'T' prefix

## RS48 Results (Radar Station and RAAF Camp)

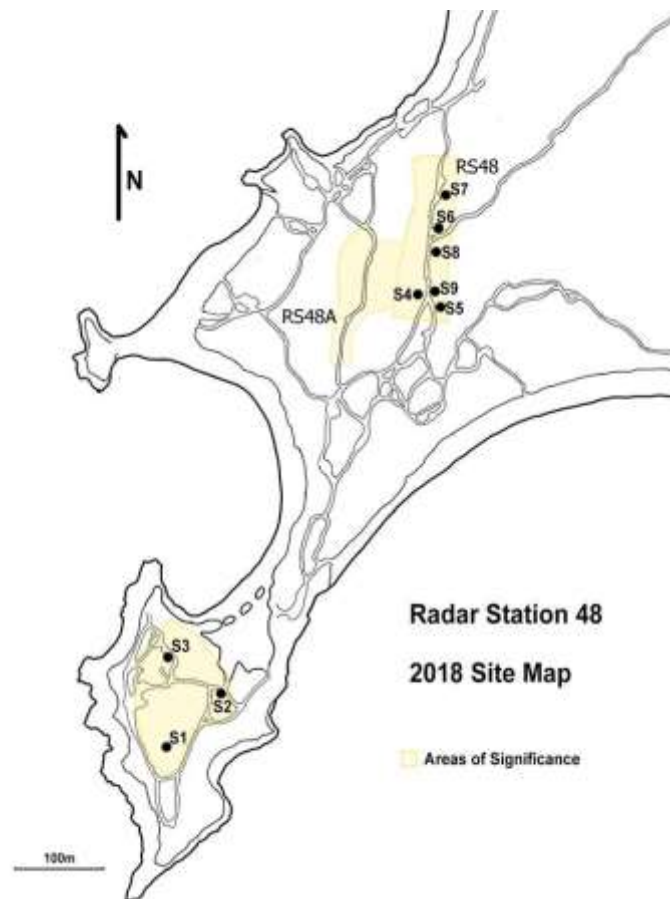


Figure 3. Locations of the major RS48 structures at North Head.

### ***S1 Radar Station tower and control room (Doover)***

*GPS Location 30°13'53.89" 114°59'42.90"*

#### *Description of structure*

Structural foundations are located at the highest point of the North Head peninsula (approximately 19.80m ASL) with 360 degree views of the coast. What remains are concrete sand bags stacked at least five layers high (upon visual inspection). The sand bags form a series of steps on the northern side of the foundations. The extent of the structure is unknown as much of it hidden by vegetation and sand, however it is estimated to be 6m x 6m.

#### *Function of structure*

The foundations are the remains of RS48. This formed the control room and antenna, which was known by the RAAF as the 'Doover'.



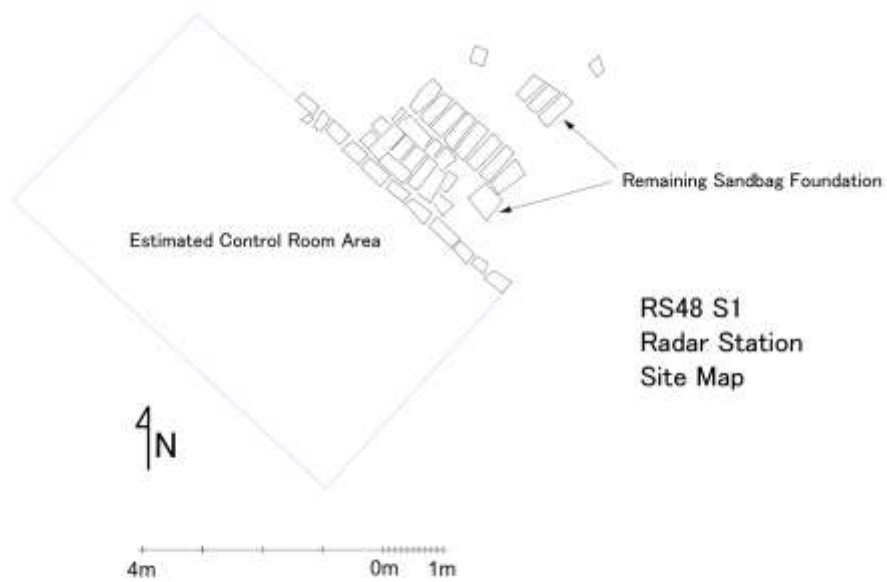


Figure 4. Plan of S1. HDA image.



Figure 5. Sand bag steps and Doover' foundations at S1. Looking south. HDA image.



*Figure 6. Sand bag steps at 'Doover' site showing heights (100mm increments). HDA photo.*



*Figure 7. Imprints of hessian on sand bags at S1. HDA photo.*





*Figure 8. Looking north from the S1. 'Igloos' A and B are in the middle ground. HDA photo.*



*Figure 9. Small structure on southern side of S1 foundations. HDA photo.*

### *Pre disturbance and clearing*

Considering the fragility of the structure and the vegetation which is protecting the site, the HDA team decided not to carry out any vegetation removal, excavations or any activities which would damage it in any way. The site is partially concealed by the vegetation and hidden from public view and it was decided that excavations could cause additional pressure to a very fragile site. The team observed some copper wire, nails and asbestos on the surface at the site. Nearby there are some corroded iron food cans consistent with being WW2 related (e.g. 30°13'53.52" 114°59'42.32").

During an examination of the site three small structures were also observed:

1. A small pile of stones on the eastern side of S1. 30°13'53.95" 114°59'42.51".
2. A small pile of stones in on the southern side of S1. 30°13'53.99" 114°59'42.96" (see fig.9).
3. Two lines of stones approximately 2m long and 1m apart near the south western corner of S1. 30°13'53.95" 114°59'42.51".

1 and 2 could be related to stabilising cable anchor points to support the tower in strong winds. 3 could be defining a pathway leading to nearby air raid shelters or weapons pits.

### *Determination of function*

Two methods were used to determine the function:

#### *(a) Interpretation of the structure*

The structure is clearly 'military' in its construction, and given its location the team have a high degree of confidence that this is the base of the 'Doover'.

#### *(b) Oral history and literature review*

The HDA interpretation that the structure was the Doover is supported by the testimony of John Grigson and Noel Grigson (pers. comm. 2018) who assisted in the demolition of the nearby RAAF camp after WW2. John Grigson visited the site with the HDA team in May 2018. John Grigson also recalled a small hut, probably weatherboard, near the Doover but had only faint recollections of it. This hut could be the operations room which formed part of radar stations (See for example Brenkley 2008:58). Only extensive excavations at the site could confirm this testimony and considering the fragility of the site it was determined not to be warranted.

### *Current Condition*

The foundations are in fair condition.



*Figure 10. S2 Generator room (Igloo) looking south east. HDA photo.*

**RS48 S2 Generator Room (Igloo) A**

*GPS Location 30°13'51.95" 114°59'45.05"*

*Description of structure*

The structure is a north-facing Nissen hut shaped building made of steel reinforced concrete. The roof and floor is 300mm thick and the north and south walls 250mm thick. It is 5m x 4.1m with the longer sides facing east and west. The building is 3.3m at its highest point. It has a metal door at the front (north), a window at the rear (south) and an exhaust point in the roof. The north west corner of the structure has been compromised by sand dune degradation and remedial action using bagged sand has been undertaken to protect the structure. Graffiti and vandalism have had a negative impact on the preservation of the building. Sections of the iron door and window have been destroyed and the structure contains beds, a refrigerator and rubbish. The interior has been modified by campers. A concrete engine bed has been removed.



### *Function of structure*

The building, known as an 'Igloo' housed a generator which ran the Radar Station 48 and associated infrastructure. Power lines ran from the Igloo to the Doover and the nearby RAAF camp.

### *Pre disturbance and clearing*

Considering the nature of the site HDA team decided not to carry out and vegetation removal, excavations or any activities which would damage it in any way.

### *Determination of function*

Two methods were used to determine the function:

#### *(a) Interpretation of the structure*

The structure is clearly 'military' in its construction, and given its location the team have a high degree of confidence that this is one of the radar station's generating rooms.

#### *(b) Oral history and literature review*

The HDA interpretation that the structure was a generating room is supported by the testimony of John Grigson and Noel Grigson (pers. comm. 2018) who assisted in the demolition of the nearby RAAF camp after WW2. John Grigson visited the site with the HDA team in May 2018.

Research has shown that 'Igloos' exist at other radar stations around Australia and similar 'Igloos' can be found at the Yanchep Radar Station site.

### *Current Condition*

The generator room is in fair condition.

## ***RS48 S3 Generator Room (Igloo) B***

*GPS Location 30°13'50.64" 114°59'42.78"*

### *Description of structure*

The structure is a north-facing Nissen hut shaped building made of steel reinforced concrete. The roof and floor is 300mm thick and the north and south walls 250mm thick. It is 5m x 4.1m with the longer sides facing east and west. The building is 3.3m at its highest point. It has a metal door at the front (north), a window at the rear (south) and an exhaust point in the roof. Graffiti and vandalism have had a negative impact on the preservation of the building. Sections of the iron door and window have been destroyed and the structure has been modified by campers. A concrete engine bed remains inside the structure.



*Figure 11. S3 Generator room (Igloo) looking south west. HDA photo.*



*Figure 12. S3 Igloo circa 1980s. Franz Britschgi photo from the Jennifer Mars collection.*



*Figure 13. Engine bed inside S3. HDA photo.*

#### *Function of structure*

The building, known as an 'Igloo' housed a generator which ran the RS48 and associated infrastructure. Power lines ran from the Igloo to the Doover and the nearby RAAF camp.

#### *Pre disturbance and clearing*

Considering the nature of the site the HDA team decided not to carry out and vegetation removal or excavations.

#### *Determination of function*

Two methods were used to determine the function:

##### *(a) Interpretation of the structure*

The structure is clearly 'military' in its construction, and given its location the team have a high degree of confidence that this is one of the radar station's generating rooms.

##### *(b) Oral history and literature review*

The HDA interpretation that the structure was a generating room is supported by the testimony of John Grigson and Noel Grigson (pers. comm. 2018) who assisted in the demolition of the nearby RAAF camp after WW2. John Grigson visited the site with the HDA team in May 2018.

Research has shown that 'Igloos' exist at other radar stations around Australia and similar 'Igloos' can be found at the Yanchep Radar Station site.

#### *Current Condition*

The generator room is in fair condition.

### ***RS48 radar station additional structures***

An examination of literature regarding similar radar stations constructed around Australia during WW2 has revealed there are numerous additional structures associated with these installations. These include power and communication cables, weapons pits and air raid shelters. These structures were often well camouflaged.

During the 2018 excavations the HDA team discussed the presence of other structures with John Grigson and Noel Grigson who informed the team that there were two anti-aircraft machine gun pits near the Doover. The pits consisted of a timber lined circle, around 2.4m in diameter and 1.5m deep with a metal pole in the centre. This pole supported a light machine gun, perhaps a Bren, Lewis or Vickers machine gun. Running off the pit was an air raid shelter consisting of a timber lining which supported 2.4m x 1.2m x 125mm concrete slabs. The roof of the shelter was buried beneath the sand. In wet weather a slightly conical metal lid was placed over the top of the weapons pit to ensure the pit and air raid shelter did not fill with water.



*Figure 14. Anti aircraft pit cover salvaged from RS48 by the Grigson family post WW2. HDA photo with thanks to John and Noel Grigson for their assistance.*





*Figure 15. Anti aircraft action using a Bren Gun from WW2 Bren Gun LMG training manual (1943) (HDA archives).*



*Figure 16. HDA archaeologists examine the location of the anti aircraft pit gun and air raid shelter as indicated by John Grigson (2018). Looking southward. HDA photo.*



While there are no known plans of these pits in existence the dimensions can be inferred from the Grigson's testimony and the material from the pits they salvaged post-war. The concrete slabs have been used as flooring for their farm workshop and the metal lid is now used as a shelter for young calves (Figure 14).

Nothing remains of these structures. John Grigson visited the site with the HDA team and indicated these were located at:

Anti-aircraft machine gun pit and air raid shelter A      30°13'53.10" 114°59'41.81"

Anti-aircraft machine gun pit and air raid shelter B      30°13'54.06" 114°59'43.40"

Considering the typography of the site it is likely there are additional pits near the Doover. A depression around 15m north of the Doover foundations could be related to fortifications or other structures.

No evidence of wooden poles supporting power and communications cables has been located. It can be assumed a power line ran from the Igloos to the Doover, and the RAAF camp about 500m to the north east of the Igloos. A telephone cable also ran from the Doover to the RAAF camp. The Grigson family salvaged the copper wire and insulators from these lines. A single sawn off power pole has been located on the norther side of the quartermaster's store.

#### ***RS48 S4 Quartermaster's Store***

*GPS location 30°13'36.81" 114°59'53.76"*

##### *Description of structure*

S4 consists of a 5.7m x 3.7m concrete slab ringed by a 100mm internal lip. The structure was divided into at least two rooms by an internal wall. At the north eastern corner there has been post war modification to create a new drainage system, this is likely where the doorway into the structure originally stood. Just off the northern extent is remains of a large pole, likely to be for power.

##### *Function of structure*

HDA believes this was the quartermaster's office and storage for the RAAF camp servicing RS48 from 1943 to 1945.

##### *Pre disturbance and clearing*

S4 was covered in both sand and scrub brush. Clearing was undertaken using handsaws, shovels, and brooms. Some plants had taken root in small cracks in the concrete pad. They were removed with no damage to the structure. Cultural material was found in the surface layer, consisting of modern rubbish

such as beer bottles, aluminium cans and bottle tops. This material was dated by typology and stratigraphy as post WW2, therefor outside of the scope of our research questions and not collected.

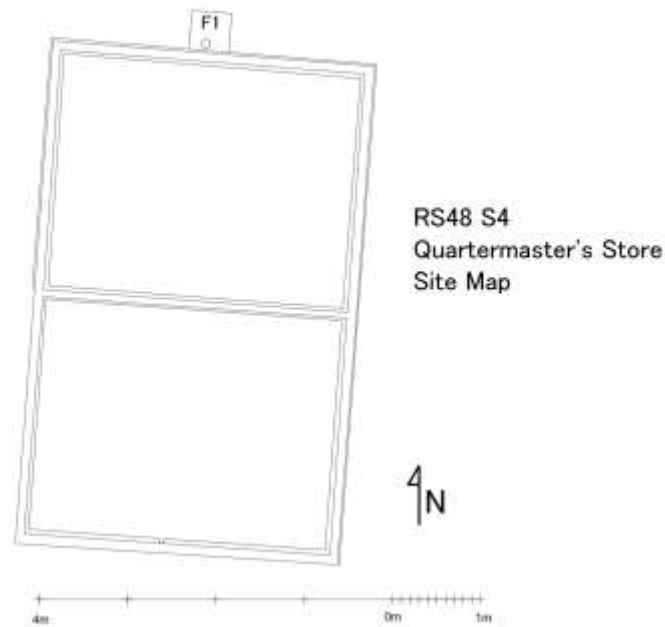


Figure 17. RS 48 S4 site plan. Created by Geoff Royce and Zack Sheppard.



Figure 18. Pre excavation of S4. Photo taken from the track running through the RAAF camp, looking west. HDA photo.



Figure 19. S4 after clearing for interpretation. HDA photo.



Figure 20. S4. Trench 1 Unit 1. HDA photo.

### *Determination of function*

Three methods were used to determine the function:

(a) Interpretation of the structure.

The structure itself, being relatively small, with little distinguishing features and lack of plumbing suggested some small administrative or storage use.

(b) Excavation.

An excavation was undertaken on the northern extent of S4 with the intention of understanding the function of a large wooden pole which was sawn off just above the surface. This excavation consisted of a 450mm x 450mm trench extended 400mm deep. Further probing suggests that the pole continues for a substantial depth beyond this, the depth of this pole, and its size led to its interpretation as a power pole.

(c) Oral history and literature review

Key information was provided to the HDA team by John Grigson and Noel Grigson (pers. comm. 2018) who were able to identify the structure itself as the Quartermaster's Store, corroborating the HDA team's interpretation.

### *Current Condition*

The foundations of S4 are in good condition.

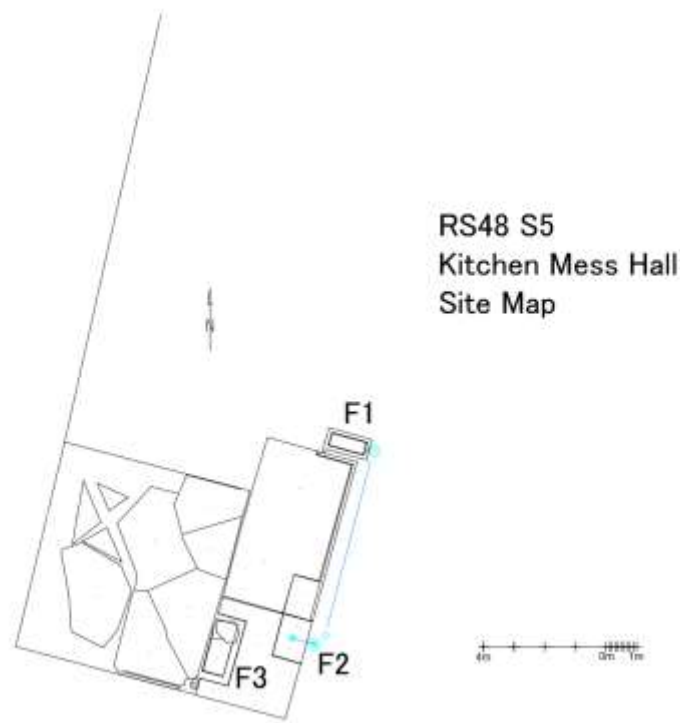


Figure 21. S5 site plan. HDA image.

## **RS48 S5 Kitchen and Mess Hall**

*GPS location 30°13'37.14" 114°59'54.24"*

### *Description of structure*

S5 is a concrete floor in two parts (A and B). Part A is 8.8m x 3m. The western section (B) is elevated 100mm higher than the eastern section (A). The floor has a 100mm concrete lip around the inside of the external wall. It is constructed from the same type of concrete as used in nearby structures associated with RS48 camp facilities. Part A holds evidence of an interior wall and is divided into two rooms. The northern most room contains a raised pad 1m x 1.3m x 50mm and the smaller southern room contains two elevated pads. One is a 1m x 1.6m x 100mm concrete pad containing a drain outlet, and the other is 1m x 2.2m constructed of broken bricks. At the north eastern corner of part A is a storm water sump (see excavation of Feature 1).

It is difficult to determine the dimensions of section B, the western section. The concrete floor is broken and the western edge is covered by deep sand. The edge of the slab and cracks have been modified post World War 2 using concrete in an effort to channel water off the broken slab into the nearby underground water tank.

There is a possibility of additional structures around the perimeter of S5. The eastern side was partially covered by an encroaching sand dune. It was beyond the capacity of the team, using hand tools, to excavate sufficient sand to determine if the storm water and effluent drains remain in situ or if there are additional structures around the perimeter of the concrete slab.

### *Function of structure*

The HDA team believes this is the kitchen, mess hall and recreation room for the Royal Australian Air Force camp servicing RS48 from 1943-1945.

### *Pre disturbance and clearing*

S4 was covered in sand, bushes and post war rubbish. The structure was cleared using handsaws, shovels, and brooms. Some plants had taken root in cracks in section B, however they were able to be removed with no damage to the structure. Cultural material found in the surface layer included modern rubbish such as beer bottles, aluminium, glass and bottle tops. This material was post WW2 and therefore outside of the scope of our research question.





*Figure 22. S5 pre disturbance. HDA photo.*



*Figure 23. S5 post clearing for interpretation. HDA photo.*



*Figure 24. S5 Feature 1 water sump, post excavation. HDA photo.*

#### *Determination of function*

Three methods were used to determine the function

##### *(a) Interpretation of the structure*

The structure contained a number of distinguishing features, including plumbing, internal doorways, external storm water drains, cooking facilities, suggesting a substantial structure used for food preparation, eating, recreation and large gatherings of personnel.

##### *(b) Excavation*

Three features were excavated:

F1. Water sump. F1 is a rectangular brick and concrete feature located on the north east corner, and external to, the kitchen and mess hall. The external measurements are 1465mm x 710mm. Excavation began after surface soil and leaf litter was removed at around 150mm from the top edge of the brick work. Samples were sieved using a 5mm sieve as excavation continued to the final depth of 610mm. Finds consisted of small pieces of post war glass and metal and included a modern small beer bottle at 380mm. No material related to the RS48 camp was located. The feature contained three broken slate baffles and it



was determined these served as a silt trap for storm water passing from roof (and gutter) drainage to the underground water tank nearby. The outlet of this feature was at one time linked to the underground water tank by an earthenware pipe. It appears this has been replaced using galvanised pipe post WW2. Using a metal detector the team tracked the galvanised pipe to an additional storm water drain located between S5 and the underground water tank. Test pitting at this drain uncovered a cool drink bottle from circa 1966. F1 had been damaged by salvage, and modified to allow water from the slab to be channelled into the nearby underground water tank. This modification was post demolition and related to the holiday camps built nearby post WW2.

F2. Drain. The drain is a 300mm hole at surface to 100mm below. It is on a raised elevated concrete pad 1m x 1.6m. The contents of the drain hole were sieved using a 5mm sieve. No cultural material was located. The drain takes waste water to an external drainage system which runs along the eastern side of the structure.



*Figure 25. S5 Feature 2 drain, post excavation. HDA photo.*



*Figure 26. S5 Feature 3 stove platform, post excavation. HDA photo.*

F3. Stove platform. This raised area consists of a partially demolished brick structure 2.05m x 97mm raised to a maximum height of 120mm above the concrete floor. It consists of a brick surround with a large block of concrete on the southern end. The feature's contents being sand with some small fragments of glass and metal, and a modern aluminium can and pull tabs which were revealed by utilising a 5mm sieve. The sand was sterile at 220mm from the top of the brick surround. It was determined this was the base for the camp stove and this interpretation was confirmed by John Grigson and Noel Grigson who partially demolished the building post WW2.

(c) Oral history and literature review

The HDA interpretation that the structure was a kitchen and mess hall was supported by the testimony of John Grigson and Noel Grigson (pers. comm. 2018) who assisted in the demolition of the structure post war.

John Grigson and Noel Grigson also informed the HDA team that there was an additional wooden extension to the building on the northern side of section A. This weatherboard covered wall, which included the wall above the concrete slab, was 70 feet long (approximately 20m). The building, constructed

of a timber frame, was not lined, with a corrugated iron roof and weatherboard external walls. The wooden extension was built on raised stumps and this section was completely removed by salvagers. While no structural evidence of this was found using a metal detector the team located numerous nails which showed evidence of being from demolition in the area indicated by the Grigsons. At the location of a possible northern wall of the timber addition the team found a storm water drain suggesting water was collected from a roof at this point. This drainage point is in the correct location for the '70 feet long wall' and indicates the Grigsons were correct in their recollections. Timber palings from the structure have been used to clad the workshop at the Grigson's farm. It is also apparent that the concrete floor at section A was supported on brick pillars and a brick wall beneath the slab edges. The wall and pillars were supported by footings. Probing along the southern side of section B has indicated footings are present. These pillars and the wall were removed during demolition and the concrete floor was deliberately broken and collapsed to ensure it would not be a trap for visitors wishing to explore beneath the floor of the structure (pers. comm. Noel Grigson 2018). The team was informed that bricks recovered from the site were used in the construction of water tanks and troughs on the Grigson's farm.

#### *Current Condition*

Section A of the structure is in good condition with some minor modifications post World War 2.

Section B has been damaged by demolition and has been modified post WW2.



*Figure 27. Weatherboards salvaged from S5 now form part of the Grigson's workshop wall. HDA photo.*



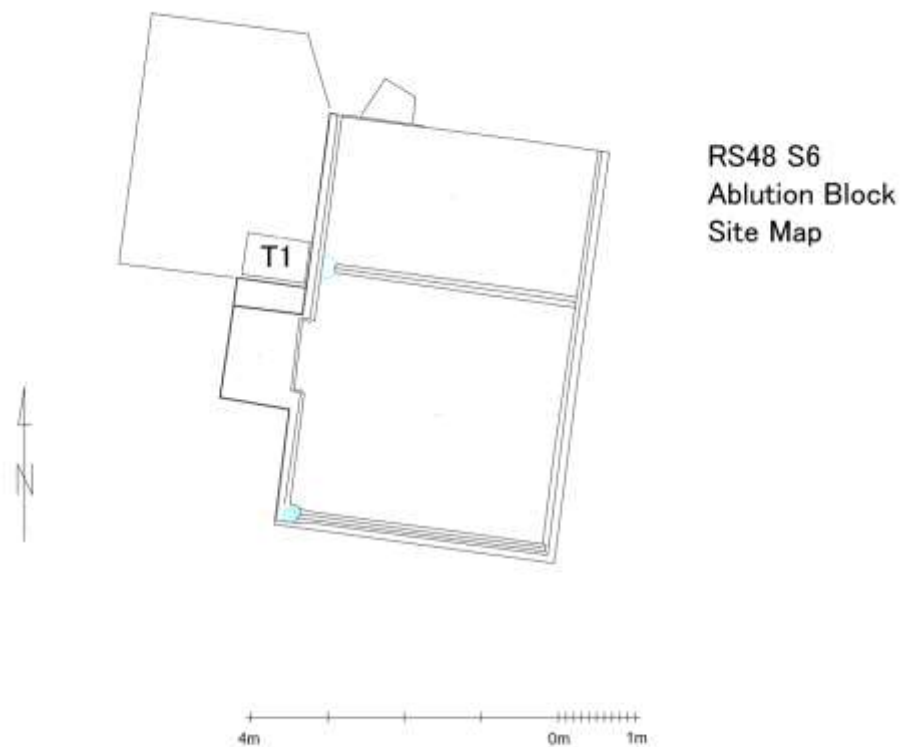


Figure 28. S6 site plan. HDA image.

#### **RS48 S6 Ablution Block**

*GPS location* 30°13'33.40" 114°59'54.83"

#### *Description of structure*

The main structure is a rectangular (5.5m x 3.70m) concrete foundation. A small extension off the western central end of the foundation measures 1.8m x 1m. Also constructed of concrete, this extension appears to be an entrance which is reached via 2 steps. Concrete construction of S6 is consistent with that which is found at other structures associated with RS48 camp facilities i.e. 'blue metal rock' and cement.

Running east – west a 'crack' traverses the foundation approximately one third of the distance from the southern edge. This may be the remains of a more intact original drain cemented over by campers after the abandonment of the building by the RAAF. A second 'crack' also running east – west, runs across the foundation at approximately two thirds of the distance from the southern edge. This crack may also be the remains of a drainage channel associated with the building's original use. On the western end of the foundation where this channel originally exited the building there is evidence of it having been either cemented over or modified in more recent times.



Figure 29. S6 before clearing for interpretation. Photo looking west. HDA photo.

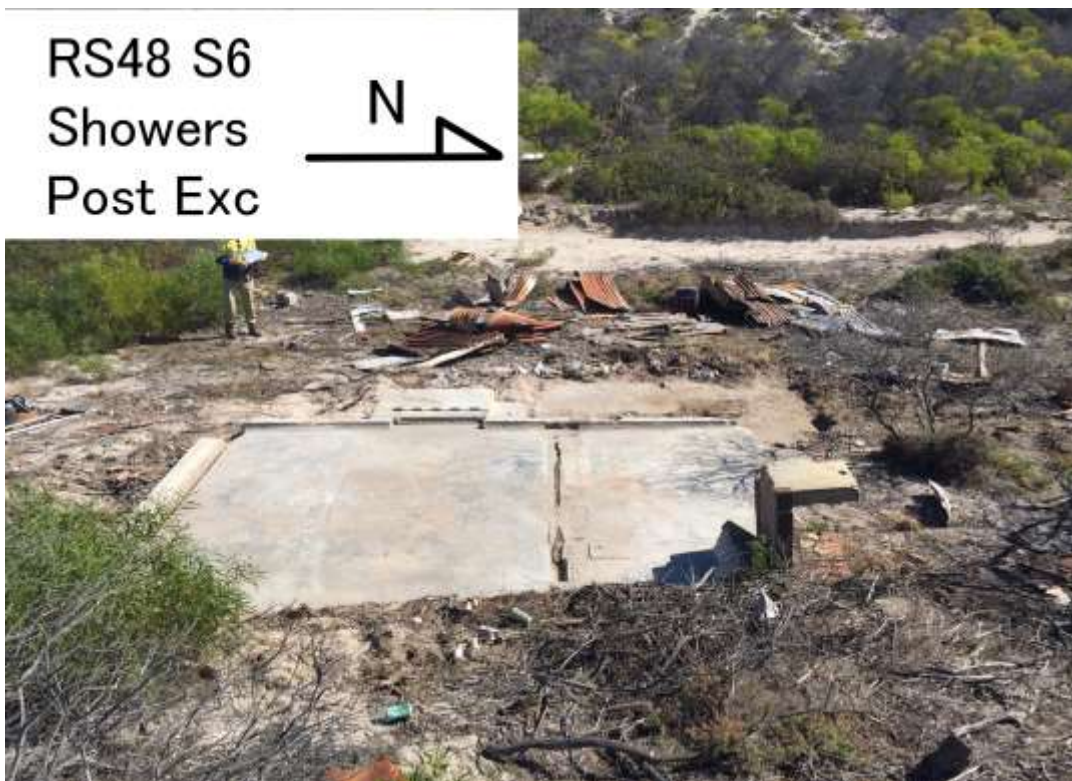


Figure 30. S6 after clearing for interpretation. Photo looking west. HDA photo.

The channel contains a coiled wire and fibre pipe which has been partially cemented in place. The enclosure of the channel and pipe inclusion are post WW2. They are believed to be associated with water collection by later users of the foundation.

Internal junctions of wall remains, with the floor of the foundation have been modified by a cement 100mm concrete lip running along the internal perimeter of the foundation. This modification is believed to be associated with water collection subsequent to the building's use as a shower block. Evidence of an internal wall running east to west is also evident. This consists of the remains of a brick and concrete feature protruding up to 10mm above the foundation and located immediately to the north of the northern 'crack'. Attached to this wall on its northern side are two raised concrete beds approximately 250mm x 250mm. One pad is located on the eastern corner of the wall and the eastern end of the foundation separated by approximately 500mm from the other.

Adjacent to the north east corner of the foundation is the remains of a brick and cement 'block' consisting of three sides of square shape. This structure appears to be made of a mix of WW2 and modern era bricks. It may be associated with the original use of the building or it could be a post WW2 structure utilising salvaged material.

Extending to the west (2.5m) and east (3.25m) of the foundation is a thin layer (200mm maximum thickness) of cement and possibly limestone or sand. This sits directly on the ground without a supporting sand pad or compressed earth below it. Its construction appears to be a post WW2 covering to reduce dirt being carried into the main building.

#### *Function of structure*

The HDA team believes this is the ablution block for the RAAF camp servicing RS48 from 1943-1945

#### *Pre disturbance and clearing*

S6 was covered with many sheets of corrugated iron, including some with bull nosing. Rusted round iron framing was also present over the foundation along with much modern rubbish including beer bottles, broken glass and various plastic waste. A thick leaf layer, branches and living shrubs also covered parts of the foundation. Beneath the larger items covering the foundation lay sand and smaller debris such as aluminium cans, plastic bottles, degraded plastic toys and glass fragments mainly from beer bottles. The material found over the foundation was identified as post WW2 and therefore beyond the scope of the current research questions. All material cleared to expose S6 was left on site.





*Figure 31. S6 Trench 1 Unit 3 post excavation. HDA photo.*

#### *Determination of function*

Three methods were used to determine the function

##### *(a) Interpretation of the structure*

The structure contained structural elements such as an internal drainage system indicative of a 'wet area'. A smaller adjoining room with two pads may be associated with a hot water or heating function. This smaller room may also have served as a laundry area. The size of the foundations is indicative of a function for small numbers of personnel at any given time such as for hygiene purposes. Collectively these structural elements are indicative of the building being used as a shower/toiletry and washing facility whilst it was part of the RS48 camp.

##### *(b) Excavation*

One feature was investigated.

S6 T1 Trench 1. A shovel test pit was placed at corner of the bottom step and western edge of the foundation. This test pit was extended to become a trench measuring 900mm x 600mm. All material removed from the trench was passed through a 5mm sieve.

Initial excavation adjacent to the bottom visible step aimed to find any indications of an additional step. Clearance to 40mm of leaf litter, sand and amber glass fragments revealed the existence of a post RS48 cement pad. Crumbling in places and loosely compacted, a sufficient area of this pad was removed to enable a broader investigation. The trench was placed in an area commonly called a 'sweep zone' which is typically where floor sweepings and cleaning results in material culture being cleared out of a room and deposited just beyond a door or entrance. It was anticipated that any finds within the sweep zone could reveal information about the age and function of the building.

Immediately below the cement pad (natural surface layer) post WW2 items located included fragments of amber glass, presumably from beer bottles, a pull tab, a clear glass fragment, plastic wrapping, two nails and a 303 bullet casing. These items are indicative of a mixed cultural material. The modern material found indicates that the cement pad was most likely constructed during the 1960s or later.

Below the surface layer to 200mm post WW2 cultural material was found. This included brown glass fragments and plastic. Building rubble consisting of fragments of concrete was found from 200mm - 300mm. The rubble may be associated with the demolition and salvage of parts of the building after the area ceased operations as part of the RS48 camp.

From 280mm a sterile layer was reached. Excavation to 300mm continued at which level the trench was closed.

(c) Oral history and literature review

The HDA interpretation that the structure an ablution or shower block during the operation of RS48 camp was supported by the testimony of John Grigson and Noel Grigson (pers. comm. 2018) who visited the camp during its operation. The Grigsons visited the site while the HDA team were present and confirmed the function of S6.

*Current condition*

The concrete foundation is in good condition with minor modifications post WW2. Despite the building being subjected to salvage pressures the outlines of some functional elements are still evident including an internal wall, internal drainage channels, concrete pads and steps. The addition of a post WW2 pad on the western edge of the structure may have assisted to maintain the integrity of part of the concrete foundation, forming a buffer from erosion or sand collection.





*Figure 32. Site plan for S7. HDA image.*

#### **RS48 S7 Latrine Block**

*GPS location 30°13'32.80" 114°59'54.87"*

#### *Description of structure*

This structure is a rectangular (5.5m x 1.85m) concrete foundation. Concrete construction consists of 'blue metal' rock and cement, similar to other concrete structures associated with the RS48 camp facilities. The foundation is 180mm thick and inclined with the higher side being on the western side sloping towards the eastern side.

Running along the western edge of the foundation is a shallow semi-circular drain (approximately 3m long) which is connected at each end to a circular drainpipe. Each drainpipe is tapered down through the concrete foundation to join a vertical earthenware sewerage pipe. Each sewerage pipe extends downwards to approximately 500mm before curving or else being joined to a curved earthenware pipe. Estimates of the angle of each curved pipe suggest both may be connected to pipes running towards points approximately 500mm south and north respectively from the middle of the eastern edge of the foundation.

On the eastern side of the foundation are four areas where chipping of the top has taken place. Three iron rods with the remains of threaded ends protrude 90mm from the eastern end of the foundation. Bounding the eastern edge of the foundation is a depression which extends for approximately

2m to the east. This depression may extend further but has been partially covered by a vegetated dune. A large section of flat galvanised iron was partially buried in the depression and is believed to be part of the original building. This sheeting is riveted together in sections and one section has a manufacturer's mark 'Queen's Head' visible.



*Figure 33. S7 before clearing for interpretation. Facing east. HDA photo.*

#### *Function of structure*

The HDA team believes this is the latrine or toilet block for the camp servicing RS48 from 1943-1945.

#### *Pre disturbance and clearing*

Access to S7 was enabled by clearing of vegetation, mainly acacia bushes and shrubs.

The site was cleared of vegetation, surface, post war refuse, sand and leaf litter. Clearance of the concrete foundation consisted of removal of sand over the surface, accumulated leaf litter, invasive plants and modern rubbish. Hand saws, shovels, secateurs, trowels, hand scoops and buckets were used to carefully clear the concrete foundation.

Observation of cultural material located during clearance of S7 indicated it to be of post war vintage, mainly from the 1970s onwards consisting of stubbies, aluminium cans, plastic drink bottles and

associated plastic wrapping. This cultural material was beyond the scope of the current research. All cleared material was left on site.



*Figure 34. S7 after clearing for interpretation. Photo looking to the west. HDA photo.*

#### *Determination of function*

Three methods were used to determine the function:

##### *(a) Interpretation of the structure*

The concrete structure contained a number of distinguishing features, including the drainage channel connected to two downpipes which were attached to plumbing pipes. This is suggestive of a urinal. Protruding iron rods with threaded ends are suggestive of additional structures which attached to the eastern side of the foundation either as attachments points for extensions eastward, for a wall or toilet seats. The chipping of the floor on the eastern side of the foundation in concert with the depression adjacent to the eastern edge are indicative of a toilet setting perhaps into or over a long drop or other sewerage system.

##### *(b) Excavation*

Five features were excavated:

F1 Northern Drainpipe. The downpipe is located on the western edge of the foundation and is at the northern end of a drainage channel. Commencing as a round hole, approximately 300mm in diameter, through the concrete foundation, the drainpipe tapers to join an earthenware plumbing pipe. This pipe extends vertically approximately 500mm before connecting to a curved earthenware pipe which redirects any flow of material above it at a right angle and towards the eastern side of the foundation.

Excavation of the northern drainpipe consisted of removal of a top layer of leaf litter and sand followed by hand excavation to the connecting curved earthenware pipe. Excavation beyond the mid-section of the curved connecting pipe was not possible due to lack of physical access.

All material removed from the northern drainpipe was collected and sieved through a 5mm sieve. Finds consisted of fragments of amber glass from beer bottles of modern age and rusted iron fragments between the surface and 280mm. One 303 bullet cartridge was found at 250mm and an Australian two cent coin was located at 500mm. These findings are indicative of mixed modern and possibly a single WW2 era cultural material.



Figure 35. S7 Feature 1 post excavation. HDA photo.





*Figure 36. S7 Feature 2 post excavation. HDA photo.*

F2 Southern Drainpipe. Located at the southern end of a drainage channel, the southern drainpipe has the same dimensions as F1 Northern Drainpipe above. Probing with a metal rod was used to determine the depth of the southern drainpipe and the angle of its orientation towards the eastern perimeter as it was not possible to fully excavate it beyond 430mm due to the confined space within the pipe. Using the same excavation methodology as described for F1 Northern Drainpipe above, no artefacts were located.

F3 Trench 1. A trench measuring 2m north - south by 1m east – west was opened up at the eastern edge of the concrete foundation from the middle of the eastern perimeter and running north. The trench was sited to try to locate the eastern end of the F1 Northern Drainpipe plumbing pipe as it exited the concrete foundation. Evidence of the function of the depression and material culture associated with the original function of the building were also sought.

No evidence of any plumbing pipes exiting the concrete foundation or running beneath it were located and no change in sand colour or compaction was evident when the trench was ceased at 410mm.



The HDA team believe any plumbing pipe was removed after the building has been left by the RAAF, possibly by people seeking building materials for farms or fishing shacks.

Loose sand with root intrusions along with a surface leaf litter contained a variety of modern cultural material indicative of use of the depressed area for a refuse site, possibly by campers. All excavated material was processed through a 5mm sieve. Below 200mm intact stubbies, plastic and glass fragments lessened. Finds included 37 intact stubbies, numerous fragments of amber glass from stubbies and beer bottles, 8 beer cans with ring pull tops, AA battery, plastic drink bottle, building rubble, angle grinding disk, numerous plastic bag and wrapping fragments, 4 x 303 bullet cartridges, braided copper wire partially insulated and an iron cleat.



*Figure 37. S7 Trench 1 Unit 3. HDA photo.*

F4 Trench 1 Sondage. A 700mm X 700mm sondage was dug at the south eastern corner F3 Trench 1 to look for evidence of plumbing or sewerage remains and the possibility of a cultural layer contemporary with the use of the building during its time as a latrine. The sondage was dug to a depth of 1100mm with material cultural finds decreasing until a sterile layer was reached at 900mm. No evidence of plumbing or sewerage remains were found and modern/mixed cultural layer of material was found. Finds included 2

pieces of unidentified grey/black material, possibly organic or plastic, amber glass fragments, a 303 bullet cartridge and a piece of wood.

F5 Trench 1 Sondage Shovel Trench. A shovel excavation was carried out to a depth of 1200mm at the north eastern corner of F4 Trench 1 Sondage to look for any evidence of organic deposition or a deeper cultural layer. No evidence of either was found.

(c) Oral history and literature review

The HDA interpretation that the structure was a latrine was supported by the testimony of John Grigson and Noel Grigson (pers. comm. 2018) who visited RS48 camp as children. The Grigsons visited while HDA were investigating the site and confirmed that S7 was the remains of the RS48 toilet block.

*Current condition*

The concrete foundations is in good condition with some minor modifications post WWII. The depression immediately east of the concrete foundation may be relatively intact but filled with post WWII refuse with its eastern periphery covered by a sand dune.



*Figure 38. Site of S8. Facing south east. HDA photo.*

### ***RS48 S8 Mechanic's Hut***

*GPS location 30°13'35.29" 114°59'54.23"*

#### *Description of structure*

S8 consists of a small irregularly shaped concrete slab, made of a thin and improvised concrete.

#### *Function of structure*

HDA believes S8 is a post war structure not related to RS48 or its function, however it occupies an area identified as the location of the Mechanics' Hut.

#### *Pre disturbance and clearing*

S8 was in a cleared area near a track intersection. Clearing consisted of only removing large segments of post WW2 construction material. Cultural material was found in the surface layer, consisting of modern rubbish such as beer bottles, aluminium cans and bottle tops. This material was dated by typology and stratigraphy as post WW2, and outside of the scope of our investigations and not collected. Probing was undertaken in the surrounding bushland to ensure the extent of S8 was uncovered.

#### *Determination of function*

Three methods were used to determine the function:

##### *(a) Interpretation of the structure*

The rudimentary design and construction of S8 strongly suggest that it is a post WW2 construction. It shares almost no similarity with other structures located at RS48.

##### *(b) Excavation*

A 500mm x 500mm shovel test pit was placed in the middle of the concrete pad of S8 and excavated to a depth of 300mm. Within this shovel test pit, and located under the concrete slab was cultural material dated to post WW2. This suggests that the concrete pad was placed after the end WW2.

##### *(c) Oral history and literature review*

Key information was provided to the HDA team by John Grigson and Noel Grigson (pers. comm. 2018) suggesting that the area where S8 was located was once a mechanics' area. However no corroborating archaeological evidence was found.

#### *Current condition*

S8 is in poor condition, due to low quality design and materials. However, due to not being WW2 related, its condition and protection are outside of the scope of this report.

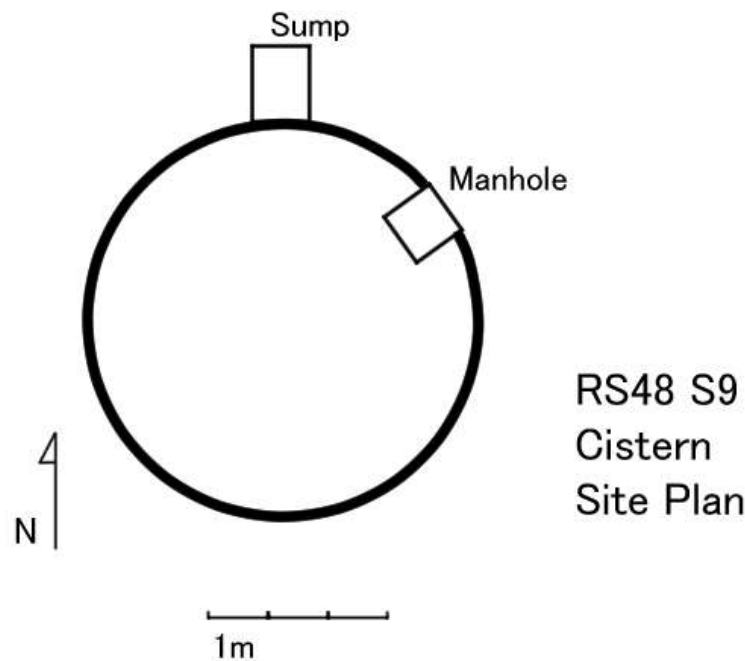


Figure 39. Cistern site plan. HDA image.

#### ***RS48 S9 Cistern (and associated pipes)***

*GPS location 30°13'36.25" 114°59'54.11"*

#### ***Description of structure***

The underground cistern has a diameter of 6.48m meters and an estimated volume of 41.7 cubic meters. It has been constructed from concrete using a similar style of construction to the Igloos and concrete foundations nearby. Access to the interior of the tank is through a manhole which is 2 x 2 feet in Imperial measurements. Iron rungs have been concreted into the tank wall. The structure also includes a number of water pipes. An earthenware plumbing pipe partially cracked runs into the ground near the cistern. Given its location adjacent to S9 it is assumed this pipe runs into it. The flanged end of the earthenware pipe is at the top. A second element consists of a pipe fitting the internal diameter of the earthenware pipe and extending vertically above it. This pipe is constructed of flat galvanised iron which has been shaped to fit the earthenware pipe then riveted to maintain its correct size. The top of the galvanised iron pipe has been cut into small segments which have been folded towards the centre to fashion a partial cap. A hole has been cut into the side of the galvanised iron pipe to allow the third element, a commercially



manufactured galvanised iron water pipe to run at a slight angle into the vertical pipe. The galvanised pipe runs at an angle of approximately 170 degrees magnetic towards S5.



*Figure 40. Western edge of the cistern roof. Photo looking north. HDA photo.*



*Figure 41. Interior of cistern (2016). HDA photo.*





*Figure 42. Cistern man hole. HDA photo.*

#### *Function of structure*

The HDA team are confident this is the cistern for holding fresh water for the RS48 camp from 1943-1945. The pipework adjacent to the cistern is a drain pipe feeding rainwater run-off from S5 Hall to S9 and forms part of the fabric of the camp servicing RS48 from 1943-1945. Modifications to the drain pipe were made by subsequent users.

#### *Pre disturbance and clearing*

The cistern was not exposed during these investigations. The associated pipe was partially covered with sand, leaf litter, broken bottles and undergrowth. Clearance consisted of removal of sand over the surface, accumulated leaf litter, invasive plants and modern rubbish. Hand saws, shovels, secateurs, trowels, hand scoops and buckets were used to carefully clear area to enable ease of access. No evidence of any cultural material associated with WW2 operations was located during clearing. All cleared material was left on site.

#### *Determination of function*

Three methods were used to determine the function:

##### *(a) Interpretation of the structure*

The cistern is in good condition and is clearly for fluid storage. It was accurately recorded in 2016 and no additional measuring or interpretation was required for this report. The associated water pipe is situated

near the edge of S5 and S9. This relative location suggests a function linking these two structures. An earthenware plumbing pipe running into S9 is indicative of the pipe being part of a water collection system employed during the operation of the RS48 camp. Subsequent modifications to the original earthenware pipe are indicative of later attempts to continue with its function as a water collection down pipe.

(b) Excavation

One excavation was conducted:

Shovel Pit 1 (S9) Drain Pipe. A shovel pit 800mm X 800mm was excavated to determine the function of the protruding riveted galvanised iron pipe and in the process to determine its relationship with nearby structures. All material excavated was passed through a 5mm sieve. The excavation revealed a manufactured galvanised iron water pipe at 50mm connected to the vertical riveted galvanised pipe. Immediately below the galvanised iron water pipe was an intact Coke bottle with a label indicating the contents as '1 Litre' and '35floz'. The use of both Imperial and Metric measures of volume on this bottle indicate that it was used around the time of the introduction of metric measurement in Australia. This indicates that the galvanised iron modifications to the original site probably happened at or after this time i.e. in the mid-1960s or later.

At 280mm the vertical pipe fitted into the flanged end of an earthenware plumbing pipe. Cultural material remains found from 250mm to the end of excavation at 300mm consisted of corroded iron fragments possibly from a can, fragments of concrete and earthenware plumbing pipe.



Figure 43. S9 drain post excavation. HDA photo.

(c) Oral history and literature review

John Grigson suggests this tank was filled by run off from the roofs of the nearby military buildings and fishermen later adapted the exposed nearby foundations to enable water to be diverted into the tanks (pers. comm. John Grigson 2018). No information was sought in regards to the associated pipes.

*Current condition*

The cistern is in very good condition. The earthenware downpipe forms part of a broader plumbing and rainwater collection infrastructure which was essential for the long term operation of the camp. Much of this infrastructure is buried. Subsequent modifications appear to be 'local' and may be representative of the ingenuity of subsequent users.

***RS48 Deposits***

The following is an evaluation of four deposits of cultural material which were identified in the 2016 report as warranting further examination to establish if they were related to RS48. (Please note: D2 from the 2016 report is now covered by the area described as the 'Army Camp (RS48A)').



*Figure 44. Example of material on the surface at D1 in 2016. HDA photo.*





*Figure 45. D1 post excavation. HDA photo.*

#### RS48 D1 Bully Beef Tin Dump

*GPS location* 30° 13' 43.62" 114° 59' 49.59"

#### *Description of deposit*

D1 is located within a sand dune blowout and consists of scattered cultural material protruding from the sand walls. This material was observed in the 2014 and 2016 reports.

#### *Origins of deposit*

HDA believes D1 is a rubbish dump. While we have not been able to ascertain an exact period, the bully beef tins consisting much of the material present in D1 is contemporary to WW2 and RS48's usage.

#### *Investigation of deposit*

A 500mm x 300mm shovel test pit was placed within the area designated as D1 and excavated to a depth of 200mm. This excavation was intended to investigate the depth of material. The excavation found no additional material other than that found on the surface. This suggests that the extent of D1 is only what is immediately visible in the sand dune blowout.

#### RS48 D3 Bottle Dump

*GPS location* 30° 13' 35.01" 114° 59' 55.16"

#### *Description of deposit*

D3 is a scattering of modern alcohol bottles and cans dispersed over an area of shrub land

#### *Origins of deposit*

HDA believes D3 is a random dispersion of modern trash.

#### *Investigation of deposit*

A study of the cultural material found at D3 determined it was deposited post WW2, and none was relevant to RS48 or its related activities. It was considered outside of the scope of this investigation and no further work was undertaken.



*Figure 46. D4 bottle dump. HDA photo.*

#### RS48 D4 Bottle Dump

*GPS location* 30° 13' 36.46" 114° 59' 53.55"

#### *Description of Deposit*

D4 is a modern bottle and trash dump, located on the surface off the south western corner of S4, the Quartermaster's Store.



### *Origins of deposit*

HDA believes believe that D4 is a modern bottle dump created by post WW2 activities and campsites.

### *Investigation of deposit*

A study of the cultural material found at D4 determined it was deposited post WW2, and none was relevant to RS48 or its related activities. It was considered outside of the scope of this investigation and no further work was undertaken.



*Figure 47. D5 bottle dump. HDA photo.*

### **RS48 D5 Bottle Dump**

*GPS location 30° 13'40.96" 114° 59' 56.87"*

### *Description of deposit*

Located by HDA (2016 report) at the south eastern end of their survey area this site consists of approximately 20 intact beer bottles and stubbies covering a 3 meter area. In situ dating of the intact bottles indicates the majority are of post WWII with stubbies dating from the 1980s. An intact amber glass jar screw top jar embossed with "FAULDING & Co LTD" on the shoulder was also found along with numerous fragments of broken brown glass.

### *Origins of deposit*

The HDA team believes this site is not associated with the operation of RS48 camp. It is a small collection of bottles and a jar which have accumulated up to recent times.

### *Investigation of deposit*

Observation of the site indicated a collection of bottles, a jar and broken glass. The area, density and amount of cultural material is suggestive of casual discarding of glass items rather than a bottle dump. Dating of bottles, a jar and bottle base fragments suggest a date range of material from the 1940s through to current times. It has no known relationship to the operation of RS48. The site is intact but is not considered to be of relevance to the current research question.

## ***RS48 Additional structures (administration and accommodation)***

### *Introduction*

John Grigson and Noel Grigson recall seeing the number '13' on one of the RAAF buildings when they visited the active radar station between 1942 and 1945. This suggests there are at least 13 RS48 related buildings in the area.

The Grigsons indicated there were at least 5 additional structures at the RAAF camp of which nothing visible remains as these were completely salvaged post war. Including the five structures revealed by John Grigson and Noel Grigson and the three structures at the radar station site the HDA survey work has accounted for 13 structures.

### *The signals room*

Approximate location 30°13'37.98" 114°59'53.13"

The signal room was situated on a slightly elevated position at the southern end of the RS48 camp. It consisted of a wooden floor on stumps, weatherboard walls and a corrugated iron roof. This room received the signal information from the Doover and was connected to it, and the Igloos, via telephone and power cables. The Grigson's testimony is supported by the HDA team's discovery of a buried copper earth stake at 30° 13' 36.92" 114° 59' 52.50".

### *The medical officer's room*

Approximate location 30°13'37.06" 114°59'53.61"

The medical officer's room was situated on a slightly elevated position at the southern end of the RAAF camp and adjacent to the mess hall. It consisted of a wooden floor on stumps, weatherboard walls and a

corrugated iron roof. The Grigson's testimony is supported by the HDA team's discovery of a number of iron nails in the area which suggested demolition.

#### *Officers' quarters*

Approximate location 30°13'35.12" 114°59'53.73"

The officers' quarters was situated at the point where the main access track to Jurien Bay entered the camp. It consisted of a wooden floor on stumps, weatherboard walls and a corrugated iron roof. The building was lined.

The building was completely salvaged post war. No evidence of this building was located by the HDA team.

#### *Barracks A*

Approximate location 30°13'34.34" 114°59'53.77"

The first of two barracks was situated to the north of the officers' quarters. It consisted of a wooden floor on stumps, weatherboard walls and a corrugated iron roof. The building was not lined. The building was approximately 20m long. The building was completely salvaged post war. No evidence of this building was located by the HDA team.

#### *Barracks B*

Approximate location 30°13'33.41" 114°59'53.98"

The second barracks was situated to the north of the barracks described above. It consisted of a wooden floor on stumps, weatherboard walls and a corrugated iron roof. The building was not lined. The building was approximately 20m long. The building was completely salvaged post war. No evidence of this building was located by the HDA team.

### ***RS 48 camp additional infrastructure (services)***

#### *Introduction*

In addition to the structures described above John Grigson and Noel Grigson provided details of the following infrastructure associated with the Radar Station.

#### *Access road*

The access road for the camp was east of the officers' quarters and passed the mechanic's hut on the right heading towards Jurien Bay. There was no track through the RAAF camp heading north as there is today.

### *Telephone line*

A telephone line ran from the RAAF camp eastwards towards Mount Leseur. The Grigson family salvaged part of this line post war.



*Figure 48. Insulators salvaged from the radar station telephone line by the Grigsons post WW2. HDA photo courtesy of the Grigson family.*

### *Small arms firing range*

There was a small arms firing range to the north of the latrines. This included a firing mound.

### *Water tank*

A metal tank was located at a high point on the sand dune ridge to the west of the RAAF camp. This tank provided water pressure for the camp facilities. Water was pumped to it from the underground tank.



### *Rubbish dump*

A rubbish dump was located east of the RAAF camp in a hollow in the dunes. This could be beneath the dump which contains much of the rubbish from the holiday shacks which existed in the area. It appears much of the material from the shacks which were demolished around 2000 was also dumped here.

### *Waste water, storm water and effluent pipe*

Along the main track and adjacent to S6 is a section of earthenware pipe (S10 in the 2016 report), which appears to be intact, but also may have been moved by track maintenance or earthmoving. Local informant John Grigson informed to team this pipe took sewerage and storm water from the camp buildings to the ocean (pers. comm. John Grigson 2018). There are numerous pieces of earthenware pipe scattered around the area and it is believed much of this was salvaged or reused by shack builders after WW2. The ocean outlet is located at approximately 30°13'29.02" 114°59'54.58"



*Figure 49. Probing for the waste water pipe along the edge of the main track through the RAAF camp in 2016. Earthenware pipe can be seen in the foreground. Photo facing north. HDA photo.*





*Figure 50. Overlay (yellow) on a Google Earth image of the tentative boundary and area of the WW2 army camp RS48A. This is in the depression in the dunes immediately to the west of the RAAF camp. HDA image.*

## **RS48A Investigations and Results (Army camp)**

*GPS location 30° 13' 36.16" 114° 59' 50.72" (in the vicinity of)*

### *Previous work*

During the 2016 survey archaeologists and volunteers located cultural material from a possible military camp to the west of the RS48 camp using AMD methods. The area of highest concentration of metal targets was designated 'D2' in the 2016 report and has been designated RS48A in this report.

Based on observations of the plans of other radar stations around Australia, and in the absence of historical records of RS48, the survey team believed there would be a separate camping area for enlisted

men or Army personnel away from the main camp area. These men would be housed in tents which would lack lasting structural components.

In the absence of visible evidence of the camp being located during transects the senior archaeologist and principal of HDA, Bob Sheppard, decided an AMD reconnaissance would locate buried cultural material associated with the camp.

The team believed a camp would be in the shelter of the dune system either to the west or east of the structural components (foundations). This would allow for a separation of the enlisted men and officers but would be in close proximity to the mess hall, headquarters and the ablution block.

The western side was the preferred site as it allowed easier access to the beach for the military personnel.

In 2016 using archaeo metal detection, archaeologist Bob Sheppard and volunteers Ian Styles and Brad Faulkner located a military site in the depression between the dunes immediately to the west of the visible structural elements at RS48.

Shallow test pits were used to identify a number of near surface metal targets.

Finds included a tube of insect repellent, a tube of shaving cream, a 303 cartridge in a clip, pieces of barbed wire and numerous 303 cartridges. Several large pieces of metal were located but not identified and left in situ. The larger targets were around 600mm deep.



*Figure 51. WW2 insect repellent and shaving cream tubes located at RS48A in 2016. HDA photo.*



*Figure 52. Fired 303 case in an ammunition clip located at RS48A in 2016. HDA photo.*



*Figure 53. Fragments of barbed wire located at RS48A. HDA photo.*

In an area of 80m x 20m 80 buried targets were located and recorded by GPS and left in situ without identification or test pitting. Sheppard (2016 Report) estimated the coverage of the area was around 20 per cent which would indicate there are 400 metal targets in the search area. Based on Sheppard's previous experience a similar number of non-metal artefacts could also be present.

None of the metal artefacts located were visible and therefore would not have been located using conventional visual survey during transects. It was determined that in the 2018 investigations shovel test pits and formal excavations would be used to establish the extent and contents of the deposit.

#### *Determining the extent of RS48A*

The extent of RS48A was determined by an AMD survey combined with a terrestrial survey. HDA archaeologists used a CTX3030 metal detector for this survey.

The methodology was to search for WW2 era metal artefacts using the metal detector, this included barbed wire, bullet casings, and dateable personal goods. To determine this, metal objects found were excavated in small shovel test pits, until they were uncovered and age be determined. These artefacts were then left in-situ. When a WW2 era artefact was found the search continued radially from that point until no further WW2 material was located, the point at which the WW2 material stopped being found was considered a tentative boundary for the extent of the site. This was undertaken at first on cardinal and ordinal points, however the survey became more organic as the RS48A site's shape became irregular.

The extent of the site can generally be considered to be the valley directly west of RS48, sharing a common boundary bordered with the North Head car park to the south, and a camping area to the north.

RS48A could consist of a larger area than determined during the survey. Modern camping areas are directly to the north and south of RS48A, including a large car park. These disturbances could have either destroyed part of RS48A, or their footprint may obscure evidence of RS48A. Further surveying could find additional WW2 material scattered further away but the team believes the main campsite lies within the marked area.

#### *Structures*

During the 2016 and 2018 investigations no structural elements similar to those at RS48 were located at RS48A. While being shown the archaeological activities at RS48 in 2018, informants John Grigson and Noel Grigson told the HDA team that the army was camped in the valley in the sand dunes to the west of the RS48 camp. This supported the HDA team's observations from 2016. The Grigsons recalled the soldiers were 'doing it tough' and living in tents. The water supply was two shallow soaks dug in the sand. They



recalled there was a small corrugated iron hut at the site which the Grigsons later salvaged. The galvanised iron appeared to have been in a fire and could have been deliberately burned.

According to the Grigsons, tension existed between the soldiers and the RAAF personnel over the difference in accommodation available to the two groups. The soldiers moved out of their camp two days before the full contingent of RAAF personnel arrived.

One wooden floor stump is visible at the base of the western dune at RS48A and a piece of corroded corrugated iron was located in a shovel test pit nearby. There are a number of broken concrete blocks near the track through RS48A and these could be related to foundations of a hut. Structural related artefacts also included galvanised iron building stump caps, various nails, a bolt, galvanised iron, alloy eyelets, iron wire, copper wire and soldering wire. These finds indicate the likelihood of at least one wooden stumped building, with some walls requiring fixing to frames by nails being located at the site and later salvaged. No indication of the roof material is evident and the size of function of the building/s is not known.



*Figure 54. Concrete block on the side of the track through RS48A which could be part of the foundations of the small hut reported by John and Noel Grigson. HDA photo.*



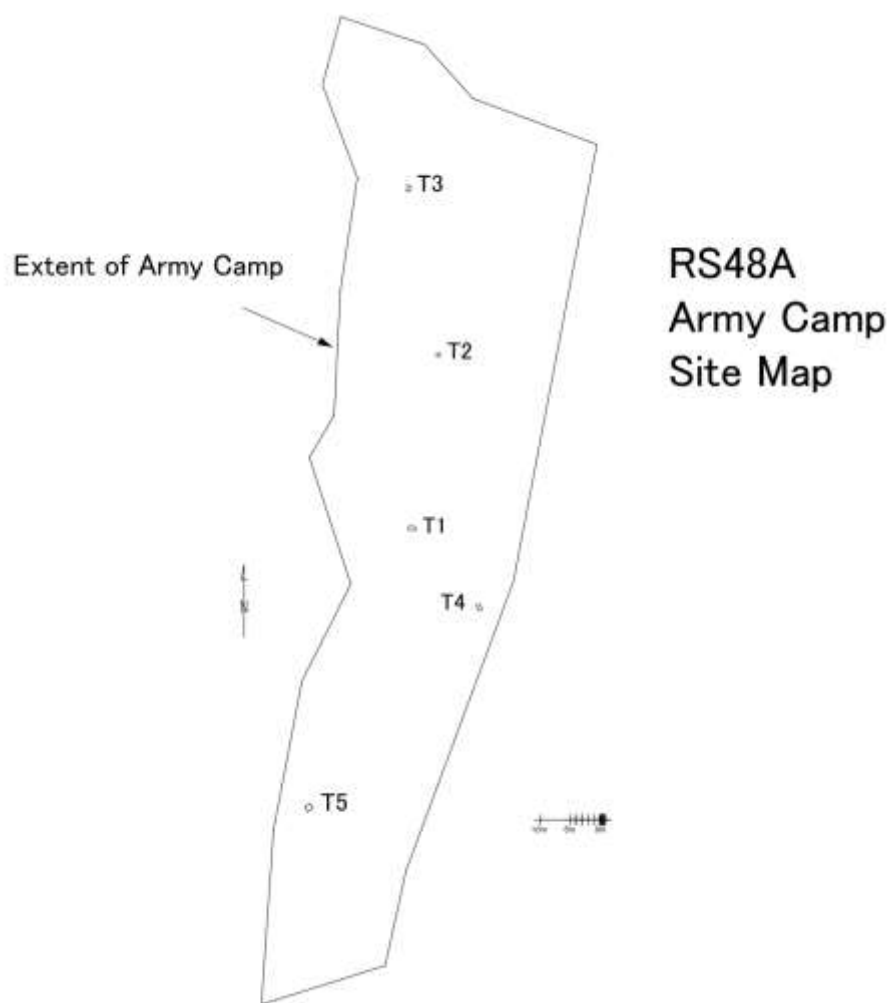


Figure 55. Location of archaeological excavations carried out at RS48A in 2018. HDA image.

## **Excavations at RS48A**

### **RS48A Trench 1 (RS48AT1)**

*GPS location 30°13'36.82" 114°50'41.61"*

#### *Method for determining placement of trench*

Trench 1 was placed in accordance to the results of an AMD survey. A cluster of metal anomalies were detected within a close proximity of each other. HDA archaeologists decided this was a key area of interest for a trench.



*Figure 56. RS48A T1 post excavation. HDA photo.*

*Description of trench*

Trench 1 is a 1.25m x 800mm excavation that extended to a depth of 300mm.

*Description of context*

Trench 1 consisted of a single stratigraphic unit named Unit 1. Unit 1 is a loose, medium grain, light grey (10 Y/R 7/1 on the Munsell chart) sand which consists of the majority of sand dunes present at both RS48 and RS48A. Leaf litter on the surface and root intrusions are present throughout Unit 1.

*Description of finds*

Trench 1 located several noteworthy finds. A fired 303 cartridge case was located at 120mm. This cartridge was produced in Hendon, Australia during WW2. Also at 120mm was a Brylcream hair cream bottle of 1940s vintage. An iron construction cleat with nails was also located at this depth. While it cannot be easily dated, we suggest that it could have been used in the construction of canvas clad buildings.

### *Conclusion*

Trench 1 uncovered WW2 material that we believe could be associated to the Army Camp. The finds included military items, personal items, and construction items. This diversity of WW2 era artefacts is interesting, especially when compared to other excavations including those undertaken at the RS48.



*Figure 57. Brylcream jar found in RS48T1. HDA photo.*

### **RS48A Trench 2 (RS48AT2)**

*GPS location 30°13'36.05" 114°59'50.91"*

*Method for determining placement of trench*

Trench 2 was placed in accordance to an AMD survey. A single large metal object was located by archaeologist Bob Sheppard. It was decided that it would be valuable to excavate as a trench.

*Description of trench*

Trench 2 is a 500mm x 700mm excavation that extended to a depth of 250mm.

*Description of context*

Trench 2 consisted of a single stratigraphic unit named Unit 2. Unit 2 is a loose, medium grain, light grey (2.5 Y/R 7/1 on the Munsell chart) sand which consists of the majority of sand dunes present at both RS48 and RS48A. Leaf litter on the surface and root intrusions are present throughout Unit 2.

*Description of finds*

During excavation of T2, the large metal object that was located was found to be a corroded steel post.

*Conclusion*

HDA believes the steel post located within T2 could be WW2 era and lumps of corrosion attached to the steel post could represent the remnants of wire. This means that the post located in T2 could represent part of the barb wire defences located around RS48A.

### **RS48A Trench 3 (RS48AT3)**

*GPS location 30°13'35.27" 114°59'50.92"*

*Method for determining placement of trench*

Trench 3 was placed in accordance to an AMD survey. Zack Sheppard and Steve Wells located a cluster of metal objects in a close proximity to a WW2 era surface find. A trench was placed under the assumption that more WW2 artefacts would be located nearby.

*Description of trench*

Trench 3 is a 1m x 700mm excavation that extended to a depth of 350mm.

*Description of context*

Trench 3 consisted of a single stratigraphic unit named Unit 3. Unit 3 is a loose, medium grain, light grey (7.5 Y/R 8/2 on the Munsell chart) sand which consists of the majority of sand dunes present at both RS48 and RS48A. Leaf litter on the surface and root intrusions are present throughout Unit 3.





*Figure 58. Shaving cream tube found on the surface at T3. HDA photo.*

#### *Description of finds*

T3 contained a single significant find. The artefact found on the surface in direct proximity to T3 was a pre-1953 dated tube of shaving cream. We believe that this artefact is likely part of a soldier's daily grooming while stationed at RS48A. The artefact found at a depth of 120mm within T3 is a 1940's/50's alloy tube of toothpaste, which is also likely related to RS48A's wartime usage.

#### *Conclusion*

HDA believes the combination of two WW2 era personal grooming items found close to each other in T3 is significant in telling us about the daily life of soldiers at RS48A.





*Figure 59. RS48A T3 post excavation. HDA photo.*

#### ***RS48A Trench 4 (RS48AT4)***

*GPS location 30°13'36.54" 114°59'51.55"*

*Method for determining placement of trench*

Trench 4 was placed by HDA archaeologists over a surface find of a WW2 era bottle with the assumption that further WW2 material would be found nearby.

*Description of trench*

Trench 4 is a 500mm x 500mm excavation that extended to a depth of 300mm.

*Description of context*

Trench 4 consisted of a single stratigraphic unit named Unit 4. Unit 4 is a loose, medium grain, light grey (7 Y/R 7/1 on the Munsell chart) sand which consists of the majority of sand dunes present at both RS48 and RS48A. Leaf litter on the surface and root intrusions are present throughout Unit 4.





Figure 60. Surface find at RS48A Trench 4. HDA photo.



Figure 61. RS48A T4 post excavation. HDA photo.

### *Description of finds*

T4 contained 5 fragments of iron cans, and a small section of soldering wire, which are non-diagnostic. However the bottle found on the surface of T5 has been dated from 1934-1948, which means it could likely be related to activities undertaken at RS48A during WW2.

### *Conclusion*

While the bottle at T4 is likely WW2 related, due to it being a surface find amongst modern rubbish, it is hard to determine if it is a primary deposition.

### **RS48A Trench 5 (RS48AT5)**

*GPS location* 30°13'39.02" 114°59'49.91"

### *Method for determining placement of trench*

At the start of the investigation of RS48A, HDA archaeologists conducted an AMD survey to delineate the extent of the RS48A campsite. During this survey archaeologists located a concentration of metallic objects. This was chosen to be the location of Trench 5.

### *Description of trench*

Trench 5 was a 1.2m x 1.5m trench excavated to a depth of 400mm.

### *Description of context*

Trench 5 consisted of a single unit, Unit 5. Unit 5 is a loose, medium grain, light grey (7.5 Y/R 7/1 on the Munsell chart) sand which consists of the majority of sand dunes present at both RS48 and RS48A. Leaf litter on the surface and large root intrusions are present throughout Unit 5.

### *Description of finds*

Trench 5 uncovered a large amount of varied material, including:

11 galvanised iron 'Stump Tops' which we believe could be used on top of wooden supports holding up barracks present at RS48.

1 1960s-70s beer bottle

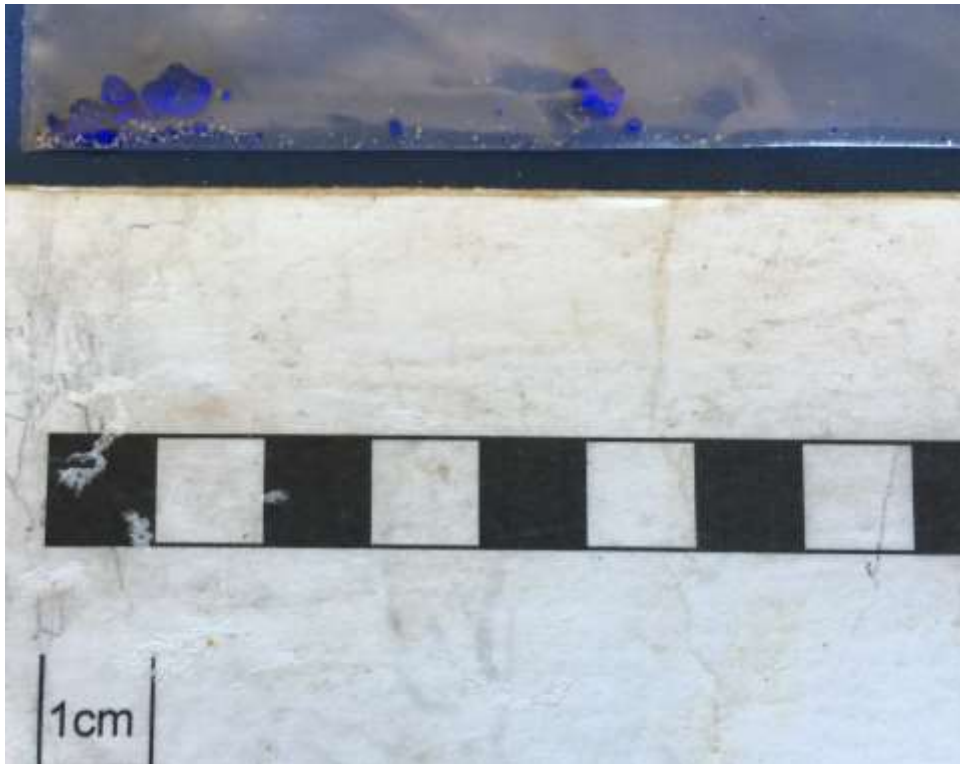
1 Scent Bottle

1 section of fine copper wire

11 fragments of iron food cans

16 Hedon production WW2 era 303 casings, fired.

A small amount of an unknown, cobalt blue, chalk like substance.



*Figure 62. Unidentified blue substance located in RS48A T5. HDA photo.*



*Figure 63. Scent bottle located at RS48A T5. HDA photo.*



### *Conclusion*

We suggest that Trench 5 is likely an intentional rubbish dump. Much of the material present could be related to the activities of RS48 or the Army Camp. The artefacts located can inform us of the cultural material present during the WW2 use of the site, even if the deposit found at T5 was not created by WW2 personnel.

### ***AMD and surface finds at RS48A***

During AMD reconnaissance work numerous targets were located, identified and left in situ. Some artefacts deemed to be diagnostic were retained and entered in the artefact database as surface or AMD finds.



*Figure 64. 303 calibre bullet casings located during AMD survey at RS48A. HDA photo.*

### ***Comparative analysis of the archaeological remains of RS48 and RS48A***

#### *Introduction*

The RAAF camp, (RS48) and the Army camp (RS48A) show significant differences in the kinds of cultural material present, and age of artefacts remaining in the archaeological record. These differences can inform us as to the different activities performed at RS48 and RS48A, both during their periods of use in WW2, and post war and assist in understanding the 'day to day life' of the personnel camped there.



## *Discussion*

The vast majority of cultural material found at RS48 is from post war usage of the site and was not collected. Efforts focussed on artefacts directly related to its wartime occupation. Artefacts observed at RS48 are predominantly structural and subsistence, with a smaller amount of military artefacts. The structural artefacts are directly related to those structural remains present at RS48, and include significant amount of WW2 era nails and fragments which have been dislodged or are related to post war salvage. Modern material, used in the modification of the structures into camp-sites are also present. Of the subsistence related cultural material found at RS48, the vast majority are post WW2 bottles related to the later use of RS48 as a camping area. The military artefacts collected are WW2 era fired cartridges found sporadically over the entire site.

The lack of WW2 era artefacts related to the day to day living of the men stationed at RS48 tell us about their behaviour towards rubbish disposal. The HDA team describes the RS48 site as 'clean' of WW2 related material and therefore there was a conscious attempt by the men stationed at there to keep their camp-site clean of rubbish. This can be supported by the presence of a large rubbish dump nearby which, although containing modern material, was described by witnesses to be re-use of an older WW2 rubbish dump. This level of cleanliness and orderliness helps to highlight that RS48 was a substantial and carefully run military camp.

Artefacts located at RS48A show a larger distribution amongst the different functional categories of artefacts, with a larger proportion of WW2 era artefacts compared to modern artefacts. At RS48A the largest collection of artefacts were related to military activities, including fired .303 cartridges (the standard rifle cartridge of Australia during WW2) as well as fewer pistol calibre cartridges, and fired projectiles. RS48A also included many artefacts related to the daily life of the soldiers stationed there. For example, these include artefacts 078, 079, 087 and 093 (Refer to the appendix for additional information). Subsistence artefacts included a tube of Nestle Concentrated Milk and fragments of several cans. Previous investigations by HDA (2016 report) located numerous bully beef tins to the south of RS48A which are also believed to be associated with the military camp. The lack of subsistence related finds indicates RS48A was well maintained with rubbish being removed, (possibly to the site where the bully beef tins were found) to ensure camp order cleanliness and proper sanitation. Finds from the current investigation and in 2016 suggests some food was canned or preserved ensuring food was available during lengthy periods between the availability of provisions.

Domestic finds in 2018 include bleach, hair cream bottle, dental cream tube, shaving cream tube, after shave bottle, alloy tin, and a scent bottle. Despite living in tents, as indicated from the oral testimony of John Grigson and Noel Grigson (pers. comm. 2018) who visited Radar Station 48 camp when it was operational, it appears the men in the camp maintained a high degree of personal hygiene, suggesting military grooming standards were enforced at RS48A.

A single medicinal bottle provides evidence that assistance was available for managing health issues at the camp. Evidence of insect repellent being available was noted by HDA (2016 report) and supports this notion. Further archaeological investigation could determine the single medicinal bottle was due to a small number being used by soldiers, or others were moved to a more substantial dumping site. An alternative explanation could be that the medicinal bottle was an example of 'elixir' use. Many medicinal brews at the time were highly alcoholic.

WW2 period beer bottle fragments were found at RS48A. Drinking in moderation and according to military routine was likely allowed at the camp. The small number of bottles and amber glass fragments at RS48A suggests that either there was minimal alcohol to drink, or that cleanliness was enforced and empty bottles were removed to a dumping site away from the camp.

The amount of WW2 material present at RS48A leads us to believe it was an occupation site during WW2. The presence of personal artefacts and the significantly larger amount of fired cartridges suggests the men stationed at RS48A did not have the same level of rubbish management as the RS48 camp. Oral testimony suggests the soldiers at RS48A were predominantly living in tents amongst the sand dunes, this would make it far easier for objects to be lost in the loose sand. The smaller amount of modern rubbish found at the site also suggests it did not have the same post war modification and occupation as RS48.

When comparing the artefacts at RS48 and RS48A we can see some differences. RS48 was a more cleanly run camp, with less rubbish being dumped in the near vicinity of the camp. While RS48A also had rubbish disposal sites, they are closer to the camp site itself. It is possible the more temporary/ephemeral nature of the RS48A camp lead to objects being lost in the loose sand.

Both sites had .303 fired cartridges present, however RS48 are in a far lower number, suggesting that weapons were not commonly fired in the area surrounding the structures, this is reinforced by the oral testimony that RS48 had a separate firing range area. RS48A has cartridges and projectiles spread over a far greater area and in larger numbers, suggesting that firing exercises were not limited to a separate firing range, but that practice was undertaken organically at the periphery of the camp itself, where its gun pits and defensive trenches would have been placed.

### *Conclusion*

The artefacts at RS48 and RS48A reflect HDA's interpretations of the purpose of the two sites. There has been substantial post war occupation and modification at RS48, with the vast majority of artefacts present being post WW2, while RS48A has a far greater proportion of WW2 era cultural material present, suggesting that it has been less impacted by post war activities.

## **2018 Report Conclusion**

### ***Details***

At RS48 the HDA team were successful in determining the functions of individual structures, the extent of the installation, both residential and administrative, as well as other elements such as communications, drainage etc.

At RS48 (RAAF radar station, camp and administration) the HDA team.

- determined the function of 8 structures at RS48
- determined the approximate location of 8 additional structures
- examined 4 deposits and established their relationship to RS48
- established the location and extent of additional infrastructure related to RS48

At RS48A (army camp) the HDA team.

- established that RS48A (D2 in the 2016 report) is the site of an army camp
- excavated and recorded 5 trenches
- provided a tentative boundary for the site
- located potential cultural deposits

Through a comparative analysis of the cultural material at the two sites the HDA team was able to help determine the nature of what day-to-day life was like for personnel serving at RS48 and RS48A. This interpretation was hindered by the sparsity of visible cultural material, the effects of post war occupation and a disciplined military approach to hygiene.

### ***Statement of significance***

It is beyond the scope of this report to provide a Statement of Significance (SS) for the site however, following investigations carried out at RS48 and RS48A the HDA team are confident a nomination for State

Heritage Office listing would be successful. A formal SS can be provided if requested. Owing to the deterioration of the site due to erosion and vandalism elements of the site could be lost if no remedial action is taken. The loss of structural elements would impede heritage listing in the future and reduce the site's heritage values.

### ***Opportunities***

The Radar Station 48 precinct provides the Shire of Dandaragan with a unique opportunity to showcase the important military heritage of the region. If managed correctly the site could play a pivotal role in tapping into military history and heritage tourism (e.g. a military heritage trail) linking the coast and the hinterland.

Opportunities also exist for a community outreach programme to involve the community, including children, in a range of military heritage projects.

### ***Urgent action required***

It is beyond the scope of this report to create a short term Conservation Management Strategy CMS (a written strategy can be provided if required) however HDA recommends that immediate steps be taken to:

- prevent vehicles from accessing the site beyond the car park.
- inform the public of the important heritage of the site.
- ensure tour operators understand the fragile nature of the site.

### ***Recommendations***

1. Prepare and implement a Conservation Management Strategy (short term).
2. Prepare and submit a nomination of the site to the Office of State Heritage for heritage registration accompanied by the appropriate Conservation Management Plan.
3. Extend the area of the survey to better determine the boundaries of RS48A.
4. Carry out additional archaeological excavations at RS48A.
5. Carry out archival research and record oral histories to create a publication telling the story of the radar station heritage precinct.
6. Promote the role the site has played in the context of the military history of the Midwest to create a project within the Shire of Dandaragan and neighbouring shires to facilitate tourism opportunities and community heritage opportunities which includes other military sites in the hinterland.

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## ***Appendix 1***

### ***Community engagement***

Prior to the start of the archaeological investigations Heritage Detection Australia called for volunteers to assist with the work. This was advertised on both the Heritage Detection Australia Facebook page and the Shire of Dandaragan Facebook pages. Although some people indicated an interest in participating this did not occur.

HDA lead investigator Bob Sheppard addressed a coastal landcare group meeting in Green Head on 11 May 2018 and gave a brief update on the project.

Bob Sheppard assisted the Jurien Bay RSL by providing a guided tour of the RS48 on 19 May 2018. Around 80 people attended.

The HDA team also provided tours to council members and staff between 7 and 17 May 2018.

### ***Media***

Details of the excavation at RS48 were shared with a number of media outlets.

Bob Sheppard conducted interviews with:

- Spirit Radio - conducted a live interview for the station's morning programme.
- ABC Radio Midwest. The interview was aired on ABC regional radio and details of the project was posted on the ABC Midwest and Wheatbelt Facebook page.
- ABC Radio Northwest. The interview was aired on Brad Beaumont's morning programme on 19 May 2018.
- GWN7 television. The interview and story was aired on 17 May 2018. See <https://www.gwn7.com.au/news/2203-digging-up-history>.

### ***Social media***

HDA provided regular updates of the project via Facebook.

The initial post detailing the activities reached 1,850 Facebook users.

Two short videos were published on line:

- The day a RS48 report sounded air raid warning sirens in Perth.
- Bullets, bottles and the Blue Orchids ... a tale of two camps.
- Additional video footage has been retained.

Facebook posts were positive and highlighted the role of the Shire of Dandaragan in the project.

### ***Photogrammetry and 3D imaging***

Heritage Detection Australia used their recent survey of the radar station at Jurien Bay to trial the use of 3D photogrammetry for heritage recording as well as a gateway to Virtual Reality (VR) and Immersive Virtual Reality as an off-site visitation tool. 3D photogrammetry allows the construction of computational models that can enhance the management of cultural sites. In its simplest form it allows accurate measurements to be taken from the models that can help track any deterioration of the heritage structures as well as the environment those structures reside in. These models can be viewed on most computers and tablets. VR will allow the disabled, the aged or those without a four-wheel drive to access and enjoy the site. HDA have future proofed the data by capturing the images with full frame cameras and 4K video, processing the data is via Photoscan Professional.



Igloo 'A'. Ian McCann image.

Artefact Number	Location	Material	Category	Type	Description	Diagnostic	Notes	Reference
001	RS48S5F3	Iron	Subsistence	Fragment	8 iron frags	No		
002	RS48S5F3	Iron	Subsistence	Fragment of Can	12 iron fragments of can, rim fragment+wall	No		
003	RS48S5F3	Aluminium	Subsistence	Can Top	1 aluminium can top	No	Post 1960	
004	RS48S5F3	Burnt Matter	Subsistence	Burnt Matter	7 pieces of burnt matter	No		
005	RS48S5F3	Glass	Subsistence	Bottle	1 Amber glass fragment	No		
006	RS48S6	Copper	Structural	Copper Wire	Segment of 6 strand copper	No		
007	RS48S6	Plastic	Recreational	Wrapper	clear plastic wrapper	No	Post 1960	
008	RS48S8	Ceramic	Subsistence	Frag of Bowl	14 pieces of thistle patterned bowl, Johnson Bros makers mark Xcrown1	No	1940s	"JOHNSON BROS_ Made in ENGLAND" Thistle pattern:Pattern Code: JB JB517
009	RS48AT4SF	Metal	Military	Casings	1 .303 casing	No		
010	RS48AT4SF	Metal	Military	Casings	1 .45 casing	yes		
011	RS48AT4SF	Metal	Military	Projectile	1 .45 projectile jacket	yes		
012	RS48AT2SF	Metal	Military	Casings	1 .303 casing	No		
013	RS48A	Metal	Structural	Wire	Single strand highly corroded iron wire	No		
014	RS48S7T1U3	Metal	Military	Casings	3 .303 Casings	No		
015	RS48S7T1U3	Metal	Structural	Wire	4 strand thick copper wire	yes		
016	RS48S5	Metal	Structural	Chicken Wire	Small segment of chicken wire	yes		
017	RS48S5	Metal	Structural	Chicken Wire	Small segment of fine chicken wire	yes		
018	RS48S5	Metal	Structural	Nails	4 roofing nails with caps	yes		
019	RS48S5	Metal	Structural	Nails	2 Roofing nails without caps	yes		
020	RS48S5	Metal	Structural	Nails	1 corroded nail	No		
021	RS48S5	Metal	Structural	Nails	1 small nail	yes		
022	RS48S5	Metal	Military	Casings	3 .303 Casings	No		
023	RS48S7F1U1	Metal	Military	Casings	1 .303 casing	No		
024	RS48S7F1U1	Metal	Personal	coin	1 2cent coin 1979	yes	Post RS	
025	RS48S6STP1U1	Metal	Military	Casings	2 .303 casings	No		
026	RS48S6STP1U1	Glass	Subsistence	Bottle	1 frag of green bottle glass	No		
027	RS48S6STP1U1	Glass	Subsistence	Bottle	2 frag clear glass	No		
028	RS48S6STP1U1	Glass	Subsistence	Bottle	6 frag amber glass	No		

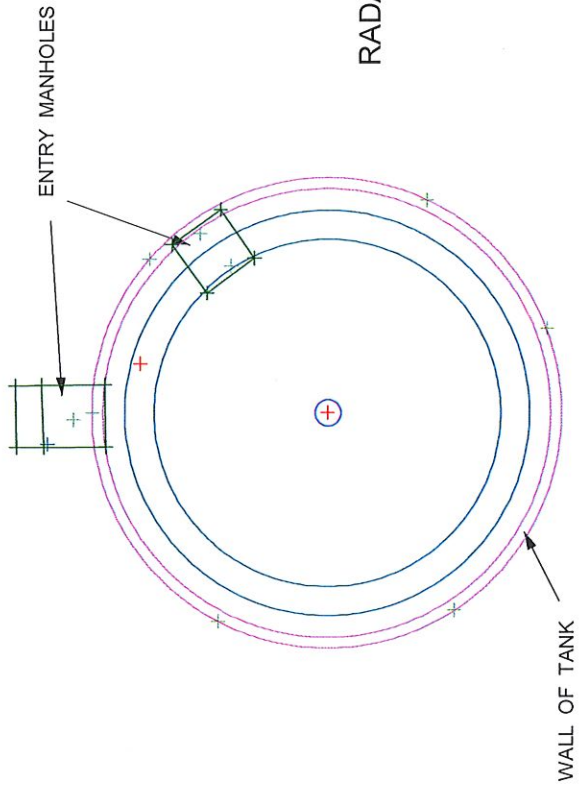
029	RS48S6STP1U1	Plastic	Personal	Comb	frag of comb tooth	yes		
030	RS48A	Metal	Subsistence	Tube	Nestle Milk tube	yes	Pre 1966 Imperial measurement 7 oz.	
031	RS48A	Metal	Military	Projectile	1 projectile jacket	No		
032	RS48A	Metal	Military	Casings	2 .303 casings	No		
033	RS48A	Metal	Structural	Bolt	1 corroded iron bolt	No		
034	RS48A	Metal	Structural	eyelet	3 brass canvas eyelets	yes		
035	RS48S5F1U1	Glass	Subsistence	Bottle	2 frag amber bottle neck	No		
036	RS48S5F1U1	Glass	Subsistence	Bottle	1 frag clear glass	No		
037	RS48S5F1U1	Metal	Subsistence	Can Top	2 iron frag rim+body	No		
038	RS48S7T1U4	Metal	Military	Casings	1 .303 casing	No		
039	RS48S7T1U4	Wood	Structural	Post	Frag of wooden post	No		
040	RS48S7T1U4	Organic	Unknown	Unknown	Unknown material	No		
041	RS48S7T1U4	Metal	Structural	Copper Wire	Insulated Copper wire	No		
042	RS48S6T1U2	Glass	Subsistence	Bottle	6 frag amber glass	No		
043	RS48S6T1U2	Glass	Subsistence	Glass	1 frag clear glass lip	No		
044	RS48S6T1U2	Metal	Subsistence	Bottle Top	2 crown marked iron bottle top	No		
045	RS48S6T1U2	Metal	Structural	Nails	1 Roofing nail with cap	yes		
046	RS48S6T1U2	Metal	Structural	Nails	15 misc Iron Frag	No		
047	RS48S6T1U2	Metal	Unknown	Unknown	1 Misc iron frag	No		
048	RS48S6T1U2	Metal	Subsistence	Can Top	3 iron can fragments	No		
049	RS48S6T1U2	Metal	Unknown	Rivet	1 Copper rivet	No		
050	RS48S6T1U2	Metal	Subsistence	Al Foil	2 frag al foil	No	1940s-present	<a href="https://www.spectatornews.com/showcase/2007/09/24/history-of-tin-foil/">https://www.spectatornews.com/showcase/2007/09/24/history-of-tin-foil/</a>
051	RS48S6T1U2	Plastic	Subsistence	Plastic	4 pieces plastic fragments	No		
053	RS48A	Metal	Military	Casings	2 .303 Casing with 1 unknown pistol calibre attached	yes		
054	RS48A	Metal	Military	Projectile	1 projectile jacket	No		
055	RS48A	Metal	Military	Casings	2 .45 casing	yes		
056	RS48A	Metal	Military	Casings	1 unknown pistol calibre	yes		
057	RS48A	Metal	Structural	Nails	1 wall nail	No		
058	RS48AT5U5	Glass	Personal	Scent Bottle	1 scent bottle	yes		
059	RS48AT5U5	Starch	Personal	Bleach	cobalt blue fragment bleach/starch	No		
060	RS48AT5U5	Copper	Structural	Copper Wire	Fine copper wire	No		
061	RS48AT5U5	Metal	Subsistence	Can Top	6 frag iron can	No		

062	RS48AT5U5	Metal	Military	Casings	16 .303 casings	No		
063	RS48AT5U5	Metal	Subsistence	Can Top	5 iron can frag	No		
064	RS48S4	Metal	Structural	Nails	3 nails, 2 with caps, 1 without	yes		
065	RS48S4	Glass	Subsistence	Bottle	1 frag amber glass	No		
067	RS48S4	Metal	Military	Casings	1 12guage rim	yes		
068	RS48S4F1U1	Metal	Structural	Bolt	1 large iron bolt with nut with small attached nail	yes		
069	RS48S5F3	Ceramic	Structural	Brick	Orange building brick S in Frog	yes		Could be from prewar to present.
070	RS48	Metal	Subsistence	Fork and Spoon	1 copper alloy fork and Spoon	yes		
071	RS48	Metal	Personal	Sunscreen	1 tube of sunscreen with plastic cap	yes	1940s -1950s; <a href="https://www.stayathomemum.com.au/my-lifestyle/the-history-of-sunscreen/https://www.google.com.au/search?q=Colgate+Ribbon+Dental+Cream+AND+Australia&amp;rlz=1C1AVFC_enAU758AU758&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ved=0ahUKEwjV4PisvYnbAhUGsJQKHS3QAOMQsAQIJg&amp;biw=1270&amp;bih=597#imgsrc=ooJAJs5wUqd_cM:">https://www.stayathomemum.com.au/my-lifestyle/the-history-of-sunscreen/https://www.google.com.au/search?q=Colgate+Ribbon+Dental+Cream+AND+Australia&amp;rlz=1C1AVFC_enAU758AU758&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ved=0ahUKEwjV4PisvYnbAhUGsJQKHS3QAOMQsAQIJg&amp;biw=1270&amp;bih=597#imgsrc=ooJAJs5wUqd_cM:</a>	
072	RS48	Glass	Structural	Window Glass	1 frag of window glass	No		
073	RS48	Glass+Metal	Subsistence	Bottle Top	1 beer bottle black emu	No	1980s - present.	
074	RS48	Glass	Subsistence	Bottle	1 frag amber glass bottle base	No		
075	RS48	Metal	Military	Casings	1 .303 casing	No		
078	RS48AT3U3	Metal	Personal	Toothpaste	1 lead tube of dental cream toothpaste	yes	1940s -1950s; <a href="https://www.google.com.au/search?q=Colgate+Ribbon+Dental+Cream+AND+Australia&amp;rlz=1C1AVFC_enAU758AU758&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ved=0ahUKEwjV4PisvYnbAhUGsJQKHS3QAOMQsAQIJg&amp;biw=1270&amp;bih=597#imgsrc=ooJAJs5wUqd_cM:">https://www.google.com.au/search?q=Colgate+Ribbon+Dental+Cream+AND+Australia&amp;rlz=1C1AVFC_enAU758AU758&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ved=0ahUKEwjV4PisvYnbAhUGsJQKHS3QAOMQsAQIJg&amp;biw=1270&amp;bih=597#imgsrc=ooJAJs5wUqd_cM:</a>	
079	RS48AT3	Metal	Personal	Shaving Cream	1 tube of shaving cream	yes	Pre 1953	"Registered by COLGATE PALMOLIVE PEET CO"
080	RS48S8STP1U1	Metal	Unknown	Unknown	3 Improvised wire binders 2 connected by iron clip	No		
081	RS48A	Bone	Subsistence	Butchered Bone	1 large butchered beef bone	No		



082	RS48A	Carbon	Subsistence	Charcoal	4 frag charcoal	No		
083	RS48A	Metal	Personal	Tin container	1 alloy tin container	No		
084	RS48S6T1U3	Metal	Structural	Nails	2 iron nails	No		
085	RS48S6STP1	Misc	Misc	Misc	6 mixed modern context objects	No		AA Battery Label Mar 2005; Ali Pull tag post 1960 <a href="https://www.washingtonpost.com/archive/lifestyle/2005/02/06/the-inventor-who-pulled-back-the-tab-and-found-millions/bbafa67f-e2a3-449b-ad4b-5caa76f5d076/?utm_term=.d0df796b4caa">https://www.washingtonpost.com/archive/lifestyle/2005/02/06/the-inventor-who-pulled-back-the-tab-and-found-millions/bbafa67f-e2a3-449b-ad4b-5caa76f5d076/?utm_term=.d0df796b4caa</a>
086	RS48A	Metal	Military	Casings	2 .303 casing	No		
087	RS48AT4U4	Glass	Medicinal	Bottle	Screw top Clear bottle, + 2 lid fragments	yes	1934 - 1948	AGM Stamp on base.
088	RS48AT4U4	Metal	Structural	Soldering wire	Soldering wire	No		
089	RS48AT4U4	Metal	Subsistence	Can Top	5 iron frag of can	No		
090	RS48AT1U1	Metal	Military	Casings	1 .303 casing	No		
091	RS48AT1U1	Metal	Structural	Iron Sheet	1 frag iron sheet metal	No		
092	RS48AT1U1	Metal	Structural	Cleat	1 iron cleat with 2 nails	No		
093	RS48AT1U1	Glass	Personal	Hair Cream	1 Bryl hair cream amber glass jar	yes	1934 - 1948	AGM Stamp on base.
094	RS48S4	Leather	Personal	Shoe sole	fragment of leather show sole with 1 tack	No		
095	RS48S4	Glass	Structural	Window Glass	2 frag reinforced frosted window glass	No		
096	RS48AT5U5	Metal	Structural	Stump tops	11 iron alloy stump tops	No		
097	RS48AT5U5	Glass	Recreational	Beer Bottle	Embossed "THIS BOTTLE REMAINS THE PROPERTY OF THE WESTERN AUSTRALIAN GLASS MANUFACTURERS LTD. Registered"	Yes	1964 -1976	<a href="http://www.gabr.net.au/biogs/ABE1360b.htm">http://www.gabr.net.au/biogs/ABE1360b.htm</a>

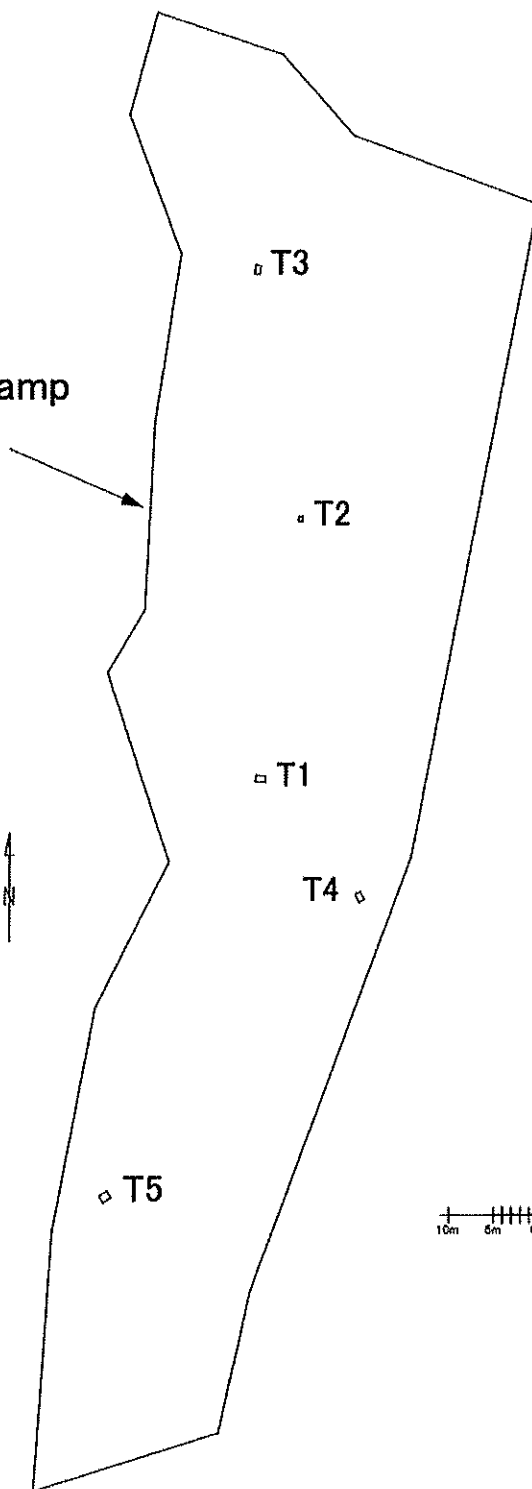
098	RS48A	Glass	RecreationalB	Beer Bottle	Embossed "THIS BOTTLE REMAINS THE PROPERTY OF THE WESTERN AUSTRALIAN GLASS MANUFACTURERS LTD. Registered"			
099	RS48AT3	Metal	Personal	Toothpaste	1 lead tube of dental cream toothpaste	Yes	1940s -1950s; <a href="https://www.google.com.au/search?q=Colgate+Rib+bon+Dental+Cream+AND+Australia&amp;rlz=1C1AVFC_enAU758AU758&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp;sa=X&amp;ved=0ahUKEwjV4PisvYnbAhUGsJQKHS3QAOMQsAQIJg&amp;biw=1270&amp;bih=597#imgsrc=ooJAJs5wUqd_cM:">https://www.google.com.au/search?q=Colgate+Rib bon+Dental+Cream+AND+Australia&amp;rlz=1C1AVFC _enAU758AU758&amp;tbm=isch&amp;tbo=u&amp;source=univ&amp; sa=X&amp;ved=0ahUKEwjV4PisvYnbAhUGsJQKHS3Q AOMQsAQIJg&amp;biw=1270&amp;bih=597#imgsrc=ooJAJs 5wUqd_cM:</a>	
100	RS48A	Metal	Personal	Shaving Cream	1 tube of shaving cream	Yes	Pre 1953	"Registered by COLGATE PALMOLIVE PEET CO"



↑ N

JURIEN BAY  
RADAR STATION 48 NORTH HEAD  
BUILDING S9  
CISTERN

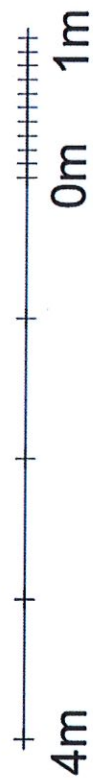
Extent of Army Camp



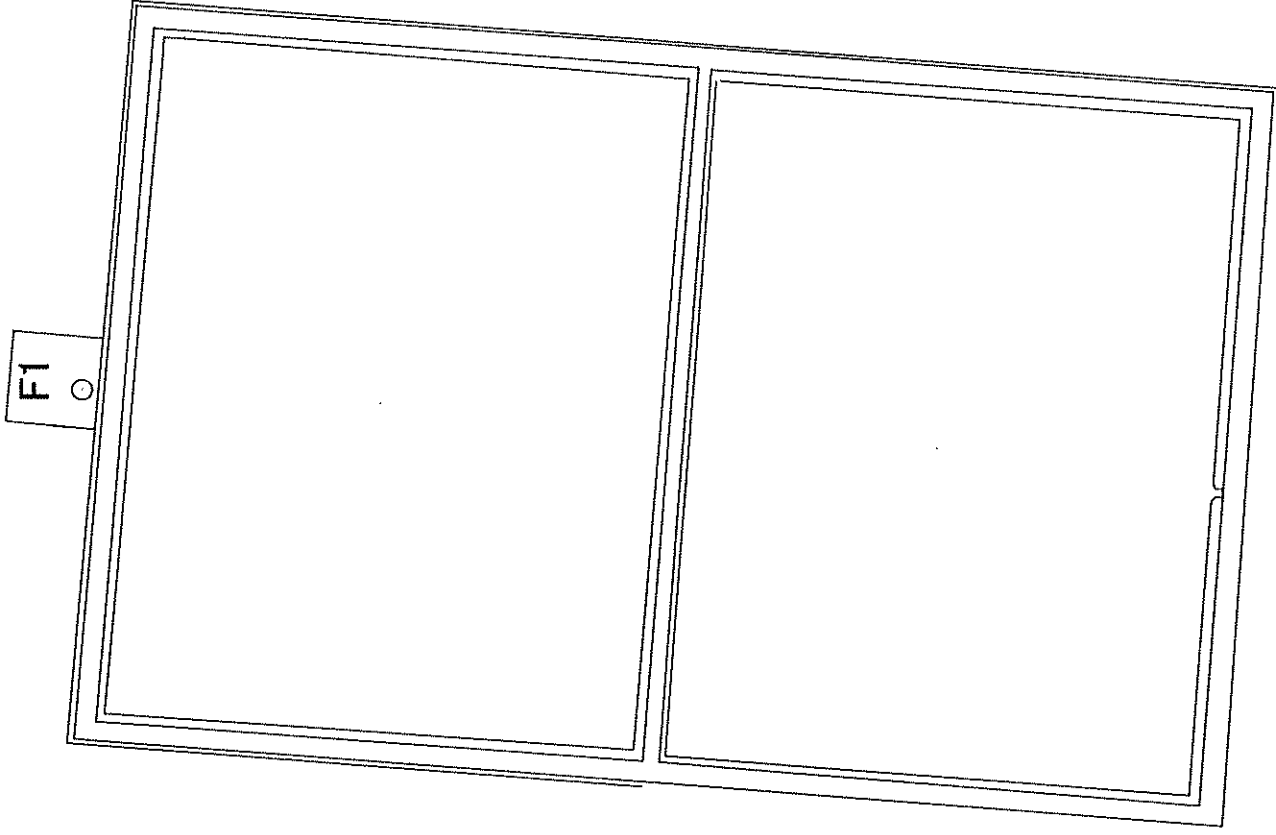
# RS48A Army Camp Site Map



# RS48 S1 Radar Station Site Map







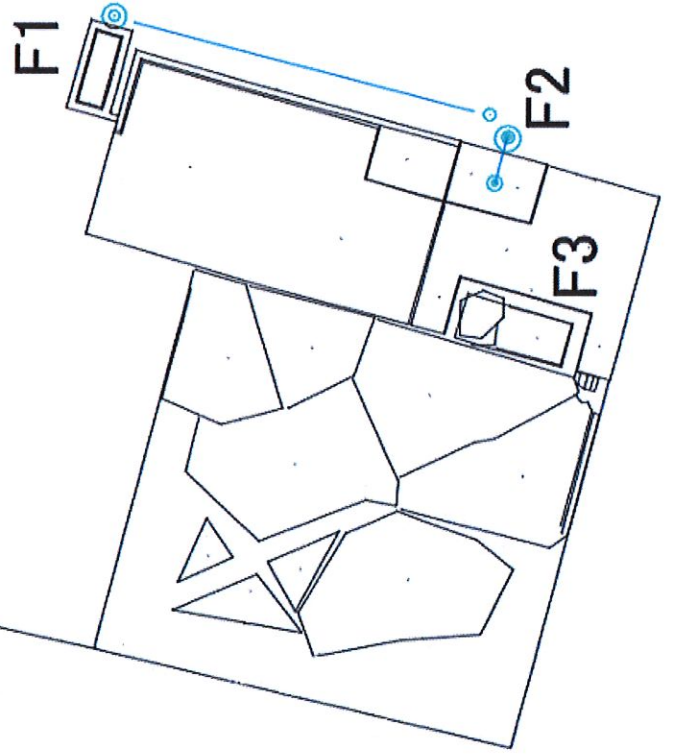
**RS48 S4  
Quartermaster's Store  
Site Map**

**4N**



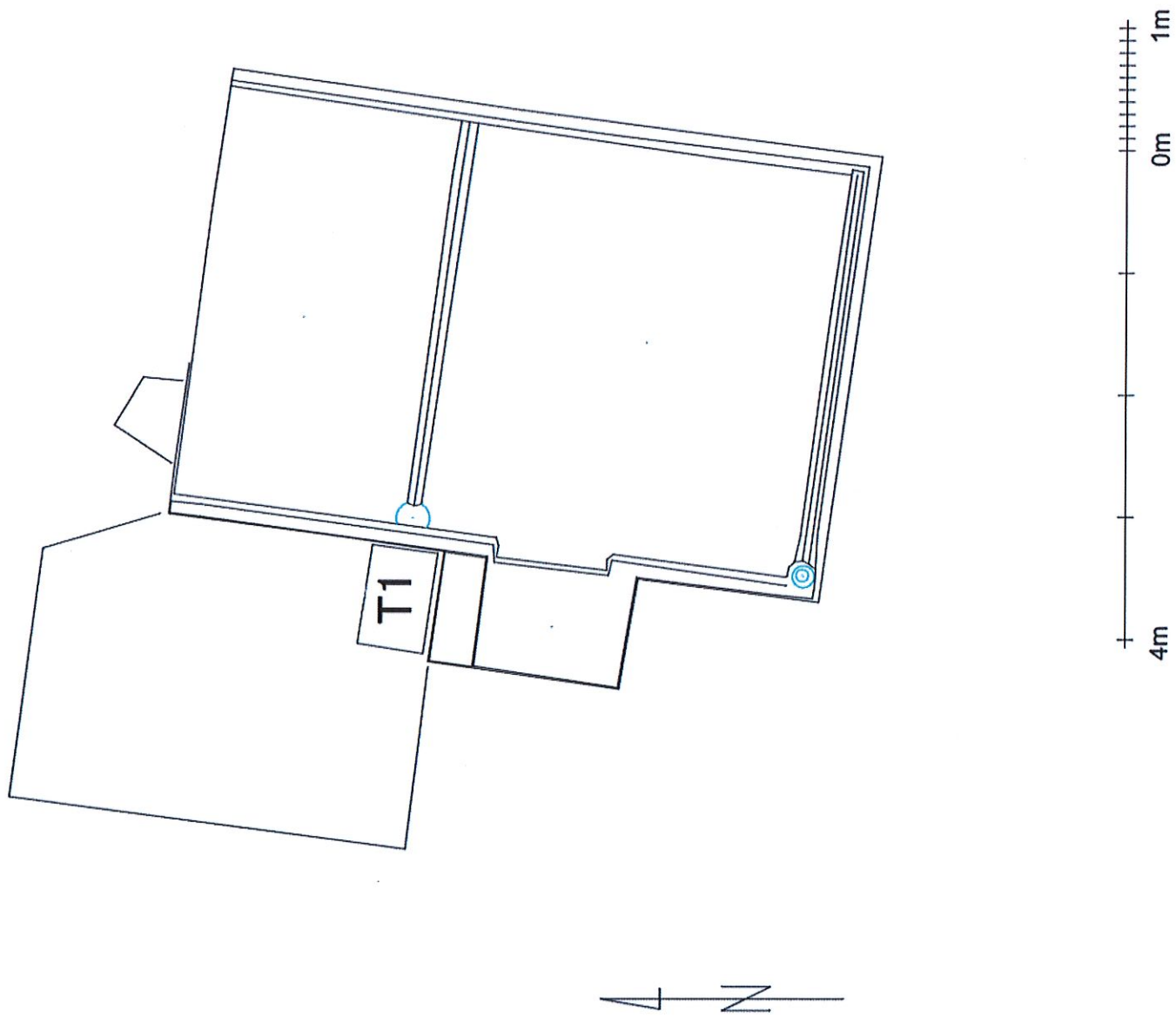
# RS48 S5 Kitchen Mess Hall Site Map

N

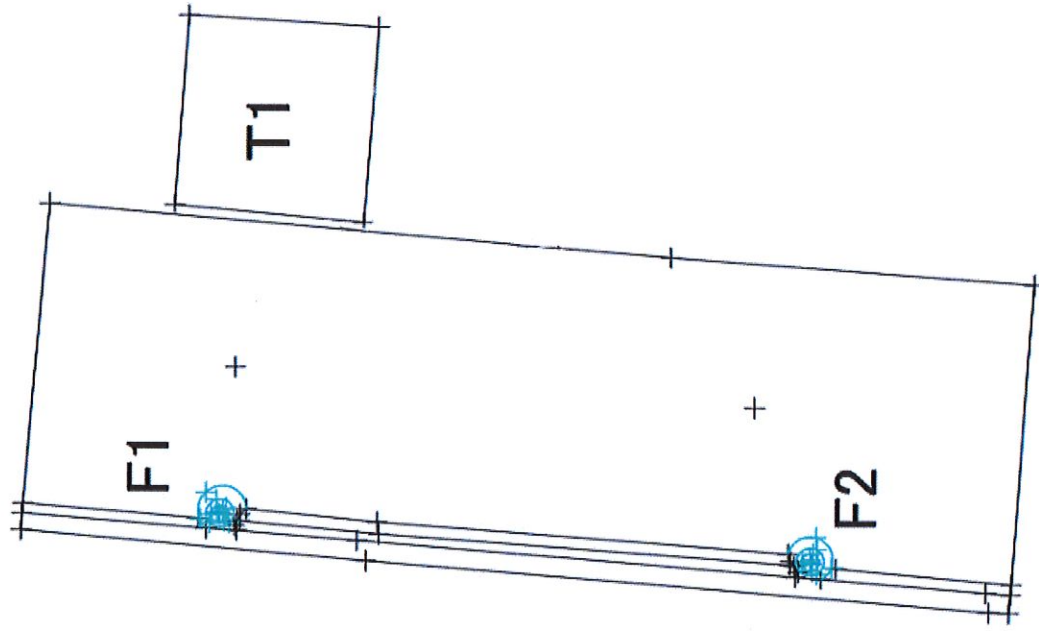


4m  
0m  
1m

RS48 S6  
Ablution Block  
Site Map



RS48 S7  
Latrine  
Site Map



## 7.8 VERGE BOND POLICY

### OBJECTIVE

To provide clear guidance to builders and their contractors of the Shire of Dandaragan's policy regarding Verge Bonds and the applicable fees.

### POLICY STATEMENT

A Verge Bond will be required to protect Shire verge assets for all building development within townsites in accordance with the following process.

Builders will be required to pay the Verge Bond at the time of submitting a Building Permit application.

The person obtaining the Building Permit is required to give notification 7 days prior to the commencement of works. After which Shire staff will then carry out a pre-construction inspection. At the pre-construction site inspection, the existing condition of the verge and footpath assets will be documented and photographed.

On completion of the building works, the builder will request the refund of the bond by submitting an Application for Verge Bond Refund along with a BA7 Notice of Completion which will trigger a second site inspection and subsequent assessment of the Shire's verge assets which will be documented and photographed.

If there is no damage to the Shire's verge assets the bond is refunded. If there is damage the builder is given 21 days to rectify the damage otherwise the Shire will repair the damaged asset using the bond funds. Following the rectification works and if any bond funds remain, they will be refunded to the builder.

If the verge asset damage is above the deposited bond value, an invoice will be forwarded to the builder for the additional works.

The value of the Verge Bond will be determined annually by Council and published in the Schedule of Fees & Charges.

Responsibility for ensuring there is no damage to the verge and footpaths lies with the original Building Permit applicant and not any subcontractors that may carry out work on the site.

<b>Policy Number</b>	<i>[Leave Blank – Executive Secretary will provide policy no.]</i>
<b>Adopted by Council</b>	<i>[Leave Blank – Executive Secretary will provide policy no.]</i>
<b>Amended</b>	



## 1.6 COMMUNITY GRANTS PROGRAM - Current

### INTRODUCTION

To provide an equitable and transparent process for the determination of the Shire of Dandaragan's recurring and annual community grants.

### OBJECTIVE

To provide funds to community based organisations and individuals, to support the promotion and development of social, economic, recreational, art and cultural benefits for the residents of the Shire of Dandaragan. The Shire of Dandaragan will allocate 0.5% of the gross yield of rates income, raised in the main rate run, to fund recurring and annual community grants in order to assist with;

- programs, activities and initiatives delivered by community groups;
- support community development initiatives;
- increase the range of events, activities and services in the Shire of Dandaragan;
- encourage the development of excellence and leadership in recreational, sporting, economic, tourism and cultural pursuits; and
- encourage the promotion of the Shire of Dandaragan's positive attributes.

### POLICY STATEMENT

#### Recurring Grants

The following grants are recurring grants which will not be reviewed annually, however, are subject to this policy:

##### 1. Local publications

Each year the Shire will incorporate within the budget a grant to be provided in September of each year to the community newspapers. The grant of \$250 each is to cover the cost of community service announcements by the Shire in the various local publications.

Advertising by the Shire is to be invoiced separately.

##### 2. Student awards - schools

Each year the Shire will contribute \$100 to the Jurien Bay District High School, \$100 to the Central Midlands Senior High School, and \$50 each to the Dandaragan Primary School, Badgingarra Primary School, Jurien Bay Primary School and Cervantes Primary School award nights.

##### 3. Australia Day

Each year the Shire of Dandaragan will grant \$1,000 to the Jurien Bay Progress and Tourism Association, \$1,000 to the Cervantes Ratepayers & Progress Association, \$750 to the Badgingarra Community Association and \$750 to Advance Dandaragan for Australia Day festivities. This grant is to assist organisations with conducting an Australia Day event and is not intended to meet the total cost of the event.

##### 4. Art acquisition

Each year the Shire of Dandaragan will contribute to the Cervantes Cultural Committee \$1,500 to secure the Shire of Dandaragan Art Purchase Prize.

The \$1,500 will be awarded to the chosen artist irrespective of the purchase value of the artwork. The prize will be determined by the Shire President or his delegate,

who will seek guidance from the judges.

In addition, to the Purchase Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee.

5. Mid West Group of Affiliated Agricultural Societies Inc

Each year the Shire of Dandaragan will contribute to the Mid West Group of Affiliated Agricultural Societies Inc \$200 to showcase the Shire of Dandaragan's products and attractions.

6. Jurien Beach Mission and Cervantes Family Festival

Each year the Shire of Dandaragan will contribute \$1,500 to each of the Jurien Bay Beach Mission and the Cervantes Family Festival to continue their summer holiday program.

### Annual Grants

Annual grants will be determined in accordance with the following process:

1. In April of each year, advertisements will be placed in each of the four local community newspapers inviting written applications for grants. Recipients of grants in the previous year will be written to and advised of the requirement to make new application for their grant.
2. Applications will be assessed against the following criteria with recommendations to Council no later than June of each year:

Extent to which project / activity benefits Shire of Dandaragan community	50%
Level of volunteer participation and wider community participation	15%
Extent to which applicant is funding the project / activity	15%
Extent to which project / activity involves other community organisations	20%

3. Funding will be deemed **ineligible** for the following:
  - a. applications that are eligible for the Shire of Dandaragan / Tronox Management Fund or CSRFF;
  - b. political organisations or events;
  - c. commercial enterprises;
  - d. any activity or project already underway or completed;
  - e. events or activities that are the responsibility of another level of government;
  - f. for events delivered by structured sporting clubs and community organisations, that are consistent within the primary purpose of that club/organization;
  - g. for the openings or celebration of new community groups or premises;
  - h. for applicants seeking to host an event for the specific purpose of raising funds for re-distribution to other non-profit community groups/clubs or charitable causes; and
  - i. applications for any activity deemed to be a component of a wider project that will ultimately result in a durable item
4. Requests for grants outside this policy are to be declined.
5. The maximum annual grant payable under this policy will be \$1,500.
6. Writing, assistance with writing, or preparation of, planning or strategic documents is eligible for funding under this Policy.

<b>Policy Number</b>	1.6
<b>Adopted by Council</b>	March 2017
<b>Amended</b>	9 July 2009, 27 May 2010, 20 September 2012, 23 January 2014, 27 March 2014, April 2017, July 2017



## APPLICATION FOR COMMUNITY GRANT

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### 1. APPLICANT / ORGANISATION

Name of organisation: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

President / Chair: \_\_\_\_\_

Secretary: \_\_\_\_\_

Treasurer: \_\_\_\_\_

Is your organisation an incorporated body? ☐ Yes ☐ No

If yes, please attach your financial statements.

## 2. FINANCIAL ASSISTANCE

Amount requested: \$ \_\_\_\_\_

### 2.1 Details of how funds will be expended:

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### 2.2 Complete the following budget table for your proposal:

#### INCOME:

Donations / Sponsorship	\$ _____
Entry Fees / Gate Takings	\$ _____
Sales	\$ _____
Contributions by applicant	\$ _____
Other funding sources	\$ _____
Shire of Dandaragan Grant	\$ _____
Total Income	\$ _____

#### IN KIND CONTRIBUTIONS:

Labour - number of hours (estimate)	_____
Use of equipment - numbers of hours	_____
Other - donated food / gifts	_____
Total Hours	_____

#### EXPENSES:

Wages	\$ _____
Hire / venue charges	\$ _____
Promotions / advertising / postage	\$ _____
Insurance	\$ _____
Consumables	\$ _____
Other (please define)	\$ _____



**2.3 Do you consent to the Shire of Dandaragan evaluating how the funds were spent, if Council elects to do so?**

☐ Yes    ☐ No

**2.4 The Shire of Dandaragan may require evidence of how the funds have been expended. Should your application be successful, will you provide copies of invoices as part of an acquittal process?**

☐ Yes    ☐ No

### 3. INFORMATION REGARDING THE APPLICATION

#### 3.1 To what extent does the event / activity for which you are seeking funding benefit the Shire of Dandaragan community?

a) What specific community needs will be satisfied by the project?

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b) How have these needs been identified?

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#### 3.2 Will this activity / project involve other community organisations? Please list other community organisations and what they will be contributing to this proposal.

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### 3.3 Please list any benefactors and their proceeds.

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Signature: \_\_\_\_\_

President / Chairperson

Print Name: \_\_\_\_\_

President / Chairperson

Date: \_\_\_\_\_

NB: Your application can be delivered to the Shire of Dandaragan by posting it to:  
PO Box 676  
JURIEN BAY WA 6516

Or hand delivered to:

Shire of Dandaragan Administration Centre  
69 Bashford Street  
JURIEN BAY WA 6516

## 1.6 COMMUNITY GRANTS PROGRAM - Proposed

### INTRODUCTION

To provide an equitable and transparent process for the determination of the Shire of Dandaragan's recurring and annual community grants.

### OBJECTIVE

To provide funds to community based organisations and individuals, to support the promotion and development of social, economic, recreational, art and cultural benefits for the residents of the Shire of Dandaragan. The Shire of Dandaragan will allocate 0.5% of the gross yield of rates income, raised in the main rate run, to fund recurring and annual community grants in order to assist with;

- programs, activities and initiatives delivered by community groups;
  - support community development initiatives;
  - increase the range of events, activities and services in the Shire of Dandaragan;
  - encourage the development of excellence and leadership in recreational, sporting, economic, tourism and cultural pursuits; and
  - encourage the promotion of the Shire of Dandaragan's positive attributes.
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### POLICY STATEMENT

#### Recurring Grants

The following grants are recurring grants which will not be reviewed annually, however, are subject to this policy:

##### 1. Local publications

Each year the Shire will incorporate within the budget a grant to be provided in September of each year to the community newspapers. The grant of \$250 each is to cover the cost of community service announcements by the Shire in the various local publications.

Advertising by the Shire is to be invoiced separately.

##### 2. Student awards - schools

Each year the Shire will contribute \$100 to the Jurien Bay District High School, \$100 to the Central Midlands Senior High School, and \$50 each to the Dandaragan Primary School, Badgingarra Primary School, Jurien Bay Primary School and Cervantes Primary School award nights.

##### 3. Australia Day

Each year the Shire of Dandaragan will grant \$1,000 to the Jurien Bay Progress and Tourism Association, \$1,000 to the Cervantes Ratepayers & Progress Association, \$750 to the Badgingarra Community Association and \$750 to Advance Dandaragan for Australia Day festivities. This grant is to assist organisations with conducting an Australia Day event and is not intended to meet the total cost of the event.

##### 4. Art

Each Cervantes Art Festival, the Shire of Dandaragan will contribute \$1,500 to the Cervantes Cultural Committee to purchase art, as the Shire of Dandaragan Art Prize.

The \$1,500 will be awarded to the chosen artist for artwork up to the value of

\$1,500. The prize will be determined by the Shire President or delegate, who will seek guidance from the judges. The artwork will be acquired by the Shire of Dandaragan as part of the Shire's art collection.

In addition to the Art Prize, the Shire of Dandaragan will donate \$1,500 towards the cost of delivering the Art Show. These funds will be spent at the discretion of the Cervantes Cultural Committee.

5. Mid West Group of Affiliated Agricultural Societies Inc

Each year the Shire of Dandaragan will contribute to the Mid West Group of Affiliated Agricultural Societies Inc \$200 to showcase the Shire of Dandaragan's products and attractions.

6. Jurien Beach Mission and Cervantes Family Festival

Each year the Shire of Dandaragan will contribute \$1,500 to each of the Jurien Bay Beach Mission and the Cervantes Family Festival to continue their summer holiday program.

### Annual Grants

Annual grants will be determined in accordance with the following process:

1. In April of each year, advertisements will be placed in each of the four local community newspapers inviting written applications for grants. Recipients of grants in the previous year will be written to and advised of the requirement to make new application for their grant.
2. Applications will be assessed against the following criteria with recommendations to Council no later than June of each year:

Extent to which project / activity benefits Shire of Dandaragan community	50%
Level of volunteer participation and wider community participation	15%
Extent to which applicant is funding the project / activity	15%
Extent to which project / activity involves other community organisations	20%

3. Funding will be deemed **ineligible** for the following:
  - a. applications that are eligible for the Shire of Dandaragan / Tronox Management Fund or CSRFF;
  - b. political organisations or events;
  - c. commercial enterprises;
  - d. any activity or project already underway or completed;
  - e. events or activities that are the responsibility of another level of government;
  - f. for events delivered by structured sporting clubs and community organisations, that are consistent within the primary purpose of that club/organization;
  - g. for the openings or celebration of new community groups or premises;
  - h. for applicants seeking to host an event for the specific purpose of raising funds for re-distribution to other non-profit community groups/clubs or charitable causes; and
  - i. applications for any activity deemed to be a component of a wider project that will ultimately result in a durable item
4. Requests for grants outside this policy are to be declined.
5. The maximum annual grant payable under this policy will be \$1,500.



6. Writing, assistance with writing, or preparation of, planning or strategic documents is eligible for funding under this Policy.

<b>Policy Number</b>	1.6
<b>Adopted by Council</b>	March 2017
<b>Amended</b>	9 July 2009, 27 May 2010, 20 September 2012, 23 January 2014, 27 March 2014, April 2017, July 2017



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