Ordinary Council Meeting - 22 February 2022 Attachments

GLAMORGAN/SPRING BAY COUNCIL

NOTICE OF PROPOSED DEVELOPMENT

Notice is hereby given that an application has been made for planning approval for the following development;

SITE: RA128 Cambria Drive Dolphin Sands

PROPOSAL: Dwelling

Any person may make representation on the application(s) by letter (PO Box 6, Triabunna) or electronic mail (planning@freycinet.tas.gov.au) addressed to the General Manager. Representations must be received before midnight on Saturday 29 January 2022.

APPLICANT:	Engineering Plus
DATE:	15 December 2021
APPLICATION NO:	DA 2021 / 334

Office: 9 Melbourne Street,
Postal: PO Box 6 Triabunna 7190
Phone: 6256 4777 Fax: 6256 4774
Email: planning@freycinet.tas.gov.au
Web: www.gsbc.tas.gov.au
ABN: 95 641 533 778

Application for Planning Approval

OFFICE USE ONLY	
DATE RECEIVED:	PID:
FEE	RECEIPT No:
DA:	PROPERTY FILE:

Advice:

Use this form for all no permit required, permitted and discretionary planning applications including subdivision, planning scheme amendment & minor amendments to permits.

For visitor accommodation in the General Residential, Low Density Residential, Rural Living, Environmental Living or Village Zone use the sharing economy form available on the Council website.

Completing this form in full will help ensure that all necessary information is provided and avoid any delay. The planning scheme provides details of what other information may be required at clause 8.1 and in each applicable Code.

Please provide the relevant details in each applicable section by providing the information or circling Yes or No as appropriate. If relevant details are provided on plans or documents please refer to the drawing number or other documents in this form.

Often, it is beneficial to provide a separate written submission explaining in general terms what is proposed and why and to justify the proposal against any applicable performance criteria.

If you have any queries with the application form or what information is required please contact the office.

Details of Applicant & Owner

Applicant:	Engineering Plus				
Contact person: (if different from applicant)	Narelle Lobdale				
Address:	81 Elizabeth Street			Phone	03 6331 7021
	Launceston	Tas	7250	Fax:	
Email:	narelle@engineeringplus.com.au			Mobile:	0409 211 610
Do you wish for all correspondence to be sent solely by email?				Yes ☒	No ☐

Owner: (if different from applicant)	R. J. BARDEN & S. T. BARDEN				
Address:	128 CAMBRIA DRIVE			Phone:	
	DOLPHIN SANDS	Tas	7190	Fax:	
Email:				Mobile:	

Application for Planning Approval

Details of Site and Application

Please note, if your application is discretionary the following will be placed on public exhibition.

Site Details

Address / Location of Proposal: 128 CAMBRIA DRIVE			
Suburb DOLPHIN SANDS Post Code 7190			
Size of site	m^2	or	1.125 Ha
Certificate of Title(s):	122591/47		

Current use of site:	STORAGE USE

General Application Details

Complete for All Applications

☒	New Dwelling	☐	Change of use
☐	Additions / Alterations to Dwelling	☐	Intensification or modification of use
☐	New Outbuilding or Addition	☐	Subdivision or boundary adjustment
☐	New Agricultural Building	☐	Minor amendment to existing permit DA …… / …..
☐	Commercial / Industrial Building	☐	Planning Scheme Amendment

Estimated value of works (design & construction)	$	

Describe the order and timing of any staged works:	or N/A

General Background Information		
Please state the name of any Council officers that you have discussed this proposal with:	Officer's name : or N/A	
Is the site listed on the Tasmanian Heritage Register?	Yes ☐	No ☒
Have any potentially contaminating activities ever occurred on the site? *If yes, please provide a separate written description of those activities.*	Yes ☐	No ☒
Is the proposal consistent with any restrictive covenants or Part 5 agreements that apply to the site?	Yes ☐	No ☒

Application for Planning Approval

Does the proposal involve any of the following?		
Type of development		**Brief written description if not clearly shown on the plans:**
Partial or full demolition	☐ **Yes** ☒ **No**	
Fencing	☐ **Yes** ☒ **No**	
New or upgraded vehicle / pedestrian access	☐ **Yes** ☒ **No**	
New or modified water, sewer, electrical or telecommunications connection	☒ **Yes** ☐ **No**	
Retaining walls	☐ **Yes** ☒ **No**	
Cut or fill	☐ **Yes** ☒ **No**	
Signage	☐ **Yes** ☒ **No**	
New car parking	☒ **Yes** ☐ **No**	
Vegetation removal	☐ **Yes** ☒ **No**	

Existing floor area -. m^2	Proposed floor area 264.m^2

Number of existing car parking on site -	Number of proposed car parking on site - 2

Describe the width & surfacing of vehicular access (existing or proposed) and how drainage/runoff is collected and discharged:	Gravel, Driveway, self draining.
If vehicular access is from a road sign-posted at more than 60 km/hr, please state the sight distance in both directions:	or N/A

Please note, if a gravel driveway is proposed from a sealed public road please address the following clause (E6.7.6 P1):

Parking spaces and vehicle circulation roadways must not unreasonably detract from the amenity of users, adjoining occupiers or the quality of the environment through dust or mud generation or sediment transport, having regard to all of the following:

(i) the suitability of the surface treatment;
(ii) the characteristics of the use or development;
(iii) measures to mitigate mud or dust generation or sediment transport.

Will stormwater from buildings and hardstand areas be managed by: (details should be clearly	Discharge to a main: …….....	Yes / ☒ N/A ☐
	Discharge to kerb & gutter: ……..…	Yes ☐ / N/A ☒
	Discharge to roadside table drain:...	Yes ☐/ N/A ☒
	Discharge to natural watercourse: ..	Yes ☐/ N/A ☒

Application for Planning Approval

shown / noted on plans)	Retained on site: ……..		Yes ☐ / N/A ☒	
Materials				
External building material	Walls:	Lightweight cladding	Roof:	corrugated roof cladding
External building colours	Walls:	neutral	Roof:	neutral
Fencing materials:	-	Retailing wall materials:		-

For all outbuildings

Describe for what purpose the building is to be used:	
Describe any intended toilet, shower, cooking or heating to be installed:	
If the building is to be used wholly or partly as a domestic workshop, what type of tools and machines will be used?	n/a

For all non-residential applications

Hours of Operation						
Current hours of operation	Monday to Friday:		Saturday:		Sunday & Public holidays:	
Proposed hours of operation	Monday to Friday:		Saturday:		Sunday & Public holidays:	

Number of Employees			
Current Employees Total:		Maximum at any one time:	
Proposed Employees Total:		Maximum at any one time:	

Describe any delivery of goods to and from the site, including the types of vehicles used and the estimated average weekly frequency:	or N/A
Describe current traffic movements into the site, including the type & timing of heavy vehicle movements & any proposed change:	or N/A
Describe any hazardous materials to be used or stored on site:	or N/A
Describe the type & location of any large plant or machinery used (refrigeration, generators)	or N/A
Describe any retail and/or storage of goods or equipment in outdoor areas:	or N/A

Application for Planning Approval

Describe any external lighting proposed:	or N/A

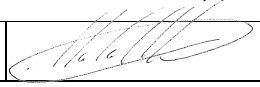
Personal Information Protection Statement:

The personal information that Council is collecting form you is deemed personal information for the purposes of the *Personal Information Protection Act 2004*. The intended recipients of personal information collected by Council may include its officers, agents or contractors or data service providers. The supply of the information by you is voluntary. If you cannot provide or do not wish to provide the information sought, Council may be unable to process your application. Council is collecting this personal information from you for the purposes of managing, addressing, advising upon and determining the application and other related Council matters.

Declaration:

I/we hereby apply for planning approval to carry out the use or development described in this application and the accompanying documents and declare that: -

- The information in this application is true and correct.
- In relation to this application, I/we agree to allow Council employees or consultants to enter the site in order to assess the application.
- I/we confirm that I/we are the copyright holder or have the authority to sign on behalf of any person with copyright for documents to this application and authorities Council to provide a copy of this application to any person for assessment or statutory consultation.
- I/we authorise Council to provide a copy of any documents relating to this application to any person for the purpose of assessment or public consultation and agree to arrange for the permission of the copyright owner of any part of this application to be obtained.
- I acknowledge that if the application is discretionary that the application will be exhibited in the Council offices and on the Council website.
- I/We declare that the Owner has been notified of the intention to make this application in accordance with section 52(1) of the *Land Use Planning and Approvals Act 1993*.

Signature:		Date:	15.12.21

If application is not the owner

If the applicant is not the owner, please list all persons who were notified of this application pursuant to section 52 of the *Land Use Planning and Approvals Act 1993*.

Name:	Method of notification:	Date of notification:

If application is on or affect Council or Crown owned or administered land

If land affected by this application is owned or administered by the Crown or Council then the written permission of the relevant Minister (or their delegate) and/or the General Manager must provided and that person must also sign this application form below:

I . being responsible for the administration of land at declare that I have given permission for the making of this application by for use and/or development involving

Signature: Date:

It is the applicant's responsibility to obtain any such consent prior to lodgement. Written requests for consent of the Council must be sent to General Manager. Request for Ministerial consent should be directed to the relevant department.

ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
CIVIL/STRUCTURAL ENGINEERING

DRAWING SCHEDULE

A00	COVER PAGE
A01	SITE PLAN
A02	CONSTRUCTION PLAN
A03	FLOOR PLAN

PROJECT INFORMATION

BUILDING DESIGNER:	GRANT JAMES PFEIFFER
ACCREDITATION No:	CC2211T
BUILDING CLASS:	CLASS 1A & 10A
LAND TITLE REFERENCE NUMBER:	122591/47
PROPOSED SHED AREA:	264m²
PROPOSED DWELLING:	71m²
DESIGN WIND SPEED:	N3
SOIL CLASSIFICATION:	TBC
CLIMATE ZONE:	7
BUSHFIRE-PRONE BAL RATING:	N/A
ALPINE AREA:	N/A
CORROSION ENVIRONMENT:	SEVERE
FLOODING:	NO
LANDSLIP:	N/A
DISPERSIVE SOILS:	UNKNOWN
SALINE SOILS:	UNKNOWN
SAND DUNES:	NO
MINE SUBSIDENCE:	NO
LANDFILL:	NO
GROUND LEVELS:	REFER PLAN
ORG LEVEL:	75mm ABOVE GROUND LEVELS

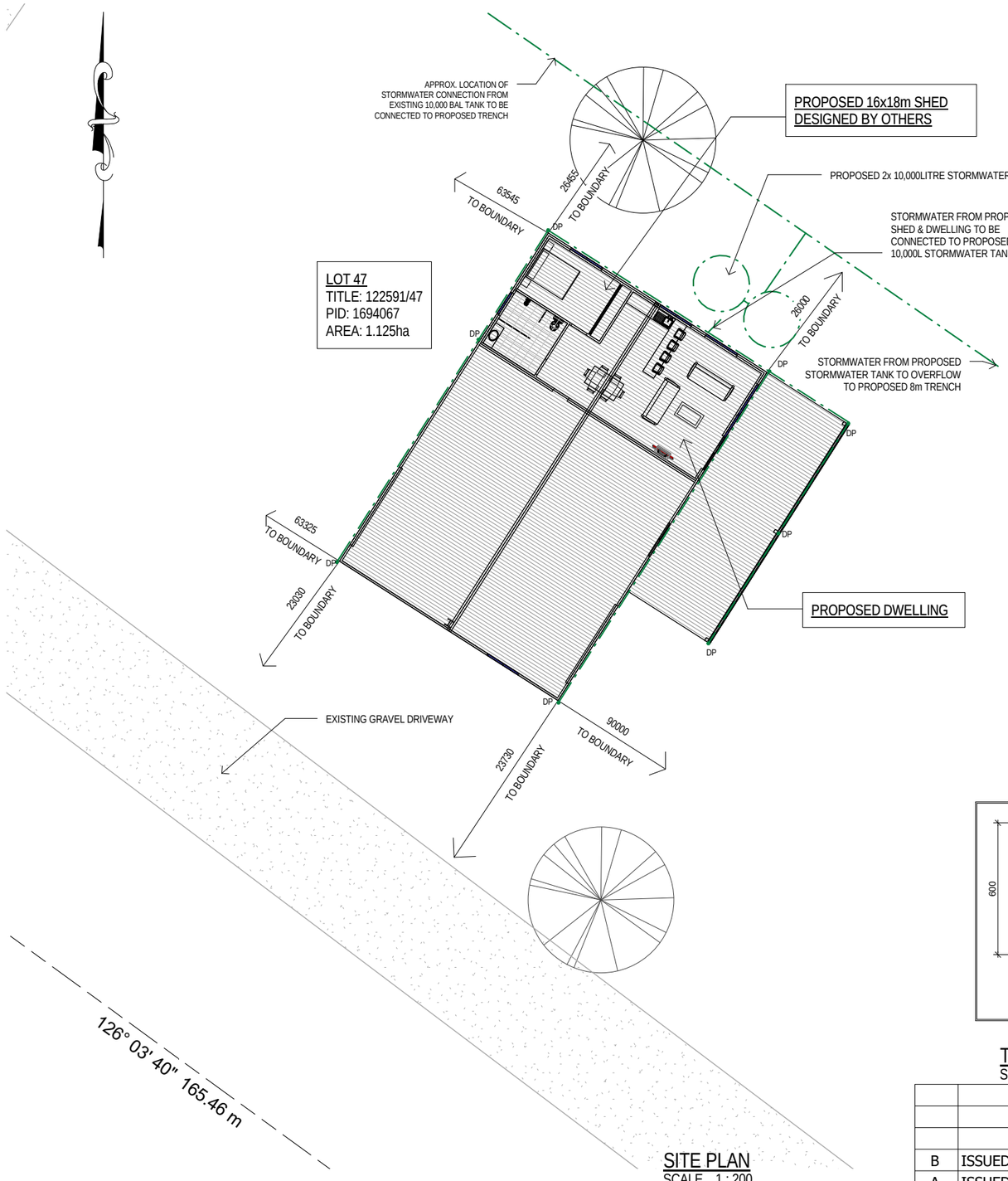
PROPOSED DWELLING & SHED

S. T. & R. J. BARDEN
128 CAMBRIA DRIVE
DOLPHIN SANDS TAS 7190

GLAMORGAN - SPRING BAY COUNCIL

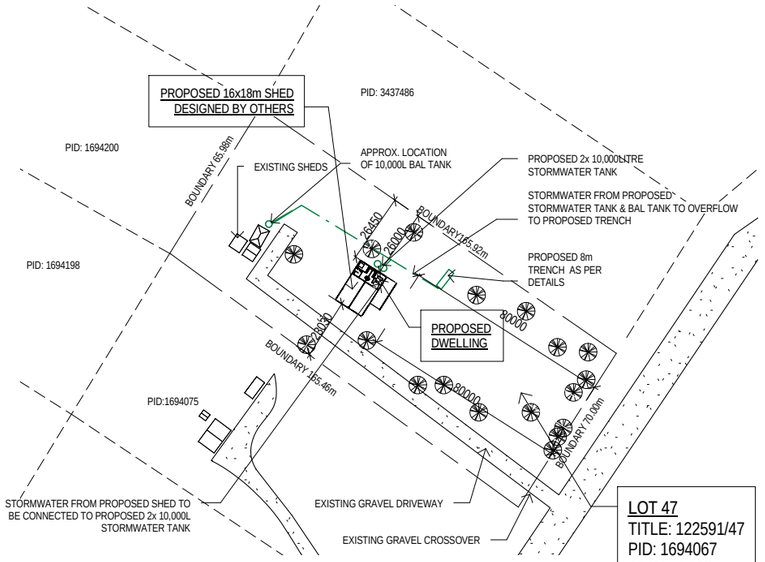
ISSUED FOR APPROVAL

81 Elizabeth Street, Launceston, Tasmania 7250 jack@engineeringplus.com.au, trin@engineeringplus.com.au
Jack 0417 362 783 or Trin 0417 545 813



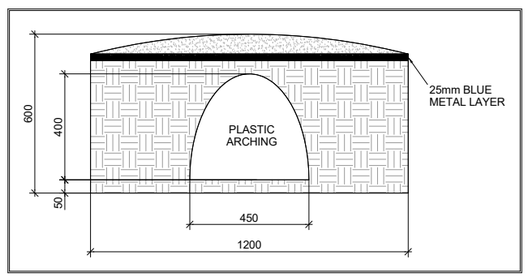
SITE PLAN
SCALE 1 : 200

ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
CIVIL/STRUCTURAL ENGINEERING



LOCALITY PLAN
SCALE 1 : 2000

LEGEND	
	SEWER
	WATER
	STORMWATER



TYPICAL STORMWATER DISPOSAL TRENCH
SCALE 1 : 500

DRAINAGE
ALL DRAINAGE WORK SHOWN IS PROVISIONAL ONLY AND IS SUBJECT TO AMENDMENT TO COMPLY WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES. ALL WORK IS TO COMPLY WITH THE REQUIREMENTS OF NATIONAL PLUMBING AND DRAINAGE CODE AS3500 AND MUST BE CARRIED OUT BY A LICENCED TRADESMAN ONLY.

Rev:	Amendment:	Date:	Int:
B	ISSUED FOR APPROVAL	22.11.21	C.L
A	ISSUED FOR APPROVAL	11.11.21	C.L
-	ISSUED FOR REVIEW	02.11.21	C.L

Date Drawn: 02.11.21
Drawn: C. Lim
Checked: A. Taylor
Approved: J. Pfeiffer
Scale: As Shown @ A3

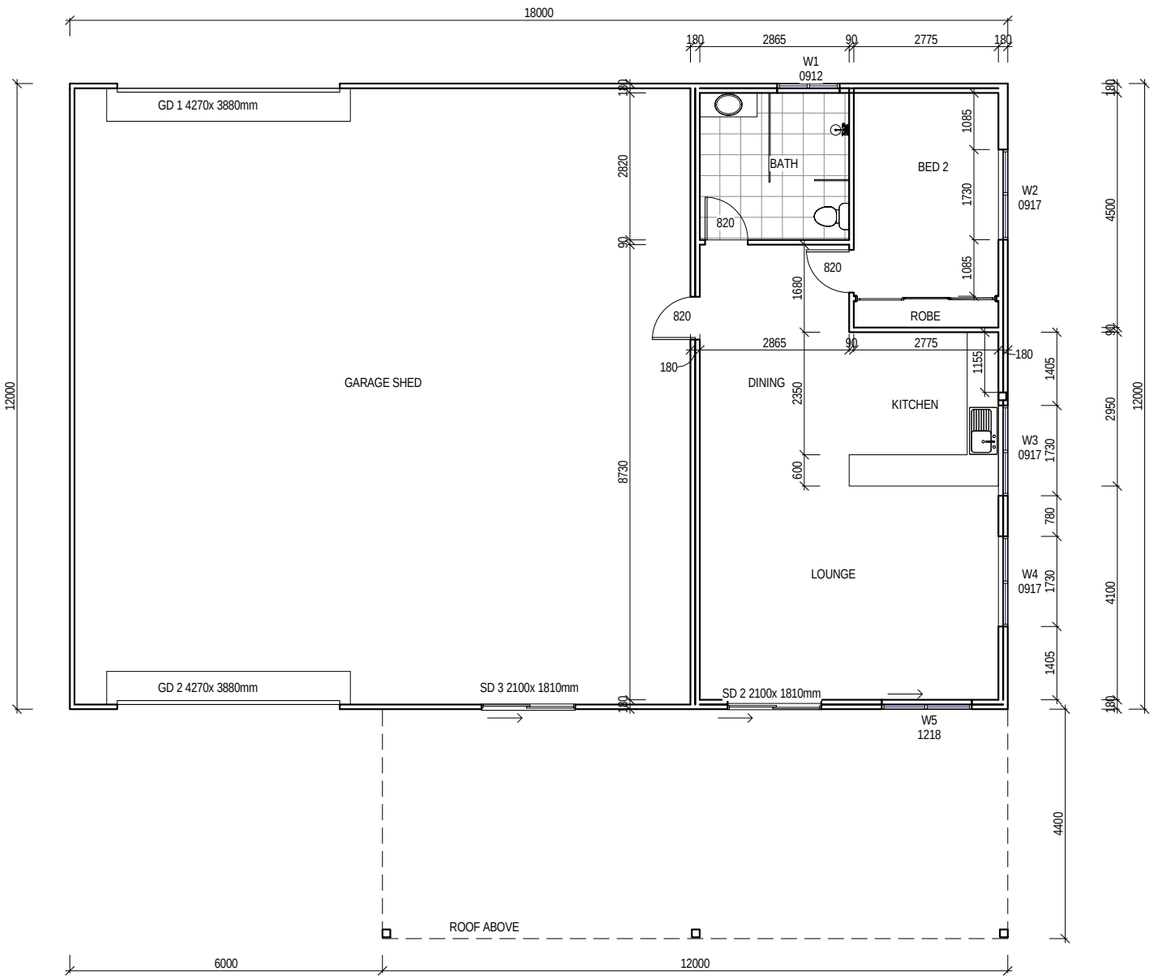
Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

ISSUED FOR APPROVAL

Client: S. T. & R. J. BARDEN
Project: PROPOSED DWELLING&SHED
Address: 128 CAMBRIA DRIVE DOLPHIN SANDS TAS 7190

Mob 0417 362 783 or 0417 545 813
jack@engineeringplus.com.au
trin@engineeringplus.com.au
ENGINEERING PLUS

Drawing No: 53721 A01 Rev B



CONSTRUCTION FLOOR PLAN
SCALE 1 : 100

WINDOW SCHEDULE

MARK	HEIGHT	WIDTH	TYPE	U-VALUE	SHGC
^W1	900	1200	DG	4.3	0.55
W2	900	1730	DG	4.3	0.55
W3	900	1730	DG	4.3	0.55
W4	900	1730	DG	4.3	0.55
W5	1200	1800	DG	4.0	0.55
SD1	2100	1800	DG	4.0	0.61
SD2	2100	1800	DG	4.0	0.61

^NOTE:
WINDOW GLASS : SMOKED GLASS

DISCLAIMER
ALL WINDOWS SHOWN ON PLAN ARE APPROX. BASED OFF STANDARD MANUFACTURING SIZES. ALL WINDOW DIMENSIONS TO BE CONFIRMED ON SITE BY BUILDER PRIOR TO ORDERING AND MANUFACTURING.

Area Schedule (Gross Building)		
Name	Area	Area (sq)
PROPOSED DWELLING	71.46 m²	7.69
PROPOSED SHED	144.54 m²	15.56
	216.00 m²	23.25

Rev:	Amendment:	Date:	Int:
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trin@engineeringplus.com.au
ENGINEERING PLUS BUILDING DESIGN PROJECT MANAGEMENT CIVIL/STRUCTURAL ENGINEERING

Date Drawn: 02.11.21
Drawn: C. Lim
Checked: A. Taylor
Approved: J. Pfeiffer
Scale: As Shown @ A3

Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

Drawing No: 53721 Rev: A02 B

ENGINEERING PLUS
BUILDING DESIGN
PROJECT MANAGEMENT
CIVIL/STRUCTURAL ENGINEERING

FLOOR COVERINGS

	CARPET
	CONCRETE
	TIMBER DECKING
	TILE
	VINYL TIMBER FLOORING

SMOKE ALARMS
PROVIDE AND INSTALL SMOKE ALARMS & HARD WIRE
TO BUILDING POWER SUPPLY TO AS 3786.
CEILING MOUNTED WITH 9VDC
ALKALINE BATTERY BACKUP
TO LOCATIONS INDICATED ON PLAN AND IN ACCORDANCE
WITH BCA PART 3.7.5.2

(S) - DENOTES INTERCONNECTED SMOKE DETECTORS

FLOOR PLAN
SCALE 1 : 100

Area Schedule (Gross Building)

Name	Area	Area (sq)
PROPOSED DWELLING	71.46 m²	7.69
PROPOSED SHED	144.54 m²	15.56
	216.00 m²	23.25

Rev:	Amendment:	Date:	Int:
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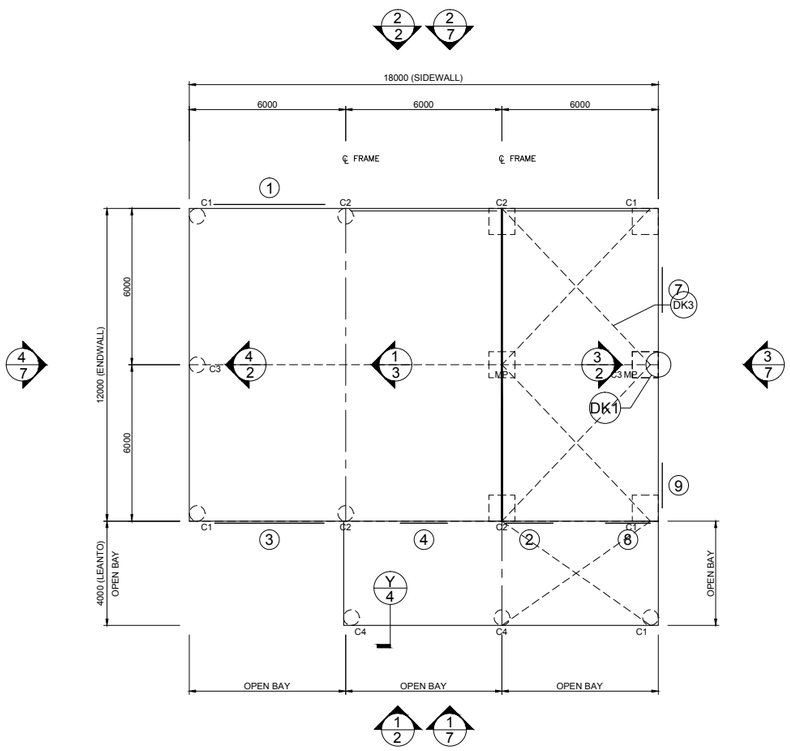
ENGINEERING PLUS

Accredited Building Designer
Designer Name: J.Pfeiffer
Accreditation No: CC2211T

Drawing No: 53721 A03 Rev B

IF IN DOUBT, ASK.

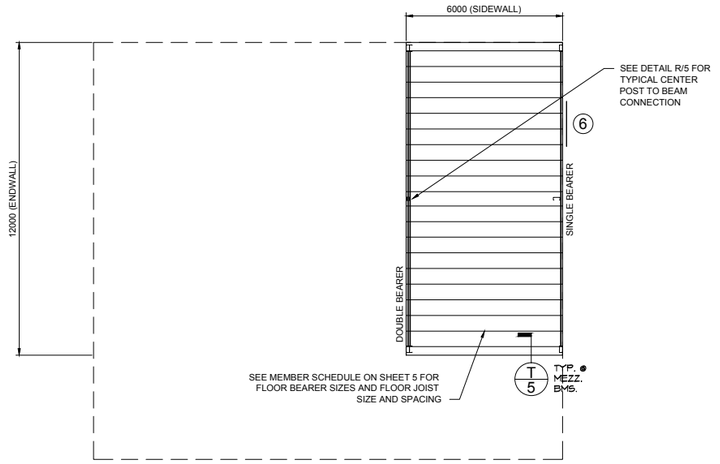


1/1 FOUNDATION PLAN AND MEMBER LAYOUT
SCALE: 1 = 200

			BALUSTRADE DESIGN LOADS				
			BALUSTRADE TOP EDGE			BALUSTRADE INFILL	
OCCUPANCY	STANDARD	BUILDING ELEMENT	HORIZONTAL	VERTICAL	ANY DIRECTION	HORIZONTAL	ANY DIRECTION
DOMESTIC/RESIDENTIAL	AS1170	INTERNAL MEZZANINE / STAIR BALUSTRADE	0.35kN/m	0.35kN/m	0.6kN	0.5kPa	0.25kN
DOMESTIC/RESIDENTIAL	AS1170	EXTERNAL MEZZANINE / STAIR BALUSTRADE	0.75kN/m	0.75kN/m	0.6kN	1kPa*	0.5kN
STORAGE	AS1170	MEZZANINE / STAIR BALUSTRADE	0.75kN/m	0.75kN/m	0.6kN	1kPa	0.5kN
FARM BUILDINGS/ SHEDS	AS1657	INTERNAL MEZZANINE / STAIR BALUSTRADE	0.33kN/m	0.33kN/m	0.55kN/m	0.5kPa	0.25kN

NOTE:
1. BALUSTRADE STRUCTURE AND DIMENSIONS ARE TO BE IN ACCORDANCE WITH NCC 2019
2. ALL LOADS ARE CONSIDERED 'LIVE LOADS' AND ARE TO HAVE APPLICABLE SAFETY FACTORS APPLIED TO STRENGTH CALCULATIONS
3. DESIGNER TO ALSO CONSIDER WIND LOADS IN CALCULATIONS. SPECIFIED VALUE DENOTES MINIMUM LIVE LOAD ONLY.
4. STAIR DESIGN, MATERIALS, AND INSTALLATION TO BE IN ACCORDANCE WITH THE BCA (Building Code of Australia).
5. DESIGN, MATERIALS, AND INSTALLATION OF ALL GUARDRAILS OR WALLS AT EXPOSED EDGES OF MEZZANINE FLOOR TO BE PROVIDED BY OTHERS.

NOTE: PARTICLE BOARD AT MEZZANINE FLOOR, ATTACH TO STEEL FRAMING WITH SCREWS @ 150 c/c AT PANEL EDGES, 300 c/c IN FIELD. FLOORING TO BE GLUED TO JOISTS USING CONSTRUCTION ADHESIVE.



2/1 MEZZANINE FLOOR FRAMING PLAN
SCALE: 1 = 200
DESIGN LIVE LOAD: 2 kPa

ROOF STRAP BRACING TO BE CONNECTED TO THE PURLIN CLOSEST TO THE LINE OF THE END WALL MULLION
FOR INTERNAL WALLS USE MULLION SPECIFICATIONS
SEE MULTIBUILD LAYOUT SCREEN FOR INTERNAL OPENING POSITIONS

MEMBER LEGEND

C1	C20024
C2	2C20024
C3	C25024
C4	2C20015
MP	2C15024

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS TO BE VERIFIED ON SITE.

SHEET 1 OF 7
JOB NO. SKSG32181
NCC 2019
DATE 25/10/2021
CHECKED TM
DRAWN FDS

STEEL BUILDING BY SKYLINE ROOFING PTY LTD (CONTACT)
03 6334 5535
FOR STUART BARDEN
AT 128 CAMBRIA DR SWANSEA

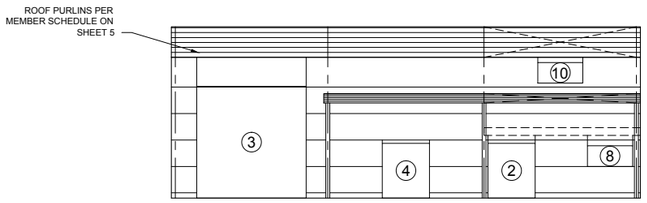
fairdinkum SHEDS

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

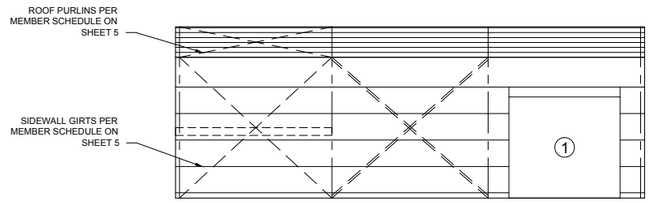
Registered Chartered Professional Engineer	Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD	Regn. No. 9985
Registered Certifying Engineer (Structural) N.T.	Regn. No. 116373ES
Registered Engineer - (Civil) VIC	Regn. No. EC36692
Registered Engineer - (Civil) TAS	Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 25/10/2021
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

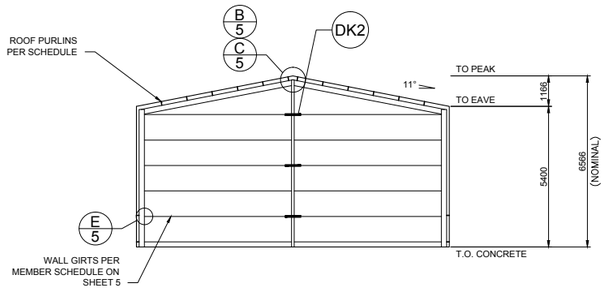
PRELIMINARY ONLY



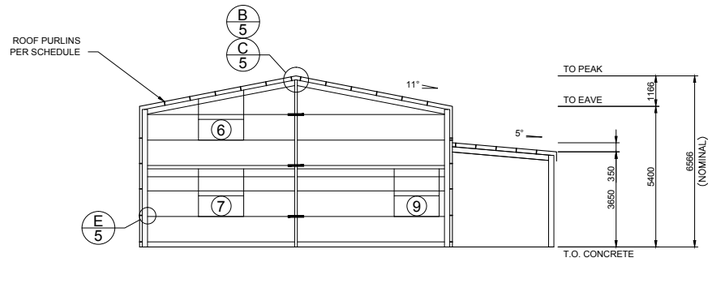
1/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



2/2 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



4/2 ENDWALL INTERIOR ELEVATION
SCALE: 1 = 200



3/2 ENDWALL INTERIOR ELEVATION
SCALE: 1 = 200

X BRACING IS REQUIRED IN 3 SIDE BAY(S) AND 1 ROOF BAY(S) (BOTH SIDES).
FLY BRACING IS INCLUDED TO BE PLACED ON EVERY SECOND PURLIN AND GIRT ON ENDWALL MULLIONS, INTERNAL COLUMNS AND INTERNAL RAFTERS.

SHEET 2 OF 7
JOB NO. SKSG32181
NCC 2019
DATE 25/10/2021
CHECKED TM
DRAWN FDS

STEEL BUILDING BY (CONTACT)
SKYLINE ROOFING PTY LTD
03 6334 5535
FOR STUART BARDEN
AT 128 CAMBRIA DR
SWANSEA

SHED SAFE accredited

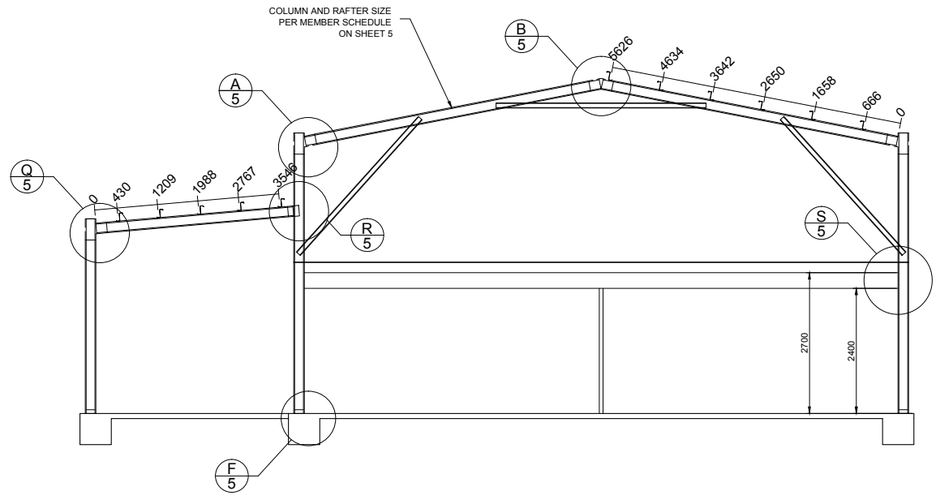
fairdinkum SHEDS

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer	Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD	Regn. No. 9985
Registered Certifying Engineer (Structural) N.T.	Regn. No. 116373ES
Registered Engineer - (Civil) VIC	Regn. No. EC36692
Registered Engineer - (Civil) TAS	Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 25/10/2021
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

PRELIMINARY ONLY



1/3 INTERNAL FRAME SECTION
SCALE: 1 = 100

Refer to Sheet #4 for concrete specification.

SHEET 3 OF 7

JOB NO. SKSG32181 | NCC 2019

DATE 25/10/2021

CHECKED TM

DRAWN FDS

STEEL BUILDING BY (CONTACT)
SKYLINE ROOFING PTY LTD
03 6334 5535

FOR
STUART BARDEN

AT
128 CAMBRIA DR
SWANSEA

SHED SAFE accredited

fairdinkum SHEDS

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
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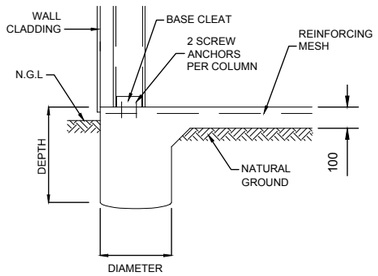
Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer — Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD — Regn. No. 9985
Registered Certifying Engineer (Structural) N.T. — Regn. No. 116373ES
Registered Engineer - (Civil) VIC — Regn. No. EC36692
Registered Engineer - (Civil) TAS — Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 25/10/2021
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

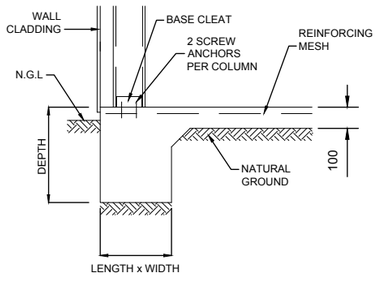
PRELIMINARY ONLY



600 x 600
Diameter x Depth (mm)

N.G.L - NATURAL GROUND LINE

Y	BORED LOCAL THICKENING DETAIL	DWG NO.	SBOMA



1000 x 1000 x 800 (MEZZANINE)
Length x Width x Depth (mm)

N.G.L - NATURAL GROUND LINE

Y	BORED LOCAL THICKENING DETAIL	DWG NO.	SBLMA

Notifications:
Site Check process is incomplete

STRUCTURAL GENERAL NOTES

1. **GOVERNING CODE** : NATIONAL CONSTRUCTION CODE (NCC), LOADING TO AS1170 - ALL SECTIONS. BUILDING SUITABLE AS EITHER A PRIVATE GARAGE CLASS 10A, OR A FARM SHED (CLASS 7 OR 8),UNLESS OTHERWISE SPECIFICALLY NOTED.
FOR USE AS A FARM SHED, IT MUST MEET THE FOLLOWING REQUIREMENTS:
   - BE LESS THAN 2000 SQM IN AREA (INCLUSIVE OF ANY MEZZANINE FLOOR AREA).
   - MUST BE LOCATED ON A FARM AND USED IN CONNECTION WITH FARMING PURPOSES.
   - BUILDING IS NOT TO BE OCCOUPIED FREQUENTLY NOR FOR EXTENDED PERIODS BY PEOPLE, WITH A MAXIMUM OF 1 PERSON PER 200 SQM OR 2 PERSONS MAXIMUM IN TOTAL WHICHEVER IS THE LESSER.
2. **DRAWING OWNERSHIP** :
THESE DRAWINGS REMAIN THE PROPERTY OF FBHS (AUST) PTY LIMITED. ENGINEERING SIGNATURE AND CERTIFICATION IS ONLY VALID WHEN BUILDING IS SUPPLIED BY A DISTRIBUTOR OF FBHS. DRAWINGS ARE PROVIDED FOR THE DUAL PURPOSE OF OBTAINING BUILDING PERMITS AND AIDING CONSTRUCTION. ANY OTHER USE OR REPRODUCTION IS PROHIBITED WITHOUT WRITTEN APPROVAL FROM FBHS.
3. **DRAWING SIGNATURE REQUIREMENTS** :
THESE DRAWINGS ARE NOT VALID UNLESS SIGNED BY THE ENGINEER. THE ENGINEER ACCEPTS NO LIABILITY OR RESPONSIBILITY FOR DRAWINGS WITHOUT A SIGNATURE. EACH TITLE BLOCK CONTAINS A WATER MARK UNDER THE CUSTOMERS NAME CONTAINING THE DATE OF PRODUCTION OF THE DRAWINGS; THE DRAWINGS ARE TO BE SUBMITTED TO COUNCIL WITHIN 21 DAYS OF THIS DATE. THIS IS TO ENSURE THAT ONLY CURRENT DRAWINGS ARE IN CIRCULATION.
4. **CONTRACTOR RESPONSIBILITIES** :
CERTIFIER AND CONTRACTOR TO CONFIRM [ON SITE] THAT THE WIND LOADINGS APPLIED TO THIS DESIGN ARE TRUE AND CORRECT FOR THE ADDRESS STATED IN THE TITLE BLOCK.
CONTRACTOR SHALL VERIFY AND CONFIRM ALL EXISTING CONDITIONS AND DIMENSIONS. ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN DRAWINGS AND EXISTING CONDITIONS PRIOR TO START OF WORK.
CONTRACTOR MUST NOT MAKE ANY DEVIATION FROM THE PROVIDED PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM ONE THE UNDERSIGNING ENGINEERS. THE ENGINEER / FBHS TAKE NO RESPONSIBILITY FOR CHANGES MADE WITHOUT WRITTEN APPROVAL.
CONTRACTOR IS RESPONSIBLE FOR ENSURING NO PART OF THE STRUCTURE BECOMES OVERSTRESSED DURING CONSTRUCTION.
BUILDING IS NOT STRUCTURALLY ADEQUATE UNTIL THE INSTALLATION OF ALL COMPONENTS AND DETAILS SHOWN IS COMPLETED IN ACCORDANCE WITH THESE DRAWINGS.
THE INDICATED DRAWING SCALES ARE APPROXIMATE. DO NOT SCALE DRAWINGS FOR CONSTRUCTION PURPOSES.
FOR FUTHER DIRECTIONS ON CONSTRUCTION THE CONTRACTOR SHOULD CONSULT THE APPROPRIATE INSTRUCTION MANUAL.
5. **ENGINEERING** :
THE ENGINEER / FBHS ARE NOT ACTING AS PROJECT MANAGERS FOR THIS DEVELOPMENT, AND WILL NOT BE PRESENT DURING CONSTRUCTION.
THE UNDERSIGNING ENGINEERS HAVE REVIEWED THIS BUILDING FOR CONFORMITY ONLY TO THE STRUCTURAL DESIGN PORTIONS OF THE GOVERNING CODE. THE PROJECT MANAGER IS RESPONSIBLE FOR ADDRESSING ANY OTHER CODE REQUIREMENTS APPLICABLE TO THIS DEVELOPMENT.
THESE DOCUMENTS ARE STAMPED ONLY AS TO THE COMPONENTS SUPPLIED BY FBHS. IT IS THE RESPONSIBILITY OF THE PURCHASER TO COORDINATE DRAWINGS PROVIDED BY FBHS WITH OTHER PLANS AND/OR OTHER COMPONENTS THAT ARE PART OF THE OVERALL PROJECT. IN CASES OF DISCREPANCIES, THE LATEST DRAWINGS PROVIDED BY FBHS SHALL GOVERN.
NO ALTERATIONS TO THIS STRUCTURE (INCLUDING REMOVAL OF CLADDING) ARE TO BE UNDERTAKEN WITHOUT THE CONSENT OF THE CERTIFYING ENGINEER.
OPENINGS SUCH AS WINDOWS AND DOORS NEED TO BE INSTALLED AS PER THE PRODUCT MANUFACTURER'S INFORMATION/DETAILS.
6. **INSPECTIONS** :
NO SPECIAL INSPECTIONS ARE REQUIRED BY THE GOVERNING CODE ON THIS JOB. ANY OTHER INSPECTIONS REQUESTED BY THE LOCAL BUILDING DEPARTMENT SHALL BE CONDUCTED AT THE OWNER'S EXPENSE.
7. **SOIL REQUIREMENTS** :
SITE CLASSIFICATION TO BE A, S OR M ONLY. SOIL SAFE BEARING CAPACITY VALUE INDICATED ON DRAWING SHEET 4 OCCURS AT 100mm BELOW FINISH GRADE, EXISTING NATURAL GRADE, OR AT FROST DEPTH SPECIFIED BY LOCAL BUILDING DEPARTMENT, WHICHEVER IS THE LOWEST ELEVATION. REGARDLESS OF DETAIL Y ON SHEET 4 THE MINIMUM FOUNDATION DEPTH SHOULD BE 100MM INTO NATURAL GROUND OR BELOW FROST DEPTH SPECIFIED BY LOCAL COUNCIL. ROLLED OR COMPACTED FILL MAY BE USED UNDER SLAB, COMPACTED IN 150mm LAYERS TO A MAXIMUM DEPTH OF 900mm. CONCRETE FOUNDATION EMBEDMENT DEPTHS DO NOT APPLY TO LOCATIONS WHERE ANY UNCOMPACTED FILL OR DISTURBED GROUND EXISTS OR WHERE WALLS OF THE EXCAVATION WILL NOT STAND WITHOUT SUPPLEMENTAL SUPPORT, IN THIS CASE SEEK FURTHER ENGINEERING ADVICE.
8. **CLASS 10a or Class 7 FOOTING DESIGNS:**
THE FOUNDATION DOCUMENTED IS ALSO APPROPRIATE FOR CLASS 10a or CLASS 7 BUILDING DESIGNS ON 'M-D', 'H', 'H-D' OR 'E' CLASS SOILS, IF TOTAL SLAB AREA IS UNDER 100m SQUARE AND THE MAXIMUM SLAB DIMENSION (LENGTH AND WIDTH) IS LESS THAN OR EQUAL TO 12m.
PLEASE BE AWARE THAT THE SLAB DESIGN FOR H & E CLASS SOILS IN THESE INSTANCES ARE DESIGNED TO EXPERIENCE SOME CRACKING. THIS CRACKING IS NOT CONSIDERED A STRUCTURAL FLAW OR DESIGN ISSUE, AND IS SIMPLY COSMETIC IN NATURE. IF THIS IS A CONCERN TO THE CLIENT IT IS ADVISED THEY DISCUSS OTHER OPTIONS WITH THE RELEVANT DISTRIBUTOR PRIOR TO THE POURING OF THE SLAB.
9. **CONCRETE REQUIREMENTS** :
ALL CONCRETE DETAILS AND PLACEMENT SHALL BE PERFORMED IN ACCORDANCE WITH AS2870 AND AS3600.
CONCRETE SHALL HAVE A MIN. 28-DAY STRENGTH OF 20MPa FOR EXPOSURE A1 & B1, 25MPa FOR EXPOSURE A2 & B2 AND 32MPa FOR EXPOSURE C, IN ACCORDANCE WITH SECTION 4, AS3600. CEMENT TO BE TYPE A. MAX AGGREGATE SIZE OF 20mm. SLUMP TO BE 80mm +-15mm. SLABS TO BE CURED FOR 7 DAYS BY WATERING OR COVERING WITH A PLASTIC MEMBRANE, AFTER WHICH CONSTRUCTION CAN BEGIN, DUE CARE GIVEN NOT TO OVER-TIGHTEN HOLD DOWN BOLTS. GIVEN ALLOWABLE SOIL TYPES 1 LAYER OF SL72 REINFORCING MESH IS TO BE INSTALLED ON STANDARD SLABS WITH A MINIMUM 30MM COVER FROM CONCRETE SURFACE. CONCRETE REINFORCING TO CONFORM TO AS 1302, AS1303 & AS 1304.
ALL REINFORCING COVER TO BE A MINIMUM OF 30mm.
10. **STRUCTURAL STEEL REQUIREMENTS** :
ALL STRUCTURAL STEEL, INCLUDING SHEETING THOUGH EXCLUDING CONCRETE REINFORCING, SHALL CONFORM TO AS 1397 (GAUGE <= 1mm fy = 550MPa, GAUGE > 1mm < 1.5mm fy = 500MPa, GAUGE >= 1.5mm fy = 450MPa).
NO WELDING IS TO BE PERFORMED ON THIS BUILDING.
ALL STRUCTURAL MEMBERS AND CONNECTIONS DESIGNED TO AS4600. ALL BOLT HOLE DIAMETERS TO STRAMIT GENERAL PUNCHINGS.
11. **FOOT TRAFFIC** :
FOR ERECTION AND MAINTENANCE PLEASE NOTE THE FOLLOWING DEFINED FOOT TRAFFIC ZONES:
- CORRUGATED: WALK ONLY WITHIN 200MM OF SCREW LINES. FEET SPREAD OVER AT LEAST TWO RIBS.
- MONOCLAD: WALK ONLY IN PANS, OR ON RIBS AT SCREW LINES.

PROJECT DESIGN CRITERIA

ROOF LIVE LOAD: 0.25 kPa
BASIC WIND SPEED: VR 45 m/s
SITE WIND SPEED: VsitB 37.4 m/s
WIND REGION: Reg A
TOPOGRAPHY FACTOR, Mt: 1
SHIELDING FACTOR, Ms: 1
MAX GROUND SNOW LOAD: N/A
MAX ROOF SNOW LOAD: N/A
SITE ALTITUDE: N/A
TERRAIN CATEGORY: TCat 2.99
SOIL SAFE BEARING CAPACITY: 100 kPa
RETURN PERIOD: 1:500
LIMITING CPI 1: -0.3
LIMITING CPI 2: 0
IMPORTANCE LEVEL: 2

DETAIL KEYS

DK1 ENDWALL VERTICAL MULLION (SEE DETAIL C/5 FOR TOP CONN. AND F/5 FOR BASE CONN.)
DK2 FLYBRACING PER DETAIL L/5
DK3 X-BRACING IN ROOF ABOVE (SEE DETAIL M/5)
DK4 DOUBLE X-BRACING IN ROOF ABOVE (SEE DETAIL M/5)

SCHEDULE OF OPENINGS

DOOR	OPENING SIZE MAX		OPENING TYPE	HEADER GIRT	OPENING JAMBS	WIND RATED
	WIDTH	HEIGHT				
1	4270	3880*	3.90H X 4.37 CB PLANETARY GEAR *SERIES B	SINGLE	Z25019U	YES
2	1810	2100	2.10H X 1.81 XO STANDARD GLASS SLIDING DOOR	SINGLE		YES
3	4200	4280*	4.30H X 4.30 CB DIRECT DRIVE *SERIES B #	SINGLE	Z25024U	YES
4	1810	2100	2.10H X 1.81 XO STANDARD GLASS SLIDING DOOR	SINGLE		YES
5	820	2040	INTERNAL PA DOOR NO SILL LHH	SINGLE		YES
6	1730	790	WINDOW	SINGLE		YES
7	1730	790	WINDOW	SINGLE		YES
8	1730	790	WINDOW	SINGLE		YES
9	1730	790	WINDOW	SINGLE		YES
10	1730	790	WINDOW	SINGLE		YES

NOTES: 1) SEE SHEET 5 FOR DOOR OPENING FRAMING INFORMATION.
2) ALL DOOR SCHEDULE MEASUREMENTS ARE ACTUAL DOOR/WINDOW SIZE NOT OPENING SIZE.

* ROLLER DOOR OPENING HEIGHT DEPENDENT ON FINAL BUILD LOCATION.

SHEET 4 OF 7
JOB NO. SKSG32181
NCC 2019
DATE 25/10/2021
CHECKED TM
DRAWN FDS

STEEL BUILDING BY (CONTACT)
SKYLINE ROOFING PTY LTD
03 6334 5535
FOR
STUART BARDEN
AT
128 CAMBRIA DR
SWANSEA

SHED SAFE accredited

fairdinkum SHEDS

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
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Email: design@nceng.com.au
ABN 341 008 173 56

Registered Chartered Professional Engineer	Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD	Regn. No. 9985
Registered Certifying Engineer (Structural) N.T.	Regn. No. 116373ES
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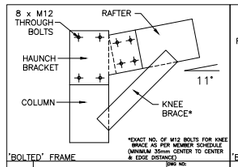
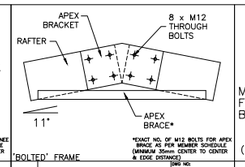
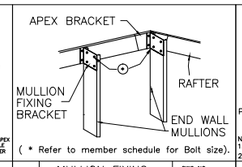


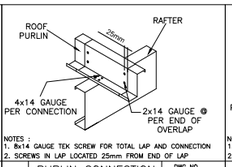
A | HAUNCH CONNECTION | DWG NO K31BB



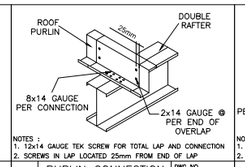
B | APEX CONNECTION | DWG NO AP31BB



C | MULLION FIXING ANGLE BRACKET | DWG NO MFA13



DP | PURLIN CONNECTION DETAIL | DWG NO PCON8L



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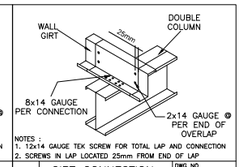
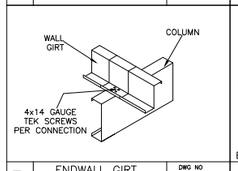
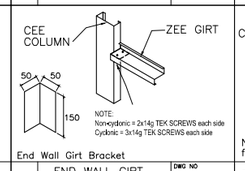


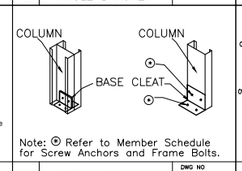
DG | GIRT CONNECTION DETAIL | DWG NO GCON8LD



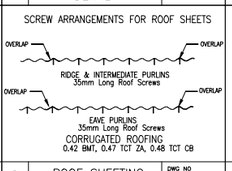
EG | ENDWALL GIRT CONNECTION DETAIL | DWG NO EGCON8N



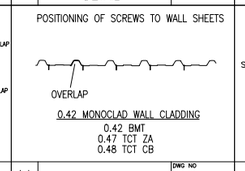
E | END WALL GIRT CONNECTION | DWG NO EG8



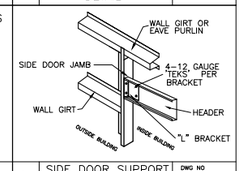
F | BASE CONNECTION | DWG NO BC27



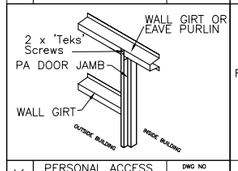
G | ROOF SHEETING PROFILE | DWG NO RONC5



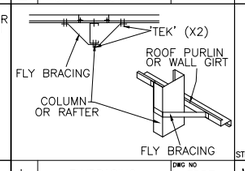
H | WALL SHEET PROFILE | DWG NO W1NC4



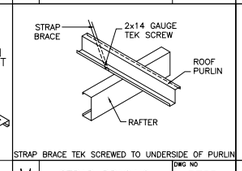
I | SIDE DOOR SUPPORT CONNECTION | DWG NO DFRS



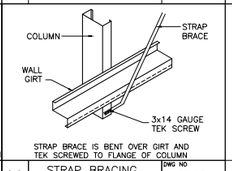
K | PERSONAL ACCESS DOOR | DWG NO PADD1



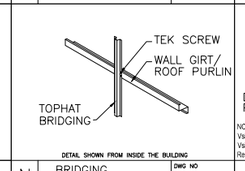
L | FLYBRACING | DWG NO FBRZ



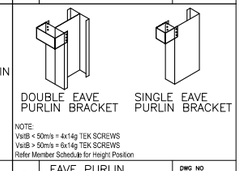
M | STRAP BRACING | DWG NO PZSB



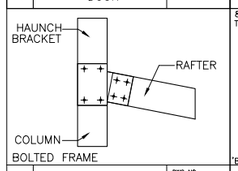
M | STRAP BRACING (UNLESS NOTED OTHERWISE) | DWG NO GZSB



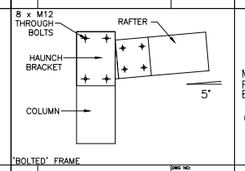
N | BRIDGING DETAIL | DWG NO PGBZ



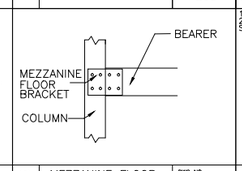
O | EAVE PURLIN BRACKET | DWG NO EPB–PH



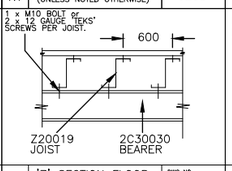
R | LEANTO CONNECTION | DWG NO LTR26HB



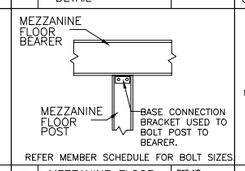
Q | HAUNCH CONNECTION | DWG NO HLT30NB



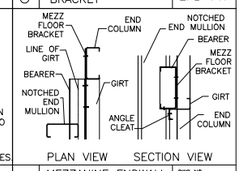
S | MEZZANINE FLOOR BRACKET | DWG NO MZC



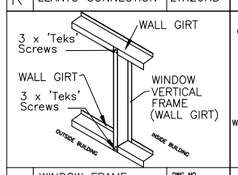
T | 'Z' SECTION FLOOR JOISTS | DWG NO MZS



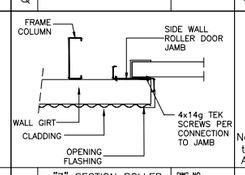
R | MEZZANINE FLOOR POST CONNECTION | DWG NO MZP9



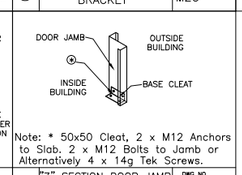
ME | MEZZANINE ENDWALL CONNECTION=B>ECZ | DWG NO BGTECZ



W | WINDOW FRAME ATTACHMENT DETAIL | DWG NO WADZ



U | "Z" SECTION ROLLER DOOR JAMB | DWG NO ZSRDJWL



X* | "Z" SECTION DOOR JAMB BASE CONNECTION | DWG NO ZRDJBC

MEMBER AND MATERIAL SCHEDULE

1	END WALL RAFTER	Single C20024
2	C.S. FRAME RAFTER	Single C20024
3	END FRAME COLUMN (C1)	Single C20024
4	C.S. FRAME COLUMN (C2)	Double C20024
5	MULLION (C3)	Single C25024
6	RL END FRAME OPEN CORNER COLUMN (C1)	Single C20024
7	RL OPEN BAY COLUMN (C4)	Double C20015
8	DOOR (#1) JAMB	Z25019 w/ C20019 Strong Behind
9	DOOR (#1) JAMB HEADER	C30024
10	DOOR (#3) JAMB	Z25024 w/ C20024 Strong Behind
11	DOOR (#3) JAMB HEADER	C30024
12	C.S. FRAME KNEE BRACE	Single C15019 @ 3.63 LONG 2 bolts each end
13	KNEE BRACE HEIGHT UP COLUMN	3.03m
14	KNEE BRACE LENGTH UP RAFTER	2.32m
15	C.S. FRAME APEX BRACE	Single C15019 @ 4.03 LONG 2 bolts each end
16	APEX POSITION FROM RAFTER END	2.02m
17	END WALL RL RAFTER	Single C20019
18	C.S. RL RAFTER	Double C20019
19	ANCHOR BOLTS (# PER DETS.)	Screw Anchor 16mm x 100 Galv
20	EAVE PURLIN	C15015 (Eave Purlin Bracket 0mm from top of column)
21	RIGHT LEANTO EAVE PURLIN	C15015 (Eave Purlin Bracket 0mm from top of column)
22	TYP. ROOF PURLIN SIZE	Z15012 (1 rows of bridging)
23	MAIN BLDG. PURLIN SPACING	0.992 m. (6 rows) (Max Allow. 1.000m)
24	MAIN BLDG. PURLIN LENGTH	6.6 m. (0.6m Overlap)
25	ROOF PURLIN BRIDGING	Tophat 64 x 0.75
26	RIGHT LEANTO PURLIN SPACING	0.779 m. (5 rows) (Max Allow. 1.000m)
27	TYP. SIDEWALL GIRT SIZE	Z15012 (1 rows of bridging)
28	MAIN BLDG. SIDEWALL GIRT SPACING	1.014 m. (5 rows) (Max Allow. 1.149m)
29	MAIN BLDG. SIDEWALL GIRT LENGTH	6.6 m. (0.6m Overlap)
30	SIDEWALL GIRT BRIDGING	Tophat 64 x 0.75
31	RIGHT LEANTO SIDEWALL GIRT SPACING	1.108 m. (0 rows) (Max Allow. 1.149m)
32	TYP. ENDWALL GIRT SIZE	Z15012 (1 rows of bridging)
33	MAIN BLDG. ENDWALL GIRT SPACING	0.976 m. (6 rows) (Max Allow. 1.000m)
34	BAY DIVIDER GIRT SPACING	0.976 m. (6 rows) (Max Allow. 1.000m)
35	MAIN BLDG. ENDWALL GIRT LENGTH	5.75 m. (0.1m Overlap)
36	ENDWALL GIRT BRIDGING	Tophat 64 x 0.75
37	FRAME SCREW FASTENERS	14-13x22 Hex C/S (SP HD 5/16" Hex Drive)
38	FRAME BOLT FASTENERS	Purlin Assy M12x30 Z/P
39	X-BRACING STRAP AND FASTENERS	Single Bracing Strap Per Roll Heavy
40	MEZZANINE FLOOR BEARERS	2C30030
41	MEZZANINE FLOOR JOISTS	Z20019 @ 0.6m.
42	MEZZANINE POSTS	2C15024
43	WALL COLOUR	MONUMENT
44	ROOF COLOUR	MONUMENT
45	ROLLER DOOR COLOUR	MONUMENT
46	P.A. DOOR COLOUR	MONUMENT
47	WINDOW COLOUR	MONUMENT
48	GLASS SLIDING DOOR COLOUR	MONUMENT
49	DOWNPIPE COLOUR	MONUMENT
50	GUTTER COLOUR	MONUMENT
51	CORNER FLASHING COLOUR	MONUMENT
52	BARGE FLASHING COLOUR	MONUMENT
53	OPENING FLASHING COLOUR	MONUMENT
54	OPEN BAY HEADER HEIGHT	0.5

"C.S." = CLEARSPAN "L." = LEFT "R." = RIGHT

SHEET 5 OF 7
JOB NO. SKSG32181
NCC 2019
DATE 25/10/2021
CHECKED TM
DRAWN FDS

STEEL BUILDING BY
(CONTACT)
SKYLINE ROOFING PTY LTD
03 6334 5535
FOR
STUART BARDEN
AT
128 CAMBRIA DR
SWANSEA

SHED SAFE accredited

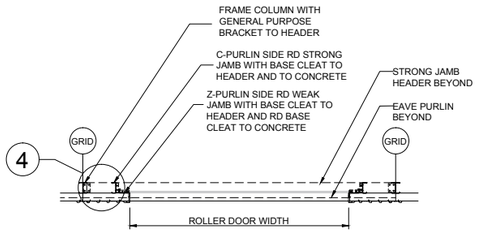
fairdinkum SHEDS

NORTHERN CONSULTING engineers
Civil & Structural Engineers
50 Punari Street
Currajong, Qld 4812
Fax: 07 4725 5850
Email: design@nceng.com.au
ABN 341 008 173 56

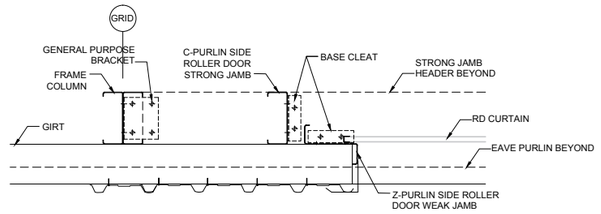
Registered Chartered Professional Engineer — Regn. No. 2558980
Registered Professional Engineer (Civil & Structural) QLD — Regn. No. 9985
Registered Certifying Engineer (Structural) N.T. — Regn. No. 116373ES
Registered Engineer - (Civil) VIC — Regn. No. EC36692
Registered Engineer - (Civil) TAS — Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 25/10/2021
Registered to the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

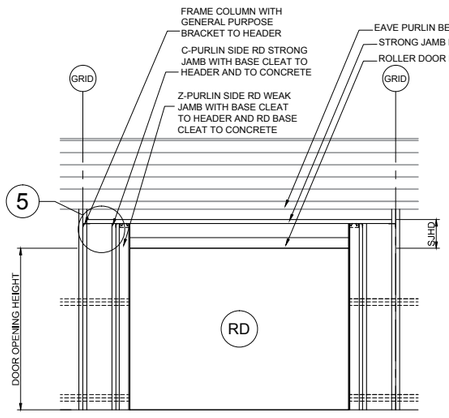
PRELIMINARY ONLY

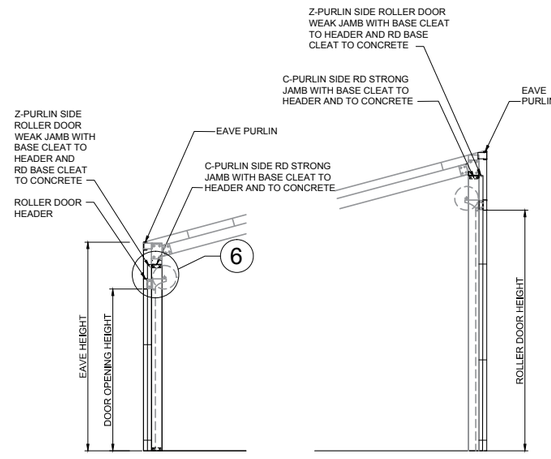


1 PLAN VIEW
SCALE: NTS



4 PLAN DETAIL
SCALE: NTS

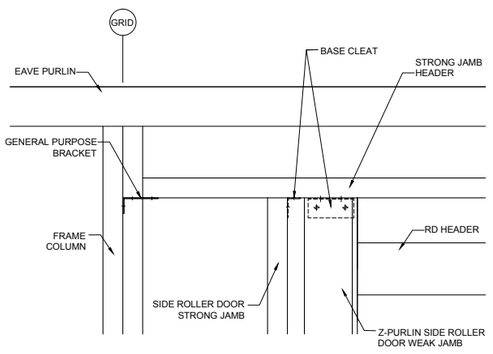




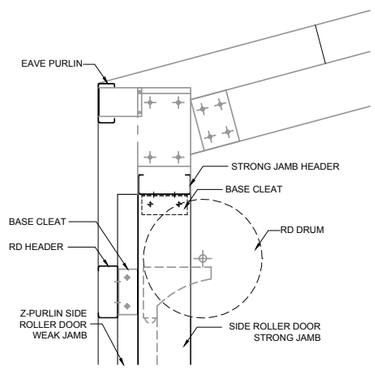
NOTE:
SJHD - STRONG JAMB HEADER DISTANCE
NO GREATER THAN 600mm

2 ELEVATION VIEW
SCALE: NTS

3 SECTION VIEW
SCALE: NTS



5 ELEVATION DETAIL
SCALE: NTS



6 SECTION DETAIL
SCALE: NTS

1/6 WINDLOCK SIDE ROLLER DOOR-Z PLAN, ELEVATION, SECTION AND DETAILS
SCALE: NTS

NOTE:
DETAILS ARE GENERIC, REFER TO MEMBER SCHEDULE FOR GIRT/PURLIN TYPE AND SPECIFICATIONS, ROLLER DOOR WEAK JAMB SIZE AND SPECIFICATIONS. LAYOUT AND DETAILS ARE INDICATIVE ONLY, REFER TO ACTUAL JOB FOR BUILDING CONFIGURATIONS, ROLLER DOOR HEIGHT AND WIDTH AND ALL OTHER RELEVANT SPECIFICATIONS

DO NOT SCALE THIS DRAWING. USE FIGURED DIMENSIONS ONLY. ALL DIMENSIONS TO BE VERIFIED ON SITE.

SHEET 6 OF 7
JOB NO. SKSG32181
NCC 2019
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STEEL BUILDING BY SKYLINE ROOFING PTY LTD
(CONTACT) 03 6334 5535
FOR STUART BARDEN
AT 128 CAMBRIA DR SWANSEA

SHED SAFE accredited

fairdinkum SHEDS

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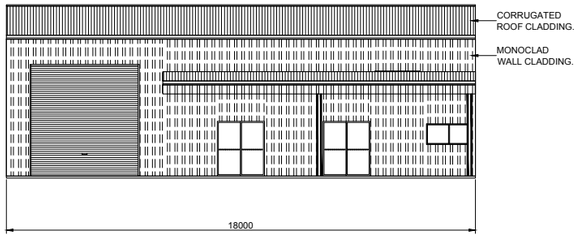
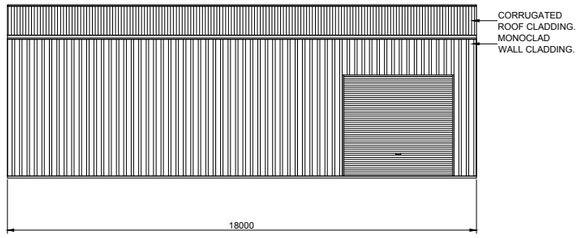
Registered Engineer - (Civil) VIC — Regn. No. EC36692
Registered Engineer - (Civil) TAS — Regn. No. CC5648M

Mr Timothy Roy Messer BE MIEAust RPEQ
Signature .....
Date 25/10/2021
Registered on the NPER in the areas of practice of Civil & Structural National Professional Engineers Register

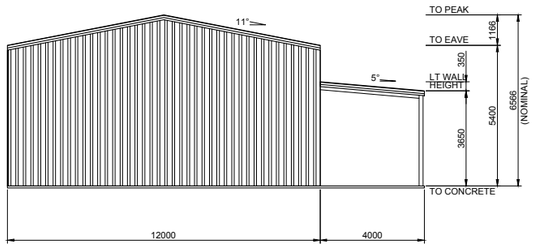
PRELIMINARY ONLY



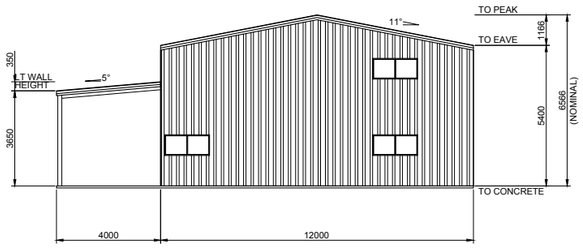
1/7 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



2/7 SIDEWALL EXTERIOR ELEVATION
SCALE: 1 = 200



4/7 ENDWALL EXTERIOR ELEVATION
SCALE: 1 = 200



3/7 ENDWALL EXTERIOR ELEVATION
SCALE: 1 = 200

BUILDING COLOURS

WALL	MONUMENT
ROOF	MONUMENT
ROLLER DOOR	MONUMENT
P.A. DOOR	MONUMENT
WINDOW	MONUMENT
GLASS SLIDING DOOR	MONUMENT
DOWNPIPE	MONUMENT
GUTTER	MONUMENT
CORNER FLASHING	MONUMENT
BARGE FLASHING	MONUMENT
OPENING FLASHING	MONUMENT

SHEET 7 OF 7
JOB NO. SKSG32181
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Signature .....
Date 25/10/2021
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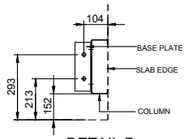
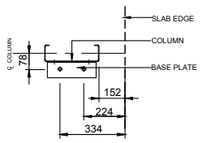
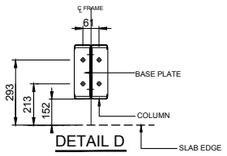
PRELIMINARY ONLY



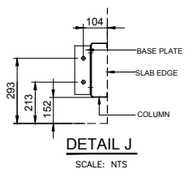
DETAIL B
SCALE: NTS



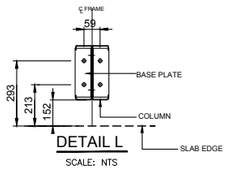
DETAIL C
SCALE: NTS



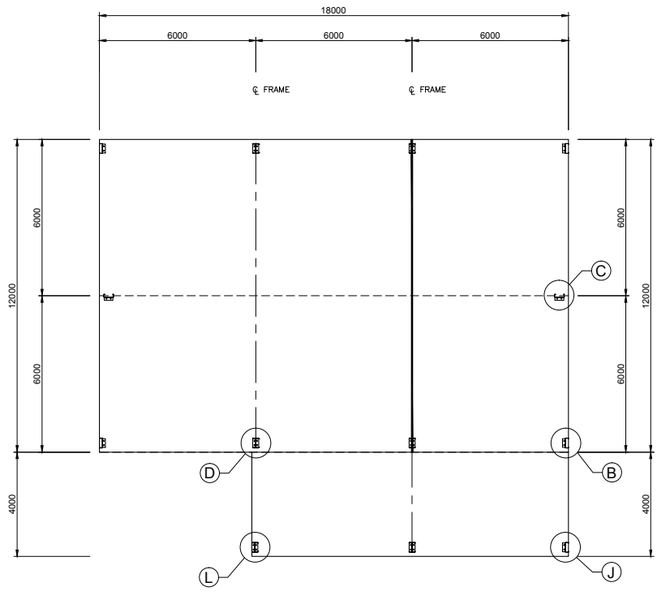
DETAIL D
SCALE: NTS



DETAIL J
SCALE: NTS



DETAIL L
SCALE: NTS



1/1 BOLT LAYOUT PLAN
SCALE: 1 = 200

NOT PART OF COUNCIL APPLICATION DOCUMENTATION

IF YOU HAVE A ROLLER DOOR IN THE GABLE END OF YOUR SHED, CONTACT YOUR DISTRIBUTOR TO SEE IF MULLION NEEDS TO BE ROTATED FOR USE AS A DOOR JAMB.

JOB NO. SKSG32181
DATE 25/10/2021
CHECKED TM
DRAWN FDS

STEEL BUILDING BY
SKYLINE ROOFING PTY LTD
03 6334 5535
FOR
STUART BARDEN
AT
128 CAMBRIA DR
SWANSEA

5/1/2021

BOLT LAYOUT PLAN

CERTIFICATE OF QUALIFIED PERSON-ASSESSABLE ITEM

Section 321

To: STUART BARDEN *Owner/Agent*

128 CAMBRIA DR *Address*

SWANSEA 7190 *Suburb/Postcode*

Form 55

Qualified person details:

Qualified Person: Timothy Messer

Address: 50 Punari Street, Currajong

Phone No: (07) 47 25 55 50

Queensland 4812

Fax No: (07) 47 25 58 50

Licence No: CC5648M (Structural & Building Designer)

Email Address: design@nceng.com.au

Qualifications and insurance details: Accredited Building Designer for Architectural design and documentation of single storey BCA classes 5 - 10 buildings with a maximum floor area of 2000 square metres, restricted to steel portal framed sheds.

(description from Column 3 of the Director's Determination - Certificates by Qualified Persons for Assessable Items

Speciality area of expertise: Structural Engineering

(description from Column 4 of the Director's Determination - Certificates by Qualified Persons for Assessable Items)

Details of Work:

Address: 128 CAMBRIA DR

SWANSEA 7190

Lot No:

Certificate of title No:

The assessable item related to this certificate: Steel Building (See Attached)

(description of the assessable item being certified)
Assessable item includes -
- *a material;*
- *a design*
- *a form of construction*
- *a document*
- *testing of a component, building system or plumbing system*
- *an inspection, or assessment, performed*

Certificate Details:

Certificate type: Structural

description from Column 1 of Schedule 1 of the Director's Determination - Certificates by Qualified Persons for Assessable Items n)

This certificate is in relation to the above assessable item, at any stage, as part of - *(tick one)* ✓

Building work, plumbing work or plumbing installation or demolition work : ☐

OR

a building, temporary structure or plumbing installation : ☐

Director of Building Control - Date Approved 1 July 2017

Building Act 2016 - Approved Form No.55

In Issuing this certificate the following matters are relevant -

Documents:	'Fair Dinkum Sheds' Structural Design Drawing (7 in total) SKSG32181
Relevant Calculations:	
Relevant calculations:	
References:	NCC 2019, AS/NZ4600-2018, AS1170,AS1170.0,AS1170.1,AS1170.2,AS1170.3,AS1170.4, AS2870-2011, AS3600-2018

Substance Of Certificate: *(what it is that is being certified)*

Structure plus foundation.

Scope and/or Limitations

Vu (Limit State Design) < or = 37.4 m/s.

I certify the matters described in this certificate.

	Signed:	*Certificate No:*	*Date:*
Qualified Person:		CC5648M	25/10/2021

Mr Timothy Roy Messer

Director of Building Control - Date Approved 1 July 2017 *Building Act 2016* - Approved Form No.55

CERTIFICATE OF THE RESPONSIBLE DESIGNER

Section 94
Section 106
Section 129
Section 155

Form 35

To : STUART BARDEN *Owner Name*
128 CAMBRIA DR *Address*
SWANSEA 7190 *Suburb/postcode*

Designer Details:

Name: **Timothy Messer** Category: **Structural & Building Designer**
Business name: **Northern Consulting Engineers**
Business address: **50 Punari Street, Currajong** Phone No: **(07) 47 25 55 50**
Queensland **4812** Fax No: **(07) 47 25 58 50**
Licence No: **CC5648M** Email Address: **design@nceng.com.au**

Details of the proposed work:

Owner/Applicant STUART BARDEN Designer's project reference No. SKSG32181
Address: 128 CAMBRIA DR Lot No:
SWANSEA 7190

Type of work : **Building work** ☒ **Plumbing work** ☐ *(X all applicable)*

Description of work :

Steel Portal Frame Structure 12 m Span x 18 m O/A length x 5.4 m eaves height building, consisting of 3 bays at 6 m x 0 m Left Leanto span x 4 m Right leanto span

(new building / alteration / addition / repair / removal / re-erection water / sewerage / stormwater / on-site wastewater management system / backflow prevention / other)

Description of the Design Work (Scope, limitations or exclusions) : *(X all applicable certificates)*

Certificate Type :	Certificate	Responsible Practitioner
	☒ Building design	Architect or Building Services Designer
	☒ Structural design	Structural Engineer
	☐ Fire Safety design	Fire Engineer
	☐ Civil design	Civil Engineer
	☐ Hydraulic design	Building Services Designer
	☐ Fire service design	Building Services Designer
	☐ Electrical design	Building Services Designer
	☐ Mechanical design	Building Services Designer
	☐ Plumbing design	Plumber
	☐ Other (specify)	

Deemed-to-Satisfy : ☒ Performance Solution : ☐ *(X the appropriate box)*

Other details :

Director of Building Control - date approved: 2 August 2017 *Building Act 2016* - Approved Form No 35

Design documents provided:

The following documents are provided with this Certificate -
Document description :

Drawing numbers : 1 to 7	Prepared by : Fair Dinkum Sheds	Date : 25/10/2021
Schedules :	Prepared by :	Date :
Specifications :	Prepared by :	Date :
Computations :	Prepared by :	Date :
Performance solution proposals :	Prepared by :	Date :
Test reports :	Prepared by :	Date :

Standards, codes or guidelines relied on in design process :

NCC 2019, AS/NZ4600-2018

AS1170,AS1170.0,AS1170.1,AS1170.2,AS1170.3,AS1170.4

AS2870-2011,AS3600-2018

NCC Building Classification = Class 10

Any other relevant documentation :

Attribution as designer:

I ..... **Tim Messer** ..... am responsible for the design of that part of the work as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2016* and sufficient detail for the builder or plumber to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance and is evidence of suitability of this design with the requirements of the National Construction Code.

	Name : (print)	*signed*	*Date*
Designer:	**Tim Messer**		25/10/2021

Licence No: **CC5648M (Structural & Building Designer)**

Director of Building Control - date approved: 2 August 2017 *Building Act 2016* - Approved Form No 35

Assessment of Certificate Works : (TasWater)

Note: single residential dwellings and outbuildings on a lot with an existing sewer connection are not considered to increase demand and are not certifiable.

If you cannot check ALL of these boxes, LEAVE THIS SECTION BLANK.

TasWater must then be contacted to determine if the proposed works are Certifiable Works.

I confirm that the proposed works are not Certifiable Works, in accordance with the Guidelines for TasWater CCW Assessments, by virtue that all of the following are satisfied:

- ☐ The works will not increase the demand for water supplied by TasWater
- ☐ The works will not increase or decrease the amount of sewage or toxins that is to be removed by, or discharged into, TasWater's sewerage infrastructure
- ☐ The works will not require a new connection, or a modification to an existing connection, to be made to TasWater's infrastructure
- ☐ The works will not damage or interfere with TasWater's works
- ☐ The works will not adversely affect TasWater's operations
- ☐ The work are not within 2m of TasWater's infrastructure and are outside any TasWater easement
- ☐ I have checked the LISTMap to confirm the location of TasWater infrastructure
- ☐ If the property is connected to TasWater's water system, a water meter is in place, or has been applied for to TasWater

Certification :

I ..... being responsible for the proposed work, am satisfied that the works described above are not Certifiable Works, as defined within the *Water and Sewerage Industry Act 2008,* that I have answered the above questions with all due diligence and have read and understood the Guidelines for TasWater CCW Assessments.
Note: the Guidelines for TasWater Certification of Certifiable Works Assessments are available at: www.taswater.com.au

	Name : (print)	*signed*	*Date*
Designer:			

Director of Building Control - date approved: 2 August 2017 *Building Act 2016* - Approved Form No 35

Biodiversity Values Database Search
To browse the web map please click HERE.

GDA Easting (6 digits) 588899
GDA Northing (7digits) 5338013
Search (this may take some time)

click here to print this report (If experiencing print layout issues in internet explorer try hold down the shift key and reload the page. However the print layout functions much better in alternative browsers e.g. Firefox or Chrome.)

The coordinate falls within the following threatened species ranges

Common name	Scientific Name	range class	Habitat Description	Web Map
new holland mouse	*Pseudomys novaehollandiae*	Potential Range	Potential habitat for the New Holland mouse is heathlands (mainly dry heathlands but also where dry heathlands form a mosaic with other heathland, moorland and scrub complexes), heathy woodlands (i.e. eucalypt canopy cover 5-20%), Allocasuarina-dominated forests on sandy substrates (not dolerite or basalt), and vegetated sand dunes. Key indicator plant species include (but are not restricted to) Aotus ericoides, Lepidosperma concavum, Hypolaena fastigiata and Xanthorrhoea spp. Significant habitat for the New Holland mouse is all potential habitat within the core range of the species.	Web map
grey goshawk	*Accipiter novaehollandiae*	Potential Range	Potential habitat for the grey goshawk is native forest with mature elements below 600 m altitude, particularly along watercourses. FPA's Fauna Technical Note 12 can be used as a guide in the identification of grey goshawk habitat. Significant habitat for the grey goshawk may be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.). FPA's Fauna Technical Note 12 can be used as a guide in the identification of grey goshawk habitat.	Web map
swift parrot	*Lathamus discolor*	Core Breeding Range	Potential breeding habitat for the Swift Parrot comprises potential foraging habitat and potential nesting habitat, and is based on definitions of foraging and nesting trees (see Table A in swift parrot habitat assessment Technical Note). Potential foraging habitat comprises E. globulus or E. ovata trees that are old enough to flower. The occurrence of foraging-habitat can be remotely assessed, although only to a limited extent, by using mapping layers such as GlobMap (DPIPWE 2010). Due to the scale and inadequacies in current foraging-habitat mapping, potential foraging-habitat density within operational areas may need to be largely identified by ground-based surveys as per Table B in the swift parrot habitat assessment Technical Note. For management purposes potential nesting habitat is considered to comprise eucalypt forests that contain hollow-bearing trees. The FPA mature habitat availability map (see Technical Note 2) predicts the availability of hollow-bearing trees using the relevant definitions of habitat provided in Table C of the swift parrot habitat assessment Technical Note. The mature habitat availability map is designed to be used to make landscape-scale assessments and may not be reliable for stand-level assessments required during the development of a Forest Practices Plan. At the stand-level the availability and distribution of hollow-bearing trees across a coupe or operation area is best determined from a ground-based assessment (see Table C in the swift parrot habitat	Web map

			assessment Technical Note). Significant habitat is all potential breeding habitat within the SE potential breeding range and the NW breeding areas.	
eastern barred bandicoot	*Perameles gunnii*	Core Range	Potential habitat for the eastern barred bandicoot is open vegetation types including woodlands and open forests with a grassy understorey, native and exotic grasslands, particularly in landscapes with a mosaic of agricultural land and remnant bushland. Significant habitat for the Eastern Barred Bandicoot is dense tussock grass-sagg-sedge swards, piles of coarse woody debris and denser patches of low shrubs (especially those that are densely branched close to the ground providing shelter) within the core range of the species.	Web map
australian grayling	*Prototroctes maraena*	Potential Range	Potential habitat for the Australian Grayling is all streams and rivers in their lower to middle reaches. Areas above permanent barriers (e.g. Prosser River dam, weirs) that prevent fish migration, are not potential habitat.	Web map
tasmanian devil	*Sarcophilus harrisii*	Potential Range	Potential habitat for the Tasmanian devil is all terrestrial native habitats, forestry plantations and pasture. Devils require shelter (e.g. dense vegetation, hollow logs, burrows or caves) and hunting habitat (open understorey mixed with patches of dense vegetation) within their home range (4-27 km2). Significant habitat for the Tasmanian devil is a patch of potential denning habitat where three or more entrances (large enough for a devil to pass through) may be found within 100 m of one another, and where no other potential denning habitat with three or more entrances may be found within a 1 km radius, being the approximate area of the smallest recorded devil home range (Pemberton 1990). Potential denning habitat for the Tasmanian devil is areas of burrowable, well-drained soil or sheltered overhangs such as cliffs, rocky outcrops, knolls, caves and earth banks, free from risk of inundation and with at least one entrance through which a devil could pass. FPA?s Fauna Technical Note 10 can be used as a guide in the identification of potential denning habitat	Web map
Swan galaxias	*Galaxias fontanus*	Potential Range	Potential habitat for the Swan Galaxias is slow to moderately fast flowing streams containing permanent water (even when not flowing), which have good instream cover from overhanging banks and/or logs, and shade from overhanging vegetation. A population can only be maintained where barriers have prevented establishment of trout and redfin perch. The nature of these barriers is variable and can include permanent natural structures such as waterfalls and chutes and also low flow-dependent features such as marshes, ephemeral water-losing and remnant channels, braided channel floodplain features. Significant habitat for the Swan galaxias is all potential habitat and a 30m stream-side reserve within the core range. This includes the Wildlife Priority Areas (Fauna Special Management Zones) on the upper Swan River, Tater Garden Creek and upper Blue Tier Creek, and other upper catchments of tributaries of the Macquarie, Blackman and Isis Rivers.	Web map
glossy grass skink	*Pseudemoia rawlinsoni*	Potential Range	Potential habitat for the Glossy Grass Skink is wetlands and swampy sites (including grassy wetlands, teatree swamps and grassy sedgelands), and margins of such habitats.	Web map
			Potential habitat for the White-Bellied Sea-eagle species comprises potential nesting habitat and potential foraging habitat.	

white-bellied sea-eagle	*Haliaeetus leucogaster*	Potential Range	Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (Class 1), lakes or complexes of large farm dams. Scattered trees along river banks or pasture land may also be used. Significant habitat for the white-bellied sea-eagle is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where nest tree still present).	Web map
green and golden frog	*Litoria raniformis*	Potential Range	Potential habitat for the green and gold frog is permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water-holding sites such as old quarries, slow-flowing stretches of streams and rivers and drainage features.	Web map
Chaostola Skipper	*Antipodia chaostola*	Potential Range	Potential habitat for the Chaostola Skipper is dry forest and woodland supporting Gahnia radula (usually on sandstone and other sedimentary rock types) or Gahnia microstachya (usually on granite-based substrates).	Web map
wedge-tailed eagle	*Aquila audax subsp. fleayi*	Potential Range	Potential habitat for the Wedge-tailed Eagle comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Significant habitat for the wedge-tailed eagle is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where the nest tree is still present).	Web map
forty-spotted pardalote	*Pardalotus quadragintus*	Potential Range	Potential habitat for the 40-spotted Pardalote is any forest and woodland supporting Eucalyptus viminalis (white gum) where the canopy cover of E. viminalis is greater than or equal to 10% or where E. viminalis occurs as a localised canopy dominant or co-dominant in patches exceeding 0.25 ha. Significant habitat for the 40-spotted Pardalote is all potential habitat associated with known colonies and such habitat within 500 m of known colonies. The survey range of the 40-spotted Pardalote is a specialist-defined area within the potential range delineated to assist with decisions on the need for a survey (most areas are close to known colonies). [not on BVD yet]	Web map
forty-spotted pardalote	*Pardalotus quadragintus*	Survey Range	Potential habitat for the 40-spotted Pardalote is any forest and woodland supporting Eucalyptus viminalis (white gum) where the canopy cover of E. viminalis is greater than or equal to 10% or where E. viminalis occurs as a localised canopy dominant or co-dominant in patches exceeding 0.25 ha. Significant habitat for the 40-spotted Pardalote is all potential habitat associated with known colonies and such habitat within 500 m of known colonies. The survey range of the 40-spotted Pardalote is a specialist-defined	Web map

			area within the potential range delineated to assist with decisions on the need for a survey (most areas are close to known colonies). [not on BVD yet]	
masked owl	*Tyto novaehollandiae*	Core Range	Potential habitat for the masked owl is all areas with trees with large hollows (?15 cm entrance diameter). In terms of using mapping layers, potential habitat is considered to be all areas with at least 20% mature eucalypt crown cover (PI-type mature density class `a?, `b?, or `c?). From on-ground surveys this is areas with at least 8 trees per hectare over 100 cm dbh. Remnants and paddock trees in agricultural areas may also constitute potential habitat. Significant habitat for the masked owl is any areas within the core range of native dry forest with trees over 100cm dbh with large hollows (?15 cm entrance diameter). Such areas usually have no regrowth component or just a sparse regrowth component. In terms of using mapping layers for an initial desktop assessment prior to an on-ground survey significant habitat may occur in all areas within the core range classified as dry forest (TASVEG dry Eucalypt forest and woodland) with at least 20% mature eucalypt crown cover (PI-type mature density class `a?, `b?, or `c?) that is classified as mature (Growth Stage class `M?). From on-ground surveys this is areas with at least 8 trees per hectare over 100 cm dbh and more than half of the canopy cover is comprised of mature trees. Remnants and paddock trees in agricultural areas may also constitute significant habitat.	Web map
spotted-tailed quoll	*Dasyurus maculatus*	Core Range	Potential habitat for the spotted-tailed quoll is coastal scrub, riparian areas, rainforest, wet forest, damp forest, dry forest and blackwood swamp forest (mature and regrowth), particularly where structurally complex areas are present, and includes remnant patches in cleared agricultural land or plantation areas. Significant habitat for the spotted-tailed quoll is all potential denning habitat within the core range of the species. Potential denning habitat for the spotted-tailed quoll includes 1) any forest remnant (>0.5ha) in a cleared or plantation landscape that is structurally complex (high canopy, with dense understorey and ground vegetation cover), free from the risk of inundation, or 2) a rock outcrop, rock crevice, rock pile, burrow with a small entrance, hollow logs, large piles of coarse woody debris and caves. FPA?s Fauna Technical Note 10 can be used as a guide in the identification of potential denning habitat.	Web map

N.V.A. threatened fauna records within 5 km

Common Name	Scientific Name	Easting	Northing	Distance (m)	Accuracy (m)	Observation Type	Observed State	NVA Observation ID
eastern barred bandicoot	*Perameles gunnii*	587357	5337781	1559	960	Sighting	Present	742589
australian grayling	*Prototroctes maraena*	587612	5336983	1649	100	Sighting	Present	349162
masked owl	*Tyto novaehollandiae*	589401	5339612	1676	9000	Sighting	Present	360520
masked owl	*Tyto novaehollandiae*	589401	5339612	1676	9000	Sighting	Present	358397
australian	*Prototroctes*	587716	5336801	1694	20	Sighting	Present	1352498

grayling	*maraena*							
australian grayling	*Prototroctes maraena*	587712	5336783	1709	100	Sighting	Present	533644
masked owl	*Tyto novaehollandiae*	587512	5336783	1854	100	Sighting	Present	1201212
masked owl	*Tyto novaehollandiae*	587312	5336833	1977	100	Sighting	Present	352400
white-bellied sea-eagle	*Haliaeetus leucogaster*	587413	5339384	2022	1000	Nest	Absent	1256906
eastern barred bandicoot	*Perameles gunnii*	591069	5338702	2277	1850	Sighting	Present	895049
eastern barred bandicoot	*Perameles gunnii*	588928	5335612	2401	1124	Sighting	Present	749873
Chequered Blue	*Theclinesthes serpentata subsp. lavara*	589630	5335720	2407	250	Sighting	Present	1308592
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	716878
curlew sandpiper	*Calidris ferruginea*	589714	5340570	2684	18500	Sighting	Present	716902
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	716428
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	654712
curlew sandpiper	*Calidris ferruginea*	589714	5340570	2684	18500	Sighting	Present	740610
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	692288
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	681575
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	725494
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	642859
hooded plover	*Thinornis rubricollis*	589714	5340570	2684	18500	Sighting	Present	692156
white-bellied sea-eagle	*Haliaeetus leucogaster*	586913	5339883	2728	50	Nest	Present	1258181
white-bellied sea-eagle	*Haliaeetus leucogaster*	586913	5339883	2728	50	Nest	Present	1258182
masked owl	*Tyto novaehollandiae*	586213	5338934	2840	1000	Nest	Present	1256586
masked	*Tyto*	588612	5335183	2845	100	Sighting	Present	352438

owl	*novaehollandiae*							
eastern barred bandicoot	*Perameles gunnii*	591021	5335001	3684	1850	Sighting	Present	895258
australian grayling	*Prototroctes maraena*	585580	5335019	4470	1000	Sighting	Present	1317490

N.V.A. threatened flora records within 2 km

Scientific Name	Common Name	Easting	Northing	Distance (m)	Accuracy (m)	Observation Type	NVA Observation ID
Pterostylis ziegeleri	grassland greenhood	588986	5338883	874	10	Sighting	1159861
Pterostylis ziegeleri	grassland greenhood	589200	5338900	937	100	Sighting	1202437
Melaleuca pustulata	warty paperbark	588312	5337183	1017	50	Sighting	782940
Pterostylis ziegeleri	grassland greenhood	589226	5339027	1065	10	Sighting	1159862
Stenopetalum lineare	narrow threadpetal	589976	5338505	1184	5	Sighting	1414275
Eucalyptus barberi	barbers gum	587712	5337583	1262	20000	Sighting	243688
Cynoglossum australe	coast houndstongue	589394	5339364	1439	1	Sighting	952118
Acacia siculiformis	dagger wattle	588181	5336716	1483	25000	Questionable	1413329
Pterostylis ziegeleri	grassland greenhood	589800	5339200	1490	200	Sighting	1202438
Damasonium minus	starfruit	587412	5336883	1868	400	Sighting	230561
Vittadinia burbidgeae	smooth new-holland-daisy	587309	5337024	1872	25	Sighting	1316830
Vittadinia gracilis	woolly new-holland-daisy	587312	5336983	1891	100	Sighting	346190
Vittadinia burbidgeae	smooth new-holland-daisy	587312	5336983	1891	100	Sighting	346191

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Rebecca & Stuart Barden
23 Country Field Court
Longford, TAS 7301

5 November 2015

Dear Rebecca & Stuart

RE: 128 Cambria Drive, Dolphin Sands
Planning advice (ecological values)

Please find following a brief statement of findings on ecological values associated with a proposed residential dwelling at 128 Cambria Drive, Dolphin Sands. I have also included a compliance statement against the Biodiversity Code of the *Glamorgan Spring Bay Interim Planning Scheme 2015.*

I recommend that this cover letter and attached report and compliance statement (including the appended *Natural Values Atlas*, *Biodiversity Values Database* and *Protected Matters Search Tool* reports) be provided with the planning application, as it addresses the potential concerns in regard to ecological values usually raised at the local government level of assessment.

Please do not hesitate to contact me further if additional information is required.

Kind regards

Mark Wapstra
Senior Scientist/Manager

STATEMENT OF FINDINGS: ECOLOGICAL VALUES OF 128 CAMBRIA DRIVE, DOLPHIN SANDS, TASMANIA

SUPPORT DOCUMENTATION FOR FUTURE DEVELOPMENT APPLICATION (GLAMORGAN SPRING BAY COUNCIL)

Prepared by Mark Wapstra for Rebecca & Stuart Barden, 5 November 2015

Preamble

Rebecca & Stuart Barden engaged Environmental Consulting Options Tasmania (ECO*tas*) to provide planning advice in relation to the management of ecological (flora and fauna) values at 128 Cambria Drive, Dolphin Sands, primarily to facilitate progression of planning (residential dwelling) through Glamorgan Spring Bay Council under the provisions of the *Glamorgan Spring Bay Interim Planning Scheme 2015*.

It is noted that the title subject is zoned as Rural Living and subject to the Biodiversity Protection Area overlay under the *Glamorgan Spring Bay Interim Planning Scheme 2015*.

It is usual for land subdivisions and similar level development proposals to be subject to highly detailed ecological assessments, followed by reporting that complies with the Department of Primary Industries, Parks, Water & Environment's *Guidelines for Natural Values Surveys - Terrestrial Development Proposals* (DPIPWE 2015), a document that outlines the various ecological values that need to be assessed. However, in my opinion, in the case of the current land use proposal a detailed report is not warranted because the residential dwelling will be constructed within part of the title essentially devoid of trees and accessed by a route that can also avoid trees, both within the context of a title with native vegetation in a modified state. Having said this, the attached report on the ecological values of the property addresses the various items covered by the *Guidelines for Natural Values Assessments* and additional information can be provided to planning authorities if needed.

Field assessment and database checks

The site (Figure 1) was assessed on 1 November 2015 by Mark Wapstra. The assessment took the form of meandering transects that criss-crossed the title and included walking all boundaries, traversing the predicted extent of any hazard management area, walking the most likely access route (and criss-crossing this route several times), and examining the likely house sites in more detail in detail. Survey coverage was such that a further site assessment will not be required, although I note I am happy to comment on the final design of the dwelling's location, access and ancillary structures in the context of the present report.

TheList was examined to determined existing vegetation mapping and known sites for threatened flora and fauna.

Database reports were produced under DPIPWE's *Natural Values Atlas* (DPIPWE 2015), the Forest Practices Authority's *Biodiversity Values Database* (FPA 2015) and the Commonwealth Department of the Environment's *Protected Matters Search Tool* (CofA 2015) to support the assessment process (all appended for reference).

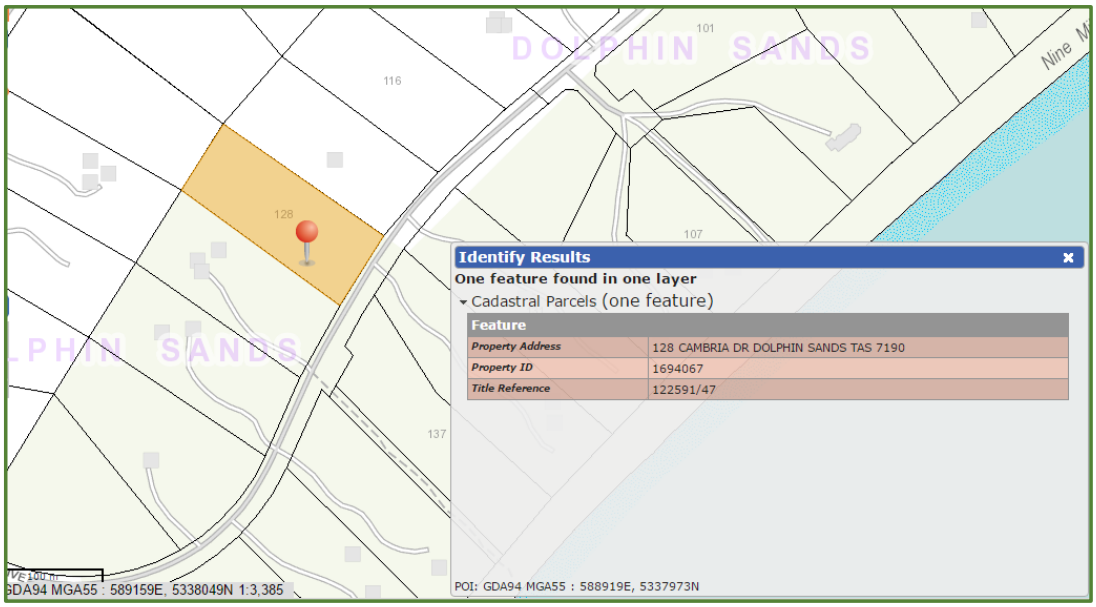

Figure 1. Location of 128 Cambria Drive [source: TheList]

Vegetation types

The entire title is currently mapped on TASVEG 3.0 as "*Eucalyptus viminalis-Eucalyptus globulus* coastal forest and woodland" (TASVEG code: DVC), which was confirmed by field assessment on 1 November 2015 (Figure 2). Interestingly, the TASVEG 3.0 boundaries tightly conform to cadastral boundaries with some titles supporting residences mapped as "urban areas" (TASVEG code: FUR) and others still mapped as DVC i.e. essentially arbitrary.

The vegetation within the title is remarkably homogenous (Plates 1 & 2) with a sparse canopy cover of *Eucalyptus viminalis* (white gum) over a virtually absent medium shrub layer (sparse *Acacia dealbata*, silver wattle, one *Banksia marginata*, silver banksia, and one *Monotoca elliptica*, tree broomheath), in turn over a dense sward of *Lomandra longifolia* (sagg) and *Poa labillardierei* (silver tussockgrass). Herbs are sparse, mainly because of the dense sagg/tussock sward that has been frequently slashed (prior to purchase) with slash remaining on the ground creating a form of mulch.

DVC is classified as threatened under Schedule 3A of the Tasmanian *Nature Conservation Act 2002*. Since changes to the *Forest Practices Regulations 2007* on 25 November 2009, the decision on "clearing" of threatened vegetation types in situations where a permit is required under the Tasmanian *Land Use Planning and Approvals Act 1993* (i.e. a planning permit under the relevant planning scheme) lies with the relevant municipal authority. In this case, I have addressed the clearing and disturbance to the DVC in a separate "compliance statement" following this report.

The DVC in the title is in moderate ecological condition, with the understorey highly modified (as compared to less disturbed sites in the area) by frequent slashing. The overstorey is also relatively sparse, although represented by several ages of trees suggesting a long history of tree removal (although it is noted there is no evidence of such activity in recent times).

Plates 1 & 2. Vegetation of the title showing the very open canopy (extensive areas without older or regrowth trees) and highly modified understorey (frequent slashing)

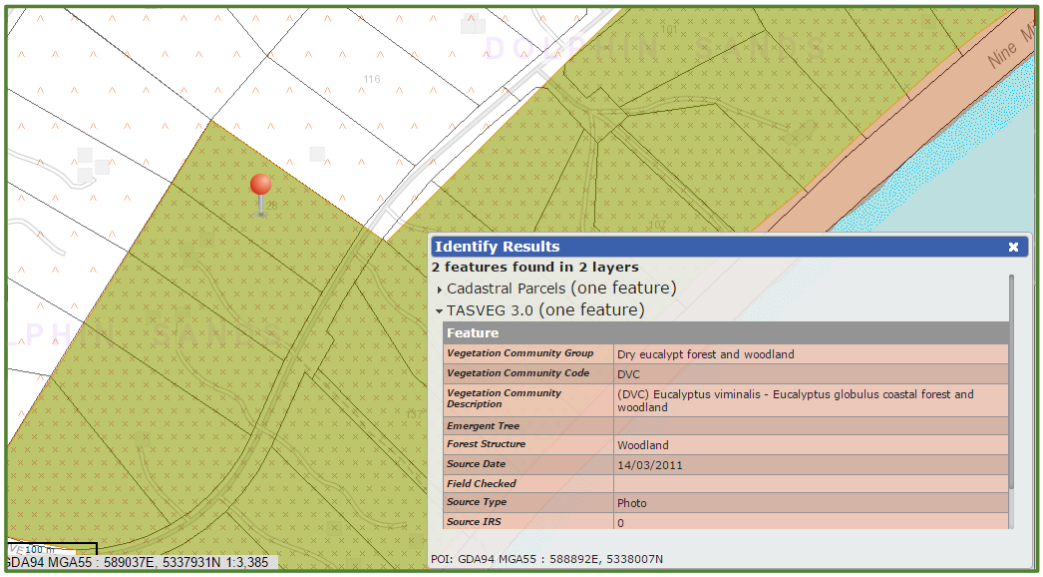

Figure 2. Existing TASVEG 3.0 vegetation mapping for title area and surrounds – note all mapped as DVC; note that other lots are shown as a mix of DVC (hatched with x) and FUR (pale cream with inverted v), representing the longer period of occupation and the degree of clearing on older lots) [source: TheList]

Threatened flora

DVC on deep sands in the Dolphin Sands area is associated with a small number of threatened flora. While databases indicate numerous species present within a nominal 5,000 m of the title boundary, most of these are marine/estuarine species or species of dolerite-based forests of the hills west of Swansea/Cranbrook. Below I discuss the small number of species I consider have a higher potential to be present within the title.

- *Stenopetalum lineare* (narrow threadpetal)

This species is listed as endangered under the Tasmanian *Threatened Species Protection Act 1995*. I detected a small population in the coast wattle scrub in a private title at the beginning

of Cambria Drive some years ago (this record is in the *Natural Values Atlas* and was included in a report that accompanied a planning application for that title). I did not detect the species within the subject title and in my experience the species is more strongly associated with grass-covered dunes in openings amongst coast wattle scrub closer to the coast. I confirmed this notion on the day of assessing the title and detected a new site (of several hundred individuals) for the species in the Dolphin Sands coastal reserve (near the outfall of the Meredith River) in just this sort of habitat (these records will appear in the *Natural Values Atlas* in due course).

- *Cynoglossum australe* (coast houndstongue)

This species is listed as rare under the Tasmanian *Threatened Species Protection Act 1995* and has been formally recommended by the Scientific Advisory Council for removal from the Act. It is most strongly associated with stabilised dunes and hinter-scrub and forest. In this case, despite intensive searching in essentially ideal habitat, the species was not detected.

- *Pterostylis ziegeleri* (grassland greenhood)

This species is listed as vulnerable under the Tasmanian *Threatened Species Protection Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. There are known sites only hundreds of metres from the boundary of the title. The vegetation of the title is less than ideal for the species, which tends to be more strongly associated (at least in coastal environments) with dune swales and broader grassy flats, the latter coinciding with known sites in nearby areas. The species at the time of the survey (Wapstra et al. 2012), and both rosette leaves and flowering plants should have been detectable at the time of survey had the species been present. While impossible to entirely discount the presence of the species from the title, I am confident it will not be present within the areas identified for greatest disturbance and that slashing for fire management will probably benefit the species, if it were to be present. I do not recommend follow-up surveys or special management of potential habitat.

- *Pterostylis squamata* (ruddy greenhood)

This species is listed as rare under the Tasmanian *Threatened Species Protection Act 1995*. The species occurs in a range of habitat but includes DVC forest/woodland (e.g. River and Rocks area near Swanwick). The species flowers later than the time of survey (most records are from December to April) and detecting non-flowering individuals by the small basal leaf rosettes is difficult (Wapstra et al. 2012). As with *Pterostylis ziegeleri*, however, I am confident it will not be present within the areas identified for greatest disturbance and that slashing for fire management will probably benefit the species, if it were to be present. I do not recommend follow-up surveys or special management of potential habitat.

- *Stellaria multiflora* subsp. *multiflora* (rayless starwort)

This species is listed as rare under the Tasmanian *Threatened Species Protection Act 1995*. A small patch of c. 5 individuals in c. 0.5 m radius area (at 588850mE 5338071mN) was detected in the northeast corner of the title on the edge of the slashed boundary line (Figure 3; Plates 3 & 4), well away from any areas proposed for disturbance (including areas likely to be included in the fuel management zone). I usually associate this species with forested habitats and rock outcrops – and until recently I had not previously recorded the species from forests on Aeolian sands (I detected the species at two other sites along Cambria Drive in September 2015). I collected specimens to submit to the Tasmanian Herbarium. Fruiting material indicates this population is assignable to subsp. *multiflora*.

No special management is recommended within 128 Cambria Drive for the species. The species is a disturbance-phile, thriving on soil disturbance and flourishing after fires and slashing (as indicated by its presence on the edge of the slashed boundary). In this case, however, the site is outside any areas likely to be disturbed so a permit under Section 51 of the Tasmanian

Threatened Species Protection Act 1995 will not be required. For reference, I flagged the site within the title with blue flagging tape and showed the owners the specific site and individuals.

Plate 3. (LHS) Habitat of *Stellaria multiflora* (approximately circled) in northeast corner of subject title – note blue flagging tape (tied to tussockgrass)

Plate 4. (RHS) Close-up of *Stellaria multiflora* from nearby area

Figure 3. Location of *Stellaria multiflora* (rayless starwort) relative to title boundaries – note that it is clear that the site is well away from any areas that will be disturbed

Any proposed works within the title will not have a deleterious impact on known sites or potential habitat of flora species classified as threatened under the Tasmanian *Threatened Species Protection Act 1995* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. Specific referral to government agencies administering these Acts is not considered warranted.

Threatened fauna

Database information and site assessment did not indicate the presence of threatened fauna species, as listed on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* or the Tasmanian *Threatened Species Protection Act 1995*. There is potential habitat for some species, although the proposed residential dwelling will not have a significant impact (no hollow-bearing trees to be removed, perhaps only a very low number of smaller regrowth trees requiring removal, minor understorey disturbance for fire management purposes, etc.).

No referral under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* is required. No permit under the Tasmanian *Threatened Species Protection Act 1995* is needed.

Weeds

The title area does not support flora species classified as "declared weeds" within the meaning of the Tasmanian *Weed Management Act 1999*, nor plant species regarded as "environmental weeds" (i.e. those not formally listed as declared but with potential to cause environmental degradation). This means that a weed management plan is not warranted although it is noted that machinery should be washed down prior to entering the site to minimise the risk of introducing weed species, especially if such machinery has come from weed-infested areas.

Plant and animal disease

No evidence of plant and animal disease issues were identified from the title. Works will not have any significant capacity to introduce such diseases or pathogens into habitat types that could be deleteriously affected. No special management actions are considered warranted.

Summary

In my opinion, there should be no significant constraints on the proposed land use under the provisions of the planning scheme in relation to ecological values, with the following recommendations made to minimise the impact on ecological values:

- minimise the extent of clearing and disturbance to native vegetation to that indicated in the final planning drawings and required for approved fire management activities;
- avoid, wherever practical, felling healthy trees; and
- avoid disturbance to the patch of threatened flora (*Stellaria multiflora* – rayless starwort) during construction and fire management (site has already been flagged).

Refer to following Compliance Statement that confirms that the proposal is complies with the provisions of the Biodiversity Code under the *Glamorgan-Spring Bay Interim Planning Scheme 2015*.

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COMPLIANCE STATEMENT FOR 128 CAMBRIA DRIVE, DOLPHIN SANDS (RESIDENTIAL DWELLING): BIODIVERSITY CODE UNDER *GLAMORGAN-SPRING BAY INTERIM PLANNING SCHEME 2015*

SUPPORT DOCUMENTATION FOR FUTURE DEVELOPMENT APPLICATION (GLAMORGAN-SPRING BAY COUNCIL)

Prepared by Mark Wapstra for Rebecca & Stuart Barden, xx November 2015

Preamble

Under the *Glamorgan-Spring Bay Interim Planning Scheme 2015*, the title proposed for development (residential dwelling) is zoned as Rural Living and wholly subject to the Biodiversity Protection Area overlay (Figure 1), designated as such because of the presence of the threatened vegetation type "*Eucalyptus viminalis-Eucalyptus globulus* coastal forest and woodland" (DVC).

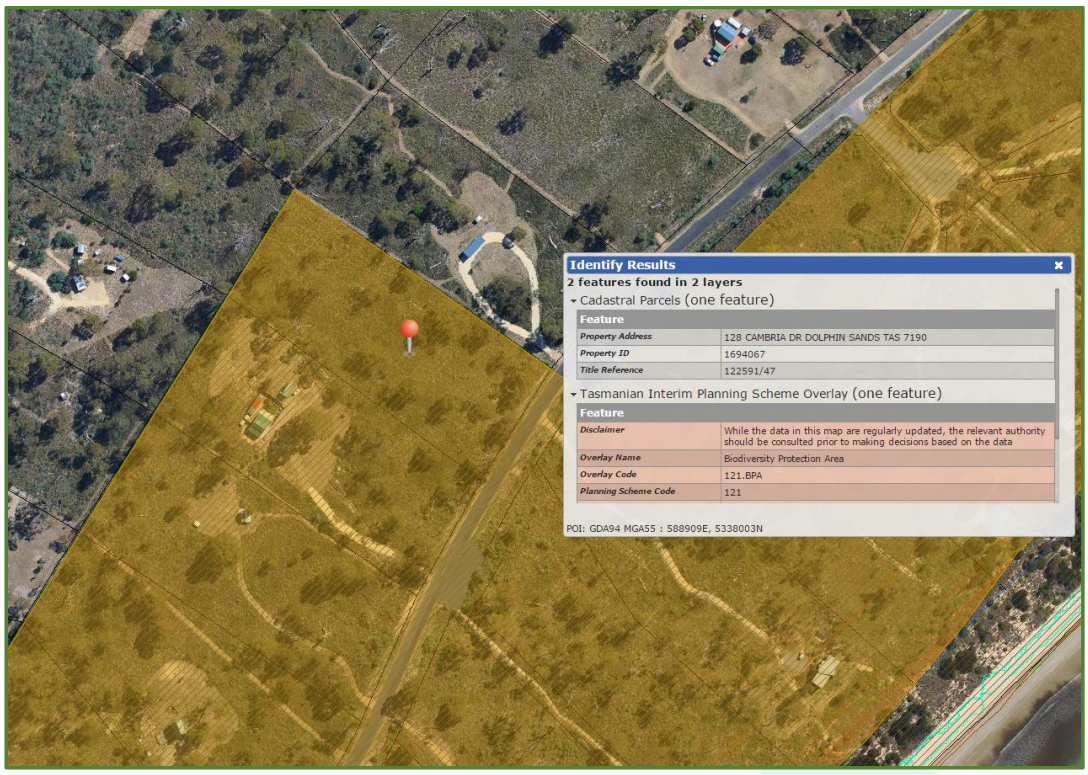


Figure 1. Title area showing extent of Biodiversity Protection Area overlay (brown solid shading) – note the almost arbitrary allocation of occupied and unoccupied lots to the Biodiversity Protection Overlay

The *Scheme* includes a Biodiversity Code, which is discussed below.

Biodiversity Code

The purpose of the Biodiversity Code is stated below:

E10.1 Purpose

E10.1.1

The purpose of this provision is to:

(a) minimise loss of identified threatened native vegetation communities and threatened flora species;

(b) conserve identified threatened fauna species by minimising clearance of important habitat and managing environmental impact;

(c) minimise loss of other biodiversity values that are recognised as locally significant by the Planning Authority.

The subject title supports a threatened native vegetation community ("*Eucalyptus viminalis-Eucalyptus globulus* coastal forest and woodland, DVC) and one site of a threatened flora species (*Stellaria multiflora*, rayless starwort) such that E10.1.1(a) has specific application.

The subject area does not contain identified threatened fauna species or important habitat for such species such that E10.1.1(b) has no direct application.

The subject area does not contain any "other biodiversity values" such that E10.1.1(c) has no direct application.

The application of the Biodiversity Code is stated below:

E10.2 Application

This code applies to development involving clearance and conversion or disturbance of native vegetation within a Biodiversity Protection Area.

The title is entirely covered by the Biodiversity Protection Area overlay. Under the *Scheme*, "native vegetation" is defined as:

"means plants that are indigenous to Tasmania including trees, shrubs, herbs and grasses that have not been planted for domestic or commercial purposes".

The title supports "native vegetation" within the meaning of the *Scheme* such that the Biodiversity Code has direct application.

"Clearance and conversion" is defined as:

"the process of removing native vegetation from an area of land and:

(a) leaving the area of land, on a permanent or extended basis, in a state predominantly unvegetated with native vegetation; or

(b) replacing the native vegetation so removed, on a permanent or extended basis, with residential, commercial, mining, agriculture or other non-agricultural development.

This concept relates to the area designated for a house site, driveway and ancillary structures such as sheds and water tanks.

"Disturbance" is defined as:

"the alteration of the structure and species composition of a native vegetation community through actions including cutting down, felling, thinning, logging, removing or destroying of a native vegetation community.

This concept relates to the area designated for fuel hazard management, although it is noted that while there may be minor structural modification (mainly understorey), the species composition will essentially remain the same between managed and un-managed woodland.

Because the Biodiversity Code has application, Section E10.5 has relevance, as follows:

E10.5 Application Requirements

E10.5.1

In addition to any other application requirements, the planning authority may require the applicant to provide a natural values determination if considered necessary to determine compliance with acceptable solutions.

E10.5.2

In addition to any other application requirements, the planning authority may require the applicant to provide any of the following information if considered necessary to determine compliance with performance criteria:

(a) a natural values determination;

(b) a natural values assessment;

(c) a report detailing how impacts on priority biodiversity values will be avoided, minimised, and/or mitigated;

(d) a special circumstances justification report;

(e) a biodiversity offsets plan.

The intent of the present report and compliance statement is to meet the requirements of Section E10.5.2 of the Biodiversity Code.

The objective for Building and Works Development Standards are stated below:

E10.7 Development Standards

E10.7.1 Buildings and Works

Objective: To ensure that development for buildings and works that involves clearance and conversion or disturbance within a Biodiversity Protection Area does not result in unnecessary or unacceptable loss of priority biodiversity values.

The Acceptable Solution cannot be met because the site supports high priority biodiversity values as defined by Table E10.1 (i.e. a threatened vegetation type).

Under the Performance Criteria where high priority biodiversity values are present, the following has application:

P1

Clearance and conversion or disturbance must satisfy the following:

(c) if high priority biodiversity values:

(i) subdivision works are designed and located to minimise impacts, having regard to constraints such as topography or land hazard and the particular requirements of the subdivision;

(ii) impacts resulting from future bushfire hazard management measures are minimised as far as reasonably practicable through appropriate siting of any building area;

(iii) high priority biodiversity values outside the area impacted by subdivision works, the building area and the area likely impacted by future bushfire hazard management measures are retained and protected by appropriate mechanisms on the land title;

(iv) special circumstances exist;

(v) residual adverse impacts on high priority biodiversity values not able to be avoided or satisfactorily mitigated are offset in accordance with the *Guidelines for the Use of Biodiversity Offsets in the Local Planning Approval Process*, Southern Tasmanian Councils Authority 2013 and any relevant Council policy.

Clause (c)(i) has no application because the development application does not relate to subdivision works.

While there is no detailed planning drawings available as yet, I discussed the most likely locations of a house, ancillary structures and the access driveway with the owners and I see no reason why clause (c)(ii) will not be met because the proposed sites are all within large natural openings in the woodland canopy (with the desired aim to retain standing trees). A fire hazard management plan will be required but I am comfortable that such a plan can meet the intent of minimising the disturbance to high priority biodiversity values, satisfying clause (c)(ii). In essence, the degree of understorey modification that has occurred to date mirrors quite closely the requirements likely to be indicated in any fire hazard management plan such that additional "clearance" of native vegetation for fire management purposes is unlikely to be needed and "disturbance" will be minimised.

Clause (c)(iii) implies a requirement to further protect high priority biodiversity values within the title outside areas not designated for fuel hazard management and building works. In this case, I do not find that formal protection of the balance of the forest within the title is warranted because the whole title is already covered by the Biodiversity Protection Area overlay and any further development is unlikely to be supported i.e. the existing mechanisms of the *Scheme* can adequately and appropriately protect the balance of the high priority biodiversity values within the title area.

Clause (c)(iv) refers to "special circumstances", which are defined as:

> "particular circumstances associated with the proposed use or development that justify loss of high priority biodiversity values".

Furthermore:

> Special circumstances are considered to exist if one or more of the following apply:
>
> (a) the use or development will result in significant long term social or economic community benefits and there is no feasible alternative location;
>
> (b) ongoing management cannot ensure the survival of the high priority biodiversity values on the site and there is little potential for recruitment or for long term persistence;
>
> (c) the extent of proposed removal of high priority biodiversity values on the site is insignificant relative to the extent of that community elsewhere in the vicinity.

Clause (a) is not applicable to a single-lot residential dwelling.

Clause (b) is hardly ever likely to have effect because "ongoing management" can ensure the "survival" of high priority biodiversity values – the problem with this clause is that the terms are undefined and subject to interpretation: most forested habitats, irrespective of condition have some level of viability and long-term persistence, especially with some form of "ongoing management".

Clause (c) requires some analysis. It is clear that any development will result in the clearance and disturbance of DVC, presumably a relatively small area (e.g. in the order of 3,000 m^2, an estimate I base on surrounding titles). The question is whether this obviously small area is "insignificant relative to the extent of that community elsewhere in the vicinity". Again, the problem is that the terms "insignificant" and "vicinity" are not defined, requiring interpretation on a case-by-case basis. Given that the title is about 1.1 ha (11,000 m^2), the clearance and disturbance of c. 3,000 m^2 of DVC equates to 27% of the DVC. However, the DVC is mapped (and confirmed by visual assessment) as extending across much of the Cambria Drive and greater Dolphin Sands area, meaning that the clearance and disturbance of c. 3,000 m^2 of DVC within the title area can be considered as "insignificant relative to the extent of that community elsewhere in the vicinity", which means clause (c) of the "special circumstances" is met.

Clause (c)(v) of the Performance Criteria refers to "residual adverse impacts on high priority biodiversity values not able to be avoided or satisfactorily mitigated [being] offset in accordance with the *Guidelines for the Use of Biodiversity Offsets in the Local Planning Approval Process*".

Clause (c)(v) has general application only for a lot-level development. The *Guidelines for the Use of Biodiversity Offsets in the Local Planning Approval Process* provide general principles and a basic approach to developing an offset/mitigation strategy, based on the general hierarchy of

avoid, mitigate and offset. Under the Biodiversity Code, these principles are acknowledged through the definition of "biodiversity offsets", as follows:

> "means measures that compensate for the residual adverse impacts of an action on the environment, when:
>
> (a) alternatives and options to avoid those impacts have been exhausted;
>
> (b) it is still considered desirable for other economic, social or environmental reasons for the action to proceed".

At a lot-level scale within an area zoned as Rural Living, residential occupation is considered an acceptable use. In my opinion, the sites proposed for the dwelling (i.e. within one of the naturally open areas essentially devoid of trees and with a modified understorey) and access (possible to wind between trees) will minimise the extent of native vegetation (especially canopy trees) requiring clearing. Therefore, formal biodiversity offsets are not warranted in this case.

Natural Values Atlas Report

Authoritative, comprehensive information on Tasmania's natural values.

Reference: ECOtas_128CambriaDrive
Requested For: MWapstra
Timestamp: 11:42:53 PM Wednesday 04 November 2015

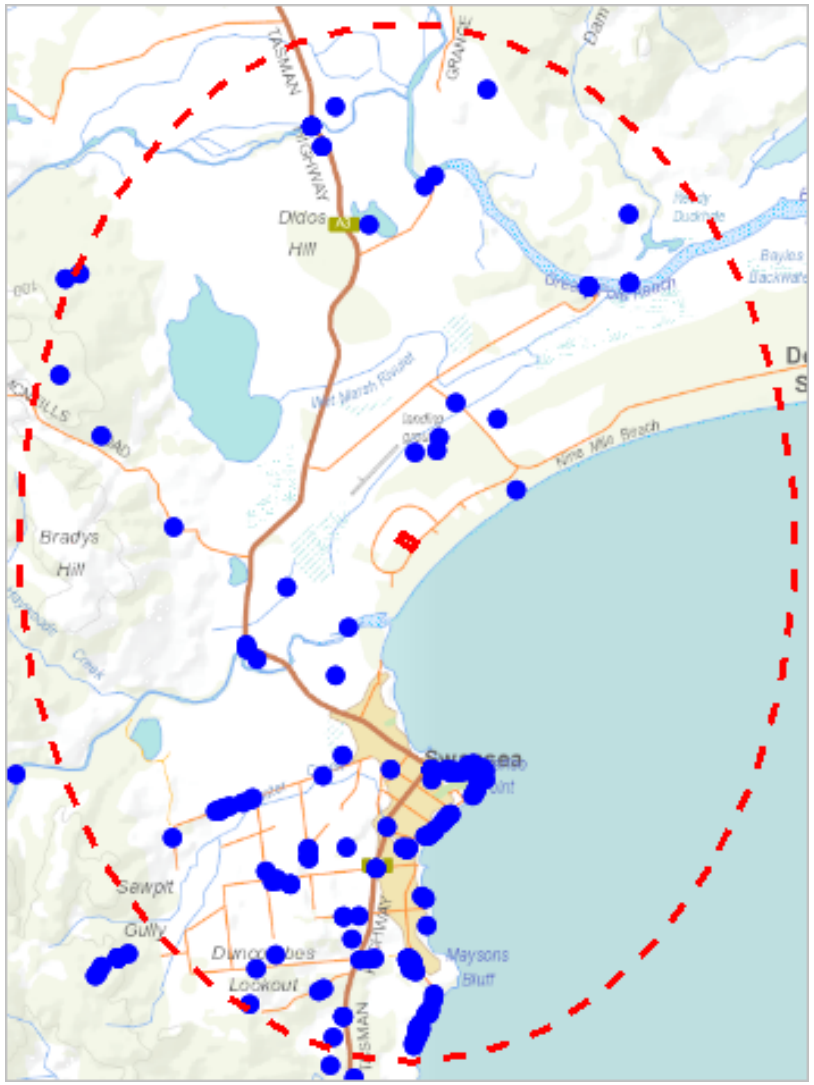
Raptors: buffers 500m and 5000m
Threatened Flora: buffers 500m and 5000m
Threatened Fauna: buffers 500m and 5000m
Tasmanian Weed Management Act Weeds: buffers 500m and 5000m
Priority Weeds: buffers 500m and 5000m
TASVEG: buffer 1000m
Threatened Communities: buffer 1000m
Geoconservation: buffer 1000m
Tasmanian Reserve Estate: buffer 1000m
Biosecurity Risks: buffer 1000m

The centroid for this query GDA94: 588899.0, 5338013.0 falls within:
1:25000 Map: 5833 SWANSEA
Property: 1694067 128 CAMBRIA DR DOLPHIN SANDS TAS 7190

*** No threatened flora found within 500 metres ***

Threatened flora within 5000 metres

592908, 5343314



584892, 5332688

Threatened flora within 5000 metres

Threatened flora within 5000 metres

Verified Records

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1413329	Acacia siculiformis	dagger wattle	r		A. Simson (3720)	01-Jan-1882	Sighting	588180, 5336716 +/- 25000m
1205839	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588872, 5333884 +/- 5m
1205838	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588870, 5333898 +/- 5m
1205850	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588946, 5333273 +/- 5m
1205846	Austrostipa scabra	rough speargrass	r			03-Jan-2011	Sighting	588898, 5333892 +/- 5m
1205843	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588882, 5333869 +/- 5m
1205833	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588854, 5333937 +/- 5m
1205841	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588880, 5333919 +/- 5m
1205840	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588874, 5333839 +/- 5m
1205835	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588860, 5333923 +/- 5m
1205849	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588900, 5333897 +/- 5m
1205845	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588889, 5333856 +/- 5m
1205853	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	589067, 5333447 +/- 5m
1417894	Austrostipa scabra	rough speargrass	r		M Wapstra (29009)	02-Jan-2011	Sighting	588899, 5333875 +/- 5m
1205852	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	589062, 5333421 +/- 5m
1205830	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588845, 5333936 +/- 5m
1205831	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588848, 5333921 +/- 5m
1205832	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588849, 5333942 +/- 5m
1205834	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588856, 5333941 +/- 5m
1205836	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588870, 5333937 +/- 5m
1205837	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588870, 5333916 +/- 5m
1205842	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588882, 5333899 +/- 5m
1205844	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588888, 5333926 +/- 5m
1205847	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588899, 5333875 +/- 5m
1205848	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588899, 5333909 +/- 5m
1205851	Austrostipa scabra	rough speargrass	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	589032, 5333403 +/- 5m
922428	Bolboschoenus caldwellii	sea clubsedge	r		Unknown Unknown (21598)	01-Feb-1979	Sighting	591112, 5341183 +/- 300m
229922	Calocephalus lacteus	milky beautyheads	r		H.D. Gordon (4403)	19-Jan-1928	Sighting	589112, 5335783 +/- 5000m
1202306	Calystegia soldanella	sea bindweed	r		Hans Wapstra (3208),Annie Wapstra (9224)	01-Dec-2010	Sighting	589101, 5333540 +/- 5m
1268263	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589231, 5335286 +/- 10m
301503	Calystegia soldanella	sea bindweed	r		Eve Lazarus (6727)	01-Nov-2002	Sighting	589046, 5334262 +/- 100m
1268267	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589509, 5335523 +/- 10m
1268265	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589133, 5335190 +/- 10m
1268264	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589202, 5335257 +/- 10m
1268260	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589246, 5335309 +/- 10m
1268268	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589527, 5335536 +/- 10m

Threatened flora within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1268266	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589125, 5335182 +/- 10m
1268262	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589282, 5335339 +/- 10m
1268261	Calystegia soldanella	sea bindweed	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589292, 5335344 +/- 10m
1383487	Calystegia soldanella	sea bindweed	r		Tim Rudman (22437)	25-Oct-2013	Sighting	589287, 5335345 +/- 10m
229935	Cryptandra amara	pretty pearlflower	e		Leonard R. Rodway (4869)	01-Jan-1896	Sighting	589112, 5335783 +/- 1500m
1449450	Cynoglossum australe	coast houndstongue	r		James Wood (8961)	13-Jan-2014	Sighting	584684, 5339576 +/- 10m
1087855	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	13-Jan-2010	Sighting	587298, 5333517 +/- 5m
230644	Cynoglossum australe	coast houndstongue	r		A.M. Buchanan (3758)	10-Dec-1984	Sighting	590712, 5340483 +/- 200m
1268275	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	09-Nov-2011	Sighting	588834, 5335017 +/- 10m
1268276	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	09-Nov-2011	Sighting	588820, 5335027 +/- 10m
1268269	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	26-Oct-2011	Sighting	589032, 5334523 +/- 10m
1268270	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	26-Oct-2011	Sighting	589027, 5334531 +/- 10m
1268277	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589037, 5335135 +/- 10m
1268278	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589059, 5335136 +/- 10m
1268272	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	09-Nov-2011	Sighting	588874, 5335024 +/- 10m
1268273	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	09-Nov-2011	Sighting	588863, 5335006 +/- 10m
1268271	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	02-Nov-2011	Sighting	588999, 5334550 +/- 10m
1268279	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589077, 5335141 +/- 10m
1268293	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589429, 5335778 +/- 10m
1268294	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589410, 5335766 +/- 10m
1268283	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589637, 5335679 +/- 10m
1268284	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589636, 5335760 +/- 10m
1268295	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589401, 5335755 +/- 10m
1268299	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	24-Dec-2011	Sighting	589346, 5335762 +/- 10m
1268292	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589465, 5335821 +/- 10m
1268280	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	15-Nov-2011	Sighting	589085, 5335149 +/- 10m
1268281	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589540, 5335577 +/- 10m
1268296	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	18-Dec-2011	Sighting	589328, 5335753 +/- 10m
1268297	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	19-Dec-2011	Sighting	589331, 5335763 +/- 10m
1268301	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	28-Dec-2011	Sighting	589273, 5335784 +/- 10m
1268300	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	27-Dec-2011	Sighting	589340, 5335762 +/- 10m
1268289	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589486, 5335807 +/- 10m
1268290	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589464, 5335811 +/- 10m
1268285	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589611, 5335794 +/- 10m
1268302	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	19-Jan-2012	Sighting	589248, 5335776 +/- 10m
1268286	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589510, 5335823 +/- 10m
1268287	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589511, 5335811 +/- 10m
1268282	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589553, 5335584 +/- 10m

Threatened flora within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1268298	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	20-Dec-2011	Sighting	589327, 5335768 +/- 10m
299753	Cynoglossum australe	coast houndstongue	r		Eve Lazarus (6727)	01-Sep-2003	Sighting	589519, 5335743 +/- 200m
1268274	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	09-Nov-2011	Sighting	588847, 5335014 +/- 10m
1268291	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589517, 5335837 +/- 10m
1268288	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	16-Nov-2011	Sighting	589501, 5335803 +/- 10m
952118	Cynoglossum australe	coast houndstongue	r		John B. Davies (4699)	16-Nov-2006	Sighting	589394, 5339364 +/- 1m
1205869	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588934, 5333228 +/- 5m
1205876	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	589032, 5333403 +/- 5m
1205874	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588971, 5333308 +/- 5m
1205872	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588947, 5333191 +/- 5m
1205875	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588973, 5333255 +/- 5m
1205866	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588916, 5333132 +/- 5m
1205870	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588940, 5333184 +/- 5m
1205858	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588859, 5333935 +/- 5m
1205860	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588871, 5333906 +/- 5m
1205862	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588881, 5333861 +/- 5m
1046348	Cynoglossum australe	coast houndstongue	r		Andrew North (2500)	30-Oct-2007	Sighting	587560, 5333995 +/- 10m
1046361	Cynoglossum australe	coast houndstongue	r		Andrew North (2500)	30-Oct-2007	Sighting	589107, 5333591 +/- 10m
1159304	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	23-Sep-2009	Sighting	589288, 5335754 +/- 10m
1159305	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	23-Sep-2009	Sighting	589320, 5335761 +/- 10m
1159307	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	23-Sep-2009	Sighting	589334, 5335759 +/- 10m
1159308	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	23-Sep-2009	Sighting	589325, 5335752 +/- 10m
1159310	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	23-Sep-2009	Sighting	589354, 5335764 +/- 10m
1046347	Cynoglossum australe	coast houndstongue	r		Andrew North (2500)	30-Oct-2007	Sighting	587473, 5334813 +/- 10m
1205864	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588900, 5333088 +/- 5m
1205865	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588913, 5333856 +/- 5m
1205868	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588928, 5333813 +/- 5m
1205873	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588959, 5333229 +/- 5m
1205877	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	589053, 5333399 +/- 5m
1205859	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588870, 5333936 +/- 5m
1205867	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588923, 5333169 +/- 5m
1205871	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588946, 5333273 +/- 5m
1205863	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588899, 5333117 +/- 5m
1205861	Cynoglossum australe	coast houndstongue	r		Mark Wapstra (1621)	03-Jan-2011	Sighting	588875, 5333939 +/- 5m
1159306	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	23-Sep-2009	Sighting	589341, 5335765 +/- 10m
1159309	Cynoglossum australe	coast houndstongue	r		Nicky Meeson (5963)	23-Sep-2009	Sighting	589280, 5335765 +/- 10m
1397916	Cynoglossum australe	coast houndstongue	r		James Wood (8961)	05-Jan-2014	Sighting	584790, 5339518 +/- 10m
230561	Damasonium minus	starfruit	r		Dennis Ivor Morris (4111)	01-Oct-1978	Sighting	587412, 5336883 +/- 400m

Threatened flora within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
243688	Eucalyptus barberi	barbers gum	r		Leonard R. Rodway (4869)	15-Aug-1900	Sighting	587712, 5337583 +/- 20000m
1154775	Haloragis heterophylla	variable raspwort	r		Andrew Welling (3369)	18-Jan-2010	Sighting	588240, 5335934 +/- 10m
1046356	Haloragis heterophylla	variable raspwort	r		Andrew North (2500)	30-Oct-2007	Sighting	588043, 5335736 +/- 10m
1306910	Hyalosperma demissum	moss sunray	e		Andrew North (2500)	28-Oct-2007	Sighting	588480, 5333940 +/- 25m
1046364	Hyalosperma demissum	moss sunray	e		Nicky Meeson (5963)	23-Oct-2007	Sighting	588528, 5333949 +/- 10m
229936	Hyalosperma demissum	moss sunray	e		Unknown Unknown (21598)	01-Jan-1881	Sighting	589112, 5335783 +/- 1500m
229937	Lasiopetalum micranthum	tasmanian velvetbush	r		A. Simson (3720)	01-Oct-1881	Sighting	589112, 5335783 +/- 1500m
230615	Lasiopetalum micranthum	tasmanian velvetbush	r		Leonard R. Rodway (4869)	01-Jan-1896	Sighting	589112, 5335783 +/- 1500m
230616	Lasiopetalum micranthum	tasmanian velvetbush	r		Unknown Unknown (21598)	01-Jan-1881	Sighting	589112, 5335783 +/- 1500m
780446	Lasiopetalum micranthum	tasmanian velvetbush	r		Unknown Unknown (21598)	01-Apr-1992	Sighting	588012, 5342083 +/- 100m
230614	Lasiopetalum micranthum	tasmanian velvetbush	r		Unknown Unknown (21598)	01-Jan-0001	Sighting	589112, 5335783 +/- 1500m
1307442	Lasiopetalum micranthum	tasmanian velvetbush	r		M. Cameron (2187)	01-Sep-1980	Sighting	588247, 5342271 +/- 1000m
945006	Lasiopetalum micranthum	tasmanian velvetbush	r		M. Allan (4997)	24-Sep-1980	Sighting	589738, 5342421 +/- 2000m
300600	Lasiopetalum micranthum	tasmanian velvetbush	r		Phil Bell (1915)	20-Feb-2000	Sighting	585035, 5335788 +/- 200m
1046354	Lepidium pseudotasmanicum	shade peppercress	r		Andrew North (2500)	30-Oct-2007	Sighting	588666, 5335230 +/- 10m
944821	Lepilaena patentifolia	spreading watermat	r		J M R Hughes (9291)	10-Nov-1984	Sighting	591112, 5340513 +/- 2000m
931459	Lepilaena patentifolia	spreading watermat	r		A.M. Buchanan (3758)	10-Dec-1984	Sighting	590712, 5340483 +/- 100m
931458	Lepilaena patentifolia	spreading watermat	r		A.M. Buchanan (3758)	11-Dec-1984	Sighting	589212, 5341583 +/- 100m
944822	Lepilaena patentifolia	spreading watermat	r		J M R Hughes (9291)	10-Nov-1984	Sighting	591112, 5340513 +/- 2000m
952119	Lobelia pratioides	poison lobelia	v		John B. Davies (4699)	16-Nov-2006	Sighting	588562, 5341112 +/- 100m
230617	Lobelia pratioides	poison lobelia	v		Leonard R. Rodway (4869)	01-Nov-1922	Sighting	589112, 5335783 +/- 1500m
99981	Melaleuca pustulata	warty paperbark	r		Kristen J. Williams (21729)	01-Jan-1990	Sighting	585512, 5339683 +/- 100m
1312089	Melaleuca pustulata	warty paperbark	r		Alan M. Gray (1473)	12-Nov-2006	Sighting	588309, 5334139 +/- 50m
229985	Melaleuca pustulata	warty paperbark	r		A.M. Buchanan (3758)	10-Dec-1984	Sighting	590712, 5340483 +/- 200m
230618	Melaleuca pustulata	warty paperbark	r		A. Simson (3720)	01-Oct-1881	Sighting	589112, 5335783 +/- 1500m
345101	Melaleuca pustulata	warty paperbark	r		Unknown Unknown (21598)	01-Jan-1993	Sighting	588012, 5342083 +/- 100m
345103	Melaleuca pustulata	warty paperbark	r		Unknown Unknown (21598)	01-Jan-1993	Sighting	588212, 5333383 +/- 100m
406196	Melaleuca pustulata	warty paperbark	r		Jamie Kirkpatrick (1315)	01-Nov-1984	Sighting	585912, 5339083 +/- 100m
782940	Melaleuca pustulata	warty paperbark	r		Alexander McGregor Buchanan (1467)	17-Mar-1993	Sighting	588312, 5337183 +/- 50m
906938	Melaleuca pustulata	warty paperbark	r		Antonius (Tony) Moscal (2435)	24-Jun-1980	Sighting	585719, 5340667 +/- 1850m
230567	Melaleuca pustulata	warty paperbark	r		Unknown Unknown (21598)	01-Apr-1974	Sighting	588112, 5341883 +/- 6000m
229895	Melaleuca pustulata	warty paperbark	r		Winifred M. Curtis (5737)	11-Mar-1974	Sighting	588112, 5341883 +/- 6000m
892573	Melaleuca pustulata	warty paperbark	r		Antonius (Tony) Moscal (2435)	28-Jul-1980	Sighting	585579, 5340621 +/- 1850m
100416	Melaleuca pustulata	warty paperbark	r		Kristen J. Williams (21729)	01-Jan-1990	Sighting	588112, 5333183 +/- 100m

Threatened flora within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
45211	Melaleuca pustulata	warty paperbark	r		Fred Duncan (21730)	21-Oct-1981	Sighting	586612, 5338184 +/- 100m
376397	Melaleuca pustulata	warty paperbark	r		Stephen Harris (2289)	01-Jan-1985	Sighting	586012, 5333983 +/- 100m
1046363	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	588025, 5333661 +/- 10m
1046365	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587537, 5334708 +/- 10m
1046368	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	586563, 5335151 +/- 10m
1046369	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	586988, 5335404 +/- 10m
1046371	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587037, 5335422 +/- 10m
1046372	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587062, 5335431 +/- 10m
1046375	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587256, 5335484 +/- 10m
1046376	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587342, 5335514 +/- 10m
1046377	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587353, 5335528 +/- 10m
1046349	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	587368, 5333861 +/- 10m
1046350	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	588384, 5333936 +/- 10m
1046352	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	588230, 5334353 +/- 10m
1046353	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	588379, 5334365 +/- 10m
1046357	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	587890, 5335029 +/- 10m
1046358	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	587893, 5335014 +/- 10m
1046360	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	587896, 5334932 +/- 10m
1046362	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587977, 5333634 +/- 10m
1046351	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	588229, 5334365 +/- 10m
1046359	Melaleuca pustulata	warty paperbark	r		Andrew North (2500)	30-Oct-2007	Sighting	587886, 5334944 +/- 10m
1046370	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587015, 5335413 +/- 10m
1046374	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587032, 5335408 +/- 10m
96075	Melaleuca pustulata	warty paperbark	r		Kristen J. Williams (21729)	01-Jan-1990	Sighting	586012, 5333983 +/- 100m
1046373	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587123, 5335451 +/- 10m
1159860	Melaleuca pustulata	warty paperbark	r		Nicky Meeson (5963)	27-May-2010	Sighting	586115, 5334023 +/- 10m
130738	Melaleuca pustulata	warty paperbark	r		Fred Duncan (21730)	19-Oct-1995	Sighting	587712, 5334683 +/- 100m
96076	Ozothamnus lycopodioides	clubmoss everlastingbush	r		Kristen J. Williams (21729)	01-Jan-1990	Sighting	586012, 5333983 +/- 100m
229938	Ozothamnus lycopodioides	clubmoss everlastingbush	r		Leonard R. Rodway (4869)	01-Oct-1892	Sighting	589112, 5335783 +/- 1500m
377754	Ozothamnus lycopodioides	clubmoss everlastingbush	r		Stephen Harris (2289)	01-Jan-1985	Sighting	586012, 5333983 +/- 100m
1046366	Ozothamnus lycopodioides	clubmoss everlastingbush	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587577, 5334734 +/- 10m
955446	Ozothamnus lycopodioides	clubmoss everlastingbush	r		Leonard R. Rodway (4869)	01-Oct-1892	Sighting	588267, 5335036 +/- 2000m
1046367	Ozothamnus lycopodioides	clubmoss everlastingbush	r		Nicky Meeson (5963)	23-Oct-2007	Sighting	587593, 5334719 +/- 10m
130637	Ozothamnus lycopodioides	clubmoss everlastingbush	r		Fred Duncan (21730)	19-Oct-1995	Sighting	587712, 5334683 +/- 100m
230619	Phyllangium divergens	wiry mitrewort	v		A. Simson (3720)	01-Jan-1881	Sighting	589112, 5335783 +/- 1500m
1159862	Pterostylis ziegeleri	grassland greenhood	v	VU	Katriona Lee Hopkins (2888)	26-Oct-2009	Sighting	589226, 5339027 +/- 10m
1202438	Pterostylis ziegeleri	grassland greenhood	v	VU	M Burbury (21964)	01-Jan-2009	Sighting	589800, 5339200 +/- 200m
1159861	Pterostylis ziegeleri	grassland greenhood	v	VU	Katriona Lee Hopkins (2888)	26-Oct-2009	Sighting	588986, 5338883 +/- 10m

Threatened flora within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1202437	Pterostylis ziegeleri	grassland greenhood	v	VU	Katriona Lee Hopkins (2888)	26-Oct-2009	Sighting	589200, 5338900 +/- 100m
343917	Rytidosperma indutum	tall wallabygrass	r		Unknown Unknown (21598)	01-Jan-1993	Sighting	588212, 5333383 +/- 100m
229921	Scaevola aemula	fairy fanflower	e		Leonard R. Rodway (4869)	01-Dec-1892	Sighting	589112, 5335683 +/- 10000m
230620	Stenanthemum pimeleoides	propeller plant	v	VU	Unknown Unknown (21598)	01-Jan-1946	Sighting	589112, 5335783 +/- 5000m
229939	Stenanthemum pimeleoides	propeller plant	v	VU	H.D. Gordon (4403)	19-Jan-1938	Sighting	589112, 5335783 +/- 5000m
780457	Stenanthemum pimeleoides	propeller plant	v	VU	Unknown Unknown (21598)	01-Apr-1992	Sighting	588012, 5342083 +/- 100m
1414275	Stenopetalum lineare	narrow threadpetal	e		Mark Wapstra (1621)	02-May-2014	Sighting	589976, 5338505 +/- 5m
230645	Teucrium corymbosum	forest germander	r		A.M. Buchanan (3758)	10-Dec-1984	Sighting	590712, 5340483 +/- 200m
229940	Teucrium corymbosum	forest germander	r		A.M. Buchanan (3758)	14-Oct-1998	Sighting	589112, 5341483 +/- 100m
1421049	Vittadinia burbidgeae	smooth new-holland-daisy	r		M Wapstra (29009)	02-Jan-2011	Sighting	588553, 5334828 +/- 5m
346191	Vittadinia burbidgeae	smooth new-holland-daisy	r		Unknown Unknown (21598)	01-Jan-1993	Sighting	587312, 5336983 +/- 100m
1205829	Vittadinia burbidgeae	smooth new-holland-daisy	r		Mark Wapstra (1621)	02-Jan-2011	Sighting	588553, 5334828 +/- 5m
1316830	Vittadinia burbidgeae	smooth new-holland-daisy	r		Richard B. Schahinger (2944)	11-Dec-2007	Sighting	587309, 5337024 +/- 25m
1046355	Vittadinia burbidgeae	smooth new-holland-daisy	r		Andrew North (2500)	30-Oct-2007	Sighting	588709, 5335791 +/- 10m
230621	Vittadinia cuneata var. cuneata	fuzzy new-holland-daisy	r		A. Simson (3720)	01-Oct-1881	Sighting	589112, 5335783 +/- 1500m
346190	Vittadinia gracilis	woolly new-holland-daisy	r		Unknown Unknown (21598)	01-Jan-1993	Sighting	587312, 5336983 +/- 100m

Unverified Records

No unverified records were found!

For more information about threatened species, please contact the Manager, Threatened Species and Marine Section.

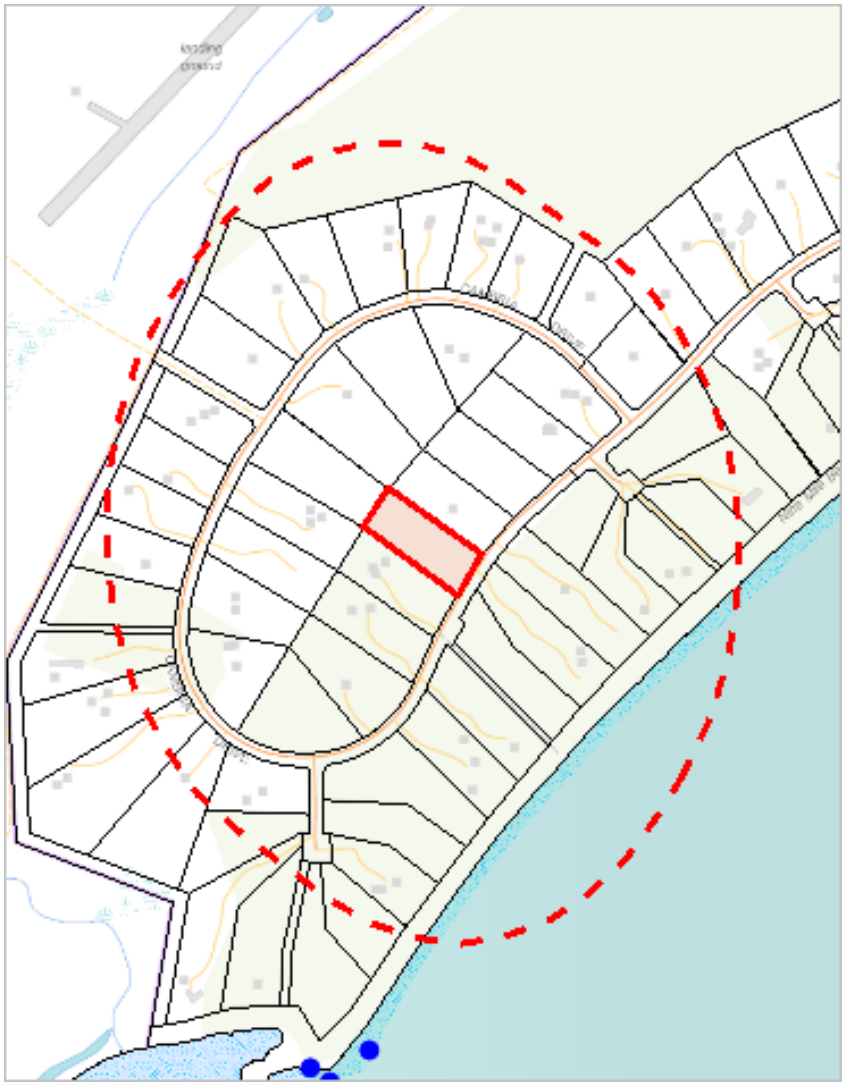
Telephone: (03) 6165 4340

Email: ThreatenedSpecies.Enquiries@dpipwe.tas.gov.au

Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 500 metres

589513, 5338795



588284, 5337229

Threatened fauna within 500 metres

Threatened fauna within 500 metres

Threatened fauna within 500 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	Potential	Known	Core
Aquila audax	wedge-tailed eagle	pe	PEN	1	0	0
Perameles gunnii	eastern barred bandicoot		VU	1	0	1
Dasyurus maculatus	spotted-tailed quoll	r	VU	1	0	0
Litoria raniformis	green and gold frog	v	VU	1	0	0
Antipodia chaostola	chaostola skipper	e	EN	1	0	0
Pseudemoia pagenstecheri	tussock skink	v		1	0	0
Lathamus discolor	swift parrot	e	EN	1	0	1
Sarcophilus harrisii	tasmanian devil	e	EN	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	1	0	0
Galaxias fontanus	swan galaxias	e	EN	1	0	0
Pseudomys novaehollandiae	new holland mouse	e	VU	1	0	0
Tyto novaehollandiae	masked owl	pe	PVU	1	0	1
Prototroctes maraena	australian grayling	v	VU	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		2	0	0
Pardalotus quadragintus	forty-spotted pardalote	e	EN	1	0	0
Accipiter novaehollandiae	grey goshawk	e		1	0	0

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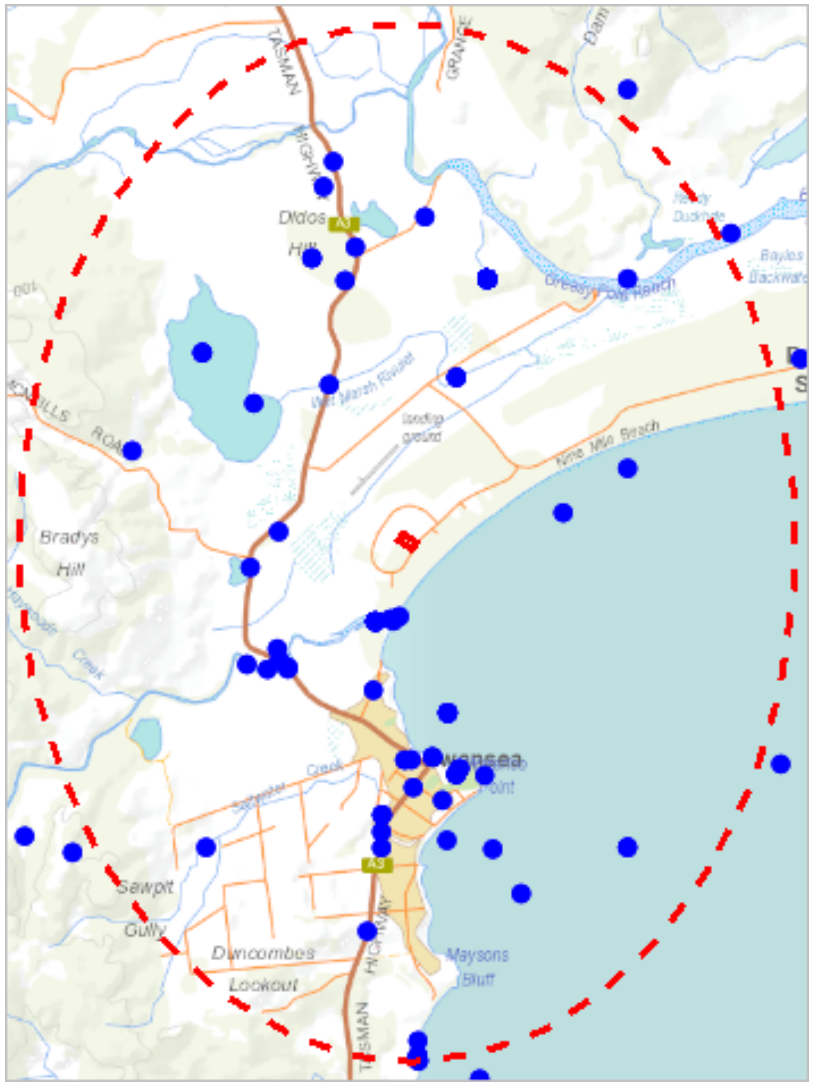
Threatened fauna within 5000 metres

592908, 5343314



584892, 5332688

Threatened fauna within 5000 metres

Threatened fauna within 5000 metres

Verified Records

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
863103	Accipiter novaehollandiae	grey goshawk	e		Unknown Unknown (21598)	26-Dec-1976	Sighting	589112, 5341183 +/- 1000m
716394	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	05-Jun-1980	Sighting	589714, 5340570 +/- 18500m
693549	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	31-May-1977	Sighting	589714, 5340570 +/- 18500m
642986	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	31-Aug-1977	Sighting	589714, 5340570 +/- 18500m
654960	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	28-Feb-1978	Sighting	589714, 5340570 +/- 18500m
732920	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	31-Aug-1980	Sighting	589714, 5340570 +/- 18500m
725042	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	29-Feb-1980	Sighting	589714, 5340570 +/- 18500m
740605	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	30-Sep-1981	Sighting	589714, 5340570 +/- 18500m
661848	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	Unknown Unknown (21598)	31-May-1978	Sighting	589714, 5340570 +/- 18500m
1298565	Arctocephalus tropicalis	sub-antarctic fur seal	e	VU	Isabel Beasley (24181)	27-May-2008	Initial sighting	589384, 5335790 +/- 100m
1298566	Arctocephalus tropicalis	sub-antarctic fur seal	e	VU	Isabel Beasley (24181)	27-May-2008	Sighting	589384, 5335790 +/- 100m
1298571	Arctocephalus tropicalis	sub-antarctic fur seal	e	VU	Isabel Beasley (24181)	09-Jun-2008	Initial sighting	589121, 5335905 +/- 100m
1298572	Arctocephalus tropicalis	sub-antarctic fur seal	e	VU	Isabel Beasley (24181)	09-Jun-2008	Sighting	589121, 5335905 +/- 100m
642735	Botaurus poiciloptilus	australasian bittern		EN	Unknown Unknown (21598)	01-Nov-1977	Sighting	589714, 5340570 +/- 18500m
740610	Calidris ferruginea	curlew sandpiper		CR	Unknown Unknown (21598)	30-Sep-1981	Sighting	589714, 5340570 +/- 18500m
716902	Calidris ferruginea	curlew sandpiper		CR	Unknown Unknown (21598)	09-Dec-1979	Sighting	589714, 5340570 +/- 18500m
725050	Diomedea melanophrys subsp. melanophrys	black-browed albatross	pe	PVU	Unknown Unknown (21598)	29-Feb-1980	Sighting	589714, 5340570 +/- 18500m
1293479	Eubalaena australis	southern right whale	e	EN	Hans Wapstra (3208),Colin Spry (5692)	10-Aug-1989	Initial sighting	589700, 5335000 +/- 100m
1293654	Eubalaena australis	southern right whale	e	EN	Mike Dicker (24208),David Scarborough (24694)	11-Aug-1996	Initial sighting	589275, 5336336 +/- 100m
1293572	Eubalaena australis	southern right whale	e	EN	Yvonne Hill (8042),Mike Dicker (24208)	20-Jun-1994	Initial sighting	589275, 5336336 +/- 100m
1293573	Eubalaena australis	southern right whale	e	EN	Yvonne Hill (8042),Mike Dicker (24208)	20-Jun-1994	Sighting	589275, 5336336 +/- 100m
1293574	Eubalaena australis	southern right whale	e	EN	Yvonne Hill (8042),Mike Dicker (24208)	20-Jun-1994	Sighting	589275, 5336336 +/- 100m
1293686	Eubalaena australis	southern right whale	e	EN	Hans Wapstra (3208),Mike Dicker (24208)	29-Aug-1997	Initial sighting	589275, 5336336 +/- 100m
1294565	Eubalaena australis	southern right whale	e	EN	Rupert Davies (24178)	26-Jul-2009	Initial sighting	589251, 5335092 +/- 100m
1292277	Eubalaena australis	southern right whale	e	EN	Rachael Alderman (7136),Rupert Davies (24178)	05-Aug-2009	Initial sighting	589350, 5335735 +/- 100m
1292278	Eubalaena australis	southern right whale	e	EN	Rachael Alderman (7136),Rupert Davies (24178)	05-Aug-2009	Sighting	589350, 5335735 +/- 100m

Threatened fauna within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1292279	Eubalaena australis	southern right whale	e	EN	Rachael Alderman (7136),Rupert Davies (24178)	05-Aug-2009	Sighting	589350, 5335735 +/- 100m
534371	Haliaeetus leucogaster	white-bellied sea-eagle	v		Unknown Unknown (21598)	01-Jan-0001	Sighting	587412, 5339383 +/- 100m
633990	Haliaeetus leucogaster	white-bellied sea-eagle	v		Unknown Unknown (21598)	31-Aug-1977	Sighting	589714, 5340570 +/- 18500m
654989	Haliaeetus leucogaster	white-bellied sea-eagle	v		Unknown Unknown (21598)	28-Feb-1978	Sighting	589714, 5340570 +/- 18500m
692259	Haliaeetus leucogaster	white-bellied sea-eagle	v		Unknown Unknown (21598)	28-Feb-1979	Sighting	589714, 5340570 +/- 18500m
671072	Haliaeetus leucogaster	white-bellied sea-eagle	v		Unknown Unknown (21598)	31-May-1978	Sighting	589714, 5340570 +/- 18500m
660309	Haliaeetus leucogaster	white-bellied sea-eagle	v		Unknown Unknown (21598)	28-Feb-1977	Sighting	589714, 5340570 +/- 18500m
1258181	Haliaeetus leucogaster	white-bellied sea-eagle	v		Shaun Thurstans (6695)	01-Jan-2003	Nest	586913, 5339883 +/- 50m
1258182	Haliaeetus leucogaster	white-bellied sea-eagle	v		Bill Brown (3537)	19-Sep-2007	Nest	586913, 5339883 +/- 50m
732400	Haliaeetus leucogaster	white-bellied sea-eagle	v		Unknown Unknown (21598)	30-Sep-1981	Sighting	589714, 5340570 +/- 18500m
1311869	Haliaeetus leucogaster	white-bellied sea-eagle	v		C L Rickett (26532)	30-Jul-1917	Sighting	588618, 5335348 +/- 5000m
725410	Lathamus discolor	swift parrot	e	EN	Unknown Unknown (21598)	31-Aug-1979	Sighting	589714, 5340570 +/- 18500m
704397	Lathamus discolor	swift parrot	e	EN	Unknown Unknown (21598)	05-Dec-1979	Sighting	589714, 5340570 +/- 18500m
1075523	Lathamus discolor	swift parrot	e	EN	Michael Kenneth Todd (10621)	29-Sep-2008	Sighting	588549, 5336566 +/- 10m
872494	Lathamus discolor	swift parrot	e	EN	A Gates (1802)	04-Nov-1995	Sighting	588912, 5335883 +/- 500m
642850	Lathamus discolor	swift parrot	e	EN	Unknown Unknown (21598)	31-Aug-1977	Sighting	589714, 5340570 +/- 18500m
625868	Lathamus discolor	swift parrot	e	EN	Unknown Unknown (21598)	31-Aug-1981	Sighting	589714, 5340570 +/- 18500m
877435	Lathamus discolor	swift parrot	e	EN	Terry Timothy (2422)	11-Feb-1987	Sighting	589212, 5335483 +/- 100m
1294596	Megaptera novaeangliae	humpback whale	e	VU	Sam Thalmann (24183)	11-Jul-2007	Initial sighting	589972, 5334562 +/- 100m
1291991	Megaptera novaeangliae	humpback whale	e	VU		25-Nov-2004	Initial sighting	592534, 5335794 +/- 100m
1291901	Megaptera novaeangliae	humpback whale	e	VU	Rosemary Gales (11443)	16-Jul-2010	Initial sighting	590433, 5338276 +/- 100m
895049	Perameles gunnii	eastern barred bandicoot		VU	R Hooper (2020)	05-Feb-1977	Sighting	591069, 5338702 +/- 1850m
895258	Perameles gunnii	eastern barred bandicoot		VU	R Hooper (2020)	07-Dec-1974	Sighting	591021, 5335001 +/- 1850m
749873	Perameles gunnii	eastern barred bandicoot		VU	Greg Hocking (7572)	13-Jan-1993	Sighting	588928, 5335612 +/- 1124m
742589	Perameles gunnii	eastern barred bandicoot		VU	Greg Hocking (7572)	20-Aug-1986	Sighting	587357, 5337781 +/- 960m
732403	Poliocephalus cristatus subsp. australis	great crested grebe	pv		Unknown Unknown (21598)	30-Sep-1981	Sighting	589714, 5340570 +/- 18500m
1352498	Prototroctes maraena	australian grayling	v	VU	Unknown Unknown (21598)	29-Mar-1979	Sighting	587716, 5336801 +/- 20m
349162	Prototroctes maraena	australian grayling	v	VU	Unknown Unknown (21598)	29-Mar-1979	Sighting	587612, 5336983 +/- 100m
1317490	Prototroctes maraena	australian grayling	v	VU	W Shaw (26960)	01-Apr-1963	Sighting	585580, 5335019 +/- 1000m
533644	Prototroctes maraena	australian grayling	v	VU	Unknown Unknown (21598)	01-Jan-0001	Sighting	587712, 5336783 +/- 100m
742641	Sarcophilus harrisii	tasmanian devil	e	EN	Greg Hocking (7572)	13-Jan-1993	Sighting	588610, 5335027 +/- 643m
1337374	Sarcophilus harrisii	tasmanian devil	e	EN	Jocelyn Hockley (20086)	03-Apr-2013	Sighting	587999, 5340794 +/- 1000m

Threatened fauna within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1337367	Sarcophilus harrisii	tasmanian devil	e	EN	Christine Sikyr (28037)	04-Apr-2013	Sighting	588000, 5340794 +/- 1000m
1316577	Sarcophilus harrisii	tasmanian devil	e	EN	Rachael ? (27167)	08-Mar-2013	Sighting	588321, 5340571 +/- 5000m
1316550	Sarcophilus harrisii	tasmanian devil	e	EN	Peter George (22060)	15-Feb-2013	Sighting	587629, 5336878 +/- 200m
1290681	Sarcophilus harrisii	tasmanian devil	e	EN	- Anonymous (16453)	09-Oct-2012	Sighting	588154, 5339555 +/- 50m
1290680	Sarcophilus harrisii	tasmanian devil	e	EN	- Anonymous (16453)	10-Oct-2012	Sighting	588848, 5335881 +/- 10000m
1154354	Sarcophilus harrisii	tasmanian devil	e	EN	Lara Keput (21473)	15-Mar-2010	Sighting	588221, 5341735 +/- 700m
1152990	Sarcophilus harrisii	tasmanian devil	e	EN	Denise Cordwell (20819)	21-Apr-2009	Sighting	587641, 5338126 +/- 500m
1075000	Sarcophilus harrisii	tasmanian devil	e	EN	Keith Breheny (7192)	18-Nov-2006	Sighting	588122, 5341491 +/- 0m
1066469	Sarcophilus harrisii	tasmanian devil	e	EN	David Prince (19658)	17-Jul-2008	Sighting	588459, 5334215 +/- 1000m
1435675	Sarcophilus harrisii	tasmanian devil	e	EN	Alain Coltier (29335)	18-Apr-2015	Sighting	588427, 5340896 +/- 200m
896553	Sarcophilus harrisii	tasmanian devil	e	EN	R Hooper (2020)	26-Jan-1976	Sighting	591021, 5335001 +/- 1850m
900966	Sarcophilus harrisii	tasmanian devil	e	EN	Hans Wapstra (3208),Annie Wapstra (9224)	06-Jan-1980	Sighting	586889, 5335053 +/- 1850m
896334	Sarcophilus harrisii	tasmanian devil	e	EN	R Hooper (2020)	14-Oct-1975	Sighting	591117, 5342403 +/- 1850m
896087	Sarcophilus harrisii	tasmanian devil	e	EN	R Gatenb (2017)	27-Dec-1973	Sighting	591093, 5340553 +/- 1850m
1318269	Sarcophilus harrisii	tasmanian devil	e	EN	Menna Jones (8901)	22-Jun-1905	Sighting	588618, 5335348 +/- 5000m
642858	Sterna nereis subsp. nereis	fairy tern	pv	PVU	Unknown Unknown (21598)	31-Aug-1977	Sighting	589714, 5340570 +/- 18500m
725437	Sterna nereis subsp. nereis	fairy tern	pv	PVU	Unknown Unknown (21598)	31-Aug-1979	Sighting	589714, 5340570 +/- 18500m
732252	Sterna nereis subsp. nereis	fairy tern	pv	PVU	Unknown Unknown (21598)	31-Aug-1980	Sighting	589714, 5340570 +/- 18500m
532088	Sternula nereis subsp. nereis	fairy tern	v	VU	Unknown Unknown (21598)	01-Jan-0001	Sighting	592112, 5340984 +/- 100m
1375810	Sternula nereis subsp. nereis	fairy tern	v	VU	Geoff Morgan (28477),Liz Morgan (28487)	24-Nov-1998	Sighting	588576, 5337237 +/- 1000m
1374475	Sternula nereis subsp. nereis	fairy tern	v	VU	Geoff Morgan (28477),Liz Morgan (28487)	24-Nov-1998	Sighting	588576, 5337237 +/- 1000m
1308592	Theclinesthes serpentata subsp. lavara	Chequered Blue	r		Chris Gregory (26192)	28-Mar-2012	Sighting	589630, 5335721 +/- 250m
692156	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	11-Jun-1979	Sighting	589714, 5340570 +/- 18500m
716878	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	31-Aug-1979	Sighting	589714, 5340570 +/- 18500m
716428	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	05-Jun-1980	Sighting	589714, 5340570 +/- 18500m
681575	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	04-Feb-1977	Sighting	589714, 5340570 +/- 18500m
654712	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	27-Feb-1978	Sighting	589714, 5340570 +/- 18500m
642859	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	31-Aug-1977	Sighting	589714, 5340570 +/- 18500m
692288	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	28-Feb-1979	Sighting	589714, 5340570 +/- 18500m
725494	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	09-Dec-1979	Sighting	589714, 5340570 +/- 18500m

Threatened fauna within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1375390	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	10-Dec-1998	Sighting	593490, 5339407 +/- 1000m
1335679	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	18-Dec-1872	Sighting	588618, 5335348 +/- 5000m
1437849	Thinornis rubricollis	hooded plover		VU	Eric John Woehler (8281)	19-Jan-2012	Sighting	588937, 5332984 +/- 100m
1437859	Thinornis rubricollis	hooded plover		VU	Eric John Woehler (8281)	20-Mar-2015	Sighting	588940, 5332996 +/- 100m
1242810	Thinornis rubricollis	hooded plover		VU	Eric John Woehler (8281)	02-Nov-2003	Sighting	588943, 5333140 +/- 100m
1242814	Thinornis rubricollis	hooded plover		VU	Eric John Woehler (8281)	02-Nov-2003	Sighting	588726, 5337259 +/- 100m
1242031	Thinornis rubricollis	hooded plover		VU	Eric John Woehler (8281)	26-Nov-1998	Sighting	588754, 5337239 +/- 100m
854492	Thinornis rubricollis	hooded plover		VU	Mark Holdsworth (1673),Priscilla Park (1968)	01-Jan-1992	Sighting	585112, 5335183 +/- 5000m
523984	Thinornis rubricollis	hooded plover		VU	Unknown Unknown (21598)	01-Jan-0001	Sighting	588812, 5337283 +/- 100m
1375392	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	24-Oct-1998	Sighting	593490, 5339407 +/- 1000m
1375391	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	21-Nov-1998	Sighting	593490, 5339407 +/- 1000m
1375132	Thinornis rubricollis	hooded plover		VU	Donnalee Young (28475)	01-Feb-1999	Sighting	588946, 5332944 +/- 1000m
1375389	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	27-Dec-1998	Sighting	593490, 5339407 +/- 1000m
1375388	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	14-Jan-1999	Sighting	593490, 5339407 +/- 1000m
1375387	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	28-Jan-1999	Sighting	593490, 5339407 +/- 1000m
1375386	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	20-Feb-1999	Sighting	593490, 5339407 +/- 1000m
1375380	Thinornis rubricollis	hooded plover		VU	Priscilla Park (1968)	16-Nov-1998	Sighting	588576, 5337237 +/- 1000m
1375379	Thinornis rubricollis	hooded plover		VU	Geoff Morgan (28477),Liz Morgan (28487)	24-Nov-1998	Sighting	588576, 5337237 +/- 1000m
1375378	Thinornis rubricollis	hooded plover		VU	Alan Fletcher (28464)	23-Nov-1998	Sighting	588576, 5337237 +/- 1000m
1374763	Thinornis rubricollis	hooded plover		VU	Donnalee Young (28475)	01-Feb-1999	Sighting	588946, 5332944 +/- 1000m
1374054	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	24-Oct-1998	Sighting	593490, 5339407 +/- 1000m
1374053	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	21-Nov-1998	Sighting	593490, 5339407 +/- 1000m
1374052	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	10-Dec-1998	Sighting	593490, 5339407 +/- 1000m

Threatened fauna within 5000 metres

Id	Species	Common Name	SS	NS	Observers	Date	Obs Type	Easting/Northing GDA94 Zone 55
1374051	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	27-Dec-1998	Sighting	593490, 5339407 +/- 1000m
1374050	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	14-Jan-1999	Sighting	593490, 5339407 +/- 1000m
1374049	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	28-Jan-1999	Sighting	593490, 5339407 +/- 1000m
1374048	Thinornis rubricollis	hooded plover		VU	David Scarborough (24694),Pat Scarborough (28495)	20-Feb-1999	Sighting	593490, 5339407 +/- 1000m
1374042	Thinornis rubricollis	hooded plover		VU	Priscilla Park (1968)	16-Nov-1998	Sighting	588576, 5337237 +/- 1000m
1374041	Thinornis rubricollis	hooded plover		VU	Geoff Morgan (28477),Liz Morgan (28487)	24-Nov-1998	Sighting	588576, 5337237 +/- 1000m
1374040	Thinornis rubricollis	hooded plover		VU	Alan Fletcher (28464)	23-Nov-1998	Sighting	588576, 5337237 +/- 1000m
352438	Tyto novaehollandiae	masked owl	pe	PVU	Unknown Unknown (21598)	01-Jan-1987	Sighting	588612, 5335183 +/- 100m
352400	Tyto novaehollandiae	masked owl	pe	PVU	Unknown Unknown (21598)	29-Jun-1974	Sighting	587312, 5336833 +/- 100m
1256586	Tyto novaehollandiae	masked owl	pe	PVU	Nick Mooney (16443)	01-Jan-1985	Nest	586213, 5338934 +/- 1000m
360520	Tyto novaehollandiae	masked owl	pe	PVU	T Conlan (2376)	09-Aug-1995	Sighting	589401, 5339612 +/- 9000m
358397	Tyto novaehollandiae	masked owl	pe	PVU	R Tyson (2192)	30-Jun-1977	Sighting	589401, 5339612 +/- 9000m
1201212	Tyto novaehollandiae	masked owl	pe	PVU	Threatened Species Section Staff Unknown (21723)	01-Jan-1950	Sighting	587512, 5336783 +/- 100m
1280003	Tyto novaehollandiae subsp. castanops	masked owl (tasmanian)	e	VU	Mark Tierney (24082)	01-Jan-2008	Sighting	592783, 5339749 +/- 10m

Unverified Records

No unverified records were found!

Threatened fauna within 5000 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	Potential	Known	Core
Aquila audax	wedge-tailed eagle	pe	PEN	1	0	0
Perameles gunnii	eastern barred bandicoot		VU	1	0	1
Dasyurus maculatus	spotted-tailed quoll	r	VU	1	0	0
Litoria raniformis	green and gold frog	v	VU	1	0	0
Antipodia chaostola	chaostola skipper	e	EN	1	0	0
Pseudemoia pagenstecheri	tussock skink	v		1	0	0
Lathamus discolor	swift parrot	e	EN	1	0	1
Sarcophilus harrisii	tasmanian devil	e	EN	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	1	0	0
Galaxias fontanus	swan galaxias	e	EN	1	0	1
Pseudomys novaehollandiae	new holland mouse	e	VU	1	0	0
Tyto novaehollandiae	masked owl	pe	PVU	1	0	1
Prototroctes maraena	australian grayling	v	VU	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		2	0	0
Pardalotus quadragintus	forty-spotted pardalote	e	EN	1	0	0
Accipiter novaehollandiae	grey goshawk	e		1	0	0

For more information about threatened species, please contact the Manager, Threatened Species and Marine Section.

Telephone: (03) 6165 4340

Email: ThreatenedSpecies.Enquiries@dpipwe.tas.gov.au

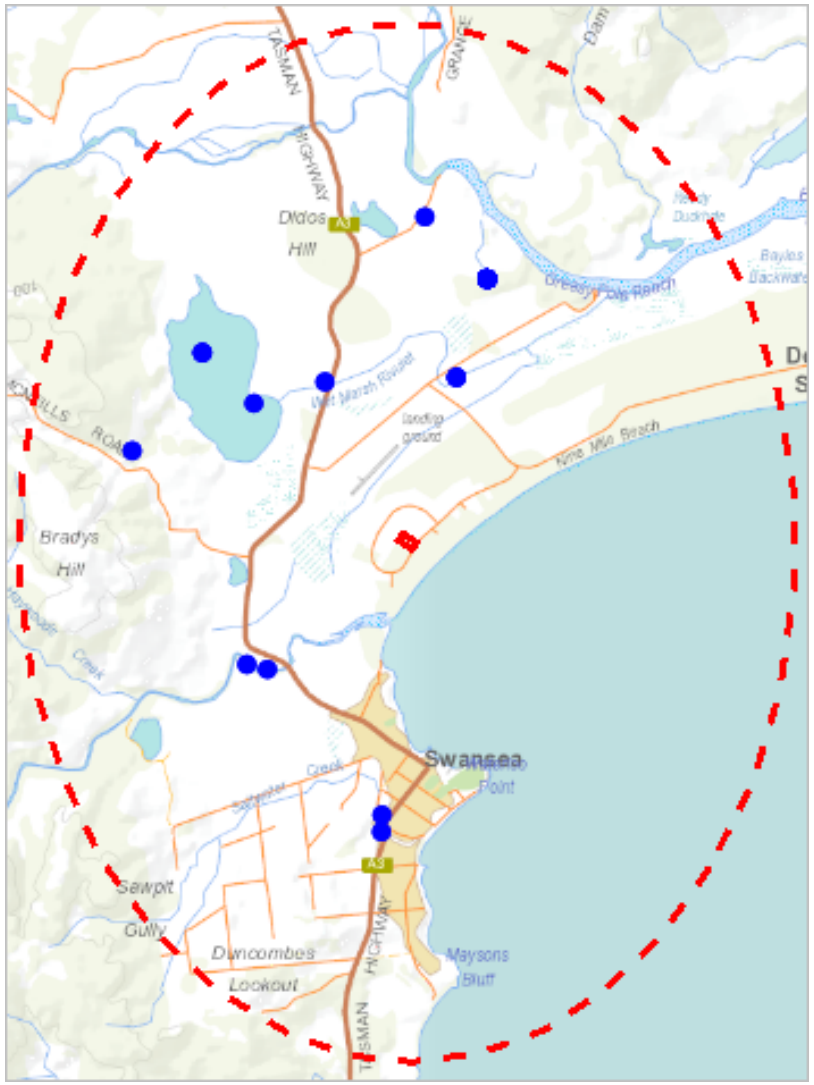
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 5000 metres

*** No Raptor nests or sightings found within 500 metres. ***

Raptor nests and sightings within 5000 metres

592908, 5343314



584892, 5332688

Raptor nests and sightings within 5000 metres

Raptor nests and sightings within 5000 metres

Please Note:

Note that inactive, damaged and/or lost eagle nests may be reinstated or replaced in following seasons (possibly even years later) and it should not be assumed that these locations will remain inactive in the long term.

Where there is no data in the Nest Productivity and Nest Occupancy fields it is likely that the productivity and occupancy of these nests has not been assessed and the absence of this data does not imply that the nests are un-occupied or un-productive.

Approaching a nest on foot during the breeding season (June to February inclusive) is highly disruptive for breeding eagles. Therefore eagle nests should not be approached during this time unless approved by a relevant DPIPWE specialist or their delegate.

Verified Records

Nest Id/Location Foreign Id	Species Name	Observer	Obs Date	Obs Type	Easting/Northing GDA94 Zone 55	Season	Nest Productivity	Nest Occupancy
610	Tyto novaehollandiae	Nick Mooney (16443)	01-Jan-1985	Nest	586213, 5338934 +/- 1000m			
1271	Haliaeetus leucogaster	Bill Brown (3537)	19-Sep-2007	Nest	586913, 5339883 +/- 50m	2007	0	
1271	Haliaeetus leucogaster	Shaun Thurstans (6695)	01-Jan-2003	Nest	586913, 5339883 +/- 50m			
	Accipiter novaehollandiae	Unknown Unknown (21598)	26-Dec-1976	Sighting	589112, 5341183 +/- 1000m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	31-May-1977	Sighting	589714, 5340570 +/- 18500m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	05-Jun-1980	Sighting	589714, 5340570 +/- 18500m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	31-Aug-1980	Sighting	589714, 5340570 +/- 18500m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	28-Feb-1978	Sighting	589714, 5340570 +/- 18500m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	30-Sep-1981	Sighting	589714, 5340570 +/- 18500m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	31-Aug-1977	Sighting	589714, 5340570 +/- 18500m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	29-Feb-1980	Sighting	589714, 5340570 +/- 18500m			
	Aquila audax subsp. fleayi	Unknown Unknown (21598)	31-May-1978	Sighting	589714, 5340570 +/- 18500m			
	Falco cenchroides	Peter Duckworth (1926)	03-Sep-1980	Sighting	588112, 5339583 +/- 100m			
	Falco peregrinus	Unknown Unknown (21598)	01-Mar-1981	Sighting	589714, 5340570 +/- 18500m			
	Haliaeetus leucogaster	Unknown Unknown (21598)	28-Feb-1979	Sighting	589714, 5340570 +/- 18500m			
	Haliaeetus leucogaster	Unknown Unknown (21598)	31-May-1978	Sighting	589714, 5340570 +/- 18500m			
	Haliaeetus leucogaster	C L Rickett (26532)	30-Jul-1917	Sighting	588618, 5335348 +/- 5000m			
	Haliaeetus leucogaster	Unknown Unknown (21598)	30-Sep-1981	Sighting	589714, 5340570 +/- 18500m			
	Haliaeetus leucogaster	Unknown Unknown (21598)	01-Jan-0001	Sighting	587412, 5339383 +/- 100m			
	Haliaeetus leucogaster	Unknown Unknown (21598)	28-Feb-1978	Sighting	589714, 5340570 +/- 18500m			
	Haliaeetus leucogaster	Unknown Unknown (21598)	31-Aug-1977	Sighting	589714, 5340570 +/- 18500m			
	Haliaeetus leucogaster	Unknown Unknown (21598)	28-Feb-1977	Sighting	589714, 5340570 +/- 18500m			
	Tyto novaehollandiae	Threatened Species Section Staff Unknown (21723)	01-Jan-1950	Sighting	587512, 5336783 +/- 100m			

Raptor nests and sightings within 5000 metres

Nest Id/Location Foreign Id	Species Name	Observer	Obs Date	Obs Type	Easting/Northing GDA94 Zone 55	Season	Nest Productivity	Nest Occupancy
	Tyto novaehollandiae	Unknown Unknown (21598)	01-Jan-1987	Sighting	588612, 5335183 +/- 100m			
	Tyto novaehollandiae	Unknown Unknown (21598)	29-Jun-1974	Sighting	587312, 5336833 +/- 100m			
	Tyto novaehollandiae	T Conlan (2376)	09-Aug-1995	Sighting	589401, 5339612 +/- 9000m			
	Tyto novaehollandiae	R Tyson (2192)	30-Jun-1977	Sighting	589401, 5339612 +/- 9000m			

Unverified Records

No unverified records were found!

Raptor nests and sightings within 5000 metres

(based on Range Boundaries)

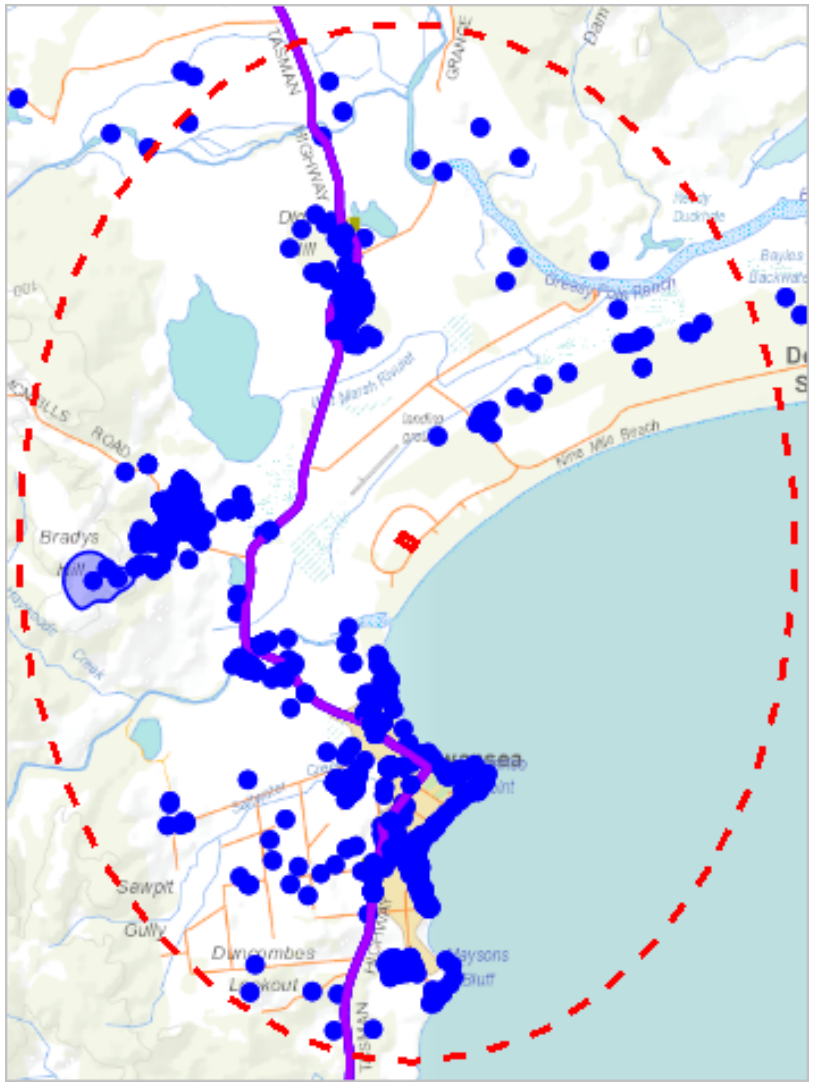
Species	Common Name	SS	NS	Potential	Known	Core
Aquila audax	wedge-tailed eagle	pe	PEN	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	1	0	0
Tyto novaehollandiae	masked owl	pe	PVU	1	0	1
Haliaeetus leucogaster	white-bellied sea-eagle	v		2	0	0
Accipiter novaehollandiae	grey goshawk	e		1	0	0

For more information about raptor nests, please contact the Manager, Threatened Species and Marine Section.
Telephone: (03) 6165 4340
Email: ThreatenedSpecies.Enquiries@dpipwe.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

*** No Tas Management Act Weeds found within 500 metres ***

Tas Management Act Weeds within 5000 m

592908, 5343314



584892, 5332688

Tas Management Act Weeds within 5000 m

Tas Management Act Weeds within 5000 m

Verified Records

Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1372122	Asparagus asparagoides	bridal creeper	Pete Lingard (22387)	30-Jun-2005	588824, 5335815 +/- 50m	7 Noyes Street , Swansea, Glamorgan Spring Bay	Present	Yes	
1372121	Asparagus asparagoides	bridal creeper	Pete Lingard (22387)	30-Jun-2004	588824, 5335815 +/- 50m	7 Noyes Street , Swansea, Glamorgan Spring Bay	Present	Yes	
1372120	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	31-Mar-2008	588610, 5336883 +/- 50m	End of Shaw street, on track leading to Meredith River mouth	Present	Yes	
1372119	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	12-Sep-2008	588515, 5336398 +/- 50m	11 Shaw Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372118	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	30-Jun-2007	588515, 5336398 +/- 50m	11 Shaw Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372117	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	08-Nov-2006	588515, 5336398 +/- 50m	11 Shaw Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372116	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	01-Sep-2005	588515, 5336398 +/- 50m	11 Shaw Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372115	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	12-Sep-2008	588527, 5336374 +/- 10m	9 Shaw Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372114	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	30-Jun-2007	588527, 5336374 +/- 10m	9 Shaw Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372113	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	01-Sep-2006	588527, 5336374 +/- 10m	9 Shaw Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372112	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	31-May-2008	588523, 5334883 +/- 50m	Dirt road (High St?) on corner of Gordon St and Tas Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372111	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	12-Sep-2008	588523, 5334586 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372110	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	25-Jul-2007	588523, 5334586 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372109	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	01-Sep-2006	588523, 5334586 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1372108	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	06-Aug-2005	588523, 5334586 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372107	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	12-Sep-2008	588524, 5334612 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372106	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	25-Jul-2007	588524, 5334612 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372217	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	11-Mar-2007	587490, 5337041 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372216	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	21-Sep-2006	587490, 5337041 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372215	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	31-Aug-2005	587490, 5337041 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372082	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	06-Aug-2005	588513, 5334607 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372214	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	587490, 5337041 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372213	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	12-Sep-2008	587453, 5337020 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372212	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	11-Mar-2007	587453, 5337020 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372211	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	21-Sep-2006	587453, 5337020 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372210	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2005	587453, 5337020 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372209	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	587453, 5337020 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372208	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	23-Sep-2008	588256, 5335593 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1372207	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	18-Jul-2007	588256, 5335593 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372206	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	01-Sep-2006	588256, 5335593 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372068	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	12-Sep-2008	588522, 5336239 +/- 50m	45 Franklin St, Swansea, Glamorgan Spring Bay	Present	Yes	
1372067	Asparagus asparagoides	bridal creeper	Amanda Brookes (28325)	01-Sep-2007	588522, 5336239 +/- 50m	45 Franklin St, Swansea, Glamorgan Spring Bay	Present	Yes	
1372066	Asparagus asparagoides	bridal creeper	Jarrod MacLaine (24005)	17-Sep-2008	588905, 5335641 +/- 50m	31 Wellington St (Cnr Tasman Hwy and Wellington street), Swansea, Glamorgan Spring Bay	Present	Yes	
1372065	Asparagus asparagoides	bridal creeper	Jarrod MacLaine (24005)	25-Oct-2007	588905, 5335641 +/- 50m	31 Wellington St (Cnr Tasman Hwy and Wellington street), Swansea, Glamorgan Spring Bay	Present	Yes	
1372205	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2005	588256, 5335593 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372204	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	588256, 5335593 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372203	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	23-Sep-2008	588288, 5335571 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372064	Asparagus asparagoides	bridal creeper	Jarrod MacLaine (24005)	30-Jun-2008	588563, 5336136 +/- 10m	64 Tasman Highway (opposite school), Swansea, Glamorgan Spring Bay	Present	Yes	
1372063	Asparagus asparagoides	bridal creeper	Jarrod MacLaine (24005)	30-Jun-2007	588563, 5336136 +/- 10m	64 Tasman Highway (opposite school), Swansea, Glamorgan Spring Bay	Present	Yes	
1372062	Asparagus asparagoides	bridal creeper	Jarrod MacLaine (24005)	30-Sep-2006	588563, 5336136 +/- 10m	64 Tasman Highway (opposite school), Swansea, Glamorgan Spring Bay	Present	Yes	
1372061	Asparagus asparagoides	bridal creeper	Jarrod MacLaine (24005)	29-Feb-2008	588645, 5336250 +/- 50m	Swansea Primary School, 31 Franklin Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372060	Asparagus asparagoides	bridal creeper	Jarrod MacLaine (24005)	10-Aug-2007	588645, 5336250 +/- 50m	Swansea Primary School, 31 Franklin Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372186	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	18-Jul-2007	588288, 5335571 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1372185	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	01-Sep-2006	588288, 5335571 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372184	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2005	588288, 5335571 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372183	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	588288, 5335571 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372182	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	23-Sep-2008	588315, 5335561 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372181	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	18-Jul-2007	588315, 5335561 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372180	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	01-Sep-2006	588315, 5335561 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372179	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2005	588315, 5335561 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372042	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2007	587313, 5336847 +/- 10m	Swansea, "Redcliff House" 13569 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372041	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	01-Sep-2006	587313, 5336847 +/- 10m	Swansea, "Redcliff House" 13569 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372040	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	01-Sep-2005	587313, 5336847 +/- 10m	Swansea, "Redcliff House" 13569 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372178	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	588315, 5335561 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372177	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	23-Sep-2008	588332, 5335577 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372176	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	18-Jul-2007	588332, 5335577 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372175	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	01-Sep-2006	588332, 5335577 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372174	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2005	588332, 5335577 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372173	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	588332, 5335577 +/- 10m	Dove Lane, Swansea, Glamorgan Spring Bay	Present	Yes	
1372172	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	02-Sep-2008	588693, 5335821 +/- 50m	12 Wellington Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372171	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	18-Jul-2007	588693, 5335821 +/- 50m	12 Wellington Street, Swansea, Glamorgan Spring Bay	Present	Yes	

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1372170	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	01-Sep-2006	588693, 5335821 +/- 50m	12 Wellington Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372169	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2005	588693, 5335821 +/- 50m	12 Wellington Street, Swansea, Glamorgan Spring Bay	Present	Yes	
1372154	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2008	588680, 5335811 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372153	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	16-Jul-2007	588680, 5335811 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372152	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	01-Sep-2006	588680, 5335811 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372151	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2005	588680, 5335811 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372150	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2004	588680, 5335811 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372149	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2008	588704, 5335800 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372148	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	16-Jul-2007	588704, 5335800 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372147	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	01-Sep-2006	588704, 5335800 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372146	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2005	588704, 5335800 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1372145	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2004	588704, 5335800 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372144	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	12-Sep-2008	588710, 5335829 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372143	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	16-Jul-2007	588710, 5335829 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372142	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	01-Sep-2006	588710, 5335829 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372141	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2005	588710, 5335829 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372140	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	588710, 5335829 +/- 10m	"Meredith House" 15 Noyes street (cnr Wellington), Swansea, Glamorgan Spring Bay	Present	Yes	
1372139	Asparagus asparagoides	bridal creeper	Pete Lingard (22387)	12-Sep-2008	588824, 5335815 +/- 50m	7 Noyes Street , Swansea, Glamorgan Spring Bay	Present	Yes	
1372124	Asparagus asparagoides	bridal creeper	Pete Lingard (22387)	30-Jun-2007	588824, 5335815 +/- 50m	7 Noyes Street , Swansea, Glamorgan Spring Bay	Present	Yes	
1372123	Asparagus asparagoides	bridal creeper	Pete Lingard (22387)	21-Sep-2006	588824, 5335815 +/- 50m	7 Noyes Street , Swansea, Glamorgan Spring Bay	Present	Yes	
1176322	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587320, 5336786 +/- - 1m		Present	Yes	Not known (or uncertain)
1176319	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587376, 5336780 +/- - 1m		Present	Yes	Not known (or uncertain)
1176318	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587391, 5336779 +/- - 1m		Present	Yes	Not known (or uncertain)
1176317	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587368, 5336774 +/- - 1m		Present	Yes	Not known (or uncertain)
1176316	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587411, 5336773 +/- - 1m		Present	Yes	Not known (or uncertain)
1176314	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587409, 5336765 +/- - 1m		Present	Yes	Not known (or uncertain)
1176313	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587403, 5336763 +/- - 1m		Present	Yes	Not known (or uncertain)
1176311	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588687, 5335825 +/- - 1m		Present	Yes	Not known (or uncertain)
1176310	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588689, 5335823 +/- - 1m		Present	Yes	Not known (or uncertain)
1176309	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588700, 5335818 +/- - 1m		Present	Yes	Not known (or uncertain)
1176307	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588699, 5335801 +/- - 1m		Present	Yes	Not known (or uncertain)
1176306	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588699, 5335797 +/- - 1m		Present	Yes	Not known (or uncertain)

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1176304	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588708, 5335790 +/- - 1m		Present	Yes	Not known (or uncertain)
1176303	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588705, 5335790 +/- - 1m		Present	Yes	Not known (or uncertain)
1176302	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588393, 5335729 +/- - 1m		Present	Yes	Not known (or uncertain)
1176301	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588312, 5335718 +/- - 1m		Present	Yes	Not known (or uncertain)
1176300	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588306, 5335717 +/- - 1m		Present	Yes	Not known (or uncertain)
1176132	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588293, 5335710 +/- - 1m		Present	Yes	Not known (or uncertain)
1176131	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588176, 5335703 +/- - 1m		Present	Yes	Not known (or uncertain)
1176129	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588171, 5335692 +/- - 1m		Present	Yes	Not known (or uncertain)
1176128	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588237, 5335684 +/- - 1m		Present	Yes	Not known (or uncertain)
1176127	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588165, 5335683 +/- - 1m		Present	Yes	Not known (or uncertain)
1176126	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588161, 5335682 +/- - 1m		Present	Yes	Not known (or uncertain)
1176125	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588225, 5335680 +/- - 1m		Present	Yes	Not known (or uncertain)
1176124	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588200, 5335675 +/- - 1m		Present	Yes	Not known (or uncertain)
1176122	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588187, 5335672 +/- - 1m		Present	Yes	Not known (or uncertain)
1176121	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588171, 5335670 +/- - 1m		Present	Yes	Not known (or uncertain)
1176119	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588149, 5335665 +/- - 1m		Present	Yes	Not known (or uncertain)
1176118	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588172, 5335665 +/- - 1m		Present	Yes	Not known (or uncertain)
1176116	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588172, 5335651 +/- - 1m		Present	Yes	Not known (or uncertain)
1176115	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588184, 5335643 +/- - 1m		Present	Yes	Not known (or uncertain)
1176113	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588202, 5335629 +/- - 1m		Present	Yes	Not known (or uncertain)
1176112	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588206, 5335626 +/- - 1m		Present	Yes	Not known (or uncertain)
1176110	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588357, 5335619 +/- - 1m		Present	Yes	Not known (or uncertain)
1176109	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588354, 5335614 +/- - 1m		Present	Yes	Not known (or uncertain)
1176100	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588343, 5335596 +/- - 1m		Present	Yes	Not known (or uncertain)
1176099	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588342, 5335594 +/- - 1m		Present	Yes	Not known (or uncertain)
1176097	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588339, 5335592 +/- - 1m		Present	Yes	Not known (or uncertain)
1176096	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588338, 5335591 +/- - 1m		Present	Yes	Not known (or uncertain)
1176094	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588263, 5335585 +/- - 1m		Present	Yes	Not known (or uncertain)
1176093	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588273, 5335583 +/- - 1m		Present	Yes	Not known (or uncertain)
1176091	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588351, 5335581 +/- - 1m		Present	Yes	Not known (or uncertain)
1179934	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	10-Nov-2009	588520, 5334717 +/- - 1m		Present	Yes	Not known (or uncertain)
1179942	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	01-Jan-2009	588680, 5335811 +/- - 1m		Present	Yes	Not known (or uncertain)
1179941	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	01-Jan-2009	588704, 5335800 +/- - 1m		Present	Yes	Not known (or uncertain)
1179939	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	02-Sep-2009	587313, 5336847 +/- - 1m		Present	Yes	Not known (or uncertain)
1179938	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	01-Sep-2009	587490, 5337041 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1179937	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	01-Sep-2009	587453, 5337020 +/- -1m		Present	Yes	Not known (or uncertain)
1179936	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	10-Nov-2009	588523, 5334586 +/- -1m		Present	Yes	Not known (or uncertain)
1179935	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	10-Nov-2009	588524, 5334612 +/- -1m		Present	Yes	Not known (or uncertain)
1164509	Asparagus asparagoides	bridal creeper	Sandra Leighton (3173)	01-Jan-0001	588921, 5335855 +/- -1m		Present	Yes	Not known (or uncertain)
1338928	Asparagus asparagoides	bridal creeper	Amanda Brooks (25218)	29-May-2012	588563, 5336136 +/-10m		Present	Yes	
1372091	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	01-Sep-2006	588524, 5334612 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372090	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	06-Aug-2005	588524, 5334612 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372089	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2008	588520, 5334717 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372088	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2007	588520, 5334717 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372087	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	30-Jun-2006	588520, 5334717 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372086	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	06-Aug-2005	588520, 5334717 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372085	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	12-Sep-2008	588513, 5334607 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372084	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	25-Jul-2007	588513, 5334607 +/-10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1372083	Asparagus asparagoides	bridal creeper	Sandy Leighton (7048),Margie Jenkin (18983)	01-Sep-2006	588513, 5334607 +/- 10m	Southern side of town near 35 Tasman Highway (before Gordon St), Swansea, Glamorgan Spring Bay	Present	Yes	
1372220	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	15-Mar-2012	587313, 5336847 +/- 10m	Swansea, "Redcliff House" 13569 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372219	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	30-Jun-2004	587313, 5336847 +/- 10m	Swansea, "Redcliff House" 13569 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1372218	Asparagus asparagoides	bridal creeper	Andrew Crane (3353),Jonah Gouldthorpe (6071)	12-Sep-2008	587490, 5337041 +/- 10m	"Cambria" 13566 Tasman Hwy, Swansea, Glamorgan Spring Bay	Present	Yes	
1176341	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587312, 5336845 +/- - 1m		Present	Yes	Not known (or uncertain)
1172975	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587525, 5337061 +/- - 1m		Present	Yes	Not known (or uncertain)
1172972	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587481, 5337031 +/- - 1m		Present	Yes	Not known (or uncertain)
1176347	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587283, 5336860 +/- - 1m		Present	Yes	Not known (or uncertain)
1176344	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587316, 5336846 +/- - 1m		Present	Yes	Not known (or uncertain)
1176340	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587305, 5336845 +/- - 1m		Present	Yes	Not known (or uncertain)
1172966	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587246, 5336899 +/- - 1m		Present	Yes	Not known (or uncertain)
1176090	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588290, 5335569 +/- - 1m		Present	Yes	Not known (or uncertain)
1176337	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587316, 5336836 +/- - 1m		Present	Yes	Not known (or uncertain)
1176333	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587345, 5336823 +/- - 1m		Present	Yes	Not known (or uncertain)
1176330	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587270, 5336808 +/- - 1m		Present	Yes	Not known (or uncertain)
1176326	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587373, 5336790 +/- - 1m		Present	Yes	Not known (or uncertain)
1176321	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587300, 5336786 +/- - 1m		Present	Yes	Not known (or uncertain)
1176130	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588172, 5335698 +/- - 1m		Present	Yes	Not known (or uncertain)
1176123	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588166, 5335675 +/- - 1m		Present	Yes	Not known (or uncertain)
1176120	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588154, 5335666 +/- - 1m		Present	Yes	Not known (or uncertain)
1176117	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588174, 5335654 +/- - 1m		Present	Yes	Not known (or uncertain)
1176114	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588187, 5335640 +/- - 1m		Present	Yes	Not known (or uncertain)
1176111	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588361, 5335620 +/- - 1m		Present	Yes	Not known (or uncertain)
1176320	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587359, 5336782 +/- - 1m		Present	Yes	Not known (or uncertain)
1176315	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587374, 5336767 +/- - 1m		Present	Yes	Not known (or uncertain)
1176312	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587395, 5336762 +/- - 1m		Present	Yes	Not known (or uncertain)
1176308	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588701, 5335804 +/- - 1m		Present	Yes	Not known (or uncertain)
1176305	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588709, 5335795 +/- - 1m		Present	Yes	Not known (or uncertain)
1176108	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588351, 5335610 +/- - 1m		Present	Yes	Not known (or uncertain)
1176101	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588365, 5335603 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1176098	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588339, 5335594 +/- - 1m		Present	Yes	Not known (or uncertain)
1176095	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	588338, 5335589 +/- - 1m		Present	Yes	Not known (or uncertain)
1179940	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	01-Jan-2009	588710, 5335829 +/- - 1m		Present	Yes	Not known (or uncertain)
1176299	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588180, 5335711 +/- - 1m		Present	Yes	Not known (or uncertain)
1179933	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	10-Nov-2009	588513, 5334607 +/- - 1m		Present	Yes	Not known (or uncertain)
1172974	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587527, 5337056 +/- - 1m		Present	Yes	Not known (or uncertain)
1172973	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587477, 5337037 +/- - 1m		Present	Yes	Not known (or uncertain)
1172971	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587356, 5337005 +/- - 1m		Present	Yes	Not known (or uncertain)
1172970	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587441, 5337004 +/- - 1m		Present	Yes	Not known (or uncertain)
1172969	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587370, 5336985 +/- - 1m		Present	Yes	Not known (or uncertain)
1172968	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587393, 5336976 +/- - 1m		Present	Yes	Not known (or uncertain)
1172967	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587236, 5336901 +/- - 1m		Present	Yes	Not known (or uncertain)
1172965	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587273, 5336896 +/- - 1m		Present	Yes	Not known (or uncertain)
1176089	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588301, 5335559 +/- - 1m		Present	Yes	Not known (or uncertain)
1176088	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588302, 5335557 +/- - 1m		Present	Yes	Not known (or uncertain)
1176087	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	588264, 5335501 +/- - 1m		Present	Yes	Not known (or uncertain)
1176350	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587261, 5336887 +/- - 1m		Present	Yes	Not known (or uncertain)
1176349	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587279, 5336880 +/- - 1m		Present	Yes	Not known (or uncertain)
1176348	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587266, 5336874 +/- - 1m		Present	Yes	Not known (or uncertain)
1176346	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587297, 5336853 +/- - 1m		Present	Yes	Not known (or uncertain)
1176345	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587309, 5336849 +/- - 1m		Present	Yes	Not known (or uncertain)
1176343	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587314, 5336846 +/- - 1m		Present	Yes	Not known (or uncertain)
1176342	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587312, 5336846 +/- - 1m		Present	Yes	Not known (or uncertain)
1176339	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587310, 5336842 +/- - 1m		Present	Yes	Not known (or uncertain)
1176644	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	01-Jan-2009	588272, 5335582 +/- - 1m		Present	Yes	Not known (or uncertain)
1176643	Asparagus asparagoides	bridal creeper	Unknown Unknown (21598)	01-Jan-2009	588323, 5335568 +/- - 1m		Present	Yes	Not known (or uncertain)
1176338	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587269, 5336842 +/- - 1m		Present	Yes	Not known (or uncertain)
1176336	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587330, 5336830 +/- - 1m		Present	Yes	Not known (or uncertain)
1176335	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	01-Oct-2008	587174, 5336830 +/- - 1m		Present	Yes	Not known (or uncertain)
1176334	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587269, 5336827 +/- - 1m		Present	Yes	Not known (or uncertain)
1176332	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587356, 5336814 +/- - 1m		Present	Yes	Not known (or uncertain)
1176331	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587270, 5336814 +/- - 1m		Present	Yes	Not known (or uncertain)
1176329	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587361, 5336807 +/- - 1m		Present	Yes	Not known (or uncertain)
1176328	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587371, 5336805 +/- - 1m		Present	Yes	Not known (or uncertain)
1176327	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587376, 5336800 +/- - 1m		Present	Yes	Not known (or uncertain)
1176325	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587290, 5336792 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1176324	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587339, 5336789 +/- 1m		Present	Yes	Not known (or uncertain)
1176323	Asparagus asparagoides	bridal creeper	Glenn Szalman (18225)	29-Aug-2008	587349, 5336787 +/- 1m		Present	Yes	Not known (or uncertain)
1268949	Carduus pycnocephalus	slender thistle	Nicky Meeson (5963)	16-Nov-2011	589619, 5335632 +/- 10m		Present	Yes	
1178213	Carthamus lanatus	saffron thistle	K. Graham (4790)	01-Jan-1993	588113, 5341982 +/- 100m		Present	Yes	Not known (or uncertain)
1170835	Cenchrus longisetus	feathertop	Mary Whitaker (9662)	01-Mar-2010	588857, 5335428 +/- 1m		Present	Yes	Not known (or uncertain)
1170834	Cenchrus longisetus	feathertop	Mary Whitaker (9662)	01-Mar-2010	588828, 5335460 +/- 1m		Present	Yes	Not known (or uncertain)
1367336	Chrysanthemoides monilifera subsp. monilifera	boneseed	Amanda Brooks (25218)	30-Jun-2012	588857, 5334857 +/- 10m	Swansea - Gordon Street, opposite the above on the corner of Rapp and Gordons Streets	Present	Yes	
1181672	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173)	07-Aug-2009	589130, 5335242 +/- 1m		Present	Yes	Not known (or uncertain)
1181668	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588701, 5335017 +/- 1m		Present	Yes	Not known (or uncertain)
1367337	Chrysanthemoides monilifera subsp. monilifera	boneseed	Amanda Brooks (25218)	30-Jun-2012	588909, 5334857 +/- 10m	Swansea - Bottom of Gordon Street near boat ramp on roadside	Present	Yes	
1367339	Chrysanthemoides monilifera subsp. monilifera	boneseed	Amanda Brooks (25218)	30-Jun-2012	588701, 5335017 +/- 10m	Swansea - Above walking track beside Saltwater Lagoon, St Margarets Court	Present	Yes	
1367340	Chrysanthemoides monilifera subsp. monilifera	boneseed	Amanda Brooks (25218)	30-Jun-2012	588716, 5334929 +/- 10m	Swansea -On hillside, St Margarets Court	Present	Yes	
1367344	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandy Leighton (7048)	16-Aug-2011	588694, 5335291 +/- 10m	Swansea -27 (?) Cooks Crt	Present	Yes	
1181663	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588887, 5334764 +/- 1m		Present	Yes	Not known (or uncertain)
1268958	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	09-Nov-2011	588748, 5335047 +/- 10m		Present	Yes	
1268954	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	09-Nov-2011	588970, 5335054 +/- 10m		Present	Yes	
1268955	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	09-Nov-2011	588863, 5335005 +/- 10m		Present	Yes	
1268951	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	26-Oct-2011	588946, 5334914 +/- 10m		Present	Yes	
1268952	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	02-Nov-2011	588951, 5334769 +/- 10m		Present	Yes	
1181671	Chrysanthemoides monilifera subsp. monilifera	boneseed	Mary Jenkin (18983)	07-Aug-2009	589125, 5335241 +/- 1m		Present	Yes	Not known (or uncertain)
1181670	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588664, 5335026 +/- 1m		Present	Yes	Not known (or uncertain)
1181669	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588716, 5334929 +/- 1m		Present	Yes	Not known (or uncertain)
1181667	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588912, 5334849 +/- 1m		Present	Yes	Not known (or uncertain)
1181666	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588909, 5334857 +/- 1m		Present	Yes	Not known (or uncertain)
1181665	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588857, 5334857 +/- 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1181664	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588868, 5334838 +/- -1m		Present	Yes	Not known (or uncertain)
1268957	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	09-Nov-2011	588775, 5335046 +/-10m		Present	Yes	
1181537	Chrysanthemoides monilifera subsp. monilifera	boneseed	Sandra Leighton (3173),Mary Jenkin (18983)	07-Aug-2009	588925, 5334787 +/- -1m		Present	Yes	Not known (or uncertain)
1170844	Chrysanthemoides monilifera subsp. monilifera	boneseed	Greg Stewart (5988)	01-Jan-0001	588938, 5334832 +/- -1m		Present	Yes	Not known (or uncertain)
1164477	Chrysanthemoides monilifera subsp. monilifera	boneseed	Unknown Unknown (21598)	01-Jan-0001	588875, 5334957 +/- -1m		Present	Yes	Not known (or uncertain)
1164476	Chrysanthemoides monilifera subsp. monilifera	boneseed	Unknown Unknown (21598)	01-Jan-0001	588968, 5335009 +/- -1m		Present	Yes	Not known (or uncertain)
911353	Chrysanthemoides monilifera subsp. monilifera	boneseed	Greg Stewart (5988)	01-Dec-2000	588637, 5335233 +/-25m	E Coast, Swansea	Present	Yes	
912166	Chrysanthemoides monilifera subsp. monilifera	boneseed	Greg Stewart (5988)	01-Dec-2000	588637, 5334832 +/-25m	E Coast, Swansea	Present	Yes	
1268953	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	09-Nov-2011	589004, 5335075 +/-10m		Present	Yes	
1268959	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	09-Nov-2011	588828, 5335024 +/-10m		Present	Yes	
1268956	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	09-Nov-2011	588844, 5335018 +/-10m		Present	Yes	
1268950	Chrysanthemoides monilifera subsp. monilifera	boneseed	Nicky Meeson (5963)	26-Oct-2011	588954, 5334943 +/-10m		Present	Yes	
1205857	Cirsium arvense var. arvense	californian thistle	Mark Wapstra (1621)	03-Jan-2011	588750, 5333905 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205856	Cirsium arvense var. arvense	californian thistle	Mark Wapstra (1621)	03-Jan-2011	588744, 5333936 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205855	Cirsium arvense var. arvense	californian thistle	Mark Wapstra (1621)	03-Jan-2011	588738, 5333812 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205854	Cirsium arvense var. arvense	californian thistle	Mark Wapstra (1621)	03-Jan-2011	588736, 5333822 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1173673	Cortaderia sp.	pampas grass	Melanie Kelly (7155)	01-Jun-2008	588838, 5336183 +/- -1m		Present	Yes	Not known (or uncertain)
1268960	Cytisus scoparius	english broom	Nicky Meeson (5963)	02-Nov-2011	588938, 5334765 +/-10m		Present	Yes	
1176104	Echium plantagineum	patersons curse	Unknown Unknown (21598)	31-May-2008	588264, 5335928 +/-50m		Present	Yes	Not known (or uncertain)
1178211	Echium plantagineum	patersons curse	K. Graham (4790)	01-Jan-1993	587313, 5334682 +/-100m		Present	Yes	Not known (or uncertain)
1176107	Echium plantagineum	patersons curse	Unknown Unknown (21598)	31-May-2008	588334, 5336022 +/-50m		Present	Yes	Not known (or uncertain)
1176106	Echium plantagineum	patersons curse	Unknown Unknown (21598)	31-May-2008	588291, 5335975 +/-50m		Present	Yes	Not known (or uncertain)
1338959	Echium plantagineum	patersons curse	Jarrod MacLaine (24005)	31-Oct-2012	588418, 5340649 +/-10m		Present	Yes	
1176103	Echium plantagineum	patersons curse	Unknown Unknown (21598)	01-Jan-0001	587672, 5335316 +/-50m		Present	Yes	Not known (or uncertain)
1176102	Echium plantagineum	patersons curse	Unknown Unknown (21598)	30-Jun-2007	587517, 5335119 +/-50m		Present	Yes	Not known (or uncertain)
1338960	Echium plantagineum	patersons curse	Jarrod MacLaine (24005)	31-Oct-2012	588377, 5340522 +/-10m		Present	Yes	
1176105	Echium plantagineum	patersons curse	Unknown Unknown (21598)	01-Jan-0001	588086, 5335968 +/-50m		Present	Yes	Not known (or uncertain)
1226464	Foeniculum vulgare	fennel	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	

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1268964	Foeniculum vulgare	fennel	Nicky Meeson (5963)	02-Nov-2011	588953, 5334767 +/- 10m		Present	Yes	
1268962	Foeniculum vulgare	fennel	Nicky Meeson (5963)	26-Oct-2011	588974, 5334744 +/- 10m		Present	Yes	
1268965	Foeniculum vulgare	fennel	Nicky Meeson (5963)	30-Dec-2011	589125, 5335894 +/- 10m		Present	Yes	
1268963	Foeniculum vulgare	fennel	Nicky Meeson (5963)	02-Nov-2011	588959, 5334784 +/- 10m		Present	Yes	
1268961	Foeniculum vulgare	fennel	Nicky Meeson (5963)	26-Oct-2011	588970, 5334766 +/- 10m		Present	Yes	
1268966	Genista monspessulana	canary broom	Nicky Meeson (5963)	02-Nov-2011	589022, 5334483 +/- 10m		Present	Yes	
1269055	Lepidium draba	hoary cress or white weed	Nicky Meeson (5963)	24-Jan-2012	589078, 5335950 +/- 10m		Present	Yes	
1269054	Lepidium draba	hoary cress or white weed	Nicky Meeson (5963)	26-Oct-2011	588994, 5334829 +/- 10m		Present	Yes	
1173919	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588993, 5335086 +/- -1m		Present	Yes	Not known (or uncertain)
1173918	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	26-Jul-1987	588267, 5335018 +/- -1m		Present	Yes	Not known (or uncertain)
1173917	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588974, 5335008 +/- -1m		Present	Yes	Not known (or uncertain)
1173915	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588973, 5334855 +/- -1m		Present	Yes	Not known (or uncertain)
1173914	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	01-Jan-0001	588414, 5334800 +/- -1m		Present	Yes	Not known (or uncertain)
1173912	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588948, 5334643 +/- -1m		Present	Yes	Not known (or uncertain)
1173911	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588981, 5334561 +/- -1m		Present	Yes	Not known (or uncertain)
1173909	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588470, 5334383 +/- -1m		Present	Yes	Not known (or uncertain)
1173908	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589227, 5333920 +/- -1m		Present	Yes	Not known (or uncertain)
1173906	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588925, 5333850 +/- -1m		Present	Yes	Not known (or uncertain)
1173905	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589301, 5333752 +/- -1m		Present	Yes	Not known (or uncertain)
1173904	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589266, 5333687 +/- -1m		Present	Yes	Not known (or uncertain)
1173902	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589092, 5333630 +/- -1m		Present	Yes	Not known (or uncertain)
1173901	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589096, 5333620 +/- -1m		Present	Yes	Not known (or uncertain)
1173899	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589192, 5333601 +/- -1m		Present	Yes	Not known (or uncertain)
1173898	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589161, 5333584 +/- -1m		Present	Yes	Not known (or uncertain)
1173896	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589130, 5333562 +/- -1m		Present	Yes	Not known (or uncertain)
1173895	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589128, 5333546 +/- -1m		Present	Yes	Not known (or uncertain)
1173893	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589095, 5333512 +/- -1m		Present	Yes	Not known (or uncertain)
1173891	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589068, 5333502 +/- -1m		Present	Yes	Not known (or uncertain)
1269005	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	19-Feb-2012	589040, 5335932 +/- 10m		Present	Yes	
1268974	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	589017, 5334581 +/- 10m		Present	Yes	
1268984	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589561, 5335560 +/- 10m		Present	Yes	
1268969	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	588966, 5334749 +/- 10m		Present	Yes	
1268980	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	02-Nov-2011	589017, 5334499 +/- 10m		Present	Yes	
1268996	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Dec-2011	589344, 5335756 +/- 10m		Present	Yes	

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1268999	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	23-Jan-2012	589262, 5335759 +/- 10m		Present	Yes	
1268986	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589659, 5335734 +/- 10m		Present	Yes	
1268971	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	588986, 5334673 +/- 10m		Present	Yes	
1268976	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	589072, 5334462 +/- 10m		Present	Yes	
1268975	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	589053, 5334487 +/- 10m		Present	Yes	
1268982	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	09-Nov-2011	588956, 5335006 +/- 10m		Present	Yes	
1268981	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	02-Nov-2011	589029, 5334471 +/- 10m		Present	Yes	
1269001	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	07-Feb-2012	588887, 5336040 +/- 10m		Present	Yes	
1269000	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	04-Feb-2012	588901, 5336011 +/- 10m		Present	Yes	
1269003	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	10-Feb-2012	588891, 5336010 +/- 10m		Present	Yes	
1268973	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	589023, 5334609 +/- 10m		Present	Yes	
1268972	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	589022, 5334622 +/- 10m		Present	Yes	
1268994	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	23-Dec-2011	589400, 5335788 +/- 10m		Present	Yes	
1268989	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589550, 5335607 +/- 10m		Present	Yes	
1268992	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	13-Dec-2011	589255, 5335718 +/- 10m		Present	Yes	
1268978	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	589088, 5334437 +/- 10m		Present	Yes	
1268985	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589642, 5335662 +/- 10m		Present	Yes	
1268983	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	15-Nov-2011	589032, 5335144 +/- 10m		Present	Yes	
1268970	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	588977, 5334690 +/- 10m		Present	Yes	
1268968	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	588985, 5334857 +/- 10m		Present	Yes	
1268998	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	15-Jan-2012	589218, 5335786 +/- 10m		Present	Yes	
1268997	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	13-Jan-2012	589208, 5335803 +/- 10m		Present	Yes	
1268988	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589439, 5335765 +/- 10m		Present	Yes	
1268987	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589531, 5335827 +/- 10m		Present	Yes	
1269004	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	14-Feb-2012	589005, 5335934 +/- 10m		Present	Yes	
1269002	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	09-Feb-2012	588890, 5336043 +/- 10m		Present	Yes	
1268995	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	25-Dec-2011	589347, 5335762 +/- 10m		Present	Yes	
1268993	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	22-Dec-2011	589374, 5335777 +/- 10m		Present	Yes	
1268991	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589588, 5335622 +/- 10m		Present	Yes	
1268990	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	16-Nov-2011	589570, 5335612 +/- 10m		Present	Yes	
1268979	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	02-Nov-2011	588941, 5334770 +/- 10m		Present	Yes	
1268977	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	589077, 5334447 +/- 10m		Present	Yes	
1268967	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	26-Oct-2011	588955, 5334935 +/- 10m		Present	Yes	
1205880	Lycium ferocissimum	african boxthorn	Mark Wapstra (1621)	03-Jan-2011	588924, 5333814 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205878	Lycium ferocissimum	african boxthorn	Mark Wapstra (1621)	03-Jan-2011	588864, 5333935 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205881	Lycium ferocissimum	african boxthorn	Mark Wapstra (1621)	03-Jan-2011	588942, 5333795 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	

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1205879	Lycium ferocissimum	african boxthorn	Mark Wapstra (1621)	03-Jan-2011	588895, 5333888 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
773251	Lycium ferocissimum	african boxthorn	Alexander McGregor Buchanan (1467)	17-Mar-1993	591228, 5339683 +/- 2880m		Present	Yes	
782939	Lycium ferocissimum	african boxthorn	Alexander McGregor Buchanan (1467)	17-Mar-1993	588312, 5337183 +/- 50m		Present	Yes	
938802	Lycium ferocissimum	african boxthorn	Phillp A. Collier (6373)	26-Jul-1987	588155, 5334868 +/- 1000m		Present	Yes	
1173921	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588953, 5335108 +/- - 1m		Present	Yes	Not known (or uncertain)
1226077	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	
1226076	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	
1173910	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589018, 5334462 +/- - 1m		Present	Yes	Not known (or uncertain)
1173907	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589288, 5333869 +/- - 1m		Present	Yes	Not known (or uncertain)
1173903	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589187, 5333632 +/- - 1m		Present	Yes	Not known (or uncertain)
1173900	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589175, 5333610 +/- - 1m		Present	Yes	Not known (or uncertain)
1173897	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589117, 5333574 +/- - 1m		Present	Yes	Not known (or uncertain)
1173894	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589122, 5333534 +/- - 1m		Present	Yes	Not known (or uncertain)
1174344	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-0001	587781, 5336840 +/- - 1m		Present	Yes	Not known (or uncertain)
1174341	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-0001	587772, 5336810 +/- - 1m		Present	Yes	Not known (or uncertain)
1174337	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-0001	587683, 5336693 +/- - 1m		Present	Yes	Not known (or uncertain)
1174334	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588700, 5336547 +/- - 1m		Present	Yes	Not known (or uncertain)
1174331	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588457, 5335880 +/- - 1m		Present	Yes	Not known (or uncertain)
1174328	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589604, 5335748 +/- - 1m		Present	Yes	Not known (or uncertain)
1173892	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589105, 5333504 +/- - 1m		Present	Yes	Not known (or uncertain)
1174231	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589374, 5335724 +/- - 1m		Present	Yes	Not known (or uncertain)
1173925	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589012, 5335151 +/- - 1m		Present	Yes	Not known (or uncertain)
1173920	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588632, 5335092 +/- - 1m		Present	Yes	Not known (or uncertain)
1173916	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588953, 5334913 +/- - 1m		Present	Yes	Not known (or uncertain)
1173913	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588939, 5334735 +/- - 1m		Present	Yes	Not known (or uncertain)
1174323	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589474, 5335543 +/- - 1m		Present	Yes	Not known (or uncertain)
1174320	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589249, 5335353 +/- - 1m		Present	Yes	Not known (or uncertain)
1174317	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	01-Jan-0001	586642, 5335277 +/- - 1m		Present	Yes	Not known (or uncertain)
1174312	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588775, 5335152 +/- - 1m		Present	Yes	Not known (or uncertain)

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1226041	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	
1174346	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588593, 5336912 +/- -1m		Present	Yes	Not known (or uncertain)
1174345	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-0001	587719, 5336878 +/- -1m		Present	Yes	Not known (or uncertain)
1174343	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-0001	587729, 5336826 +/- -1m		Present	Yes	Not known (or uncertain)
1174342	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588602, 5336810 +/- -1m		Present	Yes	Not known (or uncertain)
1174340	Lycium ferocissimum	african boxthorn	Nicky Meeson (5963)	01-Jan-0001	588627, 5336799 +/- -1m		Present	Yes	Not known (or uncertain)
1174339	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588671, 5336743 +/- -1m		Present	Yes	Not known (or uncertain)
1174338	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-0001	587633, 5336734 +/- -1m		Present	Yes	Not known (or uncertain)
1174336	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-0001	587555, 5336688 +/- -1m		Present	Yes	Not known (or uncertain)
1174335	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588719, 5336667 +/- -1m		Present	Yes	Not known (or uncertain)
1174333	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588709, 5336454 +/- -1m		Present	Yes	Not known (or uncertain)
1174332	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588745, 5336377 +/- -1m		Present	Yes	Not known (or uncertain)
1174330	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588391, 5335803 +/- -1m		Present	Yes	Not known (or uncertain)
1174329	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588399, 5335775 +/- -1m		Present	Yes	Not known (or uncertain)
1174327	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588369, 5335650 +/- -1m		Present	Yes	Not known (or uncertain)
1174326	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588647, 5335615 +/- -1m		Present	Yes	Not known (or uncertain)
1174325	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589581, 5335605 +/- -1m		Present	Yes	Not known (or uncertain)
1174324	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588640, 5335543 +/- -1m		Present	Yes	Not known (or uncertain)
1174322	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589395, 5335483 +/- -1m		Present	Yes	Not known (or uncertain)
1174321	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589321, 5335420 +/- -1m		Present	Yes	Not known (or uncertain)
1174319	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	589224, 5335319 +/- -1m		Present	Yes	Not known (or uncertain)
1174318	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589179, 5335283 +/- -1m		Present	Yes	Not known (or uncertain)
1174316	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588611, 5335240 +/- -1m		Present	Yes	Not known (or uncertain)
1174315	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588719, 5335225 +/- -1m		Present	Yes	Not known (or uncertain)
1174314	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589111, 5335202 +/- -1m		Present	Yes	Not known (or uncertain)
1174313	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	588612, 5335163 +/- -1m		Present	Yes	Not known (or uncertain)
1174233	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589293, 5341620 +/- -1m		Present	Yes	Not known (or uncertain)
1174232	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589455, 5335767 +/- -1m		Present	Yes	Not known (or uncertain)
1174230	Lycium ferocissimum	african boxthorn	Unknown Unknown (21598)	01-Jan-2007	589283, 5335715 +/- -1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1173924	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588985, 5335118 +/- - 1m		Present	Yes	Not known (or uncertain)
1173923	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588976, 5335115 +/- - 1m		Present	Yes	Not known (or uncertain)
1173922	Lycium ferocissimum	african boxthorn	Andrew North (2500)	01-Jan-0001	588964, 5335112 +/- - 1m		Present	Yes	Not known (or uncertain)
1205882	Marrubium vulgare	horehound	Mark Wapstra (1621)	03-Jan-2011	588751, 5333876 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1269013	Marrubium vulgare	horehound	Nicky Meeson (5963)	14-Dec-2011	589259, 5335720 +/- 10m		Present	Yes	
1269008	Marrubium vulgare	horehound	Nicky Meeson (5963)	02-Nov-2011	588966, 5334806 +/- 10m		Present	Yes	
1269009	Marrubium vulgare	horehound	Nicky Meeson (5963)	02-Nov-2011	588955, 5334780 +/- 10m		Present	Yes	
1269011	Marrubium vulgare	horehound	Nicky Meeson (5963)	02-Nov-2011	589067, 5334429 +/- 10m		Present	Yes	
1269006	Marrubium vulgare	horehound	Nicky Meeson (5963)	02-Nov-2011	588985, 5334808 +/- 10m		Present	Yes	
1269010	Marrubium vulgare	horehound	Nicky Meeson (5963)	02-Nov-2011	589064, 5334425 +/- 10m		Present	Yes	
1269012	Marrubium vulgare	horehound	Nicky Meeson (5963)	02-Nov-2011	589049, 5334456 +/- 10m		Present	Yes	
1269007	Marrubium vulgare	horehound	Nicky Meeson (5963)	02-Nov-2011	588976, 5334805 +/- 10m		Present	Yes	
1187931	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586613, 5338249 +/- - 1m		Present	Yes	Not known (or uncertain)
1309651	Nassella trichotoma	serrated tussock	Amanda Brooks (25218)	18-Jul-2012	586559, 5338287 +/- 10m		Present	Yes	
1309650	Nassella trichotoma	serrated tussock	Amanda Brooks (25218)	18-Jul-2012	587881, 5336543 +/- 10m		Present	Yes	
1187491	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338257 +/- - 1m		Present	Yes	Not known (or uncertain)
1187488	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338283 +/- - 1m		Present	Yes	Not known (or uncertain)
1187483	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338299 +/- - 1m		Present	Yes	Not known (or uncertain)
1187480	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586557, 5338301 +/- - 1m		Present	Yes	Not known (or uncertain)
1192457	Nassella trichotoma	serrated tussock	Mary Whitaker (9662)	25-May-2009	587737, 5336403 +/- - 1m		Present	Yes	Not known (or uncertain)
1190059	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586804, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1187896	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586666, 5338336 +/- - 1m		Present	Yes	Not known (or uncertain)
1187893	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586659, 5338406 +/- - 1m		Present	Yes	Not known (or uncertain)
1187890	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586498, 5338439 +/- - 1m		Present	Yes	Not known (or uncertain)
1186824	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586824, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1186821	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586826, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1186818	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586831, 5338179 +/- - 1m		Present	Yes	Not known (or uncertain)
1186811	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586828, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1186807	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586823, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1190056	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586800, 5338176 +/- - 1m		Present	Yes	Not known (or uncertain)
1190053	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586780, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1190048	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586791, 5338189 +/- - 1m		Present	Yes	Not known (or uncertain)
1190045	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586805, 5338193 +/- - 1m		Present	Yes	Not known (or uncertain)
1190042	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586810, 5338193 +/- - 1m		Present	Yes	Not known (or uncertain)
1189807	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586829, 5338354 +/- - 1m		Present	Yes	Not known (or uncertain)
1187246	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586560, 5338277 +/- - 1m		Present	Yes	Not known (or uncertain)
1187243	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338265 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187240	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338230 +/- - 1m		Present	Yes	Not known (or uncertain)
1187237	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338225 +/- - 1m		Present	Yes	Not known (or uncertain)
1187234	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338220 +/- - 1m		Present	Yes	Not known (or uncertain)
1187229	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338209 +/- - 1m		Present	Yes	Not known (or uncertain)
1187226	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338201 +/- - 1m		Present	Yes	Not known (or uncertain)
1188547	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338320 +/- - 1m		Present	Yes	Not known (or uncertain)
1188542	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586588, 5338293 +/- - 1m		Present	Yes	Not known (or uncertain)
1188539	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586600, 5338289 +/- - 1m		Present	Yes	Not known (or uncertain)
1187666	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338230 +/- - 1m		Present	Yes	Not known (or uncertain)
1187663	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338237 +/- - 1m		Present	Yes	Not known (or uncertain)
1187660	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586570, 5338250 +/- - 1m		Present	Yes	Not known (or uncertain)
1187657	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338255 +/- - 1m		Present	Yes	Not known (or uncertain)
1187271	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586539, 5338331 +/- - 1m		Present	Yes	Not known (or uncertain)
1187268	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586546, 5338315 +/- - 1m		Present	Yes	Not known (or uncertain)
1190039	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586818, 5338197 +/- - 1m		Present	Yes	Not known (or uncertain)
1188126	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586317, 5338138 +/- - 1m		Present	Yes	Not known (or uncertain)
1188123	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586314, 5338079 +/- - 1m		Present	Yes	Not known (or uncertain)
1188120	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586333, 5338084 +/- - 1m		Present	Yes	Not known (or uncertain)
1188117	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586351, 5338093 +/- - 1m		Present	Yes	Not known (or uncertain)
1188110	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586489, 5338141 +/- - 1m		Present	Yes	Not known (or uncertain)
1187706	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586523, 5338059 +/- - 1m		Present	Yes	Not known (or uncertain)
1187703	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586520, 5338115 +/- - 1m		Present	Yes	Not known (or uncertain)
1187699	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586543, 5338114 +/- - 1m		Present	Yes	Not known (or uncertain)
1187695	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586576, 5338162 +/- - 1m		Present	Yes	Not known (or uncertain)
1187692	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586570, 5338172 +/- - 1m		Present	Yes	Not known (or uncertain)
1187689	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1190035	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586738, 5338309 +/- - 1m		Present	Yes	Not known (or uncertain)
1190032	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190029	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190026	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190023	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586757, 5338291 +/- - 1m		Present	Yes	Not known (or uncertain)
1189856	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586760, 5338294 +/- - 1m		Present	Yes	Not known (or uncertain)
1189853	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586763, 5338288 +/- - 1m		Present	Yes	Not known (or uncertain)
1187454	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586485, 5338424 +/- - 1m		Present	Yes	Not known (or uncertain)
1187451	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586500, 5338404 +/- - 1m		Present	Yes	Not known (or uncertain)
1187448	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586504, 5338394 +/- - 1m		Present	Yes	Not known (or uncertain)
1187443	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586511, 5338384 +/- - 1m		Present	Yes	Not known (or uncertain)
1187036	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586587, 5338149 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187033	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586707, 5338146 +/- - 1m		Present	Yes	Not known (or uncertain)
1187030	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586787, 5338155 +/- - 1m		Present	Yes	Not known (or uncertain)
1187025	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586830, 5338104 +/- - 1m		Present	Yes	Not known (or uncertain)
1187022	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586875, 5338034 +/- - 1m		Present	Yes	Not known (or uncertain)
1187019	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586830, 5338199 +/- - 1m		Present	Yes	Not known (or uncertain)
1187016	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586832, 5338194 +/- - 1m		Present	Yes	Not known (or uncertain)
1185610	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586582, 5338211 +/- - 1m		Present	Yes	Not known (or uncertain)
1187440	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586535, 5338337 +/- - 1m		Present	Yes	Not known (or uncertain)
1187437	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586538, 5338332 +/- - 1m		Present	Yes	Not known (or uncertain)
1186784	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1186781	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1186778	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1185652	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586419, 5337764 +/- - 1m		Present	Yes	Not known (or uncertain)
1185649	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586537, 5338051 +/- - 1m		Present	Yes	Not known (or uncertain)
1185646	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586555, 5338067 +/- - 1m		Present	Yes	Not known (or uncertain)
1185643	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338058 +/- - 1m		Present	Yes	Not known (or uncertain)
1185640	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338073 +/- - 1m		Present	Yes	Not known (or uncertain)
1185633	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586560, 5338280 +/- - 1m		Present	Yes	Not known (or uncertain)
1187929	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586623, 5338238 +/- - 1m		Present	Yes	Not known (or uncertain)
1187926	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586632, 5338228 +/- - 1m		Present	Yes	Not known (or uncertain)
1187923	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586635, 5338221 +/- - 1m		Present	Yes	Not known (or uncertain)
1187920	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586640, 5338215 +/- - 1m		Present	Yes	Not known (or uncertain)
1188107	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586502, 5338158 +/- - 1m		Present	Yes	Not known (or uncertain)
1188104	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586504, 5338149 +/- - 1m		Present	Yes	Not known (or uncertain)
1188097	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586479, 5338035 +/- - 1m		Present	Yes	Not known (or uncertain)
1189848	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586790, 5338300 +/- - 1m		Present	Yes	Not known (or uncertain)
1189845	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586798, 5338319 +/- - 1m		Present	Yes	Not known (or uncertain)
1189842	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586735, 5338432 +/- - 1m		Present	Yes	Not known (or uncertain)
1189839	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586731, 5338499 +/- - 1m		Present	Yes	Not known (or uncertain)
1189834	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338639 +/- - 1m		Present	Yes	Not known (or uncertain)
1189831	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338639 +/- - 1m		Present	Yes	Not known (or uncertain)
1187265	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586548, 5338311 +/- - 1m		Present	Yes	Not known (or uncertain)
1187262	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586551, 5338305 +/- - 1m		Present	Yes	Not known (or uncertain)
1187259	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586553, 5338300 +/- - 1m		Present	Yes	Not known (or uncertain)
1187256	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586555, 5338294 +/- - 1m		Present	Yes	Not known (or uncertain)
1187253	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586557, 5338290 +/- - 1m		Present	Yes	Not known (or uncertain)
1187225	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338201 +/- - 1m		Present	Yes	Not known (or uncertain)
1187222	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338195 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187219	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338189 +/- -1m		Present	Yes	Not known (or uncertain)
1186828	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586830, 5338185 +/- -1m		Present	Yes	Not known (or uncertain)
1188589	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586588, 5338213 +/- -1m		Present	Yes	Not known (or uncertain)
1188586	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586601, 5338197 +/- -1m		Present	Yes	Not known (or uncertain)
1188583	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586612, 5338185 +/- -1m		Present	Yes	Not known (or uncertain)
1188580	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586619, 5338195 +/- -1m		Present	Yes	Not known (or uncertain)
1188577	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586613, 5338196 +/- -1m		Present	Yes	Not known (or uncertain)
1188574	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586599, 5338214 +/- -1m		Present	Yes	Not known (or uncertain)
1187685	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338192 +/- -1m		Present	Yes	Not known (or uncertain)
1187680	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338203 +/- -1m		Present	Yes	Not known (or uncertain)
1187677	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586567, 5338206 +/- -1m		Present	Yes	Not known (or uncertain)
1187674	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338214 +/- -1m		Present	Yes	Not known (or uncertain)
1187671	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338219 +/- -1m		Present	Yes	Not known (or uncertain)
1187250	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586559, 5338285 +/- -1m		Present	Yes	Not known (or uncertain)
1187916	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586652, 5338233 +/- -1m		Present	Yes	Not known (or uncertain)
1187913	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586694, 5338245 +/- -1m		Present	Yes	Not known (or uncertain)
1187910	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586679, 5338224 +/- -1m		Present	Yes	Not known (or uncertain)
1187907	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586653, 5338221 +/- -1m		Present	Yes	Not known (or uncertain)
1187904	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586651, 5338244 +/- -1m		Present	Yes	Not known (or uncertain)
1187668	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338225 +/- -1m		Present	Yes	Not known (or uncertain)
1187015	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586832, 5338191 +/- -1m		Present	Yes	Not known (or uncertain)
1187010	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586834, 5338194 +/- -1m		Present	Yes	Not known (or uncertain)
1187007	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586844, 5338200 +/- -1m		Present	Yes	Not known (or uncertain)
1187004	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586864, 5338204 +/- -1m		Present	Yes	Not known (or uncertain)
1187001	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586880, 5338194 +/- -1m		Present	Yes	Not known (or uncertain)
1190075	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338184 +/- -1m		Present	Yes	Not known (or uncertain)
1190072	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338184 +/- -1m		Present	Yes	Not known (or uncertain)
1190069	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586806, 5338183 +/- -1m		Present	Yes	Not known (or uncertain)
1190066	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338181 +/- -1m		Present	Yes	Not known (or uncertain)
1190061	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586806, 5338177 +/- -1m		Present	Yes	Not known (or uncertain)
1189829	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338640 +/- -1m		Present	Yes	Not known (or uncertain)
1189826	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338640 +/- -1m		Present	Yes	Not known (or uncertain)
1189821	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338367 +/- -1m		Present	Yes	Not known (or uncertain)
1189818	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338365 +/- -1m		Present	Yes	Not known (or uncertain)
1189815	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338365 +/- -1m		Present	Yes	Not known (or uncertain)
1189812	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338367 +/- -1m		Present	Yes	Not known (or uncertain)
1189809	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586798, 5338346 +/- -1m		Present	Yes	Not known (or uncertain)
1187475	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586553, 5338311 +/- -1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187472	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586550, 5338318 +/- - 1m		Present	Yes	Not known (or uncertain)
1187710	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586478, 5338021 +/- - 1m		Present	Yes	Not known (or uncertain)
1187051	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1187048	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338173 +/- - 1m		Present	Yes	Not known (or uncertain)
1187045	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338166 +/- - 1m		Present	Yes	Not known (or uncertain)
1186998	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586869, 5338170 +/- - 1m		Present	Yes	Not known (or uncertain)
1185631	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586483, 5338425 +/- - 1m		Present	Yes	Not known (or uncertain)
1185628	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586778, 5338174 +/- - 1m		Present	Yes	Not known (or uncertain)
1185625	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586703, 5338167 +/- - 1m		Present	Yes	Not known (or uncertain)
1187469	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586510, 5338389 +/- - 1m		Present	Yes	Not known (or uncertain)
1187466	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586495, 5338416 +/- - 1m		Present	Yes	Not known (or uncertain)
1187463	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586483, 5338431 +/- - 1m		Present	Yes	Not known (or uncertain)
1187458	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586478, 5338431 +/- - 1m		Present	Yes	Not known (or uncertain)
1186805	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586821, 5338177 +/- - 1m		Present	Yes	Not known (or uncertain)
1186802	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586819, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1187040	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586583, 5338157 +/- - 1m		Present	Yes	Not known (or uncertain)
1187037	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586585, 5338151 +/- - 1m		Present	Yes	Not known (or uncertain)
1185655	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586257, 5337810 +/- - 1m		Present	Yes	Not known (or uncertain)
1185618	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586627, 5338162 +/- - 1m		Present	Yes	Not known (or uncertain)
1185614	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586585, 5338203 +/- - 1m		Present	Yes	Not known (or uncertain)
1185611	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586580, 5338208 +/- - 1m		Present	Yes	Not known (or uncertain)
1188569	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586601, 5338233 +/- - 1m		Present	Yes	Not known (or uncertain)
1188566	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586580, 5338245 +/- - 1m		Present	Yes	Not known (or uncertain)
1188563	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586579, 5338248 +/- - 1m		Present	Yes	Not known (or uncertain)
1188560	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586578, 5338254 +/- - 1m		Present	Yes	Not known (or uncertain)
1188555	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338288 +/- - 1m		Present	Yes	Not known (or uncertain)
1188552	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338293 +/- - 1m		Present	Yes	Not known (or uncertain)
1188549	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338316 +/- - 1m		Present	Yes	Not known (or uncertain)
1186799	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586812, 5338177 +/- - 1m		Present	Yes	Not known (or uncertain)
1186796	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586812, 5338178 +/- - 1m		Present	Yes	Not known (or uncertain)
1186793	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586812, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1186788	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186785	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1175044	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587279, 5338492 +/- - 1m		Present	Yes	Not known (or uncertain)
1175041	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587288, 5338378 +/- - 1m		Present	Yes	Not known (or uncertain)
1175038	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587288, 5338373 +/- - 1m		Present	Yes	Not known (or uncertain)
1175035	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587290, 5338366 +/- - 1m		Present	Yes	Not known (or uncertain)
1175029	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587299, 5338357 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1175026	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587295, 5338355 +/- - 1m		Present	Yes	Not known (or uncertain)
1175023	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587161, 5338352 +/- - 1m		Present	Yes	Not known (or uncertain)
1175020	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587291, 5338347 +/- - 1m		Present	Yes	Not known (or uncertain)
1175017	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587292, 5338342 +/- - 1m		Present	Yes	Not known (or uncertain)
1175014	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587292, 5338341 +/- - 1m		Present	Yes	Not known (or uncertain)
1175011	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587553, 5338141 +/- - 1m		Present	Yes	Not known (or uncertain)
1175008	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587225, 5337517 +/- - 1m		Present	Yes	Not known (or uncertain)
1175000	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	588456, 5336339 +/- - 1m		Present	Yes	Not known (or uncertain)
1174997	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	586696, 5335293 +/- - 1m		Present	Yes	Not known (or uncertain)
1228606	Nassella trichotoma	serrated tussock	N. Meadows (6353)	01-Jan-2008	Polygon		Present	Yes	Not known (or uncertain)
1193503	Nassella trichotoma	serrated tussock	Mary Whitaker (9662)	13-Oct-2009	588600, 5336491 +/- - 1m		Present	Yes	Not known (or uncertain)
1192462	Nassella trichotoma	serrated tussock	Oliver Timothy Strutt (8261)	03-Jun-2009	588630, 5336658 +/- - 1m		Present	Yes	Not known (or uncertain)
1190076	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1190074	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1190073	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1190071	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1190070	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586806, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1190068	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1190067	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586806, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1190065	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1190064	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338179 +/- - 1m		Present	Yes	Not known (or uncertain)
1190063	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338178 +/- - 1m		Present	Yes	Not known (or uncertain)
1190062	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586805, 5338178 +/- - 1m		Present	Yes	Not known (or uncertain)
1190060	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586805, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1190058	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586802, 5338172 +/- - 1m		Present	Yes	Not known (or uncertain)
1190057	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586801, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1190055	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586800, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1190054	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586799, 5338178 +/- - 1m		Present	Yes	Not known (or uncertain)
1190052	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586778, 5338174 +/- - 1m		Present	Yes	Not known (or uncertain)
1190051	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586776, 5338179 +/- - 1m		Present	Yes	Not known (or uncertain)
1190050	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586784, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1190049	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586789, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1190047	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586795, 5338191 +/- - 1m		Present	Yes	Not known (or uncertain)
1190046	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586797, 5338190 +/- - 1m		Present	Yes	Not known (or uncertain)
1190044	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338193 +/- - 1m		Present	Yes	Not known (or uncertain)
1190043	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338193 +/- - 1m		Present	Yes	Not known (or uncertain)
1190041	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586812, 5338192 +/- - 1m		Present	Yes	Not known (or uncertain)
1190040	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586814, 5338190 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1190038	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586819, 5338198 +/- - 1m		Present	Yes	Not known (or uncertain)
1190037	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586821, 5338255 +/- - 1m		Present	Yes	Not known (or uncertain)
1190036	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586787, 5338241 +/- - 1m		Present	Yes	Not known (or uncertain)
1190034	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586754, 5338298 +/- - 1m		Present	Yes	Not known (or uncertain)
1190033	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338293 +/- - 1m		Present	Yes	Not known (or uncertain)
1190031	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190030	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338293 +/- - 1m		Present	Yes	Not known (or uncertain)
1190028	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190027	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586755, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190025	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586756, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190024	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586757, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1190022	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586757, 5338291 +/- - 1m		Present	Yes	Not known (or uncertain)
1188591	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586587, 5338213 +/- - 1m		Present	Yes	Not known (or uncertain)
1187930	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586616, 5338243 +/- - 1m		Present	Yes	Not known (or uncertain)
1187928	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586631, 5338233 +/- - 1m		Present	Yes	Not known (or uncertain)
1187927	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586631, 5338232 +/- - 1m		Present	Yes	Not known (or uncertain)
1187925	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586632, 5338225 +/- - 1m		Present	Yes	Not known (or uncertain)
1187924	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586635, 5338224 +/- - 1m		Present	Yes	Not known (or uncertain)
1187922	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586635, 5338218 +/- - 1m		Present	Yes	Not known (or uncertain)
1187921	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586635, 5338217 +/- - 1m		Present	Yes	Not known (or uncertain)
1187919	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586643, 5338218 +/- - 1m		Present	Yes	Not known (or uncertain)
1188590	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586588, 5338213 +/- - 1m		Present	Yes	Not known (or uncertain)
1188588	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586591, 5338209 +/- - 1m		Present	Yes	Not known (or uncertain)
1188587	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586595, 5338205 +/- - 1m		Present	Yes	Not known (or uncertain)
1188585	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586602, 5338196 +/- - 1m		Present	Yes	Not known (or uncertain)
1188584	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586609, 5338191 +/- - 1m		Present	Yes	Not known (or uncertain)
1188582	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586613, 5338185 +/- - 1m		Present	Yes	Not known (or uncertain)
1188581	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586620, 5338193 +/- - 1m		Present	Yes	Not known (or uncertain)
1188579	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586614, 5338194 +/- - 1m		Present	Yes	Not known (or uncertain)
1188578	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586614, 5338195 +/- - 1m		Present	Yes	Not known (or uncertain)
1188576	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586607, 5338205 +/- - 1m		Present	Yes	Not known (or uncertain)
1188575	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586605, 5338208 +/- - 1m		Present	Yes	Not known (or uncertain)
1188573	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586600, 5338221 +/- - 1m		Present	Yes	Not known (or uncertain)
1188572	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586602, 5338220 +/- - 1m		Present	Yes	Not known (or uncertain)
1188571	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586602, 5338223 +/- - 1m		Present	Yes	Not known (or uncertain)
1188570	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586600, 5338230 +/- - 1m		Present	Yes	Not known (or uncertain)
1187918	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586643, 5338219 +/- - 1m		Present	Yes	Not known (or uncertain)
1187917	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586652, 5338227 +/- - 1m		Present	Yes	Not known (or uncertain)

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1187915	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586676, 5338233 +/- - 1m		Present	Yes	Not known (or uncertain)
1187914	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586678, 5338238 +/- - 1m		Present	Yes	Not known (or uncertain)
1187912	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586703, 5338228 +/- - 1m		Present	Yes	Not known (or uncertain)
1187911	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586702, 5338222 +/- - 1m		Present	Yes	Not known (or uncertain)
1187909	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586665, 5338222 +/- - 1m		Present	Yes	Not known (or uncertain)
1187908	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586662, 5338221 +/- - 1m		Present	Yes	Not known (or uncertain)
1187906	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586647, 5338233 +/- - 1m		Present	Yes	Not known (or uncertain)
1187905	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586652, 5338233 +/- - 1m		Present	Yes	Not known (or uncertain)
1187903	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586658, 5338256 +/- - 1m		Present	Yes	Not known (or uncertain)
1187902	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586679, 5338260 +/- - 1m		Present	Yes	Not known (or uncertain)
1187901	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586680, 5338255 +/- - 1m		Present	Yes	Not known (or uncertain)
1187900	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586681, 5338255 +/- - 1m		Present	Yes	Not known (or uncertain)
1187899	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586684, 5338254 +/- - 1m		Present	Yes	Not known (or uncertain)
1187898	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586689, 5338254 +/- - 1m		Present	Yes	Not known (or uncertain)
1188568	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586595, 5338244 +/- - 1m		Present	Yes	Not known (or uncertain)
1188567	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586578, 5338245 +/- - 1m		Present	Yes	Not known (or uncertain)
1188565	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586579, 5338246 +/- - 1m		Present	Yes	Not known (or uncertain)
1188564	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586578, 5338247 +/- - 1m		Present	Yes	Not known (or uncertain)
1188562	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586578, 5338251 +/- - 1m		Present	Yes	Not known (or uncertain)
1188561	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586579, 5338254 +/- - 1m		Present	Yes	Not known (or uncertain)
1188559	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586575, 5338254 +/- - 1m		Present	Yes	Not known (or uncertain)
1188558	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586574, 5338267 +/- - 1m		Present	Yes	Not known (or uncertain)
1188557	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338283 +/- - 1m		Present	Yes	Not known (or uncertain)
1188556	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586570, 5338285 +/- - 1m		Present	Yes	Not known (or uncertain)
1188554	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586567, 5338290 +/- - 1m		Present	Yes	Not known (or uncertain)
1188553	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338291 +/- - 1m		Present	Yes	Not known (or uncertain)
1188551	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586570, 5338302 +/- - 1m		Present	Yes	Not known (or uncertain)
1188550	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586570, 5338308 +/- - 1m		Present	Yes	Not known (or uncertain)
1187897	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586679, 5338304 +/- - 1m		Present	Yes	Not known (or uncertain)
1187895	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586666, 5338346 +/- - 1m		Present	Yes	Not known (or uncertain)
1187894	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586666, 5338377 +/- - 1m		Present	Yes	Not known (or uncertain)
1187892	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586658, 5338403 +/- - 1m		Present	Yes	Not known (or uncertain)
1187891	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586520, 5338397 +/- - 1m		Present	Yes	Not known (or uncertain)
1187889	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586520, 5338442 +/- - 1m		Present	Yes	Not known (or uncertain)
1187888	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586561, 5338444 +/- - 1m		Present	Yes	Not known (or uncertain)
1187887	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586365, 5338798 +/- - 1m		Present	Yes	Not known (or uncertain)
1187886	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586880, 5338192 +/- - 1m		Present	Yes	Not known (or uncertain)
1187885	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586914, 5338242 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1188548	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338321 +/- - 1m		Present	Yes	Not known (or uncertain)
1188546	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586567, 5338318 +/- - 1m		Present	Yes	Not known (or uncertain)
1188545	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586567, 5338320 +/- - 1m		Present	Yes	Not known (or uncertain)
1188544	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338320 +/- - 1m		Present	Yes	Not known (or uncertain)
1188543	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586571, 5338320 +/- - 1m		Present	Yes	Not known (or uncertain)
1188541	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586588, 5338299 +/- - 1m		Present	Yes	Not known (or uncertain)
1188540	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586588, 5338300 +/- - 1m		Present	Yes	Not known (or uncertain)
1188538	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586606, 5338277 +/- - 1m		Present	Yes	Not known (or uncertain)
1188537	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586610, 5338264 +/- - 1m		Present	Yes	Not known (or uncertain)
1189855	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586760, 5338291 +/- - 1m		Present	Yes	Not known (or uncertain)
1189854	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586761, 5338288 +/- - 1m		Present	Yes	Not known (or uncertain)
1189852	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586766, 5338287 +/- - 1m		Present	Yes	Not known (or uncertain)
1189851	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586768, 5338288 +/- - 1m		Present	Yes	Not known (or uncertain)
1189850	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586786, 5338330 +/- - 1m		Present	Yes	Not known (or uncertain)
1189849	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586807, 5338307 +/- - 1m		Present	Yes	Not known (or uncertain)
1189847	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586781, 5338308 +/- - 1m		Present	Yes	Not known (or uncertain)
1189846	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586791, 5338316 +/- - 1m		Present	Yes	Not known (or uncertain)
1189844	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586786, 5338329 +/- - 1m		Present	Yes	Not known (or uncertain)
1189843	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586731, 5338429 +/- - 1m		Present	Yes	Not known (or uncertain)
1189841	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586794, 5338479 +/- - 1m		Present	Yes	Not known (or uncertain)
1189840	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586785, 5338496 +/- - 1m		Present	Yes	Not known (or uncertain)
1189838	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586678, 5338494 +/- - 1m		Present	Yes	Not known (or uncertain)
1189837	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586644, 5338527 +/- - 1m		Present	Yes	Not known (or uncertain)
1189836	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586366, 5338800 +/- - 1m		Present	Yes	Not known (or uncertain)
1189835	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586365, 5338800 +/- - 1m		Present	Yes	Not known (or uncertain)
1189833	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338640 +/- - 1m		Present	Yes	Not known (or uncertain)
1189832	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338639 +/- - 1m		Present	Yes	Not known (or uncertain)
1189830	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338639 +/- - 1m		Present	Yes	Not known (or uncertain)
1189828	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338639 +/- - 1m		Present	Yes	Not known (or uncertain)
1189827	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586698, 5338640 +/- - 1m		Present	Yes	Not known (or uncertain)
1189825	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586713, 5338624 +/- - 1m		Present	Yes	Not known (or uncertain)
1189824	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586714, 5338624 +/- - 1m		Present	Yes	Not known (or uncertain)
1189823	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586714, 5338625 +/- - 1m		Present	Yes	Not known (or uncertain)
1189822	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586779, 5338566 +/- - 1m		Present	Yes	Not known (or uncertain)
1189820	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338365 +/- - 1m		Present	Yes	Not known (or uncertain)
1189819	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338365 +/- - 1m		Present	Yes	Not known (or uncertain)
1189817	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586810, 5338365 +/- - 1m		Present	Yes	Not known (or uncertain)
1189816	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338365 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1189814	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338365 +/- - 1m		Present	Yes	Not known (or uncertain)
1189813	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338367 +/- - 1m		Present	Yes	Not known (or uncertain)
1189811	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338367 +/- - 1m		Present	Yes	Not known (or uncertain)
1189810	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338369 +/- - 1m		Present	Yes	Not known (or uncertain)
1189808	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586816, 5338354 +/- - 1m		Present	Yes	Not known (or uncertain)
1189806	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586938, 5338237 +/- - 1m		Present	Yes	Not known (or uncertain)
1188125	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586285, 5338162 +/- - 1m		Present	Yes	Not known (or uncertain)
1188124	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586257, 5338093 +/- - 1m		Present	Yes	Not known (or uncertain)
1188122	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586272, 5338013 +/- - 1m		Present	Yes	Not known (or uncertain)
1188121	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586308, 5338032 +/- - 1m		Present	Yes	Not known (or uncertain)
1188119	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586334, 5338083 +/- - 1m		Present	Yes	Not known (or uncertain)
1188118	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586342, 5338080 +/- - 1m		Present	Yes	Not known (or uncertain)
1188116	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586351, 5338093 +/- - 1m		Present	Yes	Not known (or uncertain)
1188115	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586399, 5338106 +/- - 1m		Present	Yes	Not known (or uncertain)
1188114	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586420, 5338053 +/- - 1m		Present	Yes	Not known (or uncertain)
1188113	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586392, 5338032 +/- - 1m		Present	Yes	Not known (or uncertain)
1188112	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586455, 5338108 +/- - 1m		Present	Yes	Not known (or uncertain)
1188111	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586488, 5338134 +/- - 1m		Present	Yes	Not known (or uncertain)
1188109	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586514, 5338154 +/- - 1m		Present	Yes	Not known (or uncertain)
1188108	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586508, 5338156 +/- - 1m		Present	Yes	Not known (or uncertain)
1188106	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586499, 5338158 +/- - 1m		Present	Yes	Not known (or uncertain)
1188105	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586488, 5338158 +/- - 1m		Present	Yes	Not known (or uncertain)
1188103	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586504, 5338149 +/- - 1m		Present	Yes	Not known (or uncertain)
1188102	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586515, 5338141 +/- - 1m		Present	Yes	Not known (or uncertain)
1188101	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586510, 5338133 +/- - 1m		Present	Yes	Not known (or uncertain)
1188100	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586500, 5338122 +/- - 1m		Present	Yes	Not known (or uncertain)
1188099	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586478, 5338101 +/- - 1m		Present	Yes	Not known (or uncertain)
1188098	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586501, 5338083 +/- - 1m		Present	Yes	Not known (or uncertain)
1187477	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586554, 5338309 +/- - 1m		Present	Yes	Not known (or uncertain)
1187476	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586552, 5338312 +/- - 1m		Present	Yes	Not known (or uncertain)
1187474	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586551, 5338314 +/- - 1m		Present	Yes	Not known (or uncertain)
1187473	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586551, 5338315 +/- - 1m		Present	Yes	Not known (or uncertain)
1187471	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586525, 5338362 +/- - 1m		Present	Yes	Not known (or uncertain)
1187470	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586516, 5338379 +/- - 1m		Present	Yes	Not known (or uncertain)
1187468	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586505, 5338400 +/- - 1m		Present	Yes	Not known (or uncertain)
1187467	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586496, 5338413 +/- - 1m		Present	Yes	Not known (or uncertain)
1187465	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586486, 5338427 +/- - 1m		Present	Yes	Not known (or uncertain)
1187464	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586482, 5338431 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187462	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586481, 5338433 +/- - 1m		Present	Yes	Not known (or uncertain)
1187461	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586480, 5338433 +/- - 1m		Present	Yes	Not known (or uncertain)
1187460	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586140, 5338727 +/- - 1m		Present	Yes	Not known (or uncertain)
1187459	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586478, 5338432 +/- - 1m		Present	Yes	Not known (or uncertain)
1187457	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586482, 5338427 +/- - 1m		Present	Yes	Not known (or uncertain)
1186804	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586819, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186803	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586819, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1186801	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586818, 5338179 +/- - 1m		Present	Yes	Not known (or uncertain)
1186800	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586816, 5338177 +/- - 1m		Present	Yes	Not known (or uncertain)
1186798	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586813, 5338176 +/- - 1m		Present	Yes	Not known (or uncertain)
1186797	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586812, 5338179 +/- - 1m		Present	Yes	Not known (or uncertain)
1186795	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586813, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186794	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586812, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1186792	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586811, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1186791	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586812, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1186790	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586811, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1186789	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586811, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186787	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186786	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1187456	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586483, 5338425 +/- - 1m		Present	Yes	Not known (or uncertain)
1187455	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586484, 5338425 +/- - 1m		Present	Yes	Not known (or uncertain)
1187453	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586488, 5338420 +/- - 1m		Present	Yes	Not known (or uncertain)
1187452	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586494, 5338413 +/- - 1m		Present	Yes	Not known (or uncertain)
1187450	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586501, 5338400 +/- - 1m		Present	Yes	Not known (or uncertain)
1187449	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586503, 5338398 +/- - 1m		Present	Yes	Not known (or uncertain)
1187447	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586506, 5338393 +/- - 1m		Present	Yes	Not known (or uncertain)
1187446	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586507, 5338390 +/- - 1m		Present	Yes	Not known (or uncertain)
1187445	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586508, 5338389 +/- - 1m		Present	Yes	Not known (or uncertain)
1187444	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586508, 5338387 +/- - 1m		Present	Yes	Not known (or uncertain)
1187442	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586533, 5338341 +/- - 1m		Present	Yes	Not known (or uncertain)
1187441	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586534, 5338340 +/- - 1m		Present	Yes	Not known (or uncertain)
1187439	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586535, 5338338 +/- - 1m		Present	Yes	Not known (or uncertain)
1187438	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586538, 5338333 +/- - 1m		Present	Yes	Not known (or uncertain)
1186783	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1186782	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586808, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1186780	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1186779	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1186777	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586809, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187711	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586483, 5338026 +/- - 1m		Present	Yes	Not known (or uncertain)
1187709	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586519, 5337994 +/- - 1m		Present	Yes	Not known (or uncertain)
1187050	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1187049	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338173 +/- - 1m		Present	Yes	Not known (or uncertain)
1187047	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338171 +/- - 1m		Present	Yes	Not known (or uncertain)
1187046	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338167 +/- - 1m		Present	Yes	Not known (or uncertain)
1187044	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338166 +/- - 1m		Present	Yes	Not known (or uncertain)
1187043	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338165 +/- - 1m		Present	Yes	Not known (or uncertain)
1187042	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586576, 5338157 +/- - 1m		Present	Yes	Not known (or uncertain)
1187041	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586588, 5338154 +/- - 1m		Present	Yes	Not known (or uncertain)
1187039	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586579, 5338154 +/- - 1m		Present	Yes	Not known (or uncertain)
1187038	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586583, 5338151 +/- - 1m		Present	Yes	Not known (or uncertain)
1187708	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586509, 5338024 +/- - 1m		Present	Yes	Not known (or uncertain)
1187707	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586511, 5338032 +/- - 1m		Present	Yes	Not known (or uncertain)
1187705	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586511, 5338106 +/- - 1m		Present	Yes	Not known (or uncertain)
1187704	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586522, 5338117 +/- - 1m		Present	Yes	Not known (or uncertain)
1187702	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586517, 5338116 +/- - 1m		Present	Yes	Not known (or uncertain)
1187701	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586525, 5338127 +/- - 1m		Present	Yes	Not known (or uncertain)
1187700	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586529, 5338126 +/- - 1m		Present	Yes	Not known (or uncertain)
1187698	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586543, 5338119 +/- - 1m		Present	Yes	Not known (or uncertain)
1187697	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586544, 5338119 +/- - 1m		Present	Yes	Not known (or uncertain)
1187696	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586553, 5338140 +/- - 1m		Present	Yes	Not known (or uncertain)
1187694	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586570, 5338170 +/- - 1m		Present	Yes	Not known (or uncertain)
1187693	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586571, 5338168 +/- - 1m		Present	Yes	Not known (or uncertain)
1187691	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1187690	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1187688	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338185 +/- - 1m		Present	Yes	Not known (or uncertain)
1187035	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586695, 5338146 +/- - 1m		Present	Yes	Not known (or uncertain)
1187034	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586705, 5338145 +/- - 1m		Present	Yes	Not known (or uncertain)
1187032	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586716, 5338149 +/- - 1m		Present	Yes	Not known (or uncertain)
1187031	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586743, 5338145 +/- - 1m		Present	Yes	Not known (or uncertain)
1187029	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586834, 5338110 +/- - 1m		Present	Yes	Not known (or uncertain)
1187028	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586831, 5338110 +/- - 1m		Present	Yes	Not known (or uncertain)
1187027	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586832, 5338109 +/- - 1m		Present	Yes	Not known (or uncertain)
1187026	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586832, 5338108 +/- - 1m		Present	Yes	Not known (or uncertain)
1187024	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586829, 5338104 +/- - 1m		Present	Yes	Not known (or uncertain)
1187023	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586830, 5338105 +/- - 1m		Present	Yes	Not known (or uncertain)
1187021	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586914, 5338242 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187020	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586844, 5338213 +/- - 1m		Present	Yes	Not known (or uncertain)
1187018	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586830, 5338199 +/- - 1m		Present	Yes	Not known (or uncertain)
1187017	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586834, 5338196 +/- - 1m		Present	Yes	Not known (or uncertain)
1187687	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338190 +/- - 1m		Present	Yes	Not known (or uncertain)
1187686	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338189 +/- - 1m		Present	Yes	Not known (or uncertain)
1187684	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338194 +/- - 1m		Present	Yes	Not known (or uncertain)
1187683	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338196 +/- - 1m		Present	Yes	Not known (or uncertain)
1187682	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338199 +/- - 1m		Present	Yes	Not known (or uncertain)
1187681	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338201 +/- - 1m		Present	Yes	Not known (or uncertain)
1187679	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338202 +/- - 1m		Present	Yes	Not known (or uncertain)
1187678	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338204 +/- - 1m		Present	Yes	Not known (or uncertain)
1187676	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586567, 5338209 +/- - 1m		Present	Yes	Not known (or uncertain)
1187675	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338212 +/- - 1m		Present	Yes	Not known (or uncertain)
1187673	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338215 +/- - 1m		Present	Yes	Not known (or uncertain)
1187672	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338217 +/- - 1m		Present	Yes	Not known (or uncertain)
1187670	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338221 +/- - 1m		Present	Yes	Not known (or uncertain)
1187669	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338223 +/- - 1m		Present	Yes	Not known (or uncertain)
1187667	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338231 +/- - 1m		Present	Yes	Not known (or uncertain)
1187014	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586833, 5338192 +/- - 1m		Present	Yes	Not known (or uncertain)
1187013	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586833, 5338192 +/- - 1m		Present	Yes	Not known (or uncertain)
1187012	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586833, 5338193 +/- - 1m		Present	Yes	Not known (or uncertain)
1187011	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586834, 5338193 +/- - 1m		Present	Yes	Not known (or uncertain)
1187009	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586834, 5338194 +/- - 1m		Present	Yes	Not known (or uncertain)
1187008	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586835, 5338194 +/- - 1m		Present	Yes	Not known (or uncertain)
1187006	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586853, 5338196 +/- - 1m		Present	Yes	Not known (or uncertain)
1187005	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586853, 5338197 +/- - 1m		Present	Yes	Not known (or uncertain)
1187003	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586889, 5338218 +/- - 1m		Present	Yes	Not known (or uncertain)
1187002	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586885, 5338207 +/- - 1m		Present	Yes	Not known (or uncertain)
1187000	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586878, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1186999	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586869, 5338172 +/- - 1m		Present	Yes	Not known (or uncertain)
1186997	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586843, 5338182 +/- - 1m		Present	Yes	Not known (or uncertain)
1185656	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586224, 5337789 +/- - 1m		Present	Yes	Not known (or uncertain)
1185654	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586287, 5337822 +/- - 1m		Present	Yes	Not known (or uncertain)
1185653	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586342, 5337824 +/- - 1m		Present	Yes	Not known (or uncertain)
1187665	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338233 +/- - 1m		Present	Yes	Not known (or uncertain)
1187664	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338235 +/- - 1m		Present	Yes	Not known (or uncertain)
1187662	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338241 +/- - 1m		Present	Yes	Not known (or uncertain)
1187661	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586570, 5338247 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187659	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338251 +/- - 1m		Present	Yes	Not known (or uncertain)
1187658	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586569, 5338253 +/- - 1m		Present	Yes	Not known (or uncertain)
1185651	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586489, 5337817 +/- - 1m		Present	Yes	Not known (or uncertain)
1185650	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586549, 5337943 +/- - 1m		Present	Yes	Not known (or uncertain)
1185648	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586561, 5338071 +/- - 1m		Present	Yes	Not known (or uncertain)
1185647	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338070 +/- - 1m		Present	Yes	Not known (or uncertain)
1185645	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586557, 5338054 +/- - 1m		Present	Yes	Not known (or uncertain)
1185644	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338054 +/- - 1m		Present	Yes	Not known (or uncertain)
1185642	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338068 +/- - 1m		Present	Yes	Not known (or uncertain)
1185641	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338072 +/- - 1m		Present	Yes	Not known (or uncertain)
1185639	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586566, 5338090 +/- - 1m		Present	Yes	Not known (or uncertain)
1185638	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338095 +/- - 1m		Present	Yes	Not known (or uncertain)
1185637	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586567, 5338124 +/- - 1m		Present	Yes	Not known (or uncertain)
1185636	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586571, 5338127 +/- - 1m		Present	Yes	Not known (or uncertain)
1185635	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1185634	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338222 +/- - 1m		Present	Yes	Not known (or uncertain)
1185632	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586550, 5338310 +/- - 1m		Present	Yes	Not known (or uncertain)
1185630	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586754, 5337865 +/- - 1m		Present	Yes	Not known (or uncertain)
1185629	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586788, 5338179 +/- - 1m		Present	Yes	Not known (or uncertain)
1185627	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586731, 5338167 +/- - 1m		Present	Yes	Not known (or uncertain)
1185626	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586708, 5338165 +/- - 1m		Present	Yes	Not known (or uncertain)
1185624	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586668, 5338170 +/- - 1m		Present	Yes	Not known (or uncertain)
1185623	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586667, 5338161 +/- - 1m		Present	Yes	Not known (or uncertain)
1185622	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586663, 5338161 +/- - 1m		Present	Yes	Not known (or uncertain)
1185621	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586656, 5338160 +/- - 1m		Present	Yes	Not known (or uncertain)
1185620	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586652, 5338160 +/- - 1m		Present	Yes	Not known (or uncertain)
1185619	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586639, 5338161 +/- - 1m		Present	Yes	Not known (or uncertain)
1185617	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586625, 5338160 +/- - 1m		Present	Yes	Not known (or uncertain)
1185616	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586596, 5338159 +/- - 1m		Present	Yes	Not known (or uncertain)
1185615	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586602, 5338159 +/- - 1m		Present	Yes	Not known (or uncertain)
1185613	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586581, 5338203 +/- - 1m		Present	Yes	Not known (or uncertain)
1185612	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586579, 5338205 +/- - 1m		Present	Yes	Not known (or uncertain)
1187270	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586545, 5338320 +/- - 1m		Present	Yes	Not known (or uncertain)
1187269	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586546, 5338318 +/- - 1m		Present	Yes	Not known (or uncertain)
1185609	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586586, 5338213 +/- - 1m		Present	Yes	Not known (or uncertain)
1187267	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586547, 5338313 +/- - 1m		Present	Yes	Not known (or uncertain)
1187266	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586547, 5338314 +/- - 1m		Present	Yes	Not known (or uncertain)
1187264	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586549, 5338310 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1187263	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586550, 5338308 +/- - 1m		Present	Yes	Not known (or uncertain)
1187261	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586552, 5338303 +/- - 1m		Present	Yes	Not known (or uncertain)
1187260	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586552, 5338301 +/- - 1m		Present	Yes	Not known (or uncertain)
1187258	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586554, 5338298 +/- - 1m		Present	Yes	Not known (or uncertain)
1187257	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586555, 5338296 +/- - 1m		Present	Yes	Not known (or uncertain)
1187255	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586556, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1187254	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586556, 5338291 +/- - 1m		Present	Yes	Not known (or uncertain)
1187252	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338289 +/- - 1m		Present	Yes	Not known (or uncertain)
1187251	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338287 +/- - 1m		Present	Yes	Not known (or uncertain)
1187249	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338283 +/- - 1m		Present	Yes	Not known (or uncertain)
1187248	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338282 +/- - 1m		Present	Yes	Not known (or uncertain)
1187247	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586560, 5338279 +/- - 1m		Present	Yes	Not known (or uncertain)
1187245	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586561, 5338275 +/- - 1m		Present	Yes	Not known (or uncertain)
1187244	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586561, 5338274 +/- - 1m		Present	Yes	Not known (or uncertain)
1187242	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338263 +/- - 1m		Present	Yes	Not known (or uncertain)
1187241	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338260 +/- - 1m		Present	Yes	Not known (or uncertain)
1187239	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338229 +/- - 1m		Present	Yes	Not known (or uncertain)
1187238	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586565, 5338226 +/- - 1m		Present	Yes	Not known (or uncertain)
1187236	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338224 +/- - 1m		Present	Yes	Not known (or uncertain)
1187235	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338222 +/- - 1m		Present	Yes	Not known (or uncertain)
1187233	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338217 +/- - 1m		Present	Yes	Not known (or uncertain)
1187232	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338217 +/- - 1m		Present	Yes	Not known (or uncertain)
1187231	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338212 +/- - 1m		Present	Yes	Not known (or uncertain)
1187230	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586564, 5338213 +/- - 1m		Present	Yes	Not known (or uncertain)
1187228	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338205 +/- - 1m		Present	Yes	Not known (or uncertain)
1187227	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338203 +/- - 1m		Present	Yes	Not known (or uncertain)
1187224	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338199 +/- - 1m		Present	Yes	Not known (or uncertain)
1187223	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586563, 5338200 +/- - 1m		Present	Yes	Not known (or uncertain)
1187221	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338194 +/- - 1m		Present	Yes	Not known (or uncertain)
1187220	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338192 +/- - 1m		Present	Yes	Not known (or uncertain)
1187218	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586559, 5338179 +/- - 1m		Present	Yes	Not known (or uncertain)
1187217	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586559, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186831	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586838, 5338185 +/- - 1m		Present	Yes	Not known (or uncertain)
1186830	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586836, 5338184 +/- - 1m		Present	Yes	Not known (or uncertain)
1186829	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586835, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1186827	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586826, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1187490	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338258 +/- - 1m		Present	Yes	Not known (or uncertain)
1187489	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586568, 5338261 +/- - 1m		Present	Yes	Not known (or uncertain)

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1187487	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586562, 5338285 +/- - 1m		Present	Yes	Not known (or uncertain)
1187486	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586560, 5338291 +/- - 1m		Present	Yes	Not known (or uncertain)
1187485	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586560, 5338292 +/- - 1m		Present	Yes	Not known (or uncertain)
1187484	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586559, 5338295 +/- - 1m		Present	Yes	Not known (or uncertain)
1187482	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586558, 5338297 +/- - 1m		Present	Yes	Not known (or uncertain)
1187481	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586556, 5338302 +/- - 1m		Present	Yes	Not known (or uncertain)
1187479	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586555, 5338305 +/- - 1m		Present	Yes	Not known (or uncertain)
1187478	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586555, 5338308 +/- - 1m		Present	Yes	Not known (or uncertain)
1186826	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586824, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1186825	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586824, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1186823	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586824, 5338183 +/- - 1m		Present	Yes	Not known (or uncertain)
1186822	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586826, 5338181 +/- - 1m		Present	Yes	Not known (or uncertain)
1186820	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586830, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186819	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586830, 5338180 +/- - 1m		Present	Yes	Not known (or uncertain)
1186817	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586831, 5338176 +/- - 1m		Present	Yes	Not known (or uncertain)
1186816	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586831, 5338176 +/- - 1m		Present	Yes	Not known (or uncertain)
1186815	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586832, 5338176 +/- - 1m		Present	Yes	Not known (or uncertain)
1186814	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586828, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1186813	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586828, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1186812	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586828, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1186810	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586826, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1186809	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586827, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1186808	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586827, 5338175 +/- - 1m		Present	Yes	Not known (or uncertain)
1186806	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586822, 5338177 +/- - 1m		Present	Yes	Not known (or uncertain)
1175043	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587294, 5338379 +/- - 1m		Present	Yes	Not known (or uncertain)
1175042	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587292, 5338380 +/- - 1m		Present	Yes	Not known (or uncertain)
1175040	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587300, 5338378 +/- - 1m		Present	Yes	Not known (or uncertain)
1175039	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587288, 5338377 +/- - 1m		Present	Yes	Not known (or uncertain)
1175037	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587289, 5338371 +/- - 1m		Present	Yes	Not known (or uncertain)
1175036	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587289, 5338368 +/- - 1m		Present	Yes	Not known (or uncertain)
1175034	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587291, 5338362 +/- - 1m		Present	Yes	Not known (or uncertain)
1175033	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587298, 5338361 +/- - 1m		Present	Yes	Not known (or uncertain)
1175032	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587298, 5338359 +/- - 1m		Present	Yes	Not known (or uncertain)
1175031	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587291, 5338360 +/- - 1m		Present	Yes	Not known (or uncertain)
1175030	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587293, 5338358 +/- - 1m		Present	Yes	Not known (or uncertain)
1175028	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587293, 5338356 +/- - 1m		Present	Yes	Not known (or uncertain)
1175027	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587149, 5338356 +/- - 1m		Present	Yes	Not known (or uncertain)
1175025	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587292, 5338355 +/- - 1m		Present	Yes	Not known (or uncertain)

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1175024	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587300, 5338352 +/- -1m		Present	Yes	Not known (or uncertain)
1175022	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587291, 5338350 +/- -1m		Present	Yes	Not known (or uncertain)
1175021	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587289, 5338348 +/- -1m		Present	Yes	Not known (or uncertain)
1175019	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587291, 5338346 +/- -1m		Present	Yes	Not known (or uncertain)
1175018	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587292, 5338344 +/- -1m		Present	Yes	Not known (or uncertain)
1175016	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587291, 5338342 +/- -1m		Present	Yes	Not known (or uncertain)
1175015	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587293, 5338341 +/- -1m		Present	Yes	Not known (or uncertain)
1175013	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587120, 5338324 +/- -1m		Present	Yes	Not known (or uncertain)
1175012	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	586577, 5338185 +/- -1m		Present	Yes	Not known (or uncertain)
1175010	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587490, 5338101 +/- -1m		Present	Yes	Not known (or uncertain)
1175009	Nassella trichotoma	serrated tussock	N. Meadows (6353)	01-Jan-2008	585815, 5337668 +/- -1m		Present	Yes	Not known (or uncertain)
1175007	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587263, 5337511 +/- -1m		Present	Yes	Not known (or uncertain)
1175006	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587266, 5337510 +/- -1m		Present	Yes	Not known (or uncertain)
1175005	Nassella trichotoma	serrated tussock	N. Meadows (6353)	23-Jun-2008	587222, 5337338 +/- -1m		Present	Yes	Not known (or uncertain)
1175004	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	588521, 5336537 +/- -1m		Present	Yes	Not known (or uncertain)
1175003	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	588478, 5336535 +/- -1m		Present	Yes	Not known (or uncertain)
1175002	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	588495, 5336517 +/- -1m		Present	Yes	Not known (or uncertain)
1175001	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	588465, 5336357 +/- -1m		Present	Yes	Not known (or uncertain)
1174999	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	586682, 5335314 +/- -1m		Present	Yes	Not known (or uncertain)
1174998	Nassella trichotoma	serrated tussock	Nicky Meeson (5963)	23-Oct-2007	586690, 5335303 +/- -1m		Present	Yes	Not known (or uncertain)
1176555	Nassella trichotoma	serrated tussock	N. Meadows (6353)	30-May-2008	585950, 5337791 +/- -1m		Present	Yes	Not known (or uncertain)
1176554	Nassella trichotoma	serrated tussock	N. Meadows (6353)	30-May-2008	586056, 5337687 +/- -1m		Present	Yes	Not known (or uncertain)
1338967	Nassella trichotoma	serrated tussock	Jarrod MacLaine (24005)	01-Nov-2012	588351, 5336837 +/-10m		Present	Yes	
1338966	Nassella trichotoma	serrated tussock	Jarrod MacLaine (24005)	01-Nov-2012	588318, 5336830 +/-10m		Present	Yes	
1338965	Nassella trichotoma	serrated tussock	Jarrod MacLaine (24005)	01-Nov-2012	588294, 5337024 +/-10m		Present	Yes	
1338964	Nassella trichotoma	serrated tussock	Jarrod MacLaine (24005)	01-Nov-2012	588284, 5337022 +/-10m		Present	Yes	
1338963	Nassella trichotoma	serrated tussock	Jarrod MacLaine (24005)	31-Oct-2012	586513, 5335271 +/-10m		Present	Yes	
1338962	Nassella trichotoma	serrated tussock	Jarrod MacLaine (24005)	31-Oct-2012	586540, 5335479 +/-10m		Present	Yes	
1338961	Nassella trichotoma	serrated tussock	Jarrod MacLaine (24005)	31-Oct-2012	586543, 5335508 +/-10m		Present	Yes	
1338936	Nassella trichotoma	serrated tussock	Amanda Brooks (25218)	18-Jul-2012	586559, 5338287 +/-10m		Present	Yes	
1338935	Nassella trichotoma	serrated tussock	Amanda Brooks (25218)	18-Jul-2012	587881, 5336543 +/-10m		Present	Yes	
1178221	Onopordum acanthium	cotton thistle or scotch thistle	K. Graham (4790)	01-Jan-1993	587713, 5337083 +/-100m		Present	Yes	Not known (or uncertain)
1226314	Rubus fruticosus	blackberry	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	
1226186	Rubus fruticosus	blackberry	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	
1269017	Rubus fruticosus	blackberry	Nicky Meeson (5963)	09-Nov-2011	588682, 5335101 +/-10m		Present	Yes	
1269020	Rubus fruticosus	blackberry	Nicky Meeson (5963)	15-Nov-2011	589148, 5335224 +/-10m		Present	Yes	
1269014	Rubus fruticosus	blackberry	Nicky Meeson (5963)	26-Oct-2011	588939, 5334924 +/-10m		Present	Yes	

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1269018	Rubus fruticosus	blackberry	Nicky Meeson (5963)	15-Nov-2011	589089, 5335163 +/- 10m		Present	Yes	
1269016	Rubus fruticosus	blackberry	Nicky Meeson (5963)	09-Nov-2011	588711, 5335048 +/- 10m		Present	Yes	
1269015	Rubus fruticosus	blackberry	Nicky Meeson (5963)	26-Oct-2011	588939, 5334714 +/- 10m		Present	Yes	
1269019	Rubus fruticosus	blackberry	Nicky Meeson (5963)	15-Nov-2011	589096, 5335175 +/- 10m		Present	Yes	
1269051	Ulex europaeus	gorse	Nicky Meeson (5963)	16-Nov-2011	589570, 5335570 +/- 10m		Present	Yes	
1269049	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588748, 5335059 +/- 10m		Present	Yes	
1269040	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588718, 5335048 +/- 10m		Present	Yes	
1269039	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588730, 5335036 +/- 10m		Present	Yes	
1269034	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588968, 5334996 +/- 10m		Present	Yes	
1269032	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588960, 5335070 +/- 10m		Present	Yes	
1269037	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588753, 5335070 +/- 10m		Present	Yes	
1269035	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588961, 5334993 +/- 10m		Present	Yes	
1269045	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588659, 5335124 +/- 10m		Present	Yes	
1269043	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588680, 5335106 +/- 10m		Present	Yes	
1269027	Ulex europaeus	gorse	Nicky Meeson (5963)	02-Nov-2011	588950, 5334771 +/- 10m		Present	Yes	
1269025	Ulex europaeus	gorse	Nicky Meeson (5963)	26-Oct-2011	588971, 5334732 +/- 10m		Present	Yes	
1269042	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588687, 5335113 +/- 10m		Present	Yes	
1269041	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588713, 5335064 +/- 10m		Present	Yes	
1269024	Ulex europaeus	gorse	Nicky Meeson (5963)	26-Oct-2011	588975, 5334764 +/- 10m		Present	Yes	
1269022	Ulex europaeus	gorse	Nicky Meeson (5963)	26-Oct-2011	588941, 5334923 +/- 10m		Present	Yes	
1269030	Ulex europaeus	gorse	Nicky Meeson (5963)	02-Nov-2011	589012, 5334598 +/- 10m		Present	Yes	
1269029	Ulex europaeus	gorse	Nicky Meeson (5963)	02-Nov-2011	588953, 5334700 +/- 10m		Present	Yes	
1167004	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588359, 5340213 +/- -1m		Present	Yes	Not known (or uncertain)
1167003	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588383, 5340224 +/- -1m		Present	Yes	Not known (or uncertain)
1167002	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588368, 5340244 +/- -1m		Present	Yes	Not known (or uncertain)
1167000	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588387, 5340337 +/- -1m		Present	Yes	Not known (or uncertain)
1166999	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588383, 5340354 +/- -1m		Present	Yes	Not known (or uncertain)
1166997	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588419, 5340385 +/- -1m		Present	Yes	Not known (or uncertain)
1166996	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588422, 5340389 +/- -1m		Present	Yes	Not known (or uncertain)
1166994	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588413, 5340531 +/- -1m		Present	Yes	Not known (or uncertain)
1166993	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588377, 5340503 +/- -1m		Present	Yes	Not known (or uncertain)
1166992	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588395, 5340485 +/- -1m		Present	Yes	Not known (or uncertain)
1166990	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588330, 5340377 +/- -1m		Present	Yes	Not known (or uncertain)

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1166989	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588306, 5340375 +/- - 1m		Present	Yes	Not known (or uncertain)
1166987	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588308, 5340339 +/- - 1m		Present	Yes	Not known (or uncertain)
1166986	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588292, 5340355 +/- - 1m		Present	Yes	Not known (or uncertain)
1166697	Ulex europaeus	gorse	Unknown Unknown (21598)	11-Feb-2003	587882, 5334570 +/- - 1m		Present	Yes	Not known (or uncertain)
1166696	Ulex europaeus	gorse	Unknown Unknown (21598)	11-Feb-2003	587294, 5334683 +/- - 1m		Present	Yes	Not known (or uncertain)
1167294	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589594, 5339161 +/- - 1m		Present	Yes	Not known (or uncertain)
1167293	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589638, 5339250 +/- - 1m		Present	Yes	Not known (or uncertain)
1167292	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589675, 5339271 +/- - 1m		Present	Yes	Not known (or uncertain)
1167290	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	593438, 5340096 +/- - 1m		Present	Yes	Not known (or uncertain)
1167287	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591824, 5340107 +/- - 1m		Present	Yes	Not known (or uncertain)
1167286	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591714, 5340014 +/- - 1m		Present	Yes	Not known (or uncertain)
1167284	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591251, 5339987 +/- - 1m		Present	Yes	Not known (or uncertain)
1167283	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591228, 5339981 +/- - 1m		Present	Yes	Not known (or uncertain)
1167282	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591163, 5339935 +/- - 1m		Present	Yes	Not known (or uncertain)
1167280	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591047, 5339923 +/- - 1m		Present	Yes	Not known (or uncertain)
1167279	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591028, 5339918 +/- - 1m		Present	Yes	Not known (or uncertain)
1166985	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588305, 5340364 +/- - 1m		Present	Yes	Not known (or uncertain)
1166984	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588298, 5340364 +/- - 1m		Present	Yes	Not known (or uncertain)
1166982	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588253, 5340369 +/- - 1m		Present	Yes	Not known (or uncertain)
1166981	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588239, 5340177 +/- - 1m		Present	Yes	Not known (or uncertain)
1166980	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588241, 5340173 +/- - 1m		Present	Yes	Not known (or uncertain)
1166978	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588235, 5340091 +/- - 1m		Present	Yes	Not known (or uncertain)
1166977	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588232, 5340087 +/- - 1m		Present	Yes	Not known (or uncertain)
1166975	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588216, 5340063 +/- - 1m		Present	Yes	Not known (or uncertain)
1166963	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588006, 5340654 +/- - 1m		Present	Yes	Not known (or uncertain)
1166961	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588094, 5340655 +/- - 1m		Present	Yes	Not known (or uncertain)
1166960	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588095, 5340637 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1166959	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588163, 5340581 +/- -1m		Present	Yes	Not known (or uncertain)
1166958	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588160, 5340612 +/- -1m		Present	Yes	Not known (or uncertain)
1166956	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	587783, 5340892 +/- -1m		Present	Yes	Not known (or uncertain)
1166955	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588241, 5340980 +/- -1m		Present	Yes	Not known (or uncertain)
1166954	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	587901, 5341077 +/- -1m		Present	Yes	Not known (or uncertain)
1166952	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588135, 5341123 +/- -1m		Present	Yes	Not known (or uncertain)
1166951	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588189, 5341152 +/- -1m		Present	Yes	Not known (or uncertain)
1165868	Ulex europaeus	gorse	Unknown Unknown (21598)	01-Jan-2001	587793, 5334853 +/- -1m		Present	Yes	Not known (or uncertain)
1165866	Ulex europaeus	gorse	Unknown Unknown (21598)	01-Jan-2001	587219, 5334761 +/- -1m		Present	Yes	Not known (or uncertain)
130706	Ulex europaeus	gorse	Fred Duncan (21730)	19-Oct-1995	588012, 5334783 +/- 100m		Present	Yes	
130666	Ulex europaeus	gorse	Fred Duncan (21730)	19-Oct-1995	587712, 5334683 +/- 100m		Present	Yes	
1269023	Ulex europaeus	gorse	Nicky Meeson (5963)	26-Oct-2011	588939, 5334906 +/- 10m		Present	Yes	
1269028	Ulex europaeus	gorse	Nicky Meeson (5963)	02-Nov-2011	588950, 5334749 +/- 10m		Present	Yes	
1269052	Ulex europaeus	gorse	Nicky Meeson (5963)	16-Nov-2011	589410, 5335585 +/- 10m		Present	Yes	
1269026	Ulex europaeus	gorse	Nicky Meeson (5963)	26-Oct-2011	588985, 5334670 +/- 10m		Present	Yes	
1269031	Ulex europaeus	gorse	Nicky Meeson (5963)	02-Nov-2011	589025, 5334479 +/- 10m		Present	Yes	
1269038	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588744, 5335059 +/- 10m		Present	Yes	
1269033	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588992, 5335067 +/- 10m		Present	Yes	
1269021	Ulex europaeus	gorse	Nicky Meeson (5963)	26-Oct-2011	588953, 5334944 +/- 10m		Present	Yes	
1269036	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588774, 5335046 +/- 10m		Present	Yes	
1269044	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588651, 5335117 +/- 10m		Present	Yes	
1269046	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588677, 5335118 +/- 10m		Present	Yes	
1269050	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588755, 5335060 +/- 10m		Present	Yes	
1269053	Ulex europaeus	gorse	Nicky Meeson (5963)	16-Nov-2011	589509, 5335580 +/- 10m		Present	Yes	
1269048	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588651, 5335155 +/- 10m		Present	Yes	
1269047	Ulex europaeus	gorse	Nicky Meeson (5963)	09-Nov-2011	588654, 5335138 +/- 10m		Present	Yes	
1167650	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588535, 5340040 +/- -1m		Present	Yes	Not known (or uncertain)
1167646	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588392, 5339954 +/- -1m		Present	Yes	Not known (or uncertain)
1167643	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588327, 5340095 +/- -1m		Present	Yes	Not known (or uncertain)
1167638	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588343, 5340084 +/- -1m		Present	Yes	Not known (or uncertain)
1166740	Ulex europaeus	gorse	Unknown Unknown (21598)	15-Feb-2003	587653, 5336753 +/- -1m		Present	Yes	Not known (or uncertain)
1166962	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588019, 5340647 +/- -1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1166957	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588137, 5340674 +/- -1m		Present	Yes	Not known (or uncertain)
1166953	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588041, 5341221 +/- -1m		Present	Yes	Not known (or uncertain)
1166950	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588325, 5341041 +/- -1m		Present	Yes	Not known (or uncertain)
1167297	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589750, 5339064 +/- -1m		Present	Yes	Not known (or uncertain)
1167001	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588366, 5340254 +/- -1m		Present	Yes	Not known (or uncertain)
1165934	Ulex europaeus	gorse	Unknown Unknown (21598)	11-Feb-2003	587655, 5336751 +/- -1m		Present	Yes	Not known (or uncertain)
1166998	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588409, 5340387 +/- -1m		Present	Yes	Not known (or uncertain)
1166995	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588484, 5340500 +/- -1m		Present	Yes	Not known (or uncertain)
1166991	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588357, 5340438 +/- -1m		Present	Yes	Not known (or uncertain)
1166988	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588305, 5340314 +/- -1m		Present	Yes	Not known (or uncertain)
1166367	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Oct-2000	588613, 5336883 +/- -1m		Present	Yes	Not known (or uncertain)
1165867	Ulex europaeus	gorse	Unknown Unknown (21598)	01-Jan-2001	587541, 5334917 +/- -1m		Present	Yes	Not known (or uncertain)
1166206	Ulex europaeus	gorse	Unknown Unknown (21598)	04-Sep-2002	588828, 5335320 +/- -1m		Present	Yes	Not known (or uncertain)
1167068	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588313, 5340907 +/- -1m		Present	Yes	Not known (or uncertain)
1167064	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588380, 5340639 +/- -1m		Present	Yes	Not known (or uncertain)
1167657	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588491, 5340370 +/- -1m		Present	Yes	Not known (or uncertain)
1167654	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588420, 5340276 +/- -1m		Present	Yes	Not known (or uncertain)
1167060	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588281, 5340503 +/- -1m		Present	Yes	Not known (or uncertain)
1167295	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589652, 5339228 +/- -1m		Present	Yes	Not known (or uncertain)
1167291	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589724, 5339286 +/- -1m		Present	Yes	Not known (or uncertain)
1167288	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	592643, 5340351 +/- -1m		Present	Yes	Not known (or uncertain)
1167285	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591679, 5340021 +/- -1m		Present	Yes	Not known (or uncertain)
1167281	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	591102, 5339926 +/- -1m		Present	Yes	Not known (or uncertain)
1166983	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588294, 5340363 +/- -1m		Present	Yes	Not known (or uncertain)
1166979	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588219, 5340090 +/- -1m		Present	Yes	Not known (or uncertain)
1226720	Ulex europaeus	gorse	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	
1226587	Ulex europaeus	gorse	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1167752	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	590498, 5339644 +/- - 1m		Present	Yes	Not known (or uncertain)
1167751	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	590252, 5339529 +/- - 1m		Present	Yes	Not known (or uncertain)
1167750	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589977, 5339406 +/- - 1m		Present	Yes	Not known (or uncertain)
1167659	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588590, 5340005 +/- - 1m		Present	Yes	Not known (or uncertain)
1167658	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588523, 5340394 +/- - 1m		Present	Yes	Not known (or uncertain)
1167656	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588507, 5340374 +/- - 1m		Present	Yes	Not known (or uncertain)
1167655	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588482, 5340300 +/- - 1m		Present	Yes	Not known (or uncertain)
1167653	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588380, 5340354 +/- - 1m		Present	Yes	Not known (or uncertain)
1167652	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588496, 5340310 +/- - 1m		Present	Yes	Not known (or uncertain)
1167651	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588431, 5340221 +/- - 1m		Present	Yes	Not known (or uncertain)
1167649	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588442, 5339942 +/- - 1m		Present	Yes	Not known (or uncertain)
1167648	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588411, 5339967 +/- - 1m		Present	Yes	Not known (or uncertain)
1167647	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588387, 5339979 +/- - 1m		Present	Yes	Not known (or uncertain)
1167645	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588393, 5339946 +/- - 1m		Present	Yes	Not known (or uncertain)
1167644	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588357, 5339957 +/- - 1m		Present	Yes	Not known (or uncertain)
1167642	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588330, 5340043 +/- - 1m		Present	Yes	Not known (or uncertain)
1167641	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588313, 5340018 +/- - 1m		Present	Yes	Not known (or uncertain)
1167640	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588318, 5340013 +/- - 1m		Present	Yes	Not known (or uncertain)
1167639	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588342, 5340080 +/- - 1m		Present	Yes	Not known (or uncertain)
1167298	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589710, 5339105 +/- - 1m		Present	Yes	Not known (or uncertain)
1167296	Ulex europaeus	gorse	Unknown Unknown (21598)	31-May-2006	589672, 5339206 +/- - 1m		Present	Yes	Not known (or uncertain)
1166949	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588300, 5340930 +/- - 1m		Present	Yes	Not known (or uncertain)
1167067	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588305, 5340896 +/- - 1m		Present	Yes	Not known (or uncertain)
1167066	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588335, 5340894 +/- - 1m		Present	Yes	Not known (or uncertain)
1167065	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588338, 5340725 +/- - 1m		Present	Yes	Not known (or uncertain)
1167063	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588315, 5340557 +/- - 1m		Present	Yes	Not known (or uncertain)
1167062	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588279, 5340562 +/- - 1m		Present	Yes	Not known (or uncertain)

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Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1167061	Ulex europaeus	gorse	Unknown Unknown (21598)	26-Aug-2005	588281, 5340556 +/- -1m		Present	Yes	Not known (or uncertain)
1167008	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588369, 5340153 +/- -1m		Present	Yes	Not known (or uncertain)
1167007	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588351, 5340186 +/- -1m		Present	Yes	Not known (or uncertain)
1167005	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588362, 5340202 +/- -1m		Present	Yes	Not known (or uncertain)
959066	Ulex europaeus	gorse	N Jones (1787),Dean Vincent (7841)	31-May-2006	592790, 5340177 +/- 250m		Present	Yes	
959075	Ulex europaeus	gorse	N Jones (1787),Dean Vincent (7841)	31-May-2006	590147, 5339362 +/- 250m		Present	Yes	
911005	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	586406, 5341892 +/- 108m		Present	Yes	
910954	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	586043, 5342035 +/- 176m		Present	Yes	
910923	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	589211, 5339037 +/- 177m		Present	Yes	
910903	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	588121, 5333248 +/- 242m		Present	Yes	
910166	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	588505, 5333257 +/- 336m		Present	Yes	
910904	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	587304, 5333632 +/- 100m		Present	Yes	
910950	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	589666, 5342051 +/- 197m		Present	Yes	
910931	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	588513, 5340983 +/- 127m		Present	Yes	
910924	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	587570, 5336709 +/- 88m		Present	Yes	
910956	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	588191, 5342517 +/- 418m		Present	Yes	
910955	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	590822, 5340733 +/- 192m		Present	Yes	
910953	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	586863, 5342584 +/- 146m		Present	Yes	
910951	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	589077, 5341741 +/- 145m		Present	Yes	
910949	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	590996, 5340255 +/- 127m		Present	Yes	
910925	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	588360, 5335048 +/- 119m		Present	Yes	
910922	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	587307, 5335707 +/- 1711m		Present	Yes	
910921	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	588164, 5333604 +/- 415m		Present	Yes	
910230	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	588505, 5340307 +/- 203m		Present	Yes	
910199	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	588320, 5342219 +/- 173m		Present	Yes	
910198	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	586806, 5342131 +/- 171m		Present	Yes	
910194	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	590016, 5340780 +/- 303m		Present	Yes	
910193	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	590046, 5341751 +/- 920m		Present	Yes	
910170	Ulex europaeus	gorse	Paul G. Black (1916)	01-Jun-2001	589896, 5340541 +/- 321m		Present	Yes	
910168	Ulex europaeus	gorse	Anne Kitchener (3289)	01-Apr-2001	587356, 5333902 +/- 107m		Present	Yes	
1205913	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588875, 5333955 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205907	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588832, 5333918 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205900	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588728, 5333867 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205898	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588704, 5333802 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	

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1205893	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588677, 5333892 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205886	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588644, 5333910 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205901	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588738, 5333855 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205916	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588906, 5333883 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205912	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588870, 5333892 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205908	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588839, 5333802 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205905	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588778, 5333915 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205896	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588688, 5333918 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205892	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588677, 5333758 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205888	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588664, 5333916 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205915	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588892, 5333920 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205914	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588884, 5333952 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205911	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588870, 5333936 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205910	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588864, 5333935 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205909	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588852, 5333922 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205906	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588782, 5333900 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205904	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588769, 5333789 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205903	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588765, 5333890 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205902	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588751, 5333884 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205899	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588726, 5333951 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205897	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588689, 5333867 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205895	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588685, 5333837 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205894	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588683, 5333946 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205891	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588675, 5333929 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205890	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588675, 5333783 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205889	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588671, 5333869 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205887	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588659, 5333927 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	

Tas Management Act Weeds within 5000 m

Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1205885	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588643, 5333893 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
1205884	Ulex europaeus	gorse	Mark Wapstra (1621)	03-Jan-2011	588642, 5333878 +/- 5m	Lot 1, Old Spring Bay Road, Swansea	Present	Yes	
782897	Ulex europaeus	gorse	Alexander McGregor Buchanan (1467)	17-Mar-1993	587912, 5333633 +/- 200m		Present	Yes	
773256	Ulex europaeus	gorse	Alexander McGregor Buchanan (1467)	17-Mar-1993	591228, 5339683 +/- 2880m		Present	Yes	
1226716	Ulex europaeus	gorse	Unknown Unknown (21598)	08-Jan-1995	LineString		Present	Yes	
1166976	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588228, 5340087 +/- -1m		Present	Yes	Not known (or uncertain)
1167006	Ulex europaeus	gorse	Unknown Unknown (21598)	09-Sep-2005	588365, 5340191 +/- -1m		Present	Yes	Not known (or uncertain)

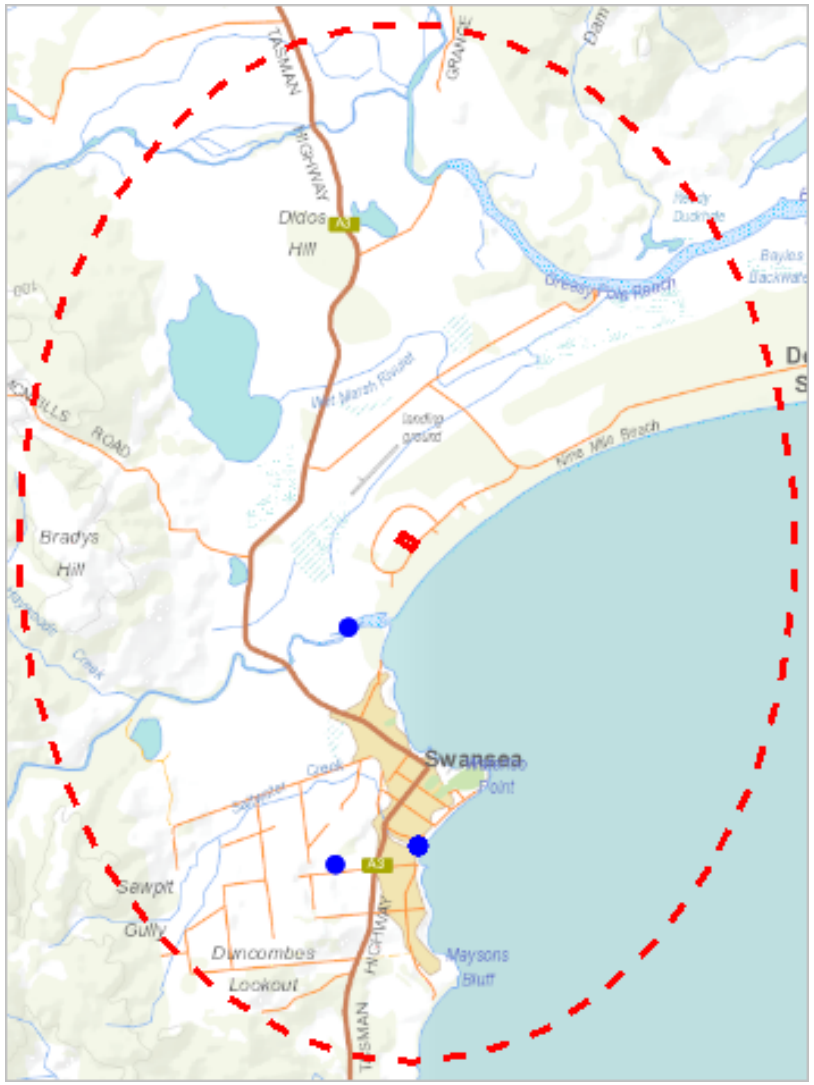
Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area.
http://www.dpipwe.tas.gov.au/inter.nsf/WebPages/TPRY-52J8Z3?open

*** No Priority Weeds found within 500 metres ***

Priority Weeds within 5000 m

592908, 5343314



584892, 5332688

Priority Weeds within 5000 m

Priority Weeds within 5000 m

Verified Records

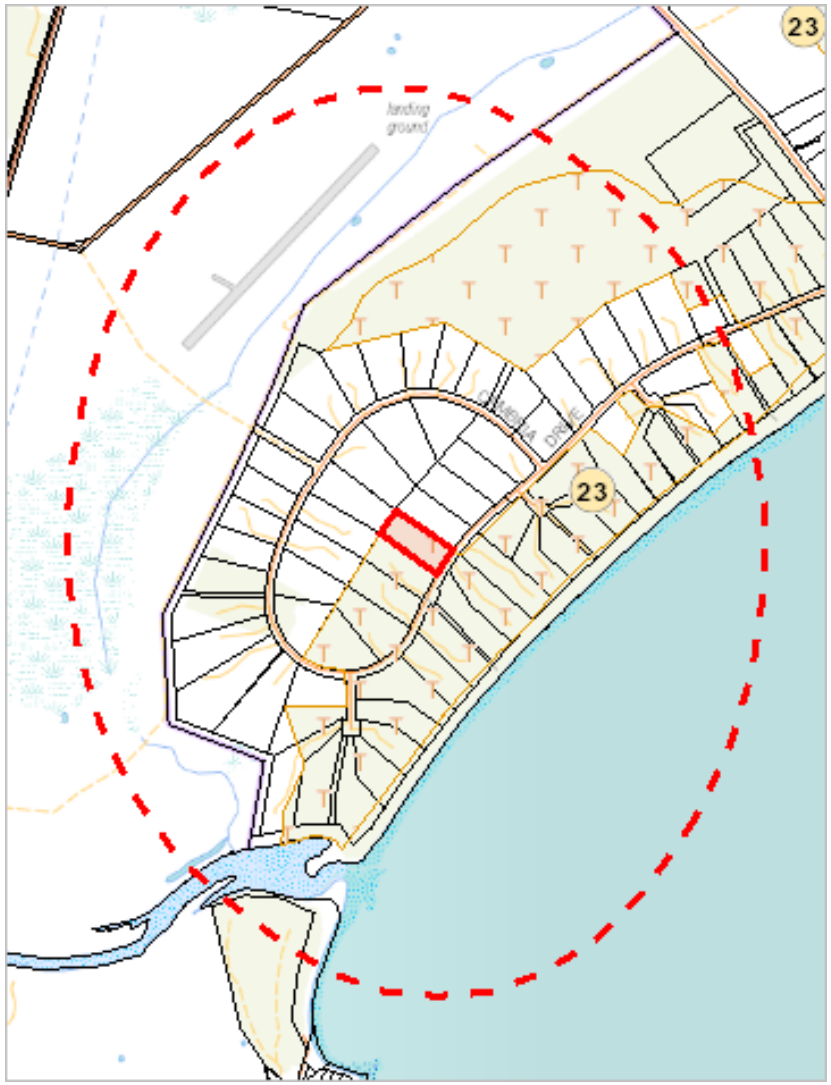
Id	Species	Common Name	Observers	Date	Easting/Northing GDA94 Zone 55	Location Description	WMA	Wons Density	Data Source
1269479	Acacia howittii	sticky wattle	Nicky Meeson (5963)	06-Nov-2011	588970, 5335040 +/- 1000m		Present	No	
1269537	Billardiera heterophylla	bluebell creeper	Nicky Meeson (5963)	06-Nov-2011	588970, 5335040 +/- 1000m		Present	No	
1269610	Echium candicans	pride of madeira	Nicky Meeson (5963)	06-Nov-2011	588970, 5335040 +/- 1000m		Present	No	
1170895	Juncus acutus	sharp rush	Greg Stewart (5988)	27-Feb-2009	588155, 5334870 +/- 1000m		Present	No	Not known (or uncertain)
1269702	Pittosporum undulatum	australian daphne, victorian box, mock orange, sweet pittosporum or victorian laurel	Nicky Meeson (5963)	06-Nov-2011	588970, 5335040 +/- 1000m		Present	No	
1269709	Polygala myrtifolia	myrtleleaf milkwort	Nicky Meeson (5963)	06-Nov-2011	588970, 5335040 +/- 1000m		Present	No	
773220	Verbascum thapsus	great mullein	Alexander McGregor Buchanan (1467)	17-Mar-1993	588312, 5337183 +/- 50m		Present	No	

Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area.
http://www.dpipwe.tas.gov.au/inter.nsf/WebPages/TPRY-52J8Z3?open

Threatened Communities (TNVC 2014) within 1000 metres

589890, 5339297



587907, 5336724

Threatened Communities (TNVC 2014) within 1000 metres

Legend: Threatened Communities

- 1 - Alkaline pans
- 2 - Allocasuarina littoralis forest
- 3 - Athrotaxis cupressoides/Nothofagus gunnii short rainforest
- 4 - Athrotaxis cupressoides open woodland
- 5 - Athrotaxis cupressoides rainforest
- 6 - Athrotaxis selaginoides/Nothofagus gunni short rainforest
- 7 - Athrotaxis selaginoides rainforest
- 8 - Athrotaxis selaginoides subalpine scrub
- 9 - Banksia marginata wet scrub
- 10 - Banksia serrata woodland
- 11 - Callitris rhomboidea forest
- 13 - Cushion moorland
- 14 -Eucalyptus amygdalina forest and woodland on sandstone
- 15 - Eucalyptus amygdalina inland forest and woodland on cainozoic deposits
- 16 - Eucalyptus brookeriana wet forest
- 17 - Eucalyptus globulus dry forest and woodland
- 18 - Eucalyptus globulus King Island forest
- 19 - Eucalyptus morrisbyi forest and woodland
- 20 - Eucalyptus ovata forest and woodland
- 21 - Eucalyptus risdonii forest and woodland
- 22 - Eucalyptus tenuiramis forest and woodland on sediments
- 23 - Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland
- 24 - Eucalyptus viminalis Furneaux forest and woodland
- 25 - Eucalyptus viminalis wet forest
- 26 - Heathland on calcareous substrates
- 27 - Heathland scrub complex at Wingaroo
- 28 - Highland grassy sedgeland
- 29 - Highland Poa grassland
- 30 - Melaleuca ericifolia swamp forest
- 31 - Melaleuca pustulata scrub
- 32 - Notelaea - Pomaderris - Beyeria forest
- 33 - Rainforest fernland
- 34 - Riparian scrub
- 35 - Seabird rookery complex
- 36 - Sphagnum peatland
- 36A - Spray zone coastal complex
- 37 - Subalpine Diplarrena latifolia rushland
- 38 - Subalpine Leptospermum nitidum woodland
- 39 - Wetlands

Legend: Cadastral Parcels

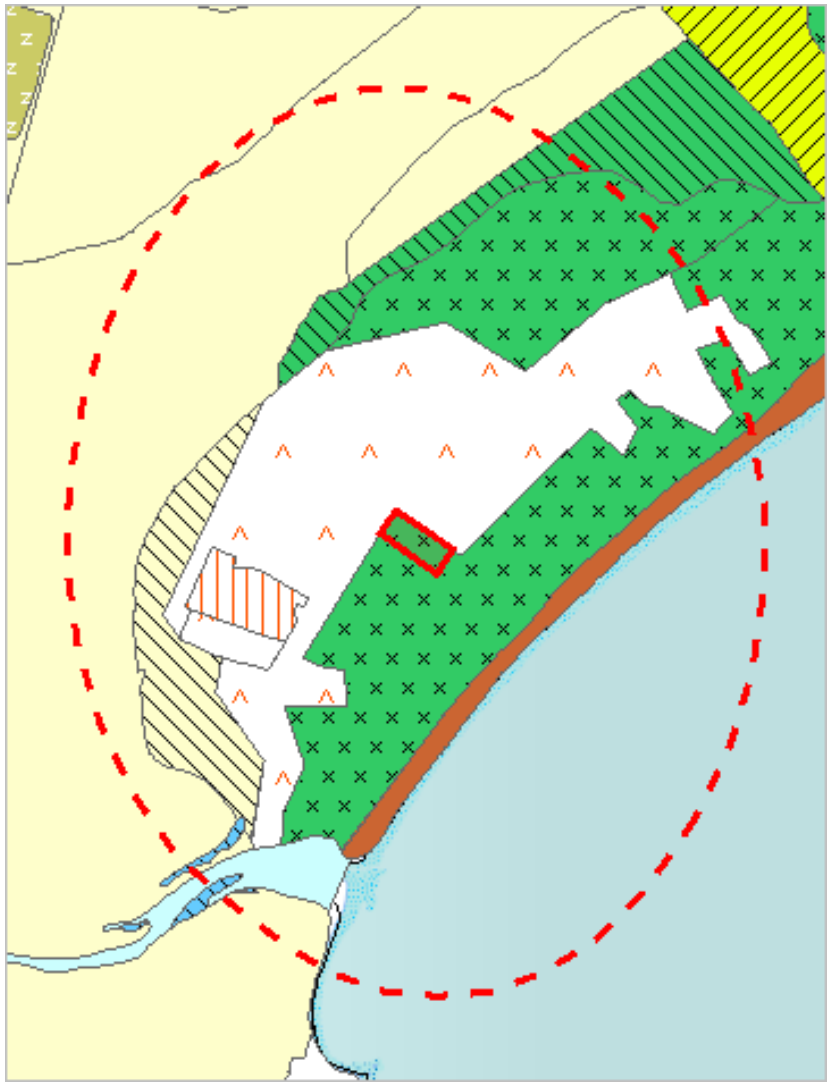
Threatened Communities (TNVC 2014) within 1000 metres

Scheduled Community Id	Scheduled Community Name
23	Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland

For more information contact: Coordinator, Tasmanian Vegetation Monitoring and Mapping Program, Conservation Values Information Section.
Telephone: (03) 6165 4320
Email: TVMMPSupport@dpipwe.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

TASVEG 3.0 Communities within 1000 metres

589890, 5339297



587907, 5336724

TASVEG 3.0 Communities within 1000 metres

Legend: TASVEG 3.0

- DAC - Eucalyptus amygdalina coastal forest and woodland
- DAD - Eucalyptus amygdalina forest and woodland on dolerite
- DAS - Eucalyptus amygdalina forest and woodland on sandstone
- DAM - Eucalyptus amygdalina forest on mudstone
- DAZ - Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits
- DSC - Eucalyptus amygdalina - Eucalyptus obliqua damp sclerophyll forest
- DBA - Eucalyptus barberi forest and woodland
- DCO - Eucalyptus coccifera forest and woodland
- DCR - Eucalyptus cordata forest
- DDP - Eucalyptus dalrympleana - Eucalyptus pauciflora forest and woodland
- DDE - Eucalyptus delegatensis dry forest and woodland
- DGL - Eucalyptus globulus dry forest and woodland
- DGW - Eucalyptus gunnii woodland
- DMO - Eucalyptus morrisbyi forest and woodland
- DNI - Eucalyptus nitida dry forest and woodland
- DNF - Eucalyptus nitida Furneaux forest
- DOB - Eucalyptus obliqua dry forest
- DOV - Eucalyptus ovata forest and woodland
- DOW - Eucalyptus ovata heathy woodland
- DPO - Eucalyptus pauciflora forest and woodland not on dolerite
- DPD - Eucalyptus pauciflora forest and woodland on dolerite
- DPE - Eucalyptus perriniana forest and woodland
- DPU - Eucalyptus pulchella forest and woodland
- DRI - Eucalyptus risdonii forest and woodland
- DRO - Eucalyptus rodwayi forest and woodland
- DSO - Eucalyptus sieberi forest and woodland not on granite
- DSG - Eucalyptus sieberi forest and woodland on granite
- DTD - Eucalyptus tenuiramis forest and woodland on dolerite
- DTG - Eucalyptus tenuiramis forest and woodland on granite
- DTO - Eucalyptus tenuiramis forest and woodland on sediments
- DVF - Eucalyptus viminalis Furneaux forest and woodland
- DVG - Eucalyptus viminalis grassy forest and woodland
- DVC - Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland
- DKW - King Island Eucalypt woodland
- DMW - Midlands woodland complex
- WBR - Eucalyptus brookeriana wet forest
- WDA - Eucalyptus dalrympleana forest
- WDL - Eucalyptus delegatensis forest over Leptospermum
- WDR - Eucalyptus delegatensis forest over rainforest
- WDB - Eucalyptus delegatensis forest with broad-leaf shrubs
- WDU - Eucalyptus delegatensis wet forest (undifferentiated)
- WGK - Eucalyptus globulus King Island forest
- WGL - Eucalyptus globulus wet forest
- WNL - Eucalyptus nitida forest over Leptospermum
- WNR - Eucalyptus nitida forest over rainforest
- WNU - Eucalyptus nitida wet forest (undifferentiated)
- WOL - Eucalyptus obliqua forest over Leptospermum
- WOR - Eucalyptus obliqua forest over rainforest
- WOB - Eucalyptus obliqua forest with broad-leaf shrubs
- WOU - Eucalyptus obliqua wet forest (undifferentiated)
- WRE - Eucalyptus regnans forest
- WSU - Eucalyptus subcrenulata forest and woodland
- WVI - Eucalyptus viminalis wet forest
- RPF - Athrotaxis cupressoides - Nothofagus gunnii short rainforest
- RPW - Athrotaxis cupressoides open woodland
- RPP - Athrotaxis cupressoides rainforest
- RKF - Athrotaxis selaginoides - Nothofagus gunnii short rainforest
- RKP - Athrotaxis selaginoides rainforest
- RKS - Athrotaxis selaginoides subalpine scrub

TASVEG 3.0 Communities within 1000 metres

RCO - Coastal rainforest
RSH - Highland low rainforest and scrub
RKX - Highland rainforest scrub with dead Athrotaxis selaginoides
RHP - Lagarostrobos franklinii rainforest and scrub
RMT - Nothofagus - Atherosperma rainforest
RML - Nothofagus - Leptospermum short rainforest
RMS - Nothofagus - Phyllocladus short rainforest
RFS - Nothofagus gunnii rainforest and scrub
RMU - Nothofagus rainforest (undifferentiated)
RFE - Rainforest fernland
NAD - Acacia dealbata forest
NAR - Acacia melanoxylon forest on rises
NAF - Acacia melanoxylon swamp forest
NAL - Allocasuarina littoralis forest
NAV - Allocasuarina verticillata forest
NBS - Banksia serrata woodland
NBA - Bursaria - Acacia woodland and scrub
NCR - Callitris rhomboidea forest
NLE - Leptospermum forest
NLM - Leptospermum lanigerum - Melaleuca squarrosa swamp forest
NLA - Leptospermum scoparium - Acacia mucronata forest
NME - Melaleuca ericifolia swamp forest
NLN - Subalpine Leptospermum nitidum woodland
AHF - Fresh water aquatic herbland
ASF - Freshwater aquatic sedgeland and rushland
AHL - Lacustrine herbland
AHS - Saline aquatic herbland
ARS - Saline sedgeland/rushland
AUS - Saltmarsh (undifferntiated)
ASS - Succulent saline herbland
AWU - Wetland (undifferentiated)
SAL - Acacia longifolia coastal scrub
SBM - Banksia marginata wet scrub
SBR - Broad-leaf scrub
SCH - Coastal heathland
SSC - Coastal scrub
SCA - Coastal scrub on alkaline sands
SRE - Eastern riparian scrub
SED - Eastern scrub on dolerite
SCL - Heathland on calcareous substrates
SKA - Kunzea ambigua regrowth scrub
SLG - Leptospermum glaucescens heathland and scrub
SLL - Leptospermum lanigerum scrub
SLS - Leptospermum scoparium heathland and scrub
SLW - Leptospermum scrub
SRF - Leptospermum with rainforest scrub
SMP - Melaleuca pustulata scrub
SMM - Melaleuca squamea heathland
SMR - Melaleuca squarrosa scrub
SRH - Rookery halophytic herbland
SSK - Scrub complex on King Island
SSZ - Spray zone coastal complex
SHS - Subalpine heathland
SWR - Western regrowth complex
SSW - Western subalpine scrub
SWW - Western wet scrub
SHW - Wet heathland
HCH - Alpine coniferous heathland
HCM - Cushion moorland
HHE - Eastern alpine heathland
HSE - Eastern alpine sedgeland

TASVEG 3.0 Communities within 1000 metres

HUE - Eastern alpine vegetation (undifferentiated)
HHW - Western alpine heathland
HSW - Western alpine sedgeland/herbland
MAP - Alkaline pans
MBU - Buttongrass moorland (undifferentiated)
MBS - Buttongrass moorland with emergent shrubs
MBE - Eastern buttongrass moorland
MGH - Highland grassy sedgeland
MBP - Pure buttongrass moorland
MRR - Restionaceae rushland
MBR - Sparse buttongrass moorland on slopes
MSP - Sphagnum peatland
MDS - Subalpine Diplarrena latifolia rushland
MBW - Western buttongrass moorland
MSW - Western lowland sedgeland
GHC - Coastal grass and herbfield
GPH - Highland Poa grassland
GCL - Lowland grassland complex
GSL - Lowland grassy sedgeland
GPL - Lowland Poa labillardierei grassland
GTL - Lowland Themeda triandra grassland
GRP - Rockplate grassland
FAG - Agricultural land
FUM - Extra-urban miscellaneous
FMG - Marram grassland
FPE - Permanent easements
FPL - Plantations for silviculture
FPF - Pteridium esculentum fernland
FRG - Regenerating cleared land
FSM - Spartina marshland
FPU - Unverified plantations for silviculture
FUR - Urban areas
FWU - Weed infestation
ORO - Lichen lithosere
OSM - Sand, mud
OAQ - Water, sea

Legend: Cadastral Parcels

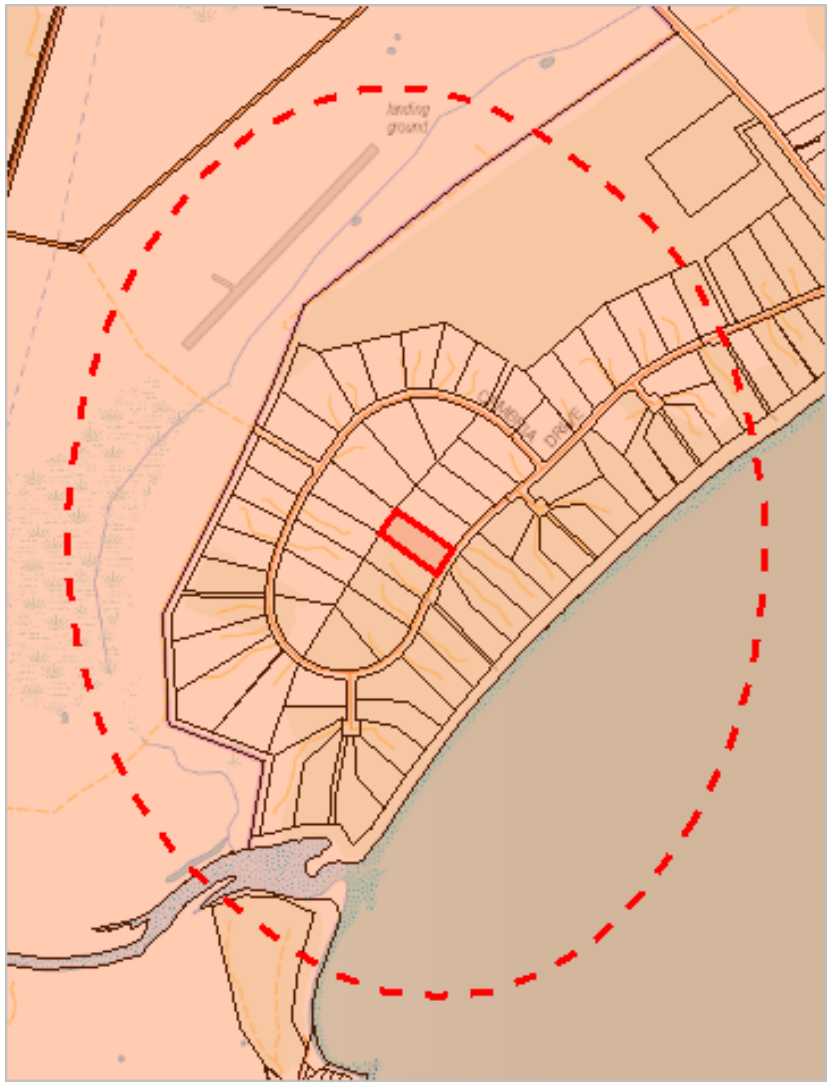
TASVEG 3.0 Communities within 1000 metres

Code	Community	Emergent Species
FUR	(FUR) Urban areas	
ARS	(ARS) Saline sedgeland/rushland	
ARS	(ARS) Saline sedgeland/rushland	
FAG	(FAG) Agricultural land	
FRG	(FRG) Regenerating cleared land	
FPU	(FPU) Unverified plantations for silviculture	
DVC	(DVC) Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland	
SAL	(SAL) Acacia longifolia coastal scrub	
FAG	(FAG) Agricultural land	
ARS	(ARS) Saline sedgeland/rushland	
OAQ	(OAQ) Water, sea	
FAG	(FAG) Agricultural land	
DVG	(DVG) Eucalyptus viminalis grassy forest and woodland	EV
FUR	(FUR) Urban areas	
DVC	(DVC) Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland	

For more information contact: Coordinator, Tasmanian Vegetation Monitoring and Mapping Program, Conservation Values Information Section.
Telephone: (03) 6165 4320
Email: TVMMPSupport@dpipwe.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Geoconservation sites within 1000 metres

589890, 5339297



587907, 5336724

Geoconservation sites within 1000 metres

Legend: Geoconservation (NVA)

Legend: Cadastral Parcels

Geoconservation sites within 1000 metres

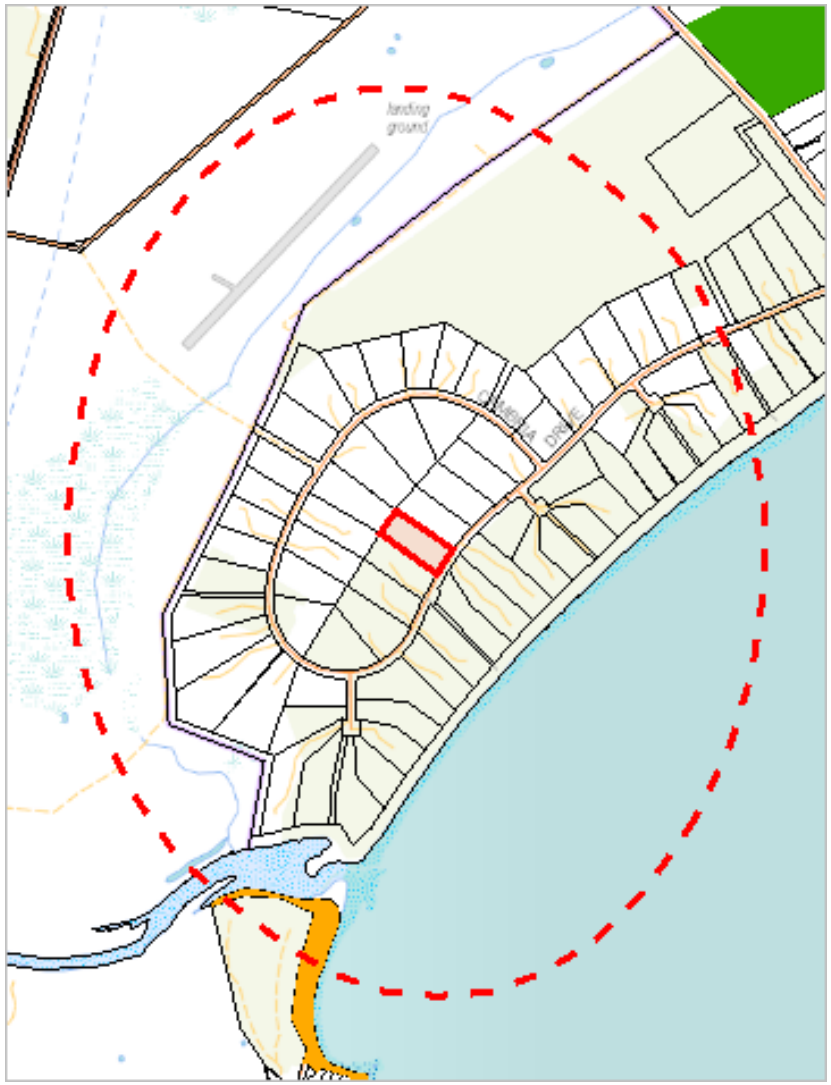
Id	Name	Statement of Significance	Geographical Significance	Status
2410	Moulting Lagoon - Great Oyster Bay	Notable example of type.	Sub-Region	Listed

Note: Restricted sites are not displayed.

For more information about the Geoconservation Database, please visit the website
http://www.dpipwe.tas.gov.au/inter.nsf/WebPages/LBUN-6TY32G?open
or contact the Geoconservation Officer:
Telephone: (03) 6165 4401
Email: Geoconservation.Enquiries@dpipwe.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Reserves within 1000 metres

589890, 5339297



587907, 5336724

Reserves within 1000 metres

Legend: Tasmanian Reserve Estate

- Conservation Area
- Game Reserve
- Historic Site
- Indigenous Protected Area
- National Park
- Nature Reserve
- Nature Recreation Area
- Regional Reserve
- State Reserve
- Wellington Park
- Public authority land within WHA
- Future Reserve Land under the TFA - first proposed reserve order
- Future Reserve Land under the TFA - first proposed reserve order and Informal Reserve on State Forest or Forestry Tas. managed land
- Future Reserve Land under the TFA - second proposed reserve order
- Future Reserve Land under the TFA - second proposed reserve order and Informal Reserve on State Forest or Forestry Tas. managed land
- Informal Reserve on State Forest or Forestry Tas. managed land
- Informal Reserve on other public land
- Conservation Covenant (NCA), Private Nature Reserve and Private Sanctuary
- Private Sanctuary
- Private land within WHA
- Management Agreement
- Part 5 Agreement (Meander Dam Offset)
- Other Private Reserve

Legend: Cadastral Parcels

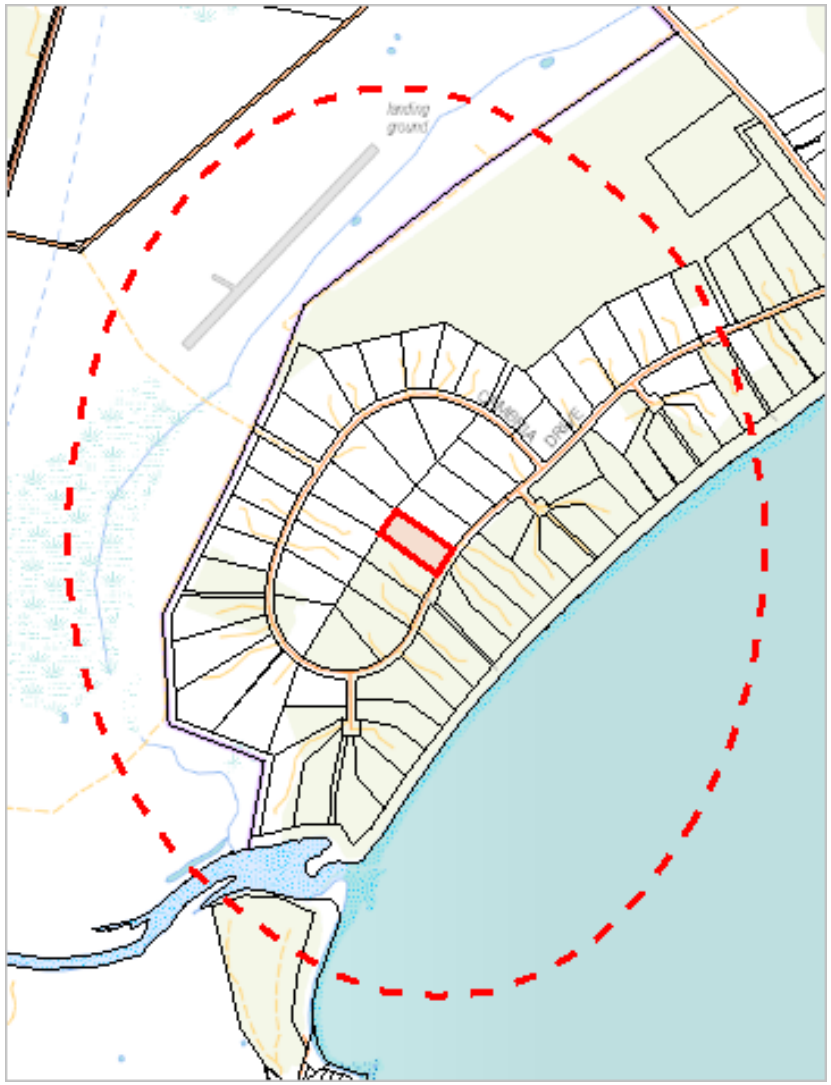
Reserves within 1000 metres

Name	Classification	Status
	Informal Reserve on other public land	Informal Reserve

For more information about the Tasmanian Reserve Estate, please contact the Sustainable Land Use and Information Management Branch.
Telephone: (03) 6233 2744
Fax: (03) 6223 8603
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Known biosecurity risks within 1000 meters

589890, 5339297



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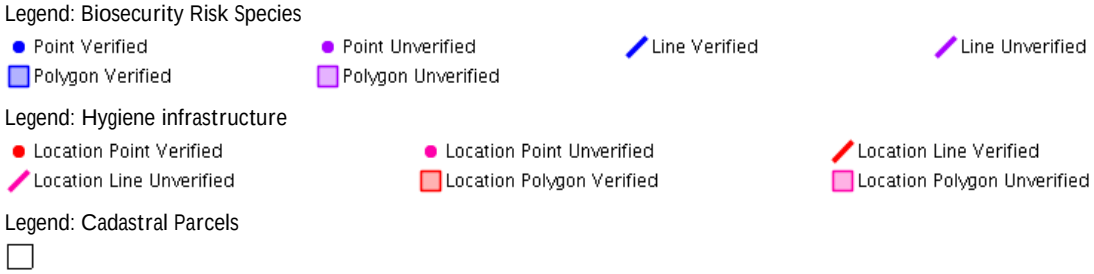
Known biosecurity risks within 1000 meters



Known biosecurity risks within 1000 meters

Species of biosecurity risk

No known species of biosecurity risk found within 1000 metres

Generic Biosecurity Guidelines

The level and type of hygiene protocols required will vary depending on the tenure, activity and land use of the area. In all cases adhere to the land manager's biosecurity (hygiene) protocols. As a minimum always Check / Clean / Dry (Disinfect) clothing and equipment before trips and between sites within a trip as needed http://www.dpipwe.tas.gov.au/inter.nsf/Publications/LBUN-8896DT?open

On Reserved land, the more remote, infrequently visited and undisturbed areas require tighter biosecurity measures.

In addition, where susceptible species and communities are known to occur, tighter biosecurity measures are required.

Apply controls relevant to the area / activity:

- Don't access sites infested with pathogen or weed species unless absolutely necessary. If it is necessary to visit, adopt high level hygiene protocols.
- Consider not accessing non-infested sites containing known susceptible species / communities. If it is necessary to visit, adopt high level hygiene protocols.
- Don't undertake activities that might spread pest / pathogen / weed species such as deliberately moving soil or water between areas.
- Modify / restrict activities to reduce the chance of spreading pest / pathogen / weed species e.g. avoid periods when weeds are seeding, avoid clothing/equipment that excessively collects soil and plant material e.g. Velcro, excessive tread on boots.
- Plan routes to visit clean (uninfested) sites prior to dirty (infested) sites. Do not travel through infested areas when moving between sites.
- Minimise the movement of soil, water, plant material and hitchhiking wildlife between areas by using the Check / Clean / Dry (Disinfect when drying is not possible) procedure for all clothing, footwear, equipment, hand tools and vehicles http://www.dpipwe.tas.gov.au/inter.nsf/ThemeNodes/SLEN-5NU68G?open
- Neoprene and netting can take 48 hours to dry, use non-porous gear wherever possible.
- Use walking track boot wash stations where available.
- Keep a hygiene kit in the vehicle that includes a scrubbing brush, boot pick, and disinfectant http://www.dpipwe.tas.gov.au/inter.nsf/Publications/LBUN-8896DT?open
- Dispose of all freshwater away from natural water bodies e.g. do not empty water into streams or ponds.
- Dispose of used disinfectant ideally in town though a treatment or septic system. Always keep disinfectant well away from natural water systems.
- Securely contain any high risk pest / pathogen / weed species that must be collected and moved e.g. biological samples.

Hygiene Infrastructure

No known hygiene infrastructure found within 1000 metres

Australian Government
Department of the Environment

EPBC Act Protected Matters Report

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

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

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

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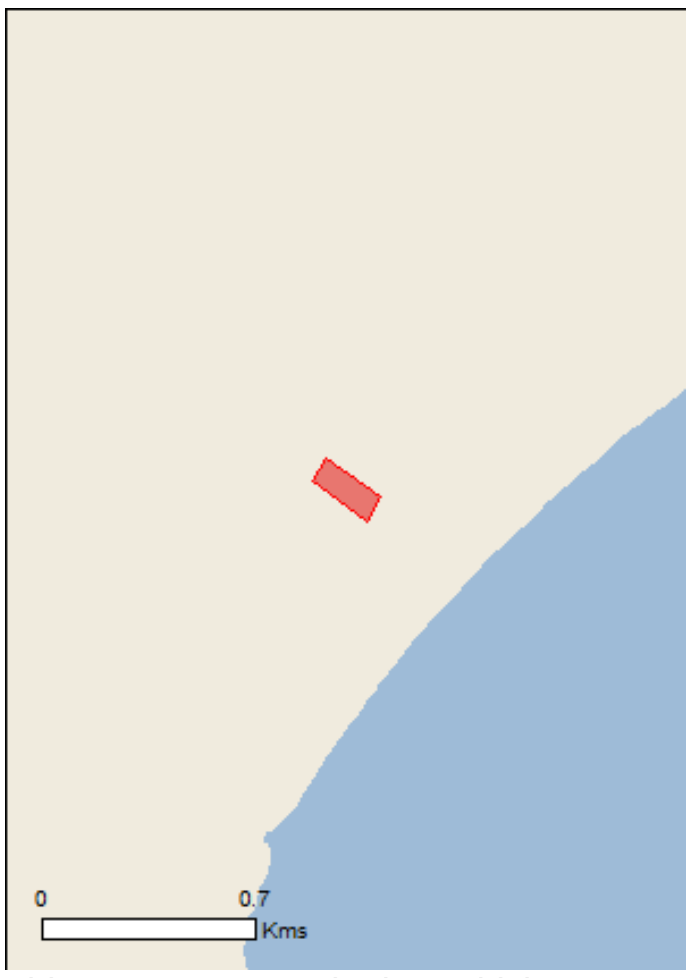
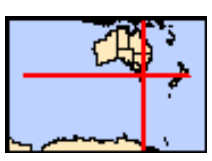


Coordinates
Buffer: 5.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	55
Listed Migratory Species:	39

Other Matters Protected by the EPBC Act

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

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

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	63
Whales and Other Cetaceans:	10
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	5
Regional Forest Agreements:	1
Invasive Species:	23
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Moulting lagoon	Within 10km of Ramsar

Listed Threatened Ecological Communities		[Resource Information]

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

Name	Status	Type of Presence
Giant Kelp Marine Forests of South East Australia	Endangered	Community may occur within area
Lowland Native Grasslands of Tasmania	Critically Endangered	Community likely to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Aquila audax fleayi Wedge-tailed Eagle (Tasmanian) [64435]	Endangered	Breeding likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Diomedea epomophora epomophora Southern Royal Albatross [25996]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora sanfordi Northern Royal Albatross [82331]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans antipodensis Antipodean Albatross [82269]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans exulans Tristan Albatross [82337]	Endangered	Species or species habitat may occur within area
Diomedea exulans gibsoni Gibson's Albatross [82271]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Status	Type of Presence
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Breeding likely to occur within area
Macronectes giganteus Southern Giant Petrel [1060]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Pterodroma leucoptera leucoptera Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta cauta Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta salvini Salvin's Albatross [82343]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta steadi White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris impavida Campbell Albatross [82449]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Tyto novaehollandiae castanops (Tasmanian population) Masked Owl (Tasmanian) [67051]	Vulnerable	Breeding known to occur within area

Name	Status	Type of Presence
Fish		
Brachiopsilus ziebelli Ziebell's Handfish, Waterfall Bay Handfish [83757]	Vulnerable	Species or species habitat may occur within area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat known to occur within area
Thymichthys politus Red Handfish [83756]	Critically Endangered	Species or species habitat may occur within area
Frogs		
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (Tasmanian population) Spotted-tail Quoll, Spot-tailed Quoll, Tiger Quoll (Tasmanian population) [75183]	Vulnerable	Species or species habitat likely to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat may occur within area
Perameles gunnii gunnii Eastern Barred Bandicoot (Tasmania) [66651]	Vulnerable	Species or species habitat likely to occur within area
Sarcophilus harrisii Tasmanian Devil [299]	Endangered	Species or species habitat likely to occur within area
Other		
Discocharopa vigens a land snail, a charopid land snail [82806]	Critically Endangered	Species or species habitat may occur within area
Plants		
Acacia axillaris Midlands Mimosa, Midlands Wattle [13563]	Vulnerable	Species or species habitat likely to occur within area
Bertya tasmanica subsp. tasmanica Tasmanian Bertya [78359]	Endangered	Species or species habitat may occur within area
Boronia gunnii Gunn's Boronia, Cataract Gorge Boronia [29394]	Vulnerable	Species or species habitat may occur within area
Boronia hippopala Velvet Boronia [78925]	Vulnerable	Species or species habitat may occur within area
Caladenia caudata Tailed Spider-orchid [17067]	Vulnerable	Species or species habitat likely to occur within area
Callitris oblonga Pygmy Cypress-pine, Pigmy Cypress-pine, Dwarf Cypress-pine [66687]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Callitris oblonga subsp. oblonga South Esk Pine [64864]	Endangered	Species or species habitat known to occur within area
Carex tasmanica Curly Sedge [9101]	Vulnerable	Species or species habitat known to occur within area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat may occur within area
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area
Lepidium hyssopifolium Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area
Leucochrysum albicans var. tricolor Hoary Sunray, Grassland Paper-daisy [56204]	Endangered	Species or species habitat may occur within area
Prasophyllum apoxychilum Tapered Leek-orchid [64947]	Endangered	Species or species habitat likely to occur within area
Pterostylis ziegeleri Grassland Greenhood, Cape Portland Greenhood [64971]	Vulnerable	Species or species habitat likely to occur within area
Stenanthemum pimeleoides Spreading Stenanthemum, Propellor Plant [15450]	Vulnerable	Species or species habitat may occur within area
Sharks		
Carcharodon carcharias Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area

Listed Migratory Species [Resource Information]

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

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered*	Species or species habitat may occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered*	Foraging, feeding or related behaviour likely

Name	Threatened	Type of Presence
		to occur within area
[Macronectes giganteus](#) Southern Giant Petrel [1060]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Macronectes halli](#) Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
[Puffinus carneipes](#) Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
[Sterna albifrons](#) Little Tern [813]		Species or species habitat may occur within area
[Thalassarche bulleri](#) Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche cauta (sensu stricto)](#) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche chrysostoma](#) Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
[Thalassarche eremita](#) Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche impavida](#) Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche melanophris](#) Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche salvini](#) Salvin's Albatross [64463]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
[Caperea marginata](#) Pygmy Right Whale [39]		Species or species habitat may occur within area
[Carcharodon carcharias](#) Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
[Eubalaena australis](#) Southern Right Whale [40]	Endangered	Breeding likely to occur within area
[Lagenorhynchus obscurus](#) Dusky Dolphin [43]		Species or species habitat may occur within area
[Lamna nasus](#) Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
[Megaptera novaeangliae](#) Humpback Whale [38]	Vulnerable	Species or species habitat may occur within area
[Orcinus orca](#) Killer Whale, Orca [46]		Species or species habitat may occur within area
Migratory Terrestrial Species		
[Hirundapus caudacutus](#) White-throated Needletail [682]		Species or species habitat likely to occur within area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
[Ardea alba](#) Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
[Ardea ibis](#) Cattle Egret [59542]		Species or species habitat may occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
[Calidris ruficollis](#) Red-necked Stint [860]		Species or species habitat known to occur within area
[Charadrius bicinctus](#) Double-banded Plover [895]		Species or species habitat known to occur within area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
[Limosa lapponica](#) Bar-tailed Godwit [844]		Species or species habitat known to occur within area
[Numenius madagascariensis](#) Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
[Pluvialis fulva](#) Pacific Golden Plover [25545]		Species or species habitat known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

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

Name

Commonwealth Land -

Listed Marine Species [Resource Information]

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

Name	Threatened	Type of Presence
Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat known to occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within area
Charadrius bicinctus Double-banded Plover [895]		Species or species habitat known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Species or species habitat known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered*	Species or species habitat may occur within area
Diomedea epomophora (sensu stricto) Southern Royal Albatross [1072]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans (sensu lato) Wandering Albatross [1073]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered*	Foraging, feeding or related behaviour likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Breeding known to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat likely to occur within area
Lathamus discolor Swift Parrot [744]	Endangered	Breeding likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Macronectes giganteus Southern Giant Petrel [1060]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Species or species habitat known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Sterna albifrons Little Tern [813]		Species or species habitat may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche cauta (sensu stricto) Shy Albatross, Tasmanian Shy Albatross [64697]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely

Name	Threatened	Type of Presence
		to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Thinornis rubricollis rubricollis Hooded Plover (eastern) [66726]	Vulnerable	Species or species habitat known to occur within area
Fish		
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area
Hypselognathus rostratus Knifesnout Pipefish, Knife-snouted Pipefish [66245]		Species or species habitat may occur within area
Kaupus costatus Deepbody Pipefish, Deep-bodied Pipefish [66246]		Species or species habitat may occur within area
Kimblaeus bassensis Trawl Pipefish, Bass Strait Pipefish [66247]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys mollisoni Mollison's Pipefish [66260]		Species or species habitat may occur within area
Mitotichthys semistriatus Halfbanded Pipefish [66261]		Species or species habitat may occur within area
Mitotichthys tuckeri Tucker's Pipefish [66262]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus robustus Robust Pipehorse, Robust Spiny Pipehorse [66274]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Stigmatopora olivacea a pipefish [74966]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area

Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding likely to occur within area

Name	Status	Type of Presence
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat may occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Belmont	TAS
Cambria #1	TAS
Coswell Beach	TAS
Redbanks	TAS
Swansea	TAS

Regional Forest Agreements	[Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
Tasmania RFA	Tasmania

Invasive Species	[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella trichotoma Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) [18884]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur

Name	Status	Type of Presence within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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

For species where the distributions are well known, maps are digitised from sources such as recovery plans and detailed habitat studies. Where appropriate, core breeding, foraging and roosting areas are indicated under 'type of presence'. For species whose distributions are less well known, point locations are collated from government wildlife authorities, museums, and non-government organisations; bioclimatic distribution models are generated and these validated by experts. In some cases, the distribution maps are based solely on expert knowledge.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-42.104747 148.074175,-42.104254 148.074593,-42.105105 148.076213,-42.105639 148.075784,-42.104747 148.074175

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Parks and Wildlife Commission NT, Northern Territory Government
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Atherton and Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

Department of the Environment
GPO Box 787
Canberra ACT 2601 Australia
+61 2 6274 1111

Maree Tyrrell

From:
Sent: Thursday, 20 January 2022 3:13 PM
To: Planning
Subject: APPLICATION NO: DA 2021 / 334 - RA128 Cambria Drive

Categories: Representation

To the General Manager,

In relation to application DA 2021 / 334 for RA128 Cambria Drive Dolphin Sands:

I have questions and concerns about the application that I believe are important for the community and Council, that stem from the fact that the submitted application is for development that is largely undefined.

I am seeking further clarification as to the purpose of the development.

My concerns stem from the development appearing to be of a style and scale not consistent with a residential dwelling, despite the application being a proposal for a "Dwelling".

Rather than a "dwelling" with a shed, the plans within the application seem instead to depict a commercial or industrial workshop or storage facility with only a small fraction of the area designated as the "proposed dwelling'.

[redacted], I am concerned about the potential impact that the use of neighbouring properties as, for instance, commercial or personal manufacturing workshops, storage facilities, or transport depots (or any number of other purposes for which a shed of that size may be appropriate) may have on the peace and tranquillity of the residential neighbourhood, impacts on the local environment, wildlife, tourism, etc.

I note that the application is listed as being for a "New Dwelling", however the plans show that the proposed dwelling living areas represent only about a third of the total footprint of the proposed building area, and that the majority of the construction in footprint and height is described on the submitted plans as a "Shed" and "Garage Shed".
As the largest component of the site, the purpose of this area is clearly an important (by scale, the most important) consideration that I believe should be described so that those assessing the application can make an informed decision.

It may not technically be an "outbuilding", but the description on the plan shows that the "shed" is clearly not meant for domestic habitation and is substantially larger than necessary for car and/or boat parking for a single bedroom house. As such, I believe the majority of the application should be considered an "outbuilding" and or otherwise have its purpose described separately from that of the "dwelling".

Similarly, the application provides provision to list hours of operation for non-residential applications, and while this purports to be a "residential application" the scale of the non-residential component suggests otherwise. If commercial activity is to be conducted, then I believe hours of operation should be stated.

The question within the application "If the building is to be used wholly or partly as a domestic workshop, what type of tools and machines will be used?" has been marked as Not Applicable.
Does this mean that if the application is approved, that the building CANNOT be used wholly or partly as a domestic workshop?

Similarly, the application has not indicated that it is for a commercial or industrial building.

Does this mean that commercial / industrial activities cannot be carried out on the premises?

If the applicant does intend to use the "shed" or "garage shed" (or part of it) as a domestic workshop, or commercial / industrial building of any sort, then I believe it is fair to all neighbouring residents that its purpose is described and that the question regarding tools and machines is answered so that residents and council can make an informed decision on the impact such activities could have on the neighbourhood and its character.

Regards,

Dear General Manager,

I have concerns and questions regarding DA 2021/334-128

I am concerned about the height of the shed. What do the GSBC planners want Cambria Drive to look like? Does this large metal shed fit into the visual aesthetics of Cambria drive?

Cambria Drive is littered with unpleasant looking sheds, shipping containers and living arrangements. Do these comply with GSBC?

I observed on the DA, Current use of site: STORAGE USE
What are the existing sheds, sleeping arrangements, toilet, shower? Do they comply with GSBC planning? if not will they be included on the final approved use of the property?

What is the intended use of such a large shed?

Once the building has been issued with a completion certificate, what controls do the residents have regarding noise pollution that may occur from the shed when carrying out any sort of commercial or "backyard (wink wink)" type of work in the future? For example, steel fabrication (grinding, cutting, hammering steel etc.)

What colour is the roofing iron (listed neutral)? what colour is the exterior cladding iron? I feel that council needs to control the colours of such large shed developments in Cambria Drive. Ones that blend into the residential/bush environment.

It is difficult to find detail about BED 1 in the DA. Also, the mezzanine floor and stair detail

What controls are in place for modifying the large undercover roof space 12x4.4 meters into living?

Thank you for your time and thoughts.

Maree Tyrrell

From:
Sent: Saturday, 29 January 2022 11:11 PM
To: Planning
Subject: DA 2021/334

Categories: Representation

Dear General Manager,

My partner has emphysema and poor blood circulation and struggles with winter wood smoke from a heater that does not comply with Australian standards from across the road from me that neighbours the applicants property. Unfortunately, in the cooler months, the katabatic winds gently smother our house both inside and out with toxic wood smoke. I have tried to resolve with both the owner and EPA with no success or health outcome.
What controls can be put in place to minimising and reducing any wood burning pollution that harms health from the proposed dwelling?
Will the GSBC put in place assurances that if the dwelling is to have a wood heater/stove, that it complies with the latest Aust/NZ standards now and into the future?

Regards

Maree Tyrrell

From:
Sent: Saturday, 29 January 2022 10:24 PM
To: Planning
Subject: APPLICATION NO: DA 2021 / 334

Categories: Representation

Dear Mr General manager,

I would like to put forward my representation and concerns re DA2021/334.

What does the GSBC want Cambria Drive to look like? The proposed, very large shed raises some concerns.
What is the intended use of a shed that is just over
6 1/2 meters high? Storage. how much storage? A huge expensive boat on a trailer is maxed out at 4.5 meters heigh!
Lack of clarity regarding the roof and cladding colour.
I feel that the height of the proposed building (shed) is too heigh. Further, I assume that GSBC can foresee what Cambria Drive will look like now and into the future by considering the above concerns. Any proposed large shed would be best dis-associated from living arrangements.
GSBC may also consider exploring the detail of the existing "sheds" provided by the applicants.

Warm regards,

GLAMORGAN/SPRING BAY COUNCIL

NOTICE OF PROPOSED DEVELOPMENT

Notice is hereby given that an application has been made for planning approval for the following development;

SITE: RA1000 Dolphin Sands Road Dolphin Sands

PROPOSAL: Dwelling

Any person may make representation on the application(s) by letter (PO Box 6, Triabunna) or electronic mail (planning@freycinet.tas.gov.au) addressed to the General Manager. Representations must be received before midnight on Friday 10 December 2021.

APPLICANT:	S Group
DATE:	10 August 2021
APPLICATION NO:	DA 2021 / 231

Office: 9 Melbourne Street,
Postal: PO Box 6 Triabunna 7190
Phone: 6256 4777 Fax: 6256 4774
Email: planning@freycinet.tas.gov.au
Web: www.gsbc.tas.gov.au
ABN: 95 641 533 778

GLAMORGAN SPRING BAY COUNCIL

Application for Planning Approval

OFFICE USE ONLY	
DATE RECEIVED:	PID:
FEE	RECEIPT No:
DA:	PROPERTY FILE:

Advice:

Use this form for all no permit required, permitted and discretionary planning applications including subdivision as well as for planning scheme amendment & minor amendments to permits.

If you are applying for a change of use to visitor accommodation in the General Residential, Low Density Residential, Rural Living, Environmental Living or Village Zone, the *Visitor Accommodation Use in Existing Habitable Buildings Standard Application Package* must be used. This is available on the Council website.

Completing this form in full will help ensure that all necessary information is provided and avoid any delay. The planning scheme provides details of what other information may be required at clause 8.1 and in each applicable Code.

Please provide the relevant details in each applicable section by providing the information or circling Yes or No as appropriate. If relevant details are provided on plans or documents please refer to the drawing number or other documents in this form.

Often, it is beneficial to provide a separate written submission explaining in general terms what is proposed and why and to justify the proposal against any applicable performance criteria.

If you have any queries with the form or what information is required please contact the office.

Details of Applicant & Owner

Applicant:	S Group				
Contact person: (if different from applicant)	Simon U'Ren				
Address:	10-14 Paterson St			Phone	6311 1403
	Launceston, TAS	7250		Fax:	
Email:				Mobile:	
Do you wish for all correspondence to be sent solely by email?				Yes ☒	No ☐

Owner: (if different from applicant)	Warren & Donna Lashmar		
Address:		Phone:	
		Fax:	
Email:		Mobile:	

Application for Planning Approval

Details of Site and Application

Please note, if your application is discretionary the following will be placed on public exhibition.

Site Details

Address / Location of Proposal:			
1000 Dolphin Sands Rd, Dolphin Sands TAS 7190	Suburb	Post Code	
Size of site	2025 m^2	or	Ha
Certificate of Title(s):	54666/157		

Current use of site:	Vacant

General Application Details

Complete for All Applications

☒	New Dwelling	☐	Change of use
☐	Additions / Alterations to Dwelling	☐	Intensification or modification of use
☐	New Outbuilding or Addition	☐	Subdivision or boundary adjustment
☐	New Agricultural Building	☐	Minor amendment to existing permit DA ..... / .....
☐	Commercial / Industrial Building	☐	Planning Scheme Amendment

Estimated value of works (design & construction)	$

Describe the order and timing of any staged works:	or N/A

General Background Information

Please state the name of any Council officers that you have discussed this proposal with:	Officer's name : N/A	or
Is the site listed on the Tasmanian Heritage Register?	Yes ☐	No ☒
Have any potentially contaminating activities ever occurred on the site? *If yes, please provide a separate written description of those activities.*	Yes ☐	No ☒
Is the proposal consistent with any restrictive covenants or Part 5 agreements that apply to the site?	Yes ☐	No ☒

Application for Planning Approval

Does the proposal involve any of the following?		
Type of development		**Brief written description if not clearly shown on the plans:**
Partial or full demolition	☐ **Yes** ☒ **No**	
Fencing	☐ **Yes** ☒ **No**	
New or upgraded vehicle / pedestrian access	☒ **Yes** ☐ **No**	Upgrade existing gravel driveway
New or modified water, sewer, electrical or telecommunications connection	☒ **Yes** ☐ **No**	New onsite waste water treatment
Retaining walls	☐ **Yes** ☒ **No**	
Cut or fill	☐ **Yes** ☒ **No**	
Signage	☐ **Yes** ☒ **No**	
New car parking	☒ **Yes** ☐ **No**	New parking per A101 - site plan
Vegetation removal	☒ **Yes** ☐ **No**	5 x Coastal houndstongue (Cynoglossum australe)

Existing floor area 0 . m^2	Proposed floor area 240.m^2 including decks

Number of existing car parking on site	Number of proposed car parking on site 1

Describe the width & surfacing of vehicular access (existing or proposed) and how drainage/runoff is collected and discharged:	Existing gravel crossover to be retained
If vehicular access is from a road sign-posted at more than 60 km/hr, please state the sight distance in both directions:	or N/A

Please note, if a gravel driveway is proposed from a sealed public road please address the following clause (E6.7.6 P1):

Parking spaces and vehicle circulation roadways must not unreasonably detract from the amenity of users, adjoining occupiers or the quality of the environment through dust or mud generation or sediment transport, having regard to all of the following:

(i) the suitability of the surface treatment;
(ii) the characteristics of the use or development;
(iii) measures to mitigate mud or dust generation or sediment transport.

Will stormwater from buildings and hardstand areas be managed by: (details should be clearly shown / noted on plans)	Discharge to a main:	Yes ☐
	Discharge to kerb & gutter:	Yes ☐
	Discharge to roadside table drain:...	Yes ☐
	Discharge to natural watercourse: ..	Yes ☐
	Retained on site: ...Water tanks.....	Yes ☒

Application for Planning Approval

Materials				
External building material	Walls:	Timber frame FC Sheet cladding	Roof:	Sheet metal
External building colours	Walls:	Timber & grey paint	Roof:	Black
Fencing materials:	n/a		Retailing wall materials:	n/a

For all outbuildings	
Describe for what purpose the building is to be used:	Residential
Describe any intended toilet, shower, cooking or heating to be installed:	Normal residential facilities
If the building is to be used wholly or partly as a domestic workshop, what type of tools and machines will be used?	n/a

For all non-residential applications

Hours of Operation						
Current hours of operation	Monday to Friday:	n/a	Saturday:	n/a	Sunday & Public holidays:	n/a
Proposed hours of operation	Monday to Friday:	n/a	Saturday:	n/a	Sunday & Public holidays:	n/a

Number of Employees			
Current Employees Total:		Maximum at any one time:	
Proposed Employees Total:		Maximum at any one time:	

Describe any delivery of goods to and from the site, including the types of vehicles used and the estimated average weekly frequency:	n/a or N/A
Describe current traffic movements into the site, including the type & timing of heavy vehicle movements & any proposed change:	n/a or N/A
Describe any hazardous materials to be used or stored on site:	n/a or N/A
Describe the type & location of any large plant or machinery used (refrigeration, generators)	n/a or N/A
Describe any retail and/or storage of goods or equipment in outdoor areas:	n/a or N/A
Describe any external lighting proposed:	n/a or N/A

Application for Planning Approval

Personal Information Protection Statement:

The personal information requested is personal information for the purposes of the *Personal Information Protection Act 2004* and will be managed in accordance with that Act. The personal information is being collected by Glamorgan Spring Bay Council for the purposes of managing, assessing, advising on and determining the relevant application in accordance with the *Land Use Planning and Approvals Act 1993* (LUPPA) and other related purposes, including for the purpose of data collection.

The intended recipients of personal information collected by Council may include its officers, agents or contractors or data service providers and contractors engaged by the Council from time to time.

The information may also be made publically available on the Council's website and available for any person to inspect in accordance with LUPAA. The supply of this information is voluntary. However, if you cannot or do not provide the information sought, the Council will be unable to accept and/or process your application.

Declaration:

I/we hereby apply for planning approval to carry out the use or development described in this application and the accompanying documents and declare that: -

- The information in this application is true and correct.
- I/we authorise Council employees or consultants to enter the site in order to assess the application.
- I/we have obtained all copy licences and permission from the copyright owner for the publication, communication and reproduction of the application and reports, plans and materials provided as part of the application and for the purposes of managing, assessing, advising on and determining the application.
- I/we authorise the Council to:
  - Make available the application and any and all information, reports, plans and materials provided with or as part of the application in electronic form on the Council's website and in hard copy at the Council's office and other locations for public exhibition if and as required;
  - Make such copies of the application and any and all information, reports, plans and materials provided with or as part of the application which are, in the Council's opinion, necessary to facilitate a consideration of the application; and
  - Publish and or reproduce the application and any and all information, reports, plans and materials provided with or as part of the application in Council agendas, for representors, referral agencies and other persons interested in the application.
- You indemnify the Council for any claim or action taken against the Council for breach of copyright in respect of the application and any and all information, report, plan and material provided with or as part of the application.
- I/we authorise Council to provide a copy of any documents relating to this application to any person for the purpose of assessment or public consultation and agree to arrange for the permission of the copyright owner of any part of this application to be obtained.
- I/We declare that the Owner has been notified of the intention to make this application in accordance with section 52(1) of the *Land Use Planning and Approvals Act 1993.*

Signature:		Date:	09/08/2021

If applicant is not the owner

If the applicant is not the owner, please list all persons who were notified of this application pursuant to section 52 of the *Land Use Planning and Approvals Act 1993.*

Name:	Method of notification:	Date of notification:
Warren Lashmar	Phone	06/08/2021
Donna Lashmar	Phone	06/08/2021

If application is on or affect Council or Crown owned or administered land

If land affected by this application is owned or administered by the Crown or Council then the written permission of the relevant Minister (or their delegate) and/or the General Manager must provided and that person must also sign this application form below:

I being responsible for the administration of land at declare that I have given permission for the making of this application by for use and/or development involving

Signature: Date:

It is the applicant's responsibility to obtain any consent prior to lodgement. Written requests for Council consent are via the General Manager. Request for Ministerial consent should be directed to the relevant department.

Warren Lushmar

Proposed Dwelling
1000 Dolphin Sands Road, DOLPHIN SANDS, Tas, 7190

DRAWING SCHEDULE:

Sheet No:	Drawing:	Rev:				Revision Date:	
A000	Cover	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A100	Location Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A101	Site Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A102	Floor Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A103	Roof Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A104	Reflected Ceiling Plan	A	B	C		07/12/2015	31/7/17 4/11/17
A105	Schematic Electrical	A	B	C		07/12/2015	31/7/17 4/11/17
A201	Elevations 01 & 02	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A202	Elevations 03 & 04	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A301	Section AA	A	B	C		07/12/2015	31/7/17 4/11/17
A302	Section BB	A	B	C		07/12/2015	31/7/17 4/11/17
A601	Glazing Schedule	A	B	C		07/12/2015	31/7/17 4/11/17
A602	Glazing Schedule	A	B	C		07/12/2015	31/7/17 4/11/17
A800	Plumbing & Drainage Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A900	General Notes	A	B	C		07/12/2015	31/7/17 4/11/17

GENERAL INFORMATION:

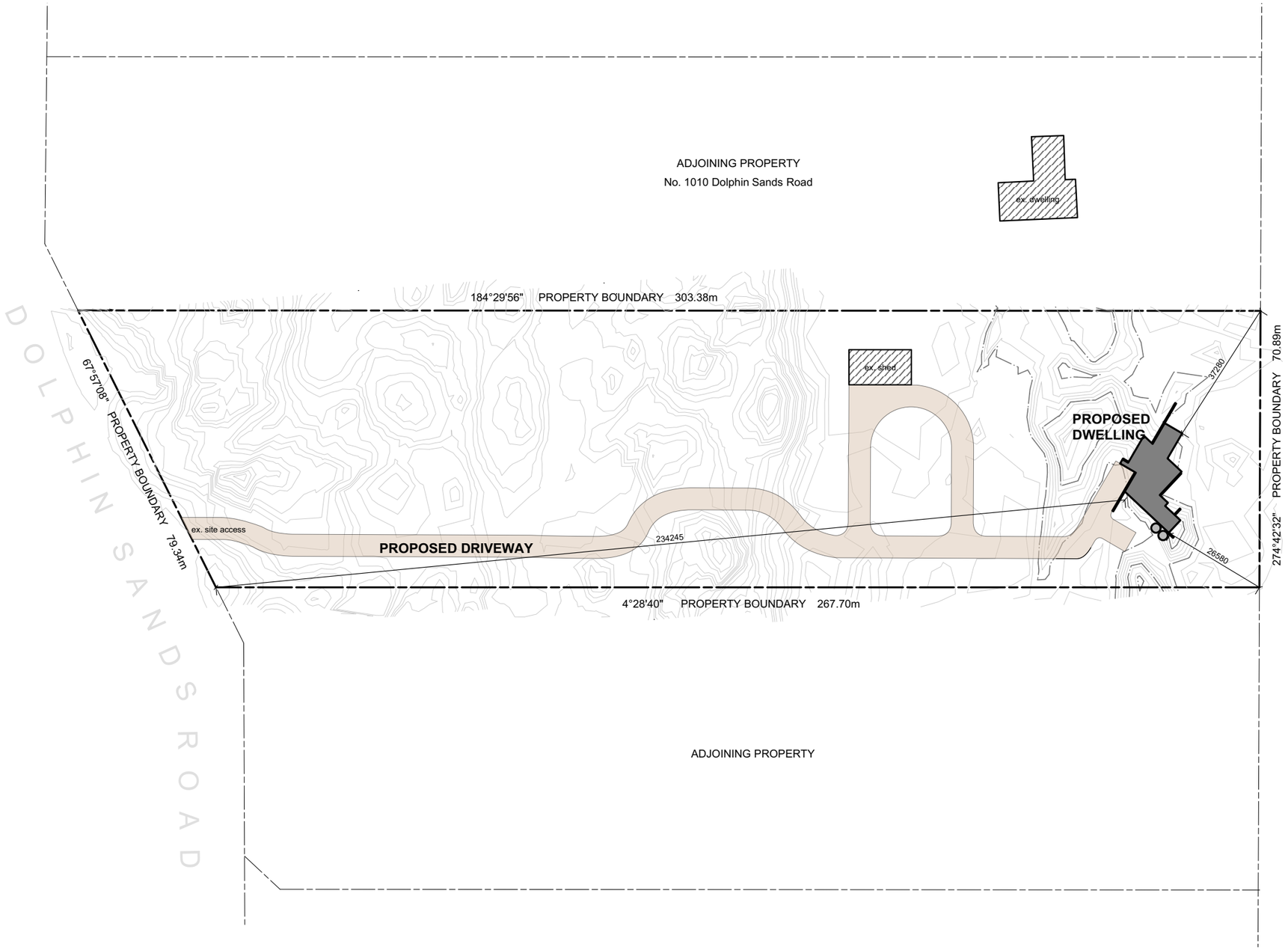
Accredited Architect:	**Sam Haberle**	
Accreditation Number:	**CC5618 U**	
Land Title Reference Number:	**C.T. 54666/157**	(Certificate volume and folio)
Municipality:	**Glamorgan-Spring Bay Council**	
Zoning:	**34.0 Particular Purpose**	
Planning Scheme Overlay:	**Interim Planning Scheme 2015**	
	Biodiversity Protection Area, Coastal Inundation Hazard Area, Coastal Erosion Area	
Soil classification:	**Class A**	Site classification to AS 2870-2011 (Reference report author)
Wind Classification:	**N3**	Site classification to AS 4055-2006 (Reference report author)
Climate Zone:	**7**	(www.abcb.gov.au map)
Alpine Area:	**N/A**	<300m AHD (BCA Figure 3.7.5.2)
Bushfire-prone Area BAL Rating:	**BAL 12.5**	As determined by registered Bushfire Assessor (AS3959-2009)
		Report Number:
Corrosion environment:	**Moderate**	For steel subject to the influence of salt water, breaking surf or heavy industrial areas, refer to BCA section 3.4.2.2 & BCA Table 3.4.4.2. Cladding and fixings to manufacturer's recommendations
Other Known site hazards:	**N/A**	High wind, earthquake, flooding, landslip, dispersive soils, sand dunes, mine subsidence, landfill, snow & ice or other relevant factors

For Development Application Only

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar		SCALE @ A3	DWG # A000
DWG Cover		DRAWN JF	
		CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au



NOTE:

All contours should be confirmed on site.

Dwelling location to be set out by registered surveyor discrepancies reported prior to commencement.

Drive to be suitably drained away from dwelling to SW pits + connected to mains.

Conveniently located taps to be installed for watering purposes.

Typically dress around house with top soil where not otherwise specified sow with grass seed set down 150mm from FFL max. Batter grade 1:20.

Garden edging typically treated pine when not against concrete.

Downpipes to be connected into council stormwater as soon as roof is installed.

Any change's to the construction and materials indicated in these drawings is to be approved by S. Group, the Engineer, the Building Surveyor, and the owner before proceeding with the work.

Use written dimensions only.
Do not scale drawings.

BUILDING AREAS:

Site Area:	2.281ha
Proposed Driveway:	2081.14m2
Proposed Dwelling:	155.11m2
Proposed Carport:	36.64m2
Proposed Decking:	68.07m2
Existing Garage:	144.0m2
Total Building Area: (excluding decking & driveway)	**335.64m2**
Site coverage percentage:	10.60%

0 mm — 70,000mm

CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar			DWG # A100
DWG Location Plan		SCALE @ A3 1:2000	
		DRAWN JF	
		CHKD SH	PROJECT# J000941

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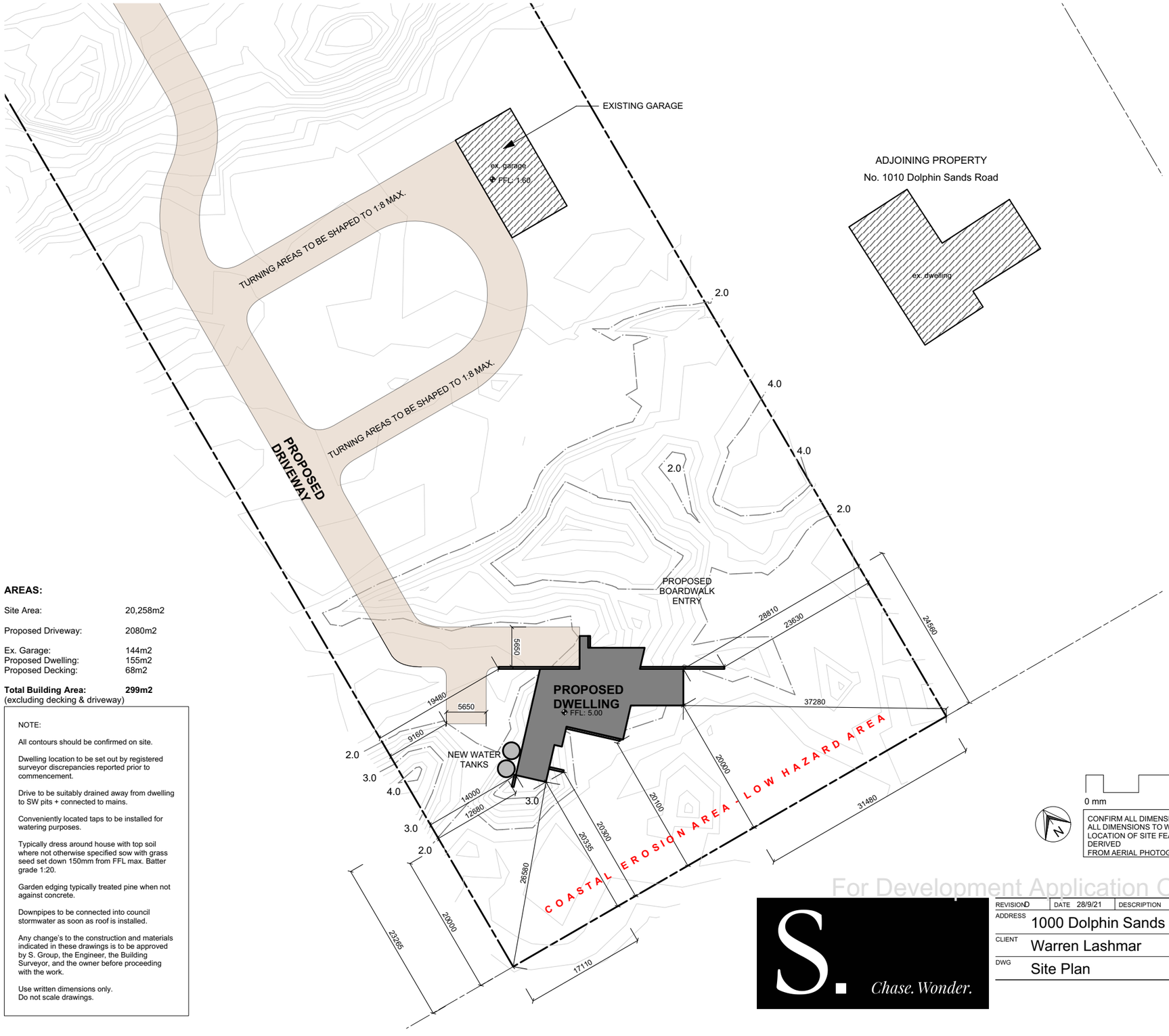


AREAS:

Site Area:	20,258m2
Proposed Driveway:	2080m2
Ex. Garage:	144m2
Proposed Dwelling:	155m2
Proposed Decking:	68m2
Total Building Area: (excluding decking & driveway)	**299m2**

NOTE:

All contours should be confirmed on site.

Dwelling location to be set out by registered surveyor discrepancies reported prior to commencement.

Drive to be suitably drained away from dwelling to SW pits + connected to mains.

Conveniently located taps to be installed for watering purposes.

Typically dress around house with top soil where not otherwise specified sow with grass seed set down 150mm from FFL max. Batter grade 1:20.

Garden edging typically treated pine when not against concrete.

Downpipes to be connected into council stormwater as soon as roof is installed.

Any change's to the construction and materials indicated in these drawings is to be approved by S. Group, the Engineer, the Building Surveyor, and the owner before proceeding with the work.

Use written dimensions only.
Do not scale drawings.

BUSHFIRE NOTES: (BAL-12.5)

To comply with Section 6 of AS3959-2009. Including, but not limited to the following:

FLOORING & SUBFLOOR SUPPORTS:
No special construction requirements.

DECKS:
No special construction requirements. Enclosed sub-floor space. No special requirements for materials except within 400mm of ground level. Decking to be non-combustible or bushfire resistant within 300mm horizontally and 400mm vertically from glazed element.

EXTERNAL WALLS:
Construction less than 400mm above ground level or decks etc. to be of non-combustible material, Min. 6mm fibre cement clad or bushfire resistant/naturally fire resistant timber.

JOINTS, VENTS & WEEPHOLES:
All external joints must be covered, sealed, overlapped, backed or butt-jointed to prevent gaps greater than 3mm. Vents and weepholes in external walls shall be screened with aluminium mesh with a maximum aperture of 2mm, except where the vents and weepholes have an aperture less than 3mm.

GLAZED WINDOWS:
Window frame and supporting frame shall be protected by a bushfire Shutter, powdercoated aluminium with Grade A safety glass minimum 4mm thickness or glass blocks. Openable portions of windows to be screened internally or externally with screens as described below. Aluminium screens within powdercoated aluminium frames must have a maximum aperture of 2mm. Gaps between the perimeter of the screen assembly and the window frame shall not exceed 3mm.

GLAZED DOORS:
Same specification as glazed windows above. However, non-combustible or 35mm solid timber for 400mm above threshold. Tight-fitting with weather strips at base. Door framing can be naturally fire resistant (high density) Timber.

ROOF:
To be non-combustible roof material (ie. Colorbond sheeting). The roof / wall junction shall be sealed, to prevent openings greater than 3mm, by the use of fascia and eaves lining.Roof ventilation openings, such as gable and roof vents, shall be fitted with aluminium ember guards with a maximum aperture of 2mm.
Roof to be fully sarked. The sarking shall:

a) be located on top of the roof framing, except that the roof battens may be fixed above the sarking;
b) cover the entire roof area including hips - with exception of ridges which should be ventilated to avoid condensation (see approved BSOL details within 'Condensation in Buildings' Tasmanian Designer's Guide); and
c) extend into gutters and valleys.
Any gaps greater than 3mm (such as under corrugations or ribs of roofing and between roof components) sealed at the fascia or wall line and at valleys, hips and ridges by -
(i) aluminium mesh with maximum aperture of 2mm; or
(ii) mineral wool; or
(iii) other non-combustible material; or
(iv) a combination of any of the above items.

ROOF PENETRATIONS:
Roof penetrations, including roof ventilators, roof-mounted evaporative cooler units, aerials, vent pipes and supports for solar collectors shall be adequately sealed at the roof to prevent gaps greater than 3mm. The material used for sealing shall be non-combustible.
Openings in roof ventilators or vent pipes shall be fitted with aluminium ember guards with a maximum aperture of 2mm.
Evaporative cooling units (fitted to the roof) to be fitted with non-combustible butterfly closers as close as practicable to the roof level, or the unit shall be fitted with non-combustible covers with aluminium mesh or perforated sheet with a maximum aperture of 2mm.

0 mm — 17500 mm

CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

For Development Application Only

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar			DWG # A101
DWG Site Plan		SCALE @ A3 1:500 DRAWN JF CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au

WALL LEGEND:

Timber stud wall
Unless noted otherwise:
90x45 MGP10 Plates
90x35 MGP10 Noggings Mid-Height
90x35 MGP10 Studs @ 450cts.

300mm Permathene™ Gabion Wall
Sandstone Filled.

(internal) / (external)
Nom. 165mm Clad Studwork wall.
90mm Studwork Wall (internal)
55mm Horizontal & Vertical
Battens & Cladding (external)

FLOOR AREAS:

Proposed Dwelling:	187.11m2
Proposed Decking:	49.47m2
Total Area:	234.97m2

FLOOR FINISHES SCHEDULE:

CU	Carpet Underlay. To be selected.
CT	Ceramic Tiles (300x300). Colour to be selected.
TF	Timber Floorboard Overlay.
SC	Sealed Concrete.
DB	Timber Decking Boards. Merbau or simliar approved boards.

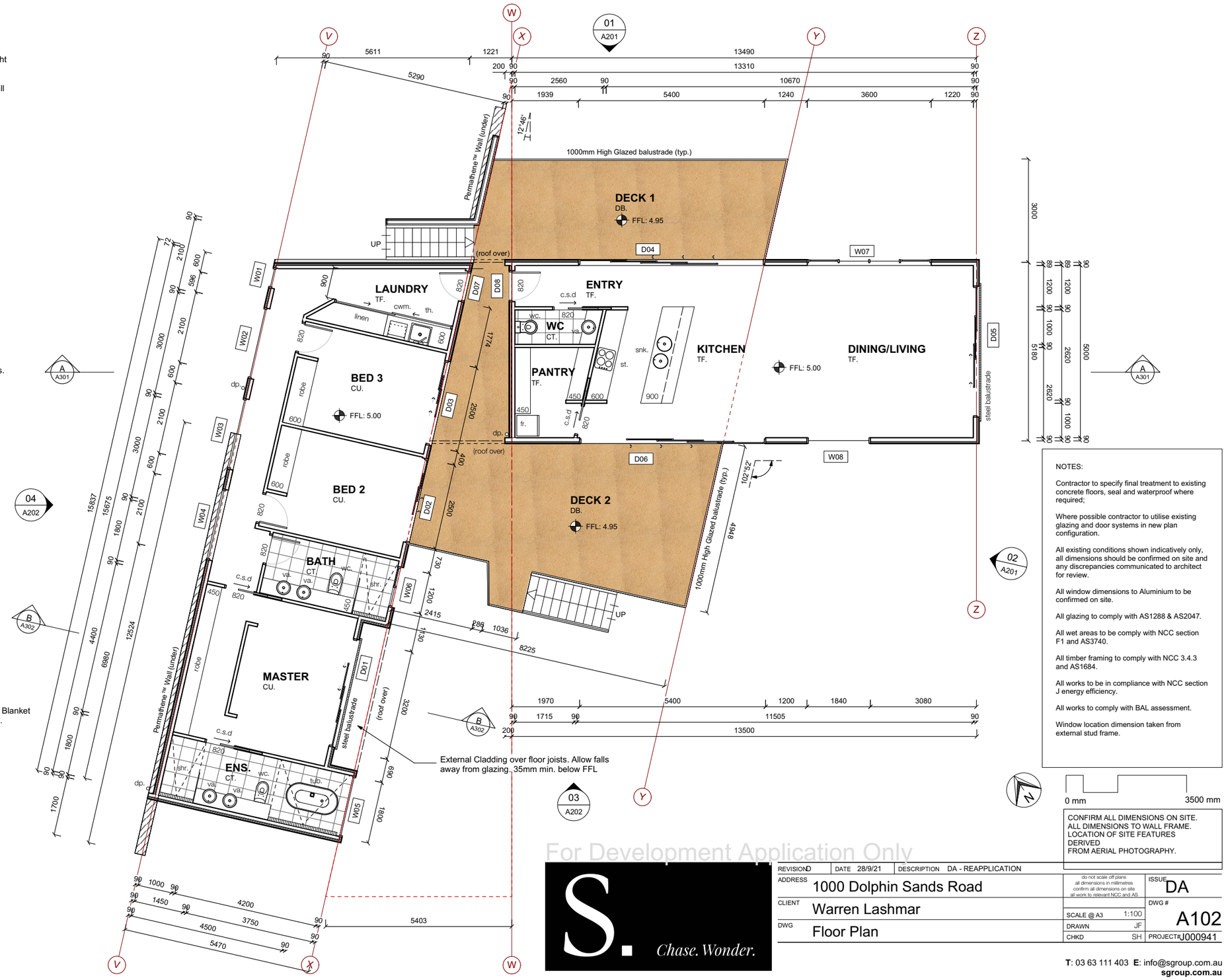
KEY:

wc.	Water Closet
ba.	Basin
va.	Vanity Unit
shr.	Walk-in Shower
tub.	Free standing Bath Tub
tr.	Towel Rail
snk.	Sink
bch.	Bench
st.	Stove with rangehood over
fr.	Fridge/Freezer
dwm.	Dish Washing Machine
cwm.	Clothes Washing Machine
th.	Trough
dsk.	Built-in Desk
sky.	Skylight
hp.	Heat Pump
s.a.	Interconnected Smoke Alarm
s.d	Face Sliding Door
c.s.d	Cavity Sliding Door
dp	Downpipe
hwc	Hot Water Cylinder
acu	Air Conditioning Unit
s/b	Switchboard

INSULATION REQUIREMENTS:
NCC 2016 PART 3.12. (Climate Zone 7)

Walls: Min. R2.5 (90mm) 'Pink' batts with vapour-permeable wall wrap.

Roof: R1.3 (55mm) 'Permastop' Building Blanket
R4.0 (195mm) 'PINK' Ceiling Batts.



NOTES:

Contractor to specify final treatment to existing concrete floors, seal and waterproof where required;

Where possible contractor to utilise existing glazing and door systems in new plan configuration.

All existing conditions shown indicatively only, all dimensions should be confirmed on site and any discrepancies communicated to architect for review.

All window dimensions to Aluminium to be confirmed on site.

All glazing to comply with AS1288 & AS2047.

All wet areas to be comply with NCC section F1 and AS3740.

All timber framing to comply with NCC 3.4.3 and AS1684.

All works to be in compliance with NCC section J energy efficiency.

All works to comply with BAL assessment.

Window location dimension taken from external stud frame.

0 mm — 3500 mm

CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

S. *Chase. Wonder.*

REVISION	D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION
ADDRESS	1000 Dolphin Sands Road	do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT	Warren Lashmar	SCALE @ A3 1:100	DWG # A102
DWG	Floor Plan	DRAWN JF	
		CHKD SH	PROJECT# J000941

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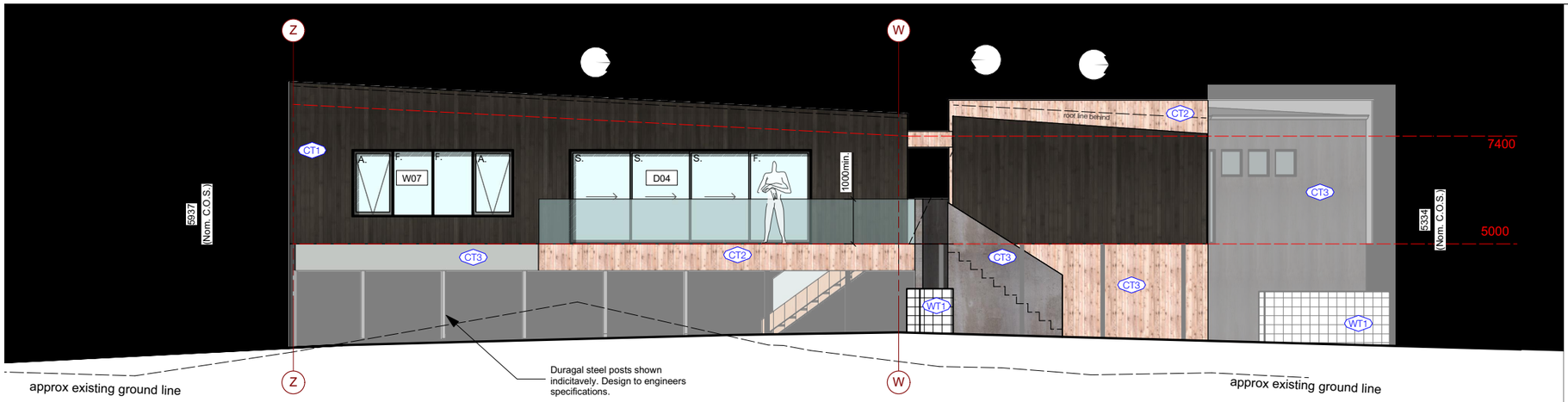

CLADDING TYPES

CT1 Mortlock TrendplankTM spotted gum cladding, expressed screw fixing, black stain.

CT2 Mortlock TrendplankTM spotted gum cladding,expressed screw fixing, natural.

CT3 Easylap, james hardie textured paint finish (texture finish to manufacturers specifications and applied to cover fixings), joint painted to match

CT4 CSR™ Cemintel Barestone raw finish fastened secret screw fixing.

WT1 Permathene™ Gabion Wall (sandstone filled)

ALL CLADDINGS INSTALLED TO MANUFACTURERS SPECIFICATIONS

ALL COLOURS TO FUTURE SELECTION, COMPLIMENTARY AND RESPONSIVE TO SURROUNDINGS

BATTER TO COMPLY WITH NCC

GROUND LEVELS SHOWN INDICATIVELY, ENSURE FINISH SURFACE FALLS AWAY FROM STRUCTURE.

GLASS BALUSTRADE TO COMPLY WITH AS1288

COLOUR SCHEDULE
(or similar approved)

monument - C1 | charcoal - C2 | shale grey - C3

white - C4 | black - C5

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar		SCALE @ A3 1:100	DWG # A201
DWG Elevations 01 & 02		DRAWN JF	
		CHKD SH	PROJECT# J000941

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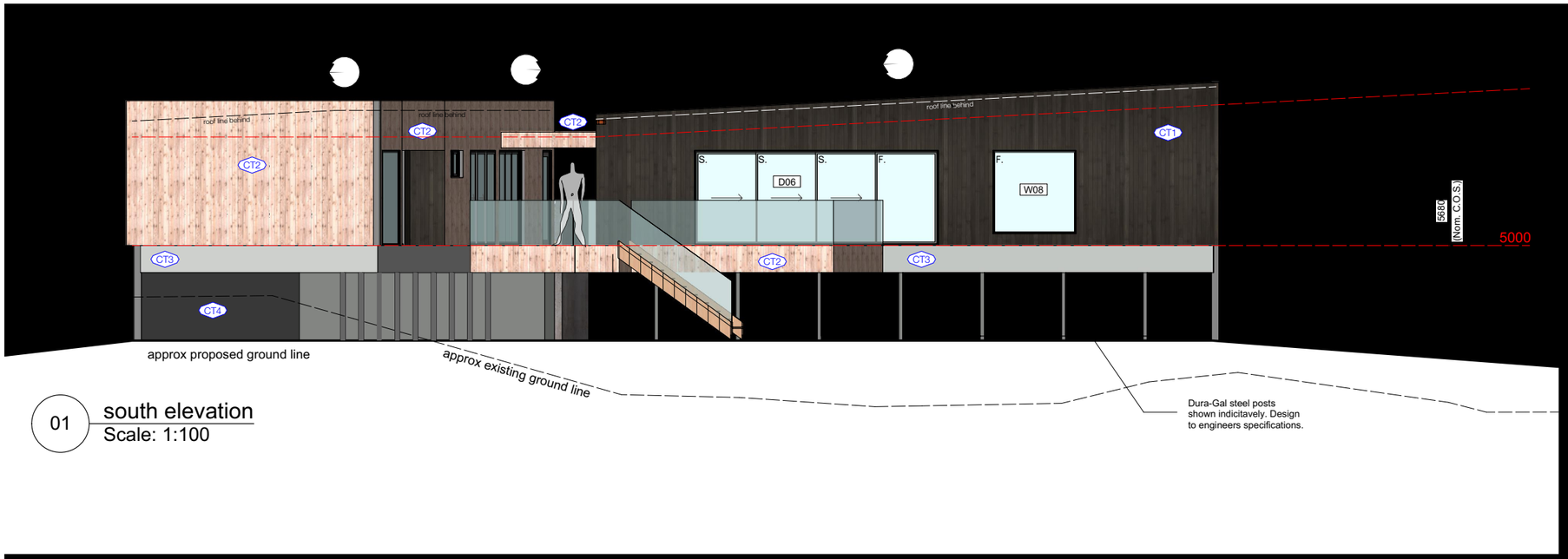
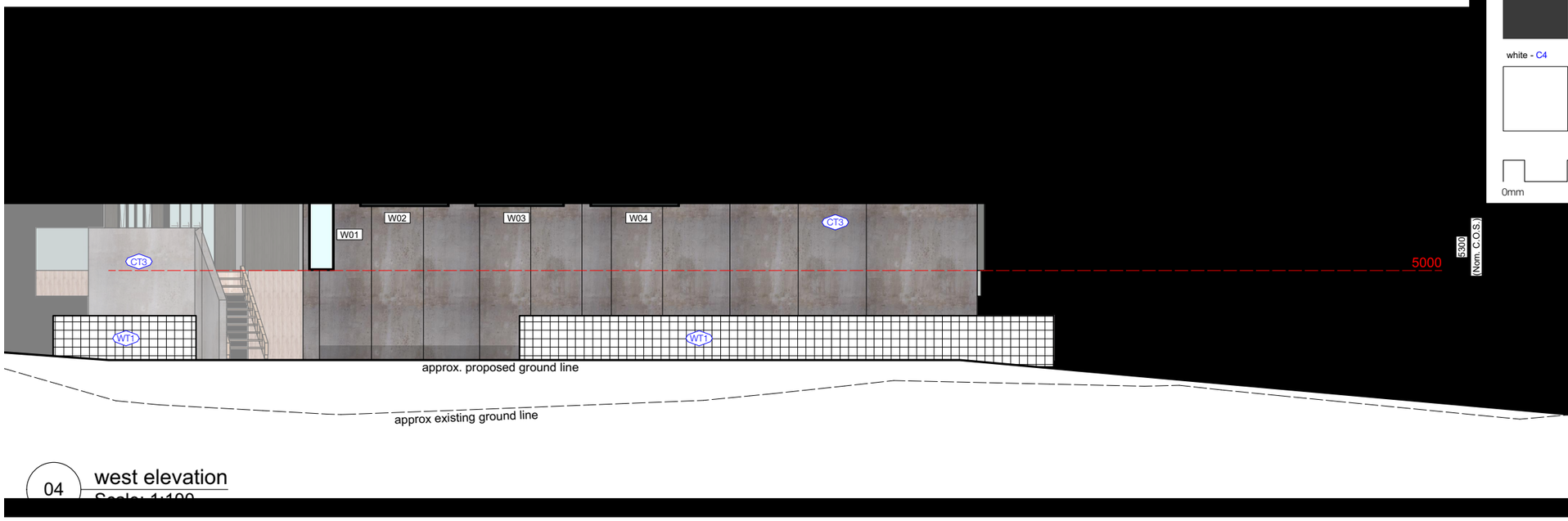


01 south elevation
Scale: 1:100



04 west elevation
Scale: 1:100

CLADDING TYPES

CT1 Mortlock TrendplankTM spotted gum cladding, expressed screw fixing, black stain.

CT2 Mortlock TrendplankTM spotted gum cladding,expressed screw fixing, natural.

CT3 Easylap, james hardie textured paint finish (texture finish to manufacturers specifications and applied to cover fixings), joint painted to match

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GROUND LEVELS SHOWN INDICATIVELY, ENSURE FINISH SURFACE FALLS AWAY FROM STRUCTURE.

GLASS BALUSTRADE TO COMPLY WITH AS1288

COLOUR SCHEDULE
(or similar approved)

monument - C1 | charcoal - C2 | shale grey - C3

white - C4 | black - C5

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar		SCALE @ A3 1:100	DWG # A202
DWG Elevations 03 & 04		DRAWN JF	
		CHKD SH	PROJECT# J000941

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SANITARY PLUMBING TO AS 3500.2
TABLE 6.1: FIXTURE UNIT RATINGS:

Mark:	Fixture:	Outlet pipe size:
1.	Water Closet Pan	DN100
2.	Basin	DN40
3.	Sink	DN50
4.	Shower	DN40 or DN50
5.	Bath	DN40
6.	Though - laundry	DN40 or DN50

Note: Fixtures shown as "ex." are existing.

PLUMBING LEGEND:

Stormwater Line (100 UPVC) @ Min. 1% Falls.

Sewer Line (100 UPVC) @ Min. 1.65% Falls.

Wet Areas shown hatched. Refer Waterproofing details.

AG. Agricultural Pipe drain. (Must drain to SW pit.)

DWM. Dish washing machine. (38dia. Drain hose to sink trap)

CWM. Clothes washing machine. (38dia. Drain hose to trough trap)

I.O Inspection opening.

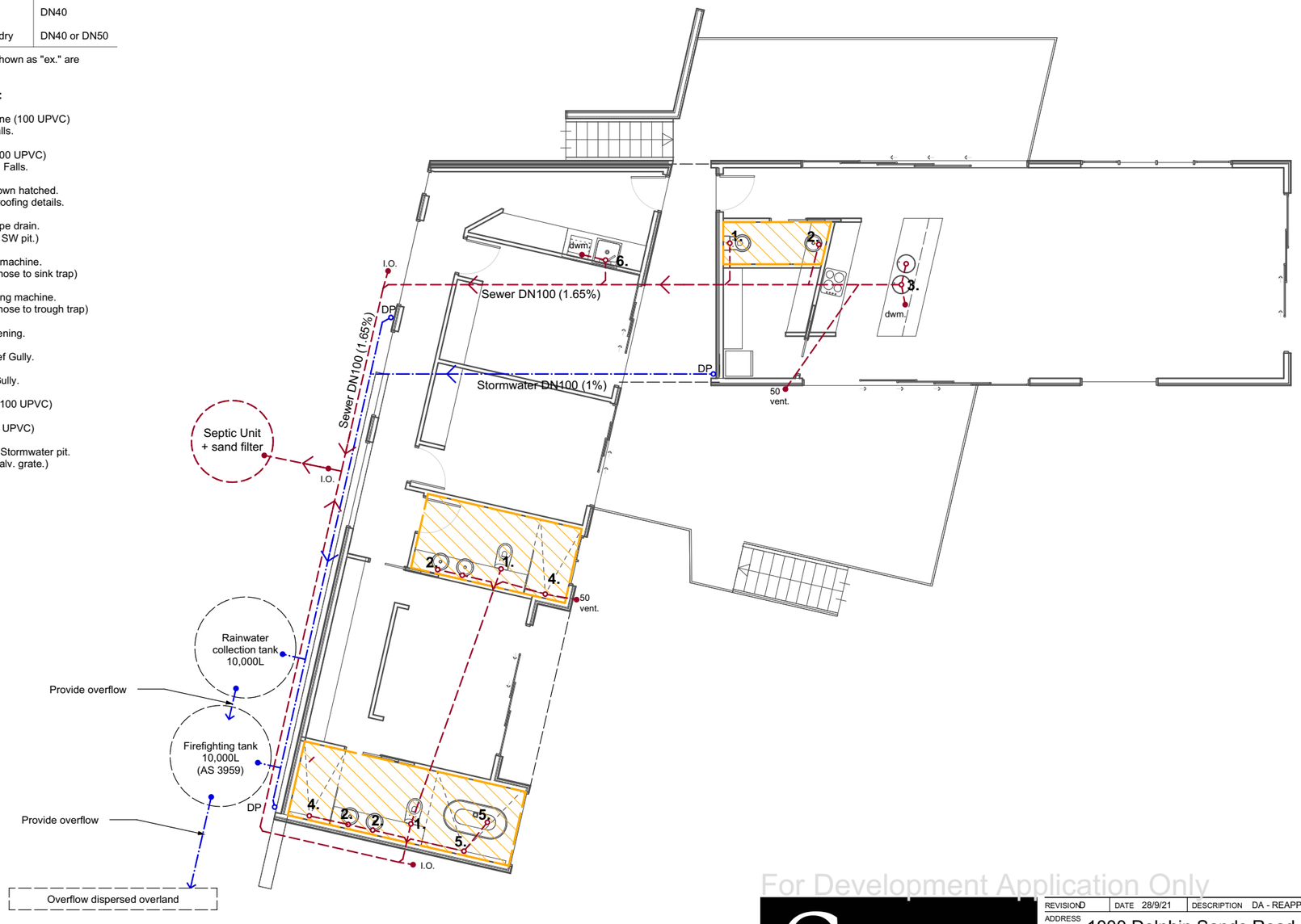
ORG. Overflow Relief Gully.

FW. Floor Waste Gully.

WS. Waste Stack (100 UPVC)

DP. Downpipe (90 UPVC)

PIT. 300sq x 450d Stormwater pit. (Removable galv. grate.)



PLUMBING NOTES:

All works to be carried out by a licensed plumber,
plumber / builder to take levels prior to construction
to ensure drainage lines can be connected to legal
points of discharge (connection points).

Cold water supply line from meter to house 25mm dia.
cold water branches 16mm dia.
hot water main line - 20mm dia.
hot water branches 16mm dia.

vacuum breaker back flow devices to fitted to all outside taps

Install inspection openings at major bends for stormwater and all low points of downpipes. All plumbing & drainage to be in accordance with local Council requirements.
Provide surface drain to back of bulk excavation to drain levelled pad prior to commencing footing excavation.

SERVICES
The heated water system must be designed and installed with Part B2 of NCC Volume Three - Plumbing Code of Australia.

Thermal insulation for heated water piping must:
A) be protected against the effects of weather and sunlight; and
B) be able to withstand the temperatures within the piping; and
C) use thermal insulation in accordance with AS/NZS 4859.1

Heated water piping that is not within a conditioned space must be thermally insulated as follows:
1. Internal piping
a) All flow and return internal piping that is -
i) within an unventilated wall space
ii) within an internal floor between storeys; or
iii) between ceiling insulation and a ceiling
Must have a minimum R-Value of 0.4 (ie 9mm of closed cell polymer insulation)

2. Piping located within a ventilated wall space, an enclosed building subfloor or a roof space
a) All flow and return piping
b) Cold water supply piping and Relief valve piping- within 500mm of the connection to central water heating system
Must have a minimum R-Value of 0.9 (ie 19mm of closed cell polymer insulation)

3. Piping located outside the building or in an unenclosed building sub-floor or roof space
a) All flow and return piping
b) Cold water supply piping and Relief valve piping- within 500mm of the connection to central water heating system
Must have a minimum R-Value of 1.3 (ie 25mm of closed cell polymer insulation)

Piping within an insulated timber framed wall, such as that passing through a wall stud, is considered to comply with the above insulation requirements.

Provide ag drain and backfill behind any retaining wall.
"Geofabrics - Megaflo" subsoil drainage system.

N

0 mm 3500 mm

CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar		SCALE @ A3 1:100	DWG # A800
DWG Plumbing & Drainage Plan		DRAWN JF	
		CHKD SH	PROJECT# J000941

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S. Group
Level 1, 10-14 Paterson St, Launceston
Level 1, 90-92 Murray St, Hobart
PO Box 1271, Launceston, TAS 7250
p 03 6311 1403 **e** info@sgroup.com.au
abn 33 625 566 618 **sgroup.com.au**

28th September 2021

General Manager,

Glamorgan Spring Bay Council

9 Melbourne St (PO Box 6)

Triabunna TAS 7190

RE: DEVELOPMENT APPLICATION RFI RESPONSE – RA1000 DOLPHIN SANDS RD

Dear Greg,

In response to the Request for Further Information dated 27th September 2021 S Group makes the following submissions:

1. The garage was approved and constructed under the previous application for this property. As such, the garage is not included in this application, the site plan (A100) has been amended to reflect this.
2. No external material is to be painted white, the white colour listed on the schedule applies to internal finishes only.
3. The only impervious surfaces are roofed areas. The stormwater from these areas is to be captured in water tanks as detailed on A101 and A800. The proposed driveway is gravel and is a permeable surface.
4. The Bushfire Risk assessment and Bushfire Hazard Management Plan from Lark & Creese is attached.
5. Natural Values Assessment from Lark & Creese is attached.
6. A800 details the waste water system, the location of which is outside of the coastal inundation area as outlined on p 3 of the Natural Values Assessment (attached).
7. The structural engineering and associated Form 35 from Engineering Edge is attached.

If further information or clarification relating to this application is required please contact me.

Best regards,

Simon U'Ren,
Designer (BSc, BEnvDes, MA)
Email: simon@sgroup.com.au
P. (03) 6311 1403
M. 0402 742 252

create. wonder.

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BUSHFIRE RISK ASSESSMENT
PROPOSED NEW DWELLING
1000 DOLPHIN SANDS ROAD, DOLPHIN SANDS
FOR
TASSIE HOMES

PREPARED BY
N M CREESE
Bushfire Management Practitioner BFP-118
18th November 2015

LARK & CREESE
62 Channel Highway, Kingston 7050 Ph 6229 6563 info@larkandcreese.com.au

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15486-01

CONTENTS:

Disclaimer:
AS 3959-2009 cannot guarantee that a dwelling will survive a bushfire attack, however the implementation of the measures contained within AS 3959-2009, this report and accompanying plan will improve the likelihood of survival of the structure. This report and accompanying plan are based on the conditions prevailing at the time of assessment. No responsibility can be accepted to actions by the land owner, governmental or other agencies or other persons that compromise the effectiveness of this plan. The contents of this plan are based on the requirements of the legislation prevailing at the time of report.

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1. SUMMARY:

This Bushfire Risk Assessment has been prepared to support the design and construction of a new dwelling at 1000 Dolphin Sands Road, Dolphin Sands. The site has been deemed to be bushfire prone due to its proximity to the areas of unmanaged vegetation surrounding the site.

This report identifies the protective features and controls that must be incorporated into the design and construction works to ensure compliance with the standards. Fire management solutions are as defined in AS 3959-2009 *Construction of Buildings in Bushfire-Prone Areas, Glamorgan-Spring Bay Interim Planning Scheme 2015, National Construction Code (Volume 2)* and the Tasmania Fire Service publication *Guidelines for Development in Bushfire Prone Areas* 2005.

Providing that construction standards for **BAL-12.5** of AS 3959-2009 are incorporated into the design and new building works and the provision of the minimum hazard management areas specified in Table 1, the new building works are capable of compliance with the provisions of AS 3959-2009 and as a result, the bushfire risk is reduced.

Access is to comply with the provisions of E1.6.3.2, *Glamorgan-Spring Bay Interim Planning Scheme 2015.* A minimum 10,000 litre supply of water is to be provided for fire fighting purposes in accordance with the provisions of E1.6.3.3, *Glamorgan-Spring Bay Interim Planning Scheme 2015*

The effectiveness of the measures and recommendations detailed in this report and AS 3959-2009 is dependent on their implementation and maintenance for the life of the development or until the site characteristics that this assessment has been measured from alter from those identified. No liability can be accepted for actions by lot owners, Council or governmental agencies which compromise the effectiveness of this report.

This report has been prepared by Nick Creese, principal of Lark & Creese surveyors. Nick is a registered surveyor in Tasmania and is accredited by the Tasmania Fire Service to undertake bushfire attack level assessments and prepare bushfire hazard management plans.

Site survey was carried out on 18th October 2015.

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2. LOCATION:

Property Address: 1000 Dolphin Sands Road, Dolphin Sands

Title Owner: W. A. & D. M. Lashmar

Title Reference: C.T. 54666/157

Title Area: 2.841 ha

PID No. 5279223

Municipal Area: Glamorgan-Spring Bay

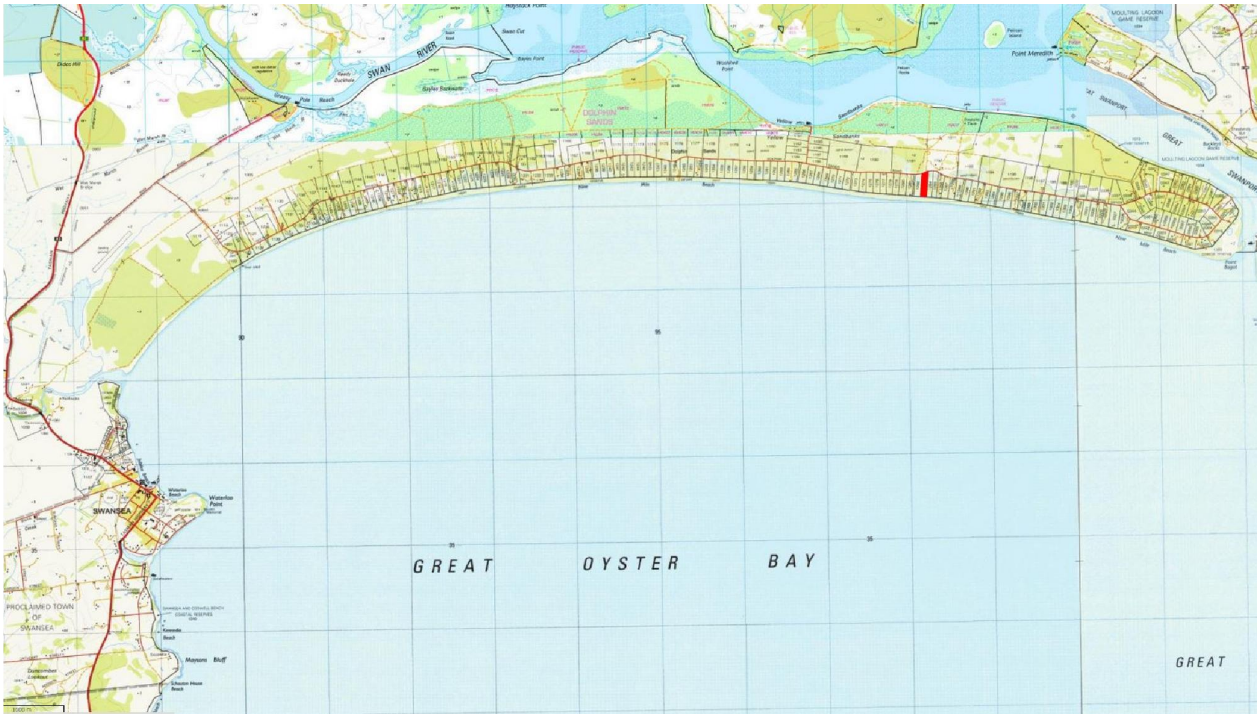

IMAGE 1: Site Location (Source *The LIST*)

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3. SITE DESCRIPTION:

The site forms part of a large long established subdivision on Dolphin Sands Road, Dolphin Sands. The property is at an elevation of 5 metres AHD with the site being generally level. A gravel driveway provides access to the building site from Dolphin Sands Road, a Council maintained sealed road.

At the time of assessment the allotment had a 220m gravel access to near the proposed development site. The Allotments topography is undulating sand dunes predominately vegetated by Marram grass however small clusters of native coastal scrub form a mosaic of vegetation communities including grasses and sedges.

The land to the north , east and west are similar sized allotments comprising of developed and undeveloped properties consisting of dwellings, limited gardens, sheds and hardstand areas Allotments to the east predominantly consists of native coastal scrub while neighbouring allotments to west are predominantly Marram Grass. To the south of the development site a Crown foreshore reserve separates the site from Nine Mile Beach & Great Oyster Bay.

Reticulated water supply is unavailable to the site with all water supply requirements reliant on on-site water storage.

Planning controls are administered by the Glamorgan-Spring Bay Council under the *Glamorgan-Spring Bay Interim Planning Scheme 2015*. The site is zoned Particular Purpose-Dolphin Sands.

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IMAGE 2: Looking east towards development site

IMAGE 2: Looking north towards development site

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4. PROPOSED DEVELOPMENT:

A new class 1A residential dwelling is proposed for the site close to the foreshore boundary. Construction materials include timber exterior cladding, colorbond roofing and aluminium framed windows and sliding doors.

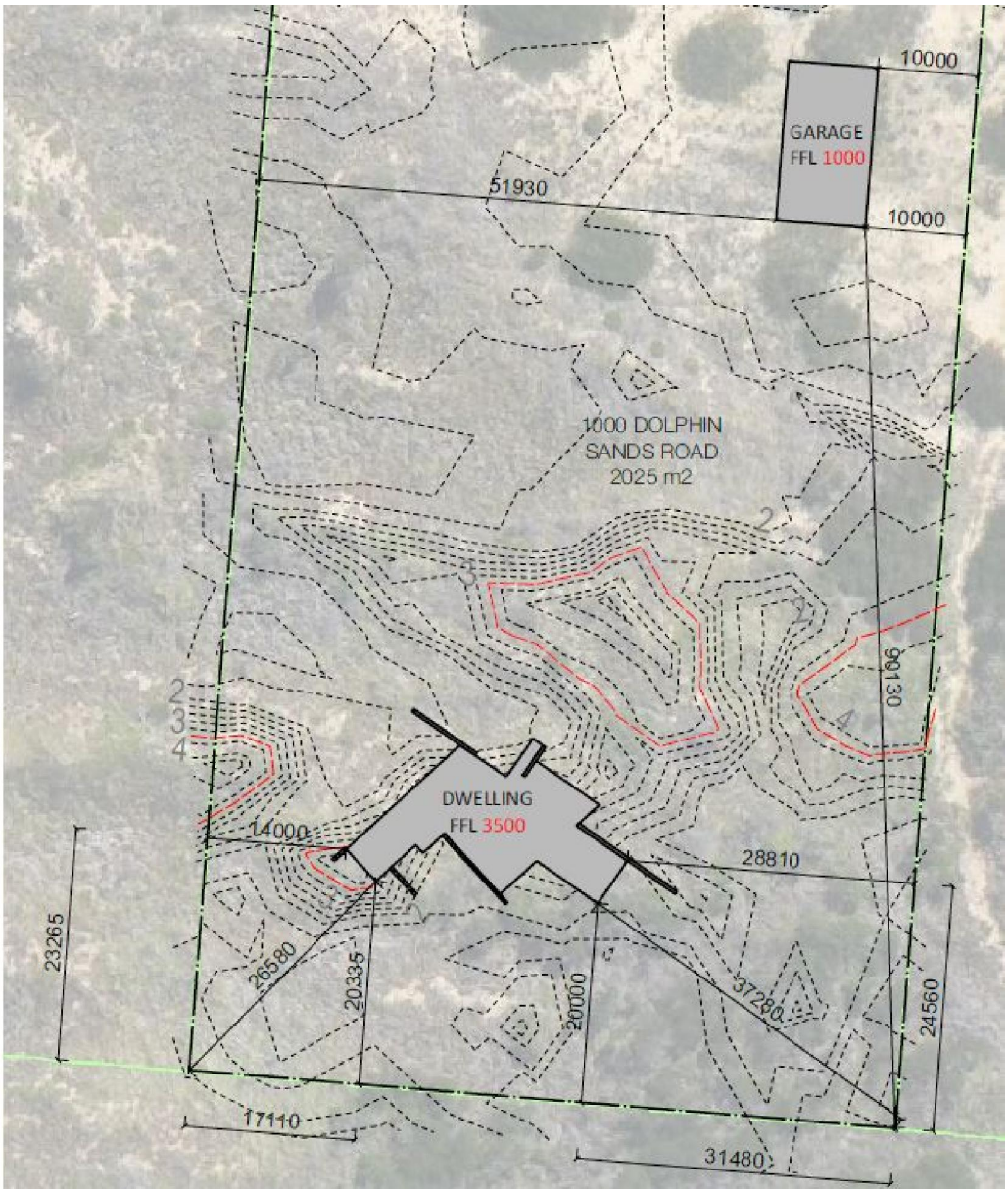

IMAGE 4: Site Plan

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5. BUSHFIRE ASSESSMENT:

Fire Danger Index (FDI): The Fire Index Rating for Tasmania is adopted as 50.

Vegetation Classification:
The predominant vegetation has been determined as follows:

North of development site:	Classification G(i): Grassland
East of development site:	Classification C: Scrubland
South of development site:	Classification C: Scrubland
West of development site:	Classification G(i): Grassland

Gradient under predominant vegetation:	North:	Level
	East:	Level
	South:	Level
	West:	Level
Distance to predominant vegetation:	North:	0 metres
	East:	0 metres
	South:	0 metres
	West:	0 metres

NOTES: At the time of assessment the extent of the vegetation removal was limited to the access and turning area. The proposed house site is further to the south in a vegetated area and as such the distances to predominate vegetation has been assessed as 0 metres. The vegetation surrounding the site is a mosaic of coastal scrubland and open Marram grass. Vegetation is typically <3 metres high with foliage cover assessed as exceeding 30%. Sparser shrubs and increased areas of grasses to the north and west have been assessed as Classification G(i):Grassland. To the east and south, more significant groups of coastal scrubland have been assessed as Classification C:Scrubland.

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IMAGE 5: Aerial Image of predominant vegetation – Source *The LIST*

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IMAGE 6: Predominant vegetation north of site – Classification G(i): Grassland

IMAGE 7: Predominant vegetation east of site – Classification C: Scrubland

IMAGE 8: Predominant vegetation to south of site – Classification C: Scrubland

IMAGE 9: Predominant vegetation to west of site – Classification G(i): Grassland

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Bushfire Attack Level (BAL):

Based on the predominant vegetation detailed above, and the separation distance provided between the predominant vegetation and the development, the BAL for each elevation of the proposed dwelling has been assessed as follows:

North Elevation:	**BAL-12.5**
East Elevation:	**BAL-12.5**
South Elevation:	**BAL-12.5**
West Elevation:	**BAL-12.5**

Table 1 details the hazard management area required to comply with that BAL, and the area available for compliance.

	NORTH	EAST	SOUTH	WEST
BAL	**BAL-12.5**	**BAL-12.5**	**BAL-12.5**	**BAL-12.5**
VEGETATION TYPE	Classification G(i): Grassland	Classification C: Shrubland	Classification C: Shrubland	Classification G(i): Grassland
SLOPE	Level	Level	Level	Level
HAZARD MANAGEMENT AREA REQUIRED	14-<50 metres	19-<100 metres	19-<100 metres	14-<50metres
HAZARD MANAGEMENT AREA AVAILABLE	In excess of 14 metres available for establishment of hazard management area.	In excess of 19 metres available for establishment of hazard management area.	In excess of 19 metres available for establishment of hazard management area.	14 metres available for establishment of hazard management area.

TABLE 1: BAL assessment and Hazard Management Area requirements

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6. COMPLIANCE:

All building works shall comply with the specifications for **BAL-12.5** under Section 5of AS 3959-2009. This includes the general provisions contained within AS 3959-2009 and the following sub-sections:

- 5.1 General provisions
- 5.4 External Walls
- 5.5 External Glazed Elements and Assemblies and External Doors
- 5.6 Roofs
- 5.7 Verandas, Decks, Steps, Ramps and Landings
- 5.8 Water and Gas Supply Pipes.

Glamorgan-Spring Bay Interim Planning Scheme 2015:

Compliance with the Acceptable Solutions provisions of Section E 1.6.3 (new habitable buildings on pre-existing lots) are achieved through the implementation of the following:

- E1.6.3.1 Provision of Hazard Management Areas:
  A1(b) This report details the extent of hazard management areas consistent with the objective through the provision of improved hazard management area in accordance with AS 3959-2009, providing for improved fire protection from the bushfire prone vegetation surrounding the site.

- E1.6.3.2 Private Access:
  A1 (c) Access is to be provided to within 30 metres of the furthest point of the dwelling.
  A2 (a) Access is to provide to within 3 metres of the static water supply.

- E1.6.3.2 A3 Construction standards for Private Access: access to a residential site is to comply with the Modified 4C Access Road standards.

  A Modified 4C Access Road is an all weather road which complies with the Australian Road Research Board "Unsealed Roads Manual – Guidelines to Good Practice", 3rd Edition, March 2009 as a classification 4C Access Road and the following modified requirements:

  - Single lane private access roads less than 6 m carriageway width must have 20 m long passing bays of 6 m carriageway width not more than 100m apart. (Minimum pavement width is to be 4.00 metres including shoulders).

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- A private access road longer than 100 m must be provided with a driveway encircling the building, or a hammerhead "T" or "Y" turning head 4 m wide and 8 m long, or a trafficable circular turning area of 10 m radius.
- Culverts and bridges must be designed for a minimum vehicle load of 20 tonnes.

- Vegetation must be cleared for a height of 4 m, above the carriageway, and 2 m each side of the carriageway.

  See Unsealed Roads Manual – Guidelines to Good Practice and Section 3.7.4.1, National Construction Code for further details.

- E1.6.3.3 A1(d) Provision of Water Supply for fire fighting purposes: on-site storage for dedicated fire fighting purposes is to be provided to the following standards:

  - Stored water supply in a water tank, swimming pool, dam or lake available for fire fighting at all times which has a capacity of at least 10,000 litres for each separate building.

  - A water tank and above ground pipes and fittings used for a stored water supply must be made of non-rusting, non-combustible, non-heat-deforming materials and must be situated more than 6 m from a building.

  - The water tank must have an opening in the top of not less than 250 mm diameter or be fitted with a standard TFS Stortz coupling capable of delivering 270 L per minute.

  - The supply is accessible by fire-fighting vehicles and is within 3 metres of a hardstand area.

  See Section 3.7.4.2, National Construction Code for further details

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Hazard Management Areas:

Hazard Management Areas are to be established and maintained in a minimal fuel condition for the distances quoted under "Hazard Management Area Required" (Table 1). This can be achieved through the implementation of the following measures:

- Establishing non-flammable areas around the dwelling such as paths, patios, driveways, lawns etc.

- Locating dams, orchards, vegetable gardens, effluent disposal areas etc on the bushfire prone side of the building.

- Providing heat shields and ember traps on the bushfire prone side of the dwelling such as non-flammable fencing, hedges, separated garden shrubs and small trees. Avoid the use of highly flammable plants.

- Ensure flammable materials such as wood piles, fuels and rubbish heaps are stored away from the dwelling.

- Replace highly flammable plants with low flammability species.

- Provide horizontal separation between tree crowns and vertical separation between ground fuels and overhead branches.

- Provide separation between significant trees such that groups are no greater than 20 metres in width, and more than 20 metres of other groups of significant trees. Note that retention of some trees can screen a dwelling from windborne embers.

- Regular slashing or mowing of grass to a height of less than 100mm.

- Removal of ground fuels such as leaves, bark, fallen branches etc on a regular basis.

- Ensuring no trees overhang the dwelling so that vegetation falls onto the roof.

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7. CONCLUSIONS & RECOMMENDATIONS:

This Bushfire Risk Assessment has been prepared to support design and construction of a new dwelling at 1000 Dolphins Road, Dolphin Sands. The report has reviewed the bushfire risks associated with the site, and determined the fire management strategies that must be carried out to ensure the development on the site is at reduced risk from bushfire attack. Provided the elements detailed in this report are implemented the development on the site is capable of compliance with AS-3959-2009 and the Tasmania Fire Service Guidelines and any potential bushfire risk to the site is reduced.

The new building works must comply with the requirements **BAL-12.5** of AS-3959-2009 as specified in Table 1 and Part 6 of this report. The Council's approval issued for the building works should contain conditions requiring that the protective elements defined in this report and AS-3959-2009 is implemented during the construction phase and maintained by the lot owners for the life of the structure.

Access and a supply of water shall be provided in accordance with E1.6.3, Bushfire Prone Areas Code of the Glamorgan-Spring Bay Interim Planning Scheme 2015.

Although not mandatory, any increase in the construction standards above the assessed Bushfire Attack Level will afford improved protection from bushfire and this should be considered by the owner, designer and/or builder prior to construction commencing.

Hazard Management Areas must be established and maintained in a minimal fuel condition in accordance with this plan and the TFS guidelines. It is the owner's responsibility to ensure the long term maintenance of the hazard management areas in accordance with the requirements of this report.

This report does not recommend or endorse the removal of any vegetation within, or adjoining the site for the purpose of bushfire protection without the explicit approval of the local authority.

N M Creese
Accredited Bushfire Management Practitioner BFP-118

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8. REFERENCES:

- *AS-3959-2009 - Construction of Buildings in Bushfire Prone Areas.*
- *National Construction Code Volume 2.*
- *Guidelines for Development in Bushfire Prone Areas* - Tasmania Fire Service.
- *Glamorgan-Spring Bay Interim Planning Scheme 2015*.
- *The LIST* - Department of Primary Industry Parks Water & Environment.

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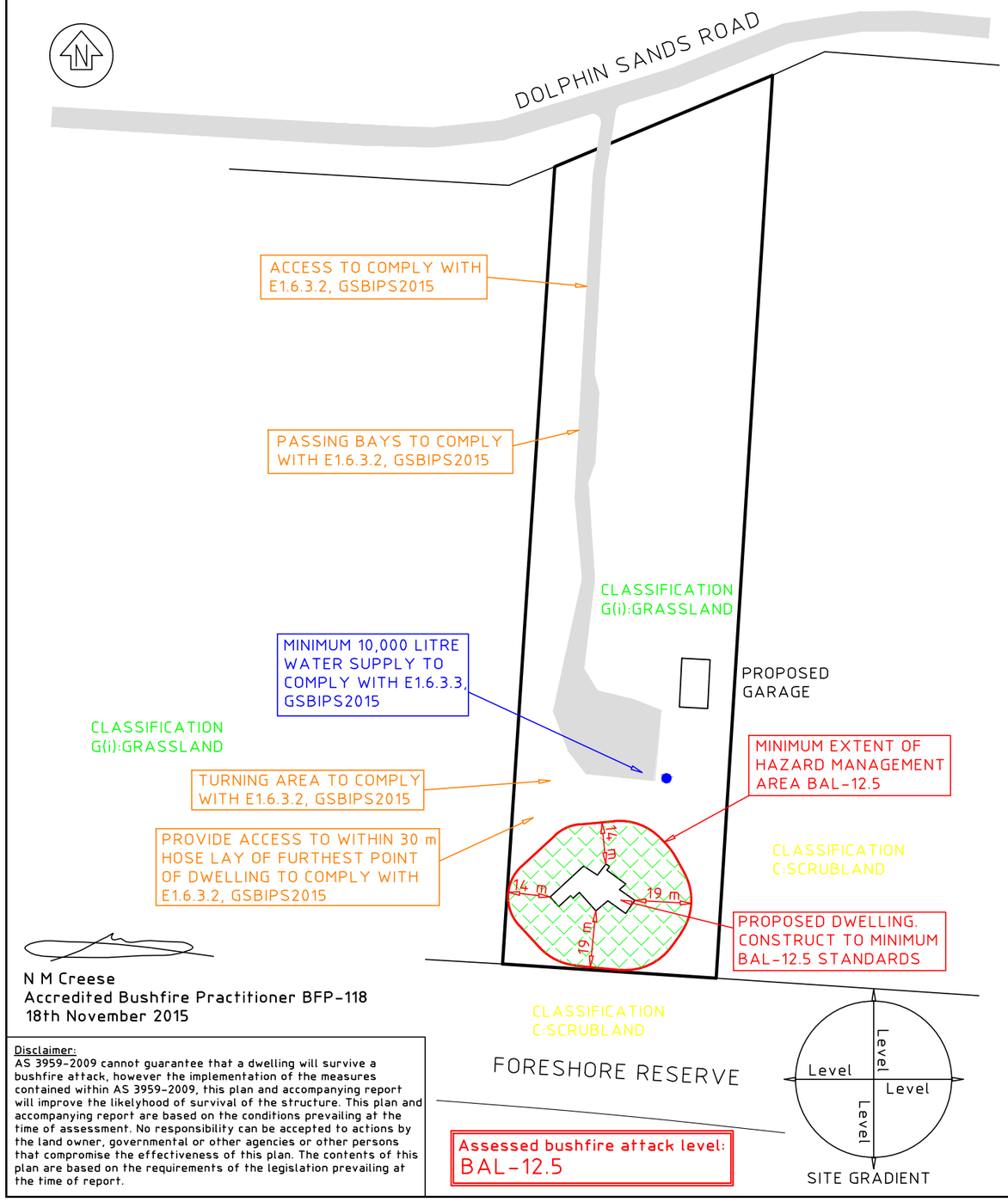
ATTACHMENT 1



N M Creese
Accredited Bushfire Practitioner BFP-118
18th November 2015

Disclaimer:
AS 3959-2009 cannot guarantee that a dwelling will survive a bushfire attack, however the implementation of the measures contained within AS 3959-2009, this plan and accompanying report will improve the likelyhood of survival of the structure. This plan and accompanying report are based on the conditions prevailing at the time of assessment. No responsibility can be accepted to actions by the land owner, governmental or other agencies or other persons that compromise the effectiveness of this plan. The contents of this plan are based on the requirements of the legislation prevailing at the time of report.

Assessed bushfire attack level:
BAL-12.5

NOTES:
1) Design and construction standards of the new dwelling are to comply with BAL-12.5 of AS 3959-2009.

2) Hazard management areas are to be established and maintained in a reduced fuel condition the dimensions quoted in this plan.
This can be achieved through the implementation of the following measures:

- Establishing non-flammable areas around the dwelling such as paths, patios, driveways, lawns etc.
- Locating dams, orchards, vegetable gardens, effluent disposal areas etc on the bushfire prone side of the building.
- Providing heat shields and ember traps on the bushfire prone side of the dwelling such as non-flammable fencing, hedges, separated garden shrubs and small trees. Avoid the use of highly flammable plants.
- Ensure flammable materials such as wood piles, fuels and rubbish heaps are stored away from the dwelling.
- Replace highly flammable plants with low flammability species.
- Provide horizontal separation between tree crowns and vertical separation between ground fuels and overhead branches.
- Provide separation between significant trees such that groups are no greater than 20 metres in width, and more than 20 metres of other groups of significant trees. Note that retention of some trees can screen a dwelling from wind borne embers.
- Regular slashing or mowing of grass to a height of less than 100mm.
- Removal of ground fuels such as leaves, bark, fallen branches etc on a regular basis.
- Ensuring no trees overhang the dwelling so that vegetation falls onto the roof.

See attached report and TFS guidelines for further information.

3) Access to be provided in accordance with E1.6.3.2, Glamorgan-Spring Bay Interim Planning Scheme 2015 to a minimum Modified 4C standard. A Modified 4C Access Road is an all weather road which complies with the Australian Road Research Board Unsealed Roads Manual – Guidelines to Good Practice, 3rd Edition, March 2009 as a classification 4C Access Road and the following modified requirements:

- Single lane private access roads less than 6 m carriageway width must have 20 m long passing bays of 6 m carriageway width not more than 100m apart. Minimum pavement width to be 4.00 metres including shoulders.
- A private access road longer than 100 m must be provided with a driveway encircling the building, or a hammerhead "T" or "Y" turning head 4 m wide and 8 m long, or a trafficable circular turning area of 10 m radius.
- Culverts and bridges must be designed for a minimum vehicle load of 20 tonnes.
- Vegetation must be cleared for a height of 4 m, above the carriageway, and 2 m each side of the carriageway.
- Hardstand access is to be provided to within 3 metres of the static water supply.
- Access is to be provided to within 30 metres of the furthest point of the building, measured as a hose lay.

4) A minimum static water supply of 10 000 litres per habitable building is provided and that connections for fire fighting purposes are included in accordance with E1.6.3.3, Glamorgan-Spring Bay Interim Planning Scheme 2015.

5) This Bushfire Hazard Management Plan and accompanying Bushfire Risk Assessment are in compliance with the Acceptable Solutions Provisions of E.1.6.3 (new habitable buildings on pre-existing lots) Glamorgan-Spring Bay Interim Planning Scheme 2015

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BUSHFIRE HAZARD MANAGEMENT PLAN

Owner: **W. A. & D. M. LASHMAR**		Note: This plan has been prepared for the purpose of compliance with AS3959-2009 and Tasmania Fire Service Guidelines . This plan is not to be used for any other purpose without the express permission of Lark & Creese. The details depicted on this plan have been obtained from a combination of field survey, aerial photography and mapping and as such may not represent the precise nature of the site.
Location: **1000 DOLPHIN SANDS ROAD, DOLPHIN SANDS**		
Title Reference: **C.T. 54666/157**	PID: **5279223**	
Scale: **1:1500**	Date: **18/11/2015**	Surveyors Ref No. **15486**

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NATURAL VALUES ASSESSMENT

1000 DOLPHINS SANDS ROAD, DOLPHINS SANDS

For

D. M. & W. A. Lashmar

November 2021

D. Summers (BAppSc)

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1. Summary

The following report, on behalf of D. M. & W. A. Lashmar, assess the potential impacts on existing natural values associated with the construction of a new dwelling within 1000 Dolphin Sands Road, Dolphin Sands to assist local, State and Commonwealth agencies during the assessment and approval process. The property is zoned Particular Purpose (PPZ 3 – Dolphin Sands) and within the Biodiversity Protection Overlay under Glamorgan-Spring Bay Interim Planning Scheme 2015 (G-SBIPS2015). The study site was assessed by Doug Summers in October 2021.

Legislative Implications
Threatened flora

- One threatened plant species, *Melaleuca pustulata*, listed under Tasmania's *Threatened Species Protection Act 1995* had previously been recorded near the northern boundary, but not recorded during the survey. No plant listed under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999* previously recorded,
- Flora surveys recorded, *Cynoglossum australe*, listed as rare within DPIPWE's Threatened plants within the Local Government Area: Glamorgan – Spring Bay, however, It appears this plant has been delisted from Schedule 3A of under Tasmania's *Threatened Species Protection Act 1995*,
- Assessment indicates existing vegetation, including the proposed development site, is consistent with TASVEG 4.0 classification *Acacia longifolia* coastal scrub (SAL),
- Not anticipated the development, and establishment of the BAL-19 bushfire hazard management area, will result in a significant loss of potential habitat for threatened flora,
- No further assessment or permit required under Tasmania's *Threatened Species Protection Act 1995* or the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1999.*

Vegetation communities

- TASVEG 4.0 identify the remaining vegetation, including the proposed development site, as Acacia longifolia coastal scrub (SAL) that is not listed as threatened under Schedule 3A of Tasmania's Nature Conservation Act 1995,
- Not anticipated the development, and establishment of the BAL-19 bushfire hazard management area, will significantly impact or threaten SAL vegetation community. No further assessment or referral required under Tasmania's Nature Conservation Act 2002 or Land Use Planning and Approvals Act 1993.

Threatened fauna

- No fauna species listed under Tasmania's Threatened Species Protection Act 1995 or the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 have previously been recorded within the allotment, or were recorded during surveys,
- Assessment indicates the study area is within range boundaries of Spotted-tailed Quolls, Devils and the Eastern-barred bandicoot. Assessment indicates the area impacted will not result in a significant loss of foraging or denning habitat for Quolls, Devils and Eastern-barred bandicoots. No further assessment or permit required under Tasmania's Threatened Species Protection Act 1995 or the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999,
- Given the proposal will not require the removal of known threatened species habitat or a significant loss of potential habitat, it is anticipated no further assessment or referral under

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Tasmania's Threatened Species Protection Act 1995 or the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 is required.

Weed Management

- Sow and Spear thistles are not listed under Tasmania's Weed Management Act 1999. No specific weed management controls required.

The study site is within Council's Biodiversity Protection Area and generally any removal of vegetation requires offsetting in accordance with '*Guidelines for the use of Biodiversity Offsets in the local planning approval process'*. Assessment indicates the allotment can support an in-situ biodiversity offset that Would encapsulate same-for-same vegetation type.

Assessment indicates the proposed development will result in the loss of potential habitat for the rare *Lachnagrostis billardierei* subsp *tenueseta* and *Melaleuca pustulata*. However, it is not anticipated the proposal will result in a significant loss of habitat for these and other species recorded within 5km.

As such it is unlikely the development will substantially impact surrounding natural values identified or compromise the existing ecological systems and functions the allotment and surrounding environs support. No further assessment or permit is required under Tasmania's *Threatened Species Protection Act 1995* or Commonwealth's *Environmental Protection Biodiversity Conservation Act 1999.*

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2. Proposal and Site Description

This assessment has been undertaken as part of a development application to the Glamorgan Spring Bay Council for the construction of a new Class 1A dwelling (see Figure 2). The survey specifically focuses on flora and fauna values assessing potential impacts, but also considering remedial measures, on ecological functions of flora and fauna within the development site and also surrounding vegetation communities. Survey methodology based on 'Site Examination for Threatened and Endangered Plant Species' [1] supported by methodology outlined in "Manual for Assessing Vegetation Condition in Tasmania" [2].

The development sites are currently zoned Particular Purpose [3] with the proposed development sites (dwelling and garage) are boarded by similarly zoned allotments to the east and west whilst allotments to the north are larger in size. The proposed development site is encompassed by Councils Biodiversity Protection Overlay whilst a small section of the southern part of the property is considered vulnerable to Coastal Erosion and Coastal inundation under the *Glamorgan - Spring Bay Council Interim Planning Scheme 2015* (see Figure 6).

Substrate is derived from Undifferentiated Cenozoic sequences consisting of sand gravel and mud of alluvial, lacustrine and littoral origin [4]. A survey found no geomorphic conservation features or geoconservation sites within the property [4] nor any Aboriginal or cultural heritage sites have been documented within the study site [4]. Research also indicted no documented cases of Phytophthora cinnamomi (Pc) were found within the property [4].

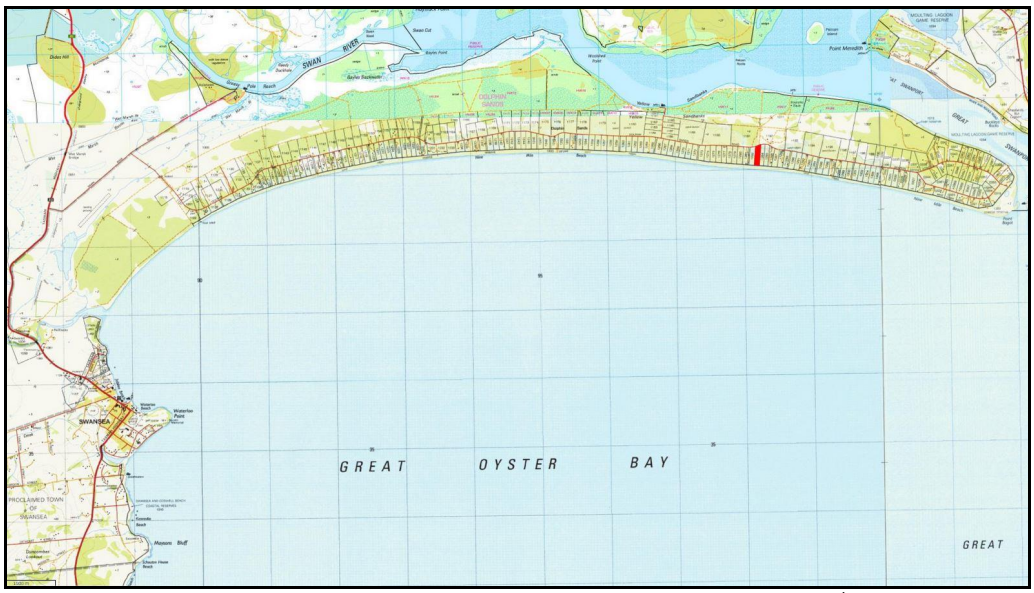

Figure 1 – Locality map, 1000 Dolphin Sands Road, Dolphin Sands (in red) [4].

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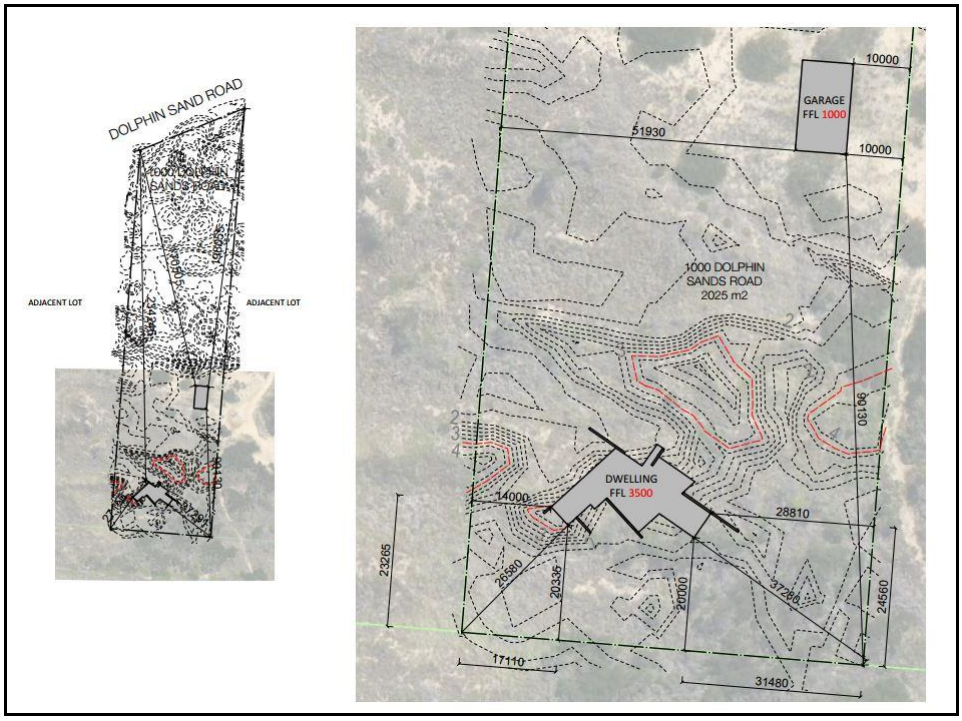

Figure 2 – Proposal site plan 1000 Dolphin Sands Road, Dolphin Sands.

1 Dawson & Rochow, 1982
2 DPIPWE, 2009
3 KPS2000
4 Natural Values Atlas 3.0

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3. Native Vegetation

Acacia pustulata and *Lachnagrostis billardierei* subsp *tenuiseta* listed as rare under Tasmanian's *Threatened Species Protection Act 1995* was previously recorded within 500m but not recorded within the property. No vascular plant species of national conservation significance, listed in the *Commonwealth Environment Protection & Biodiversity Conservation Act 1999* were recorded on site.

Flora assessment undertaken in 2015 recorded *Cynoglossum australe* that was at the time listed as 'rare' at that time but has since been removed from the Schedule A of Tasmanian's *Threatened Species Protection Act 1995*. *Cynoglossum australe* is still listed as rare under DPIPWE's Threatened plants within the Glamorgan – Spring Bay Local Government Area.

At time of survey an approved access road had been constructed extending south from the access point via Dolphin Sands Road running close to the western boundary leading to an area reclaimed with fill covering approximately 750m^2. Vegetation survey indicates the 350m long linear strip of vegetation between Dolphin Sands Road and Great Oyster Bay is a mosaic of *Acacia longifolia*, coastal scrub vegetation communities and introduced Marram grass shaped by topography, past and present land use and both wild bushfires and planned reduction burns.

SLA vegetation occupies majority of the allotment dominated by *Acacia longifolia*, *Banksia marginata*, *Leucogogon parviflorus* and *Banksia marginata* however vegetation structure and species composition in the southern half predominantly consisted of Marram Grass, with a shrub layer of *Acacia longifolia*. Coastal vegetation communities are stable by nature but are short lived[8] however existing dominance of Marram grass appears to be in response to fire evident by charred trunks as far south as the proposed house site. It is unclear when the fire occurred but surveys indicate native species of herbs, grasses and shrubs are colonising the burnt site and in time through successional communities eventually will be dominated by *Acacia longifolia* [8].

Distribution of *Banksia marginata* is limited to the peaks of the secondary dunes in the north of the allotment with isolated pockets of *Acacia longifolia* subsp *sophorae, Leucopogon parviflorus* and *Rhagodia candolleana* dominating shrub species in the southern three quarters of the allotment. Zonation of coastal plant species is not as evident due to lack of typical vegetation structure however recruitment of native herbs, grasses and graminoids post fire indicates natural successional processes operating and are dictating species recruitment and distribution within the allotment. *Lomandra longifolia* appears limited to the northern parts of the allotment whilst low lying areas in the southern part of the property are occupied by species such as *Juncas* sp., *Lepediosperma concavum*, *Cynoglossum* sp., *Carbobortus rossii* and herbs such as *Gnapalium indutum*, *Poranthera microphylla*, *Viola* sp, and *Euchiton* sp whilst *Actites megalocarpus* can be found occupying fore-dunes in the Crown Reserve. Native grasses include *Austrostipa* sp., and *Poa* sp.

Flora and fauna assessment indicates the fire, previous and current land use and management practices have shaped vegetation within the allotment with existing vegetation consistent with TASVEG 4.0 *Acacia longifolia* Coastal Shrub (SAL) vegetation community. However, Marram grass dominates the southern third of the allotment (>50% cover) the vegetation structure and reduced species diversity. TASVEG 4.0 SAL vegetation community is not listed as threatened under Tasmania's *Nature Conservation Act 2022*.

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Figure 3 – Distribution of vegetation communities within the subject property (black) and surrounding properties as per TASVEG 4.0 [8]. Anticipated existing distribution of veg communities significantly influenced by fire in 1994 with Marram grass throughout the allotment but dominant in southern third. ARS- Saline sedgeland / rushland, DVC – Dry *Eucalyptus viminalis* coastal forest/woodland, SAL- *Acacia longifolia* coastal scrub.

Figure 4 – Image looking south along existing access showing SLA that has regenerated following the 2014 fires.

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Figure 5 - Image looking east at typical topography and SLA vegetation community occupying the central section of the allotment.

Figure 6 – Image looking south at existing clearing near the shed.

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Figure 7 – Image showing the extent of clearance and/or conversion of SLA adjacent to the existing shed.

Figure 8 – Image looking at the proposed development site supporting SLA vegetation community with Marram grass dominant.

7 Forestry Practices Authority
8 Harris & Kitchener, 2005
9 TASVEG 4.0, DPIPWE
10 Threatened species Unit, NP&WS & *Tasmanian Threatened Species Protection Act 1995, Commonwealth Environmental Protection, Biodiversity Conservation Act 1999 and Tasmanian Nature Conservation Act 1999*.

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4. Introduced Plants

Marram grass is well established within the allotment with the southern half dominated by the introduced species[11]. This invasive weed species can displace native grass species by rapidly colonising areas post fire and sandy locations not normally settled by native species. Control is the only realistic option in many cases particularly with respect to protecting threatened species habitat. Marram grass in not listed a Declared weed under the *Tasmanian Weed Management Act 1999* site and as such has no individual Weed Management Plan. Spear and Sow thistles recorded were sparse and limited to disturbed sites adjacent to access and around the shed and given the limited numbers anticipate eradication can be achieved. Recent survey of the Natural Values Database indicated no *Phytophthora cinnamomi* (Pc) infestation or within 1000m [13]. SLA vegetation community is not considered susceptible to Pc.

Table 4 – Weed species present on site. (Excludes exotic grass and Plantago species).

Weed Species	Status [11]	Distribution
Sow thistle *Sonchus oleraceus* & Spear thistle *Cirsium vulgare*	• Environmental weed species, • Zone B - Containment	• Distribution is limited to disturbed areas adjacent to access, • Isolated plants found within disturbed areas surrounding the shed.
Marram grass *Ammophila arenaria*	• Environmental weed species	• Found throughout the allotment, • Dominates vegetation structure in the southern third of the allotment including the proposed development site.

Figure 9 – Sow thistle rosette found on side of access road in northern part of allotment.

11 Kingborough Weed Management Strategy 2013-2018
12 Southern Tasmanian Weed Management Strategy 2005
13 Natural Values Atlas Database 3.0, DPIPWE

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5. Discussion

No threatened fauna species listed in Schedule 3, 4 or 5 of the *Threatened Species Protection Act 1995* or the *Environment Protection and Biodiversity Conservation Act 1999* have previously been recorded within the study site. A search of the Natural Values Atlas database indicates the significance of the vegetation with respect to coastal values has a non-threatened status with the proposed development site assessed as having 50-90% Marram grass coverage. Despite SLA being displaced, the surrounding coastal area still represents potential habitat and values for threatened flora and fauna species.

The study site constitutes potential habitat for threatened plants listed in Table 1. Surveys potentially found *Cynoglossum australe* within study site however identification was not possible due to lack of diagnostic features (flower colour). Follow up surveys will be required in Nov/Dec to coincide with optimum flowering period for correct identification. This survey period also represents suitable survey times for threatened grass species listed found within 500m such as the Small-awned blowngrass and Knotty speargrass.

Tasmanian Devils and Spotted-tailed Quoll have been recorded within 5km however all Quoll sightings were to the north beyond the geographic confines of the sandy peninsular between Great Oyster Bay and the Swan River and Moulting Lagoon whilst Devils have been recorded only twice on the peninsular. Survey of the study site indicates marginal foraging habitat with no potential den habitat for the Devil with nearest potential habitat to the north in *Eucalyptus viminalis* forest.

Whilst Hooded Plovers have been recorded close by on Nine Mile Beach however, the proposed development site does not represent suitable habitat. From a conservation perspective, the dominance of Marram grass occupying and altering possible nesting sites represents a far greater threat to the survival of this bird species[20]. White-bellied sea eagle and Grey goshawk have been recorded within 5km but the study site offers only potential foraging habitat for the Sea eagle. The vulnerable Green and gold frog has been recorded in Swanwick approximately 4.4km to the east however the study site does not represent favourable habitat and therefore unlikely to be impacted.

Table 1: Significant Plant species previously recorded within 5 km radius of the study area [5].

Species	Conservation Status [6] TSPA	EPBCA	Observations/Comments
Acacia ulicifolia Juniper wattle	rare	-	Not recorded previously or at time of survey. Found within 5km. In Tasmania *Acacia ulicifolia* is found on sandy coastal heaths, open forest and woodland in the north and east of Tasmania. Development site does not constitute potential habitat. Do not anticipated proposal will result in a loss of potential habitat. No further assessment under TSPA or EPBCA.
Austrostipa nodosa Knotty speargrass	rare	-	Not recorded previously or at time of survey. In Tasmania, this species occurs predominantly in the eastern half of the State in grassland or open forest. Flowering of this grass is from

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			August to October (Flora of Victoria). Mature inflorescences are required for identification. Intergradation with other species may confuse identification. Development site does not constitute preferred habitat. Do not anticipated proposal will result in a loss of potential habitat. No further assessment under TSPA or EPBCA.
Bertya tasmanica subsp. *tasmanica* Tasmanian bertya	endangered	Endangered	Not recorded previously or at time of survey. Development site does not constitute potential habitat. The species is known from mostly riparian sites in Tasmania's Northern Midlands and East Coast regions and is partly associated with the EPBC Act listed *Eucalyptus ovata–Callitris oblonga* Forest community. The Swanwick site is atypical, in that plants occur within near-coastal vegetation dominated by *Allocasuarina verticillata* (drooping sheoak). This shrub flowers from spring to summer. It may be identified at any time of year due its distinctive 'rosemary-like' foliage. Do not anticipated proposal will result in a loss of potential habitat. No further assessment under TSPA or EPBCA.
Caustis pentandra Thick twistsedge	rare	-	Not recorded previously or at time of survey. In Tasmania, *Caustis pentandra* is known from sandy soils in coastal heathland and heathy woodland around the north-east and East Coast. Restricted to Freycinet National Park and environs. Do not anticipated proposal will result in a loss of potential habitat. No further assessment under TSPA.
Corunastylis nuda Tiny midge-orchid	rare	-	Not recorded previously or at time of survey. In Tasmania, *Corunastylis nuda* occurs in a wide range of habitats including scrub, subalpine grassland, heathy open forest, open rock plates among forest, shrubby dry sclerophyll forest and open wet sclerophyll forest, from near sea level to 1000 m elevation on a range of different soil types and parent geologies. Do not anticipated proposal will result in a loss of potential habitat. No further assessment under TSPA.
Cynoglossum australe Aust hound's tongue	rare	-	Recorded on site in 2015. Not listed as threatened species. No further assessment under TSPA.

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Gratiola pubescens Hairy brookline	vulnerable	-	Not recorded previously or at time of survey. In Tasmania the species is most commonly located in permanently or seasonally damp or swampy ground, including the margins of farm dams. Do not anticipated proposal will result in a loss of potential habitat. No further assessment under TSPA.
Glycine microphylla Small-leafed microphylla	vulnerable	-	Not recorded previously or at time of survey. In Tasmania, *Glycine microphylla* occurs in dry to dampish sclerophyll forest and woodland in the north and east of the State. Do not anticipated proposal will result in a loss of potential habitat. No further assessment under TSPA.
Lachnagrostis billardierei spp. *tenuiseta* Small-awn blowngrass	rare	-	Not recorded previously or at time of survey. *Lachnagrostis billardierei* subsp. *tenuiseta* grows on deep windblown sands, such as on the edge of the seaward side of sand dunes. It can grow amongst stands of marram grass, close to the beach, either on or between the first two or three sand dunes (subsp. *billardiere*i tends to grow in more sheltered positions. The taxonomy of native *Lachnagrostis* species is difficult. Mature inflorescences are required for identification, and while these can be present at any time of the year, spring-summer is the ideal survey period. Proposed development site represents potential habitat but not recorded. Do not anticipate the proposal will result in a significant loss of potential habitat. No further assessment under TSPA.
Melaleuca pustulata Warty paperbark	rare	-	Not recorded previously or at time of survey. Melaleuca pustulata occurs in a range of habitats including dry open woodland (often on dolerite in forests dominated by Eucalyptus pulchella), grassland and scrub, riparian zones and stable dunes in sparse coastal shrubbery. It is restricted to the State's Central East coast. Can be identified at any time of the year. Do not anticipate the proposal will result in a significant loss of potential habitat. No further assessment under TSPA.
Trithuria submerse Submerged watertuft	rare	-	Not recorded previously or at time of survey. Habitat includes areas subject to flooding, viz., the margins of wetlands, small watercourses, shallow temporary depressions and wet

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			heathlands. Development site does not constitute potential habitat. No further assessment under TSPA.
Poa Poiformis var. *ramiferI* Island purple grass	rare	-	Not recorded previously or at time of survey. In Tasmania, Poa poiformis var. ramifer is found on shores and offshore islands around the coast on sand dunes and in rocky habitats (Curtis & Morris 1994) Development site constitutes potential habitat. Do not anticipate the proposal will result in a significant loss of potential habitat. No further assessment under TSPA.
Pterostylis squamata Ruddy greenhood	rare	-	Not recorded previously or at time of survey. Is a terrestrial orchid, which in Tasmania, is found mainly in grassy and heathy eucalypt woodland in lowland areas in the north, east, southeast and the Midlands. Do not anticipate the proposal will result in a significant loss of potential habitat. No further assessment under TSPA or EPBCA.
Pterostylis ziegeleri Grassland greenhood	vulnerable	Vulnerable	Not recorded previously or at time of survey. *Pterostylis ziegeleri* is restricted to the east and north of Tasmania. In coastal areas, the species occurs on the slopes of low stabilised sand dunes and in grassy dune swales, while in the Midlands it grows in native grassland or grassy woodland on well-drained clay loams derived from basal. Flowers are required for the identification and to aid detection of this spring flowering ground orchid which dies back to subterranean tubers after flowering. Development site constitutes potential habitat. Do not anticipate the proposal will result in a significant loss of potential habitat. No further assessment under TSPA or EPBCA.
Sporobolus vitginicus Salt couch	rare	-	Not recorded previously or at time of survey. In Tasmania, *Sporobolus virginicus* inhabits salt marshes and sand hills near the Northeast Coast and through the Furneaux Islands. Proposed development site does not represent potential habitat. No further assessment under TSPA.
Spyridium vexilliferum var. *vexilliferum*	rare	-	Not recorded previously or at time of survey. In Tasmania, *Spyridium vexilliferum var. vexilliferum* is found in sandy heaths and on rocky outcrops in the east, north and west

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			of Tasmania (Curtis & Morris 1975). Development site does not constitute potential habitat. Do not anticipate the proposal will result in a significant loss of potential habitat. No further assessment under TSPA.
Viminaria juncea Golden spray	endangered	-	Not recorded previously or at time of survey. In Tasmania, plants grow close to sea level on soils prone to periodic waterlogging and drying out in summer. The associated vegetation is generally a sedgey shrubland. Development site does not constitute potential habitat. Do not anticipate the proposal will result in a significant loss of potential habitat. No further assessment under TSPA.

Table 5- Significant fauna species previously recorded within 5 km radius of the study area and likelihood of them occurring on site[13]. TSPA - *Tasmanian Threatened Species Protection Act 1995*, EPBC - *Commonwealth Environmental Protection, Biodiversity Conservation Act 1999* .

CONSERVATION STATUS			
No Threatened Fauna within 500 metres			
Accipiter novaehollandiae Grey Goshawk	endangered	-	No previously recorded or at time of assessment. Vegetation communities do not constitute potential foraging or nesting habitat. Prefer waterways lined with *Leptospermum sp*. Anticipate the proposal will not significantly impact potential habitat. No further assessment or referral under TSPA 1995 required.
Sarcophilus harrisii Tas Devil	endangered	Endangered	No previously recorded or at time of assessment. Potential scats found in the south-eastern corner. Site within potential range boundaries for this species. Occupy a variety of habitats from inland to coastal environs. Unlikely proposed development will result in significant loss of habitat or impact individuals or populations. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Threatened Fauna within 5000 metres			
SPECEIES	**TSPA**	**EPBC**	**COMMENTS**
Aquila audax fleayi Tasmanian Wedge-tailed	endangered	Endangered	No previously recorded or at time of assessment. Significant habitat for the wedge-tailed eagle is all native forest and native non-forest vegetation within

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eagle			500 m or 1 km line-of-sight of known nest sites (where the nest tree is still present). 1 nest approx. 1.4km to south-west, but not within line-of-sight. Habitat modelling indicates the veg represents a low likelihood of finding a nest. Anticipate the proposal will not impact priority habitat, nesting or breeding activities of nearby nesting. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Alcedo azurea subsp. Diemenensis Azure Kingfisher	endangered	Endangered	No previously recorded or at time of assessment. Site does not represent suitable habitat. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Antipodia chaostola Chaostola skipper	endangered	Endangered	No previously recorded or at time of assessment. A small patch of *Gahnia microstachya* recorded on site represents potential larval food/habitat for this species. Assessment failed to find larval nests. Proposal will not encroach into potential habitat. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Dasyurus maculatus Spotted-tailed Quoll	rare	Vulnerable	No previously recorded or at time of assessment. dry sclerophyll vegetation potential habitat. Proposal unlikely to result in significant loss of potential habitat. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Dasyurus viverrinus Eastern Quoll	-	Endangered	No previously recorded or at time of assessment. Prefers dry sclerophyll vegetation adjacent to grassy and agricultural areas. Proposal unlikely to result in significant loss of habitat. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Pardalotus quadragintus Forty-spotted pardalote	endangered	Endangered	No previously recorded or at time of assessment. *Eucalyptus viminalis* not recorded within allotment. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Haliaeetus	vulnerable	-	Not previously observed on site. Habitat

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leucogaster *White -bellied sea eagle*			modelling indicates the veg represents a low likelihood of finding a nest. Anticipate the proposal will not impact priority habitat, nesting or breeding activities of nearby nesting. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Lathamus discolor Swift parrot	endangered	Critically Endangered	No previously recorded or at time of assessment. Site within Swift parrot Important Breeding Areas. One *Eucalyptus globulus* exceeding 700m dbh clear of works represents potential forging nesting habitat will not be impacted. Anticipated no further assessment is required. No referral or permit under the Commonwealth *EPBC Act* is required.
Perameles gunnii Eastern-barred Bandicoot	-	Vulnerable	Not previously recorded on site. Occupies a variety of habitats from forest, woodland and urban environments preferring bush/pasture interface. Site constitutes potential habitat however it is unlikely the proposal will result in a significant loss of habitat however; occupation brings additional pressure from dogs and cats that can be as significant as habitat loss. It is not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.
Tyto novaehollandiae Masked Owl	endangered	Vulnerable	Not previously recorded within study site. This endangered species requires mature old growth forest that supports large nesting hollows. One *Eucalyptus amygdalina* clear of the proposed development site represents potential nesting habitat for the Masked Owl. Proposal will not impact potential habitat and therefore not anticipated further assessment or referral under the *TSPA 1995* or Commonwealth *EPBCA 1999* is required.

15 Natural Values Atlas Database 2.0, DPIWE
16 Fauna Technical Note No. 5
17 Koch. A. 'Tree hollows in Tasmania: A Guide' & Fauna Technical Note No. 3
18Threatened species Unit, NP&WS
19 Fauna Technical Note No. 1, 6 & 14
20 N P & WS: Threats – Marram grass

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6. Discussion

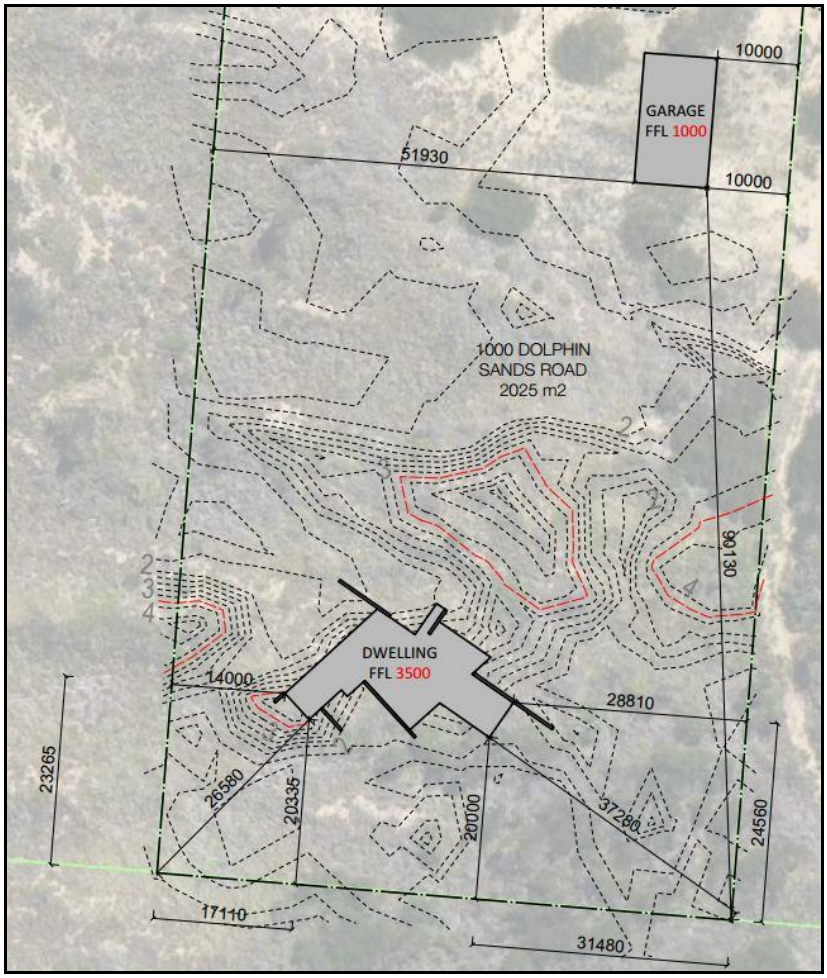

Figure 10 – Proposal site plan.

Proposed development requires the modification of approximately 3000m^2 to construct a Class 1A dwelling to BAL-12.5 and to establish and maintain the bushfire hazard management area (BHMA). The proposal appears to be consistent with existing development within the Dolphin Sands subdivision and is a permitted use within the Particular Purpose zone and GSPIPS2015.

Given the scale of the proposed development it is anticipated impacts will be localised and low impact and not affect the survival of SAL vegetation community or the ecological functions they provide. The building envelope will potentially impact habitat threatened flora habitat but do not anticipate the development will result in a significant loss of potential habitat.

Surveys indicate the study site constitutes potential but marginal habitat for the Tasmanian Devil Spotted-tailed Quoll and that have been observed within 5 km however only two devils have been recorded on the sandy peninsular between Moulting lagoon and Great Oyster Bay. As such, it is unlikely the proposal will result in a significant loss of potential foraging and refuge resources nor isolate individuals from necessary foraging sites or adjoining populations during development. The Hooded plover has been recorded on Nine Mile Beach within 500m however, the proposal is unlikely to impact this bird species.

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Geotechnical report indicates future site inundation potential is largely depended on the resilience of the frontal dune system to storm erosion and in particular shoreline recession from sea level rise. The report has identified the proposed development is acceptably within the 2065 design life of the building adding the proposed dwelling is also well within the stable foundation zone and above the wave runup levels expected from backshore wave attenuation. Urbanisation of development sites can lead to an overuse of fertilisers and herbicides that can find their way into groundwater systems. Providing landscaped areas utilise endemic natives it is anticipated appropriate planting and land use will not negatively impact on the aquifer beneath the dune system.

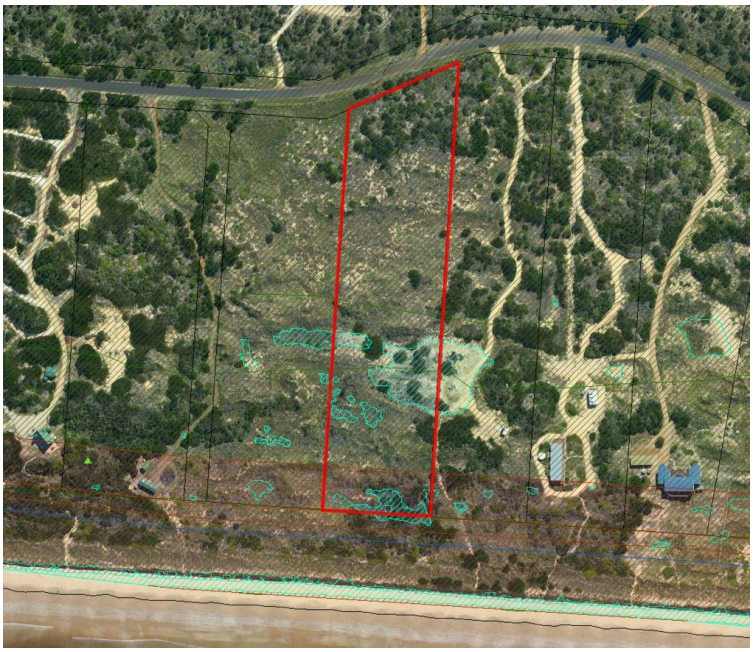

Figure 11 – Image showing extent of the Biodiversity Protection Area encompassing the entire allotment (green), Coastal Erosion Hazard Area (red) and potential Coastal Inundation Hazard Areas (light green) within the allotment (Ref: Image Google earth 2015).

It is proposed the biodiversity offset be contained within the northern part of the allotment providing same-for-same veg community (see figure 7). This offset area will be approximately 12000m^2 providing and offset ratio of 1:3 or 4. Conservation covenant will ensure the protection of potential threatened flora and fauna habitat outside the development site and BHMA.

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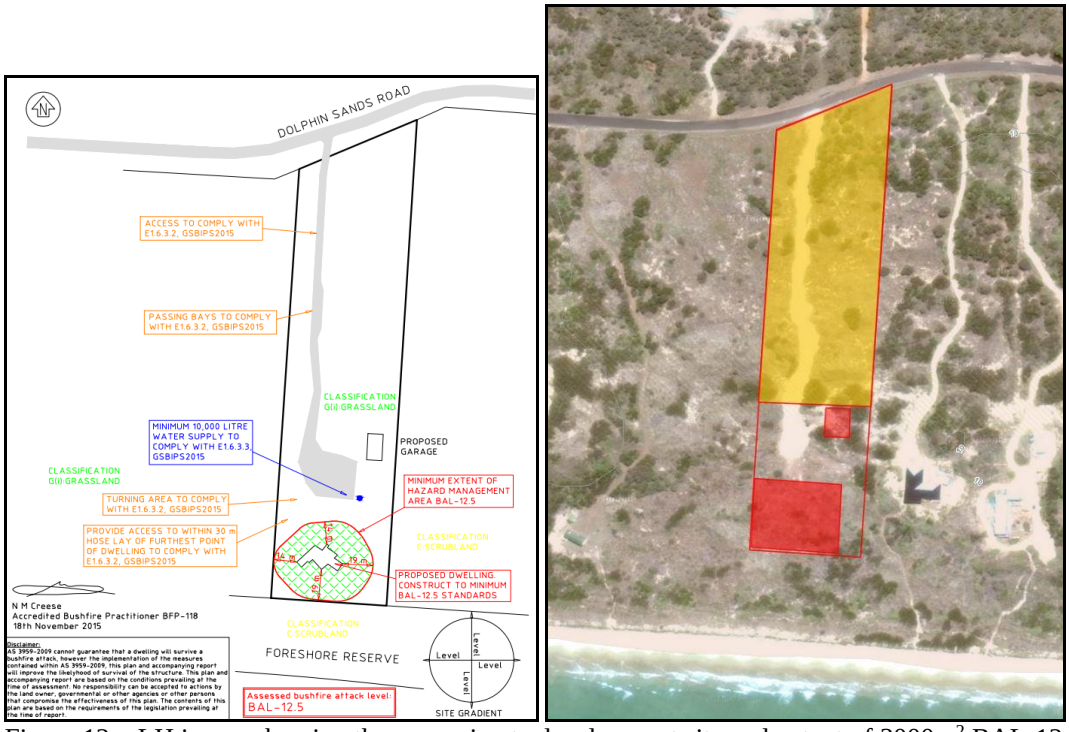

Figure 12 – LH image showing the approximate development site and extent of 3000m^2 BAL-12.5 BHMA. RH image shows proposed location for the Part 5 Agreement as an in-situ, 1:4 biodiversity offset in the form of a vegetation covenant (in yellow approx. 12000m^2).

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7. Legislative Implications

Commonwealths' *Environmental Protection & Biodiversity Conservation Act 1999* (EPBCA).

There are 2 issues of national significance relating to the Act, the nationally endangered and vulnerable fauna [21]

- *Sarcophilus harrisii* (Tasmanian Devil) - endangered TSPA & EPBCA
- *Dasyurus maculatus* (Spotted-tailed Quoll) - rare TSPA & Vulnerable EPBCA

There are two issues relating to nationally endangered flora that could potentially occupy the site [21]

- *Pterostylis ziegeleri (Grassland greenhood) – vulnerable TSPA & EPBCA*
- *Bertya tasmanica subsp. tasmanica (Tasmanian bertya) – endangered TSPA & EPBCA*

Under the EPBC Act referral is required if:
'An action has, will have, or is likely to have a significant impact on a vulnerable/endangered species if it does, will or is likely to (amongst other things):

- *Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline*
- *Adversely affect habitat critical to the survival of a species'*

Whilst considered potential habitat for the Tasmanian Devils and Spotted-tailed Quolls the site is not considered significant habitat. The Hooded plover recorded within 500m on Nine Mile Beach unlikely to be impacted by proposal. It is not anticipated the proposed development represents suitable habitat for nationally endangered flora and unlikely to significantly impact on the survival of the threatened flora species. On this basis the proposal is unlikely to lead to a significant decline in flora and fauna habitat. Therefore, on this basis, a referral under the EPBC Act will not be required [21].

Tasmanian *Threatened Species Protection Act 1995* (TSPA)
A search indicates *Cynoglossum australe* has been delisted from Schedule 3 of the TSPA. The study site constitutes potential habitat for the *Lachnagrostis billardierei* subsp *tenuiseta* but only marginal for *Melaleuca pustulata* and other flora species highlighted in Table 1. When the scale of disturbance and ecology of these species is taken into account, it is anticipated the development proposal will not affect the survival of these species[23]. Therefore, on this basis, a referral under the TSPA will not be required [22].

Tasmanian *Nature Conservation Act 2002* and *Land Use Planning and Approvals Act 1993*
SAL vegetation community within the study site is not considered threatened under Tasmania's *Nature Conservation Act 2002* and does not require a referral to the Forestry Practice Authority and therefore the proposed development will not require a Forest Practice Plan rather, approval for the proposal will be required from Glamorgan-Spring Bay Council. No further assessment under the *Nature Conservation Act 2002*.

Tasmanian *Weed Management Act 1999* (WMA)
Sow and Spear thistles are not listed as a Declared weed under Tasmania's *Weed Management Act 1999* or *Glamorgan Spring Bay Weed Management Plan 2015-2020* [24]. Given the site is largely weed free, quarantine measures at a minimum must include a wash down of earth moving machinery before entering the work site to avoid the introduction of new weed species and wash down prior to leaving. Although the weed hygiene mechanism is also designed to prevent

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accidental introduction of *Phytophthora cinnamomi* (Pc) however, the site does not represent favourable habitat due to low annual rainfall [25] and thus it is anticipated Pc would not survive in this environment.

Tasmanian *State Coastal Policy Validation Act 2003*
The State Coastal Policy Validation Act 2003 replaces the former definition of the Coastal Zone in the State Coastal Policy 1996 and reinstates the Policy. The Act also validates all previous decisions made under the Policy. The following clauses relate to this report:
1.1.2. The coastal zone will be managed to protect ecological, geomorphological and geological coastal features and aquatic environments of conservation value.
1.4.1. Areas subject to significant risk from natural coastal processes and hazards such as flooding, storms, erosion, landslip, littoral drift, dune mobility and sea-level rise will be identified and managed to minimise the need for engineering or remediation works to protect land, property and human life.
1.4.2. Development on actively mobile landforms such as frontal dunes will not be permitted except for works consistent with Outcome 1.4.1.
1.4.3. Policies will be developed to respond to the potential effects of climate change (including sea level rise) on use and development in the coastal zone.

The Geotechnical report addressing the criteria indicated the proposal is acceptably within above criteria and the 2065 design life of the building.

21 Commonwealths' Environmental Protection and Biodiversity Conservation Act 1999
22 Tasmanian Threatened Species Protection Act 1995
23 Harris and Kitchner, 2015
24 Tasmanian Nature Conservation Act 1999 & Land Use Planning and Approvals Act 1993
25 Glamorgan Spring Bay Weed Management Strategy 2015-2020
26 Flora Technical Notes No. 8

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8. Conclusions

Surveys indicates Marram grass is codominant within the SLA vegetation occupying the southern third of the allotment, including the proposed development site and associated BHMA. Whilst Marram dominates, the site still represents potential threatened flora habitat. *Cynoglossum australe* appears to have benefited from disturbance however, this species has been delisted from Schedule 3 of Tasmania's *Threatened Species Protection Act 1999*. Providing the proposed development is located in the area identified, it is not anticipated proposal will result in a significant loss of potential habitat for *Lachnagrostis billardierei* spp. *tenuiseta* recorded nearby. Given limited disturbance and the ecology of the threatened species, it is not anticipated further assessment or referral under the Tasmanian *Threatened Species Protection Act 1999* or Commonwealth's *Environmental Protection & Biodiversity Conservation Act 1999* is required. SLA vegetation is not listed as a threatened vegetation community and as such referral under the Tasmanian *Nature Conservation Act 2002* is not required.

It is not anticipated the proposal will result in a significant loss of potential habitat for the Tasmanian Devil, Spotted tailed quoll or Eastern-barred bandicoot. Therefore, no further assessment or referral under Tasmanian *Threatened Species Protection Act 1999* or Commonwealth's *Environmental Protection & Biodiversity Conservation Act 1999* is required.

Geotechnical report by GeoSolutions indicates the location of the proposed dwelling will not be subject to nor contribute to erosion because of development within Coastal Erosion Hazard Area and locality is acceptably within the 2065 design life of the building.

Providing the wastewater system is designed and installed to correct specifications it is anticipated the proposed development will not have any long term residual impacts on the ecological functions of the SAL vegetation community. Whilst the removal of vegetation and final development may not directly impact threatened fauna species, in the short term it will temporarily displace other marsupials, birds and reptile's species that may utilise the area as habitat.

Provisions within the GSBIPS2015 Biodiversity Code require the loss of moderate priority vegetation within the Biodiversity Protection Area to be offset in accordance with *Guidelines for the Use of Biodiversity Offsets* in the *Local Planning Approval Process, Southern Tasmanian Councils Authority 2013*. The proposal is to offset loss of moderate priority vegetation from the development site with an in-situ 1:3 or 1:4 biodiversity offset to be administered by a Part 5 Agreement as a vegetation covenant under Tasmania's *Land Use Planning and Approvals Act 1993*. Recommendations include:

- Stage works to avoid unnecessary development and ensure a soil, water and erosion management plan is implemented,
- Implementing a weed management plan to include hygiene management prescriptions to prevent accidental importation and exportation of weed material during construction.

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10. Vascular plant list.

APPENDIX A: VASCULAR PLANT SPECIES LIST
1000 DOLPHIN SANDS ROAD, DOLPHINS SANDS.

DICOTYLEDONAE

FAMILY NAME *Name*	**Common name**
AIZOACEAE	
Carpobrotus rossii	Native Pig face
ASTERACEAE	
Actites megalocarpa	
Euchiton involucratus	
Gnaphalium indutum	
BORAGINACEAE	
Cynoglossum australe	
CHENOPODIACEAE	
Rhagodia candolleana	
ERICACEAE	
Leucopogon parviflorus	
MIMOSACEA	
Acacia longifolia subsp *sophorae*	
MYRTACEAE	
Leptospermum scoparium	
PHYLLANTHACEAE	
Poranthera microphylla	
PROTEACEAE	
Banksia marginata	
ROSACEAE	
Acaena novae-zelandiae	

MONOCOTYLEDONAE

FAMILY NAME *Name*	**Common name**
CYPERACEAE	
Ficinia nodosa	
Lepidosperma concavum	Sword sedge

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JUNCACEAE
Juncas sp

LOMANDRACEAE
Lomandra longifolia

LILIACEAE
Dianella sp

POACEAE
Austrostipa sp
Poa spp. Tussock grass

INTRODUCED PLANT SPECIES

ASTERACEAE
Cirsium vulgare Spear thistle
Sonchus oleraceus Sow thistle

GENTIANACEAE
Centaurium erythraea

POACEAE
Ammophila arenaria Marram grass

GEO-ENVIRONMENTAL SOLUTIONS

COASTAL VULNERABILITY ASSESSMENT

1000 Dolphin Sands Road

CLIENT

Lark & Creese

October 2015

Geo-Environmental Solutions P/L 86 Queen Street Sandy Bay 7005. Ph 6223 1839 Fax 6223 4539

Tables

Figures

Executive Summary

Geo-Environmental Solutions Pty Ltd (GES) were contracted by Lark and Creese to prepare a coastal erosion and inundation hazard assessment for a property at Dolphin Sands. The project area consists of a single cadastral title (CT 54666/157) located at 1000 Dolphin Sands Road, with an area of approximately 2.0 Ha (The Site).

An application to conduct construction works has triggered the assessment in accordance with the Glamorgan Spring Bay Interim Planning Scheme (IPS) 2015.

A 'first pass assessment' has been conducted for the site area by Sharples (2008) which involved an assessment of coastline geomorphology and vulnerability to inundation and erosion processes. This assessment has been reviewed and built upon in a 'second pass assessment' which involved site specific hydrodynamic modelling to further assess the site inundation and erosion risks. The need for a third pass assessment is based on the level of erosion risk and/or the occurrence of the site in an erosion hazard area which has been identified in the Department of Premier and Cabinet (DPAC 2012) mapping. Given that there is limited erosion information available, a third pass assessment has been conducted for the site.

The site is set back between 75 m and 370 m from present day sea-levels (approximately 0.1 m Australian Height Datum (AHD) based on DPAC (2012) adopted projections and ranges in elevation from 1.2 m AHD to 9 m AHD.

The site comprises of soft sediments which are vulnerable to the risk of erosion from storm events and beach recession from sea level rise.

Future site inundation potential is largely depended on the resilience of the frontal dune system to storm erosion and in particular shoreline recession from sea level rise. The third pass assessment has identified that the proposed development is acceptable within the 2065 design life of the building. The proposed dwelling is well within the stable foundation zone and above the wave runup levels expected from backshore wave attenuation.

It is highly unlikely that the distal back dune areas (north of the dwelling) will become inundated by coastal processes within the design life of the building due to the presence of the secondary dune ridges.

GES have conducted a risk assessment of the site by addressing performance criteria. Erosion and inundation risks at the site are acceptable for the design life of the building as per the findings and recommendations in this report.

List of Abbreviations

AHD	Australian Height Datum
AEP	Annual Exceedance Probability
ARI	Average Reoccurrence Interval
CEM	Coastal Engineering Model
CEHC	Coastal Erosion Hazards Code
DCP	Dynamic Cone Penetrometer
DEM	Digital Elevation Model
DPAC	Department of Premier and Cabinet
ERMP	Erosion Risk Management plan
GES	Geo-Environmental Solutions Pty Ltd
GIS	Geographical Information System
IPAC	Inundation Prone Areas Code
IPCC	Intergovernmental Panel on Climate Change
IPS	Interim Planning Scheme
LiDAR	Light Detection And Ranging
LIST	Land and Information System, Tasmania
MRT	Mineral Resources Tasmania
NCCOE	National Committee on Coastal and Ocean Engineering
SB	Soil Bore
SPM	Shoreline Protection Manual
SSP	Surf Similarity Parameter
SWAN	Simulating Waves Nearshore
TAFI	Tasmanian Aquiculture and Fisheries Institute
WRL	Water Research Laboratory (University of New South Wales)

1 Introduction

Geo-Environmental Solutions Pty Ltd (GES) were contracted by Lark and Creese to prepare a coastal erosion and inundation hazard assessment for a property at Dolphin Sands. The project area consists of a single cadastral title (CT 54666/157) located at 1000 Dolphin Sands Road, with an area of approximately 2.0 Ha (The Site).

An application to conduct construction works has triggered the assessment in accordance with the Glamorgan Spring Bay Interim Planning Scheme (IPS) 2015. A 'first pass assessment' has been conducted for the site area by Sharples (2008) which involved an assessment of coastline geomorphology and vulnerability to inundation and erosion processes. This assessment has been reviewed and built upon in a 'second pass assessment' which involved site specific hydrodynamic modelling to further assess the site inundation and erosion risks.

The need for a third pass assessment is based on the level of erosion risk and/or the occurrence of the site in an erosion hazard area which has been identified in the Department of Premier and Cabinet (DPAC 2012) mapping. Given that there is limited erosion information available, a third pass assessment has been conducted for the site.

The site is set back between 75 m and 370 m from present day sea-levels (approximately 0.1 m Australian Height Datum (AHD) based on DPAC (2012) adopted projections and ranges in elevation from 1.2 m AHD to 9 m AHD.

GES have undertaken this assessment using available scientific literature and datasets. Estimations are determined by approximation with appropriate regional information applied where appropriate to site specific information. Data collection and site specific modelling was undertaken in assessment of the site.

2 Objectives

The objective of the site investigation is to:

- Identify which codes need to be addressed in terms of coastal vulnerability and identify the relevant performance criteria relevant to the project which need addressing;
- Conduct a literature review of all geological, geomorphologic, hydrodynamic information and any 'First or Second Pass Assessments' which are relevant to the site;
- Conduct a 'Second Pass Assessment' assessment of the site to determine projected sea level rise, storm tides and site specific hydrodynamic conditions and where applicable, GES's site specific soil investigation findings;
- Use the site specific inundation modelling to identify generalised site erosion potential;
- Conduct a 'Third Pass Assessment' where the site is identified as having an erosion risk based on the Second Pass Assessment;
- Where a Third Pass Assessment is required, conduct a detailed assessment of site erosion vulnerability in terms of long term beach recession and short term storm erosion. Cross sections will be generated and stable foundation zones will be indicated;
- Conduct a site risk assessment for the proposed development ensuring relevant performance criteria are addressed; and
- Where applicable, provide recommendations on methods and design approach to reduce inundation and erosion impact.

3 Site Details

3.1 Project Area Land Title

The land studied in this report is defined by the following title reference:

- CT 54666/157

This parcel of land is referred to as the 'Site' and/or the 'Project Area' in this report.

3.2 Project Area Regional Coastal Setting

The Project Area is located at Dolphin Sands on Nine Mile Beach to the east of Swansea (Figure 1).

The site is exposed to swell wave activity within Great Oyster Bay from the Southern Ocean which is determined to be considerably more dominant than potential wind fetch generated within the bay (Figure 2). The site is subject to coastal processes from the following wave conditions:

- Southerly wind fetch combined with Southern Ocean swell activity to form the dominant wave conditions at the site; and
- South easterly and south westerly wind fetch is not modelled in this assessment given that resulting wave heights will have minimal contribution to hydrodynamic process compared with southerly generated waved . Local wind generated waves are the dominant factor driving local longshore drift processes on the eastern and western ends of Nine Mile Beach. Given the site location within the centre of Nine Mile Beach, both south easterly and south westerly wind directions are expected to generate similar hydrodynamic conditions resulting in more balanced sediment distribution from longshore drift processes.

Figure 1. Regional Location of Project Area - The Land and Information System, Tasmania (LIST)

3.3 Project Area Local Setting

The site is located at 1000 Dolphin Sands Road on an elongated 2 Ha lot between Nine Mile Beach and Dolphin Sands Road. The site is relatively undisturbed and features blowout and ridge line dune systems. Neighbouring dwellings are built within 20 m of the coastal boundary.

Figure 2 Site Local Setting (The LIST)

4 Planning

4.1 State Coastal Policy

On 16 April 2003 the State Coastal Policy Validation Act 2003 came into effect. This Act replaces the former definition of the Coastal Zone in the State Coastal Policy 1996 and reinstates the Policy. The Act also validates all previous decisions made under the Policy. The following clauses are pertinent to the scope of this report:

1.1. NATURAL RESOURCES AND ECOSYSTEMS

1.1.2. The coastal zone will be managed to protect ecological, geomorphological and geological coastal features and aquatic environments of conservation value.

1.4. COASTAL HAZARDS

1.4.1. Areas subject to significant risk from natural coastal processes and hazards such as flooding, storms, erosion, landslip, littoral drift, dune mobility and sea-level rise will be identified and managed to minimise the need for engineering or remediation works to protect land, property and human life.

1.4.2. Development on actively mobile landforms such as frontal dunes will not be permitted except for works consistent with Outcome 1.4.1.

1.4.3. Policies will be developed to respond to the potential effects of climate change (including sea-level rise) on use and development in the coastal zone.

4.2 Interim Planning Scheme Overlays

4.2.1 Waterways & Coastal Protection Areas (WCPA) Overlay

The site falls outside of the Waterways & Coastal Protection Areas (WCPA) overlay (Figure 3).

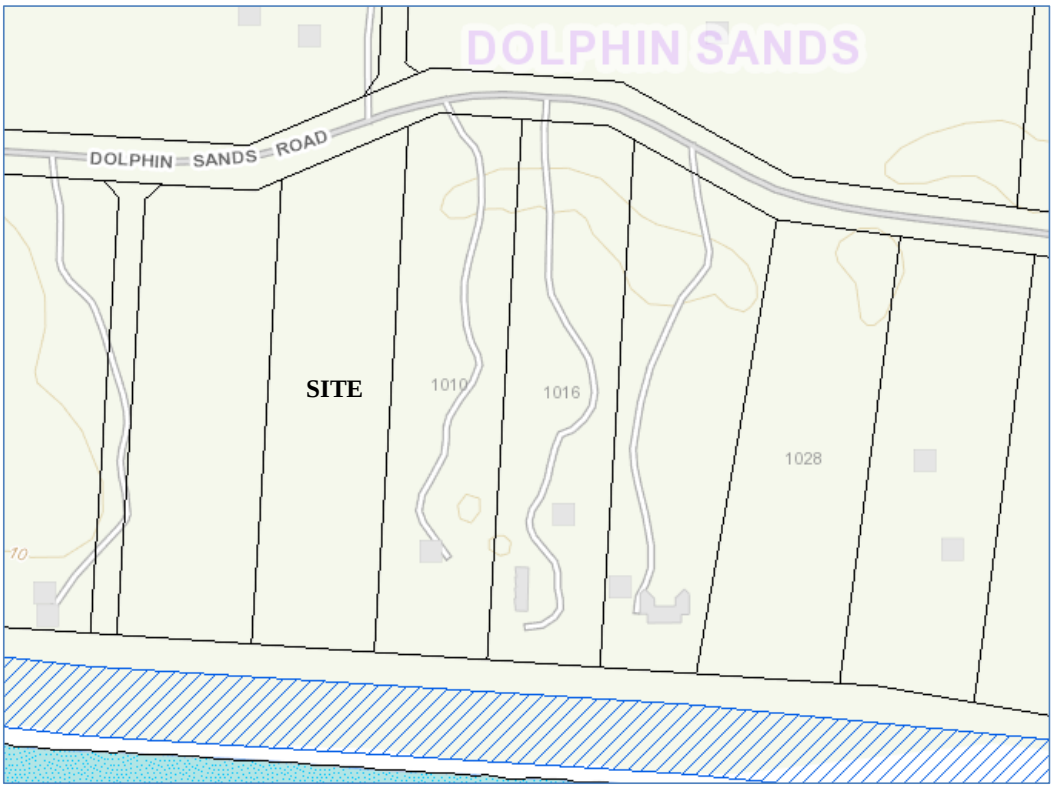

Figure 3 WCPA Overlay near the Site (The LIST)

4.2.2 Inundation Prone Areas Code (IPAC) Overlay

Parts of the site fall within the E15Inundation Prone Areas Code (IPAC) overlay (Figure 4). The areas highlighted in Figure 4 are defined as low risk based on '*Vulnerable to a 1% AEP storm event in 2100*'.

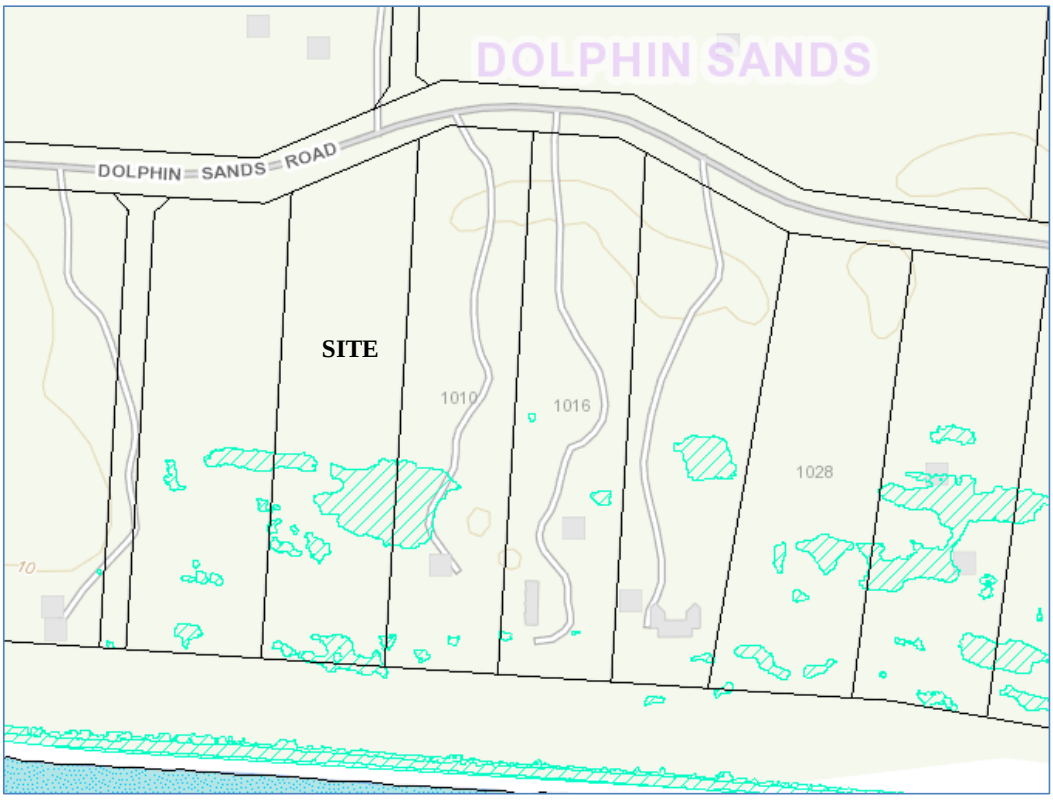

Figure 4 IPAC Overlay near the Site (The LIST)

4.2.3 Coastal Erosion Hazards Code (CEHC) Overlay

Part of the site falls within the Coastal Erosion Hazards Code (CEHC) overlay (Figure 5).

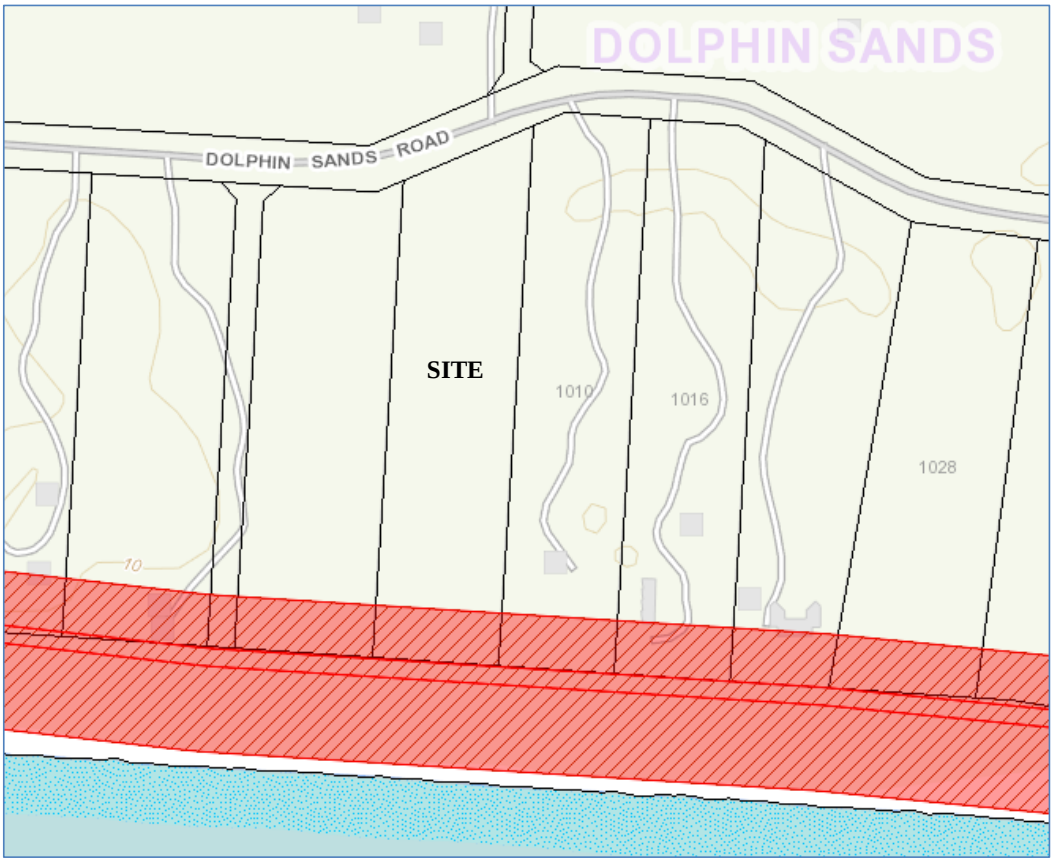

Figure 5 CEHC Overlay near the Site (The LIST)

4.3 Proposed Development

The proposed development comprises of two separate building structures:

- A proposed dwelling set back approximately 20 m from the coastal boundary positioned on a higher relief back dune landform which has an elevation up to 3.4 m AHD;
- A proposed shed located on lower lying topography (a blowout dune deflation hollow) to the north of the proposed dwelling which has an elevation of between 1.0 and 1.2 m AHD.

Table 1 below presents a summary of the parts of the site which fall within the various IPS (2015) code overlays (Figure 6). Relative elevations reported in Table 1 are constructed from climate futures LiDAR files (metadata presented in Appendix 1).

Table 1 Summary of Site Areas Falling Within Potential Coastal Vulnerability Zones

Site Location	Elevation Range (m AHD)	WCPA (E11) Overlay	IPAC (E15) Overlay Low Risk	IPAC (E15) Overlay Medium Risk	IPAC (E15) Overlay High Risk	CEHC (E16) Overlay
Proposed Shed	1.0 to 1.2	-	100%	-	-	-
Proposed Dwelling	3.0 to 3.5	-	-	-	-	70%
Inferred Driveway Access	>1.5 m AHD	-	-	-	-	-

- Overlay Outside of Inundation Zone

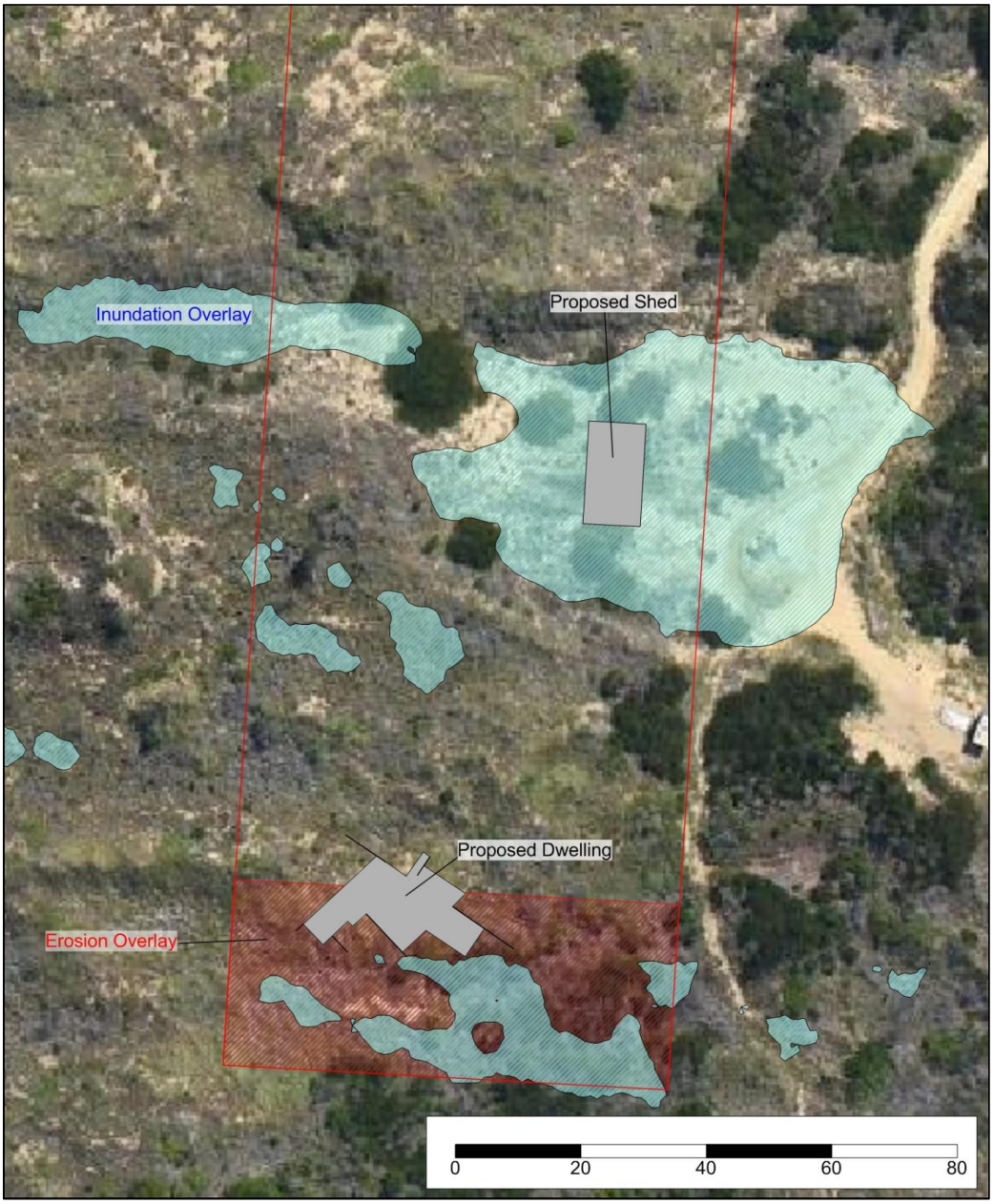

Figure 6 Proposed Development – Site Plan

4.4 Development Standard Criteria

Where applicable, the need for further performance criteria compliance is outlined in Appendix 2.

4.4.1 Waterways & Coastal Protection Code (WCPC)

Given that the site does not fall within the IPS WCPC zone, development standards E11 do not need to be addressed for the proposed development.

4.4.2 Inundation Prone Areas Code (IPAC)

The proposed site falls within the area mapped as IPS IPAC low hazard zone. Development standard E15 was addressed for the proposed development. According to Table E15.1, the actual shed has an elevation between 1.0 and 1.2 m AHD and needs to be assessed according to the medium hazard criteria (E15.7.2). The following performance criteria need to be addressed as detailed in Appendix 2:

- E15.7.2 P1; and
- E15.7.2 P3;

4.4.3 Coastal Erosion Hazards Code (CEHC)

Given that the site falls within the IPS CEHC zone, development standards E16 were addressed for the proposed development. The following performance criteria need to be addressed as detailed in Appendix 2:

- E16.7.1 P1

5 First Pass Assessment

5.1 Natural Resource Management (NRM) Mapping

The LIST presents a summary of the site coastal vulnerability over a 100 m section of the coastline near the site (Appendix 3). Table 2 presents a summary of the relevant site geomorphic information.

Table 2 Summary of Natural Resource Management (NRM) Mapping (The LIST)

Aspect	Description
Site Description	Open coast sandy shore backed by low-lying sandy plains
Shoreline	Sandy beach or shoreline - fine to med grainsize
Intertidal	Sloping sandy bottom in lowest intertidal to subtidal zone
Backshore	Dunes (one or more dune ridges with unconsolidated sediment plain)

5.2 Smartline Directory

Appendix 4 presents a summary of the Smartlines Database which was accessed to provide site specific geomorphic information. Key aspects of the site include:

- Foredune on sand to below sea level in the backshore area;
- Dune or beach ridge plain with sand to below sea level in the distal backshore areas;
- Fine-medium beach sand in the intertidal zone with a moderate intertidal sloe; and
- High exposure to wave energy, with dune field exposed to wave attack at seaward side.

5.3 Sharples Definition

Based on the Sharples (2006) assessment, the site is classified as:

- Open sandy shore backed by soft sediment plain - potential erosion and shoreline recession vulnerability

5.4 Summary

In summary, the following can be concluded for the site specific location based on the first pass geomorphology and coastal vulnerability information:

- The site comprises of soft sediments which are vulnerable to the risk of erosion from storm events and beach recession from sea level rise;
- There is no evidence of shallow underlying bedrock;
- There site is vulnerable to wave attack; and
- A second pass assessment is required at the site to determine the recession and erosion risk.

6 Second Pass Assessment

6.1 Definitions

Sharples & Donaldson 2014 define the following second pass assessment approach:

> "A second pass assessment builds upon a first pass assessment identification of coastal areas potentially susceptible to coastal hazards such as flooding and erosion, by building an understanding of regional variability in the processes that may drive flooding and erosion, so as to begin to differentiate between those susceptible areas that may be more or less at risk from these hazards. In most cases, the most important regional process that drives coastal hazards is the wave climate, encompassing average and extreme wave heights and directions experienced by the coast, and variation in exposure to these at different locations along a regional coast. "

6.2 Previous Studies

GES are not aware of any second pass assessments that have been conducted for Nine Mile Beach.

6.3 Scope of Works

GES have conducted a site specific second pass assessment. The following second pass assessment scope of works has been adopted for the site:

- Use site specific geology and geomorphology information to make inferences about the susceptibility of the site to erosion;
- Develop a comprehensive site specific wave model for the site based on methods outlined in the Shoreline Protection Manual SPM (1984) and the Coastal Engineering Model (CEM 2008) which will provide site specific information on actual inundation levels and site erosion potential;
- To identify short term hydrodynamics based on site specific 1% Annual Exceedance Probability (AEP) astronomical tide, barometric low (storm), wave runup, wave setup and wind setup conditions;
- Drawing on localised 1% AEP information made available in the IPS (2015) to understand site still water levels for year 2050 and 2100 and where applicable translate these to time frames to be more relevant to the design life of the proposed site works;
- Assess how changing hydrodynamic conditions including water currents at the site will impact on the proposed development with implications for site stability and flooding for a given time period;
- Conduct a 'third pass assessment' to determine site erosion risk;
- Provide a comprehensive risk assessment addressing all performance criteria and providing recommendations where applicable.

6.4 Site Physical Setting

6.4.1 Site Geology

The site geology is inferred to comprise of locally derived windblown sand (Figure 7). MRT mapping indicates the beach sand is of Quaternary age, but there is no differentiation beyond littoral its origin. Soils from the site are expected to comprise of beach and aeolian sands.

6.4.2 Site Geomorphology

A number beach erosion hollows are present in the back dune areas which are inferred to be deflation hollows (slacks) where sand has been winnowed out and deposited downwind of the prevailing wind direction. Dune form features indicate that the most dominant wind is from the northwest. It is possible

that acid forming tannins have accumulated in the slacks which have further lowered the landform through calcareous sand dissolution.

The proposed dwelling is located on a back dune ridge which is not part of the frontal dune system.

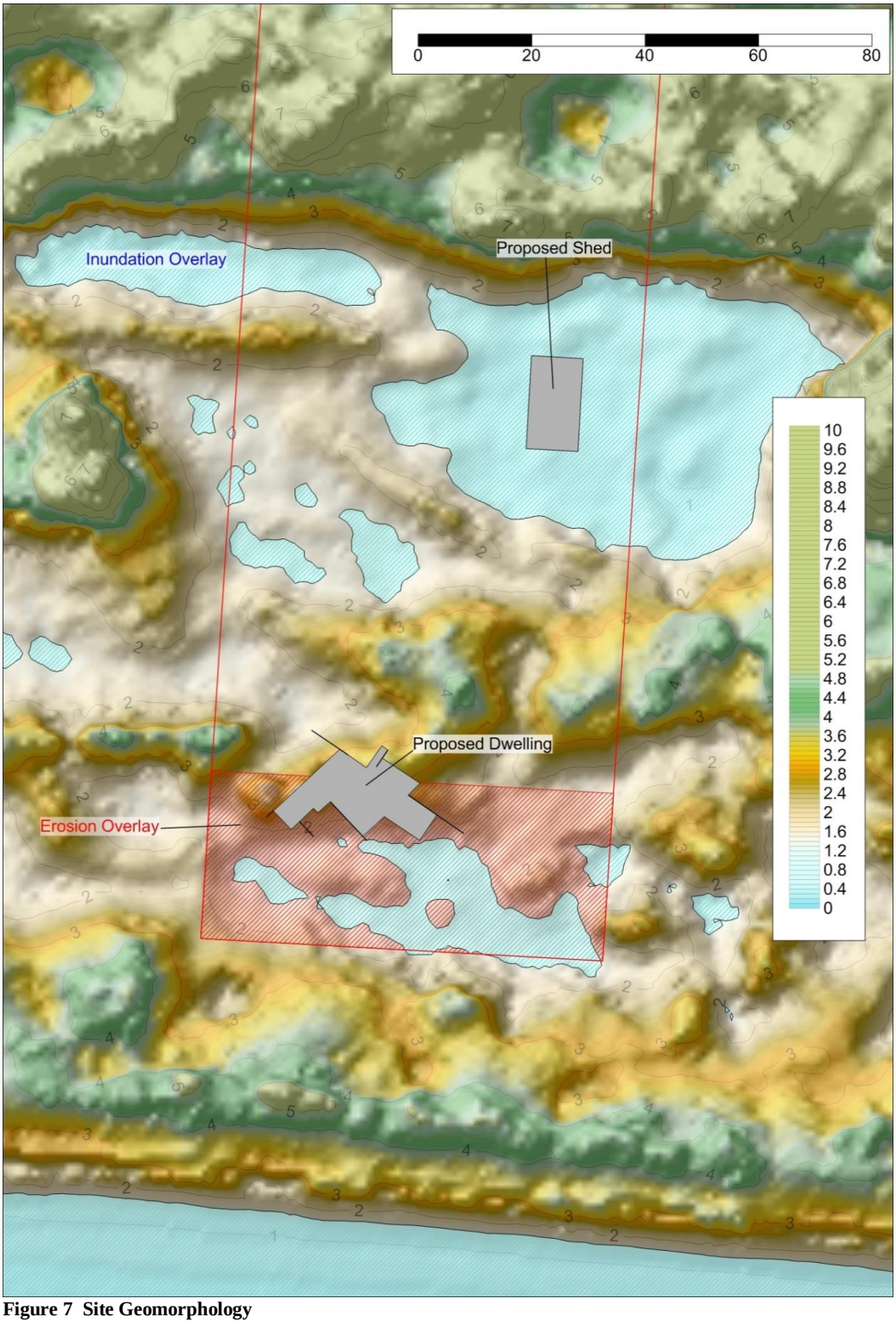

Figure 7 Site Geomorphology

6.5 Site Baseline Seawater Levels

6.5.1 Storm Tide

Storm tide events may be defined in terms of the culmination of astronomical tide and storm surge events. Maximum storm tide inundation levels have been adopted for the site based on a 1% AEP that an inundation event will occur. Storm tide levels are obtained from the IPS (2015) inundation hazard tables.

The storm tide level adopted for the site 1.15 m

6.5.2 Sea Level Rise

The IPS (2015) has adopted the following sea level rise estimates based DPAC projections with reference to a 2010 baseline:

- 0.2 m rise by 2050; and
- 0.8 m rise by 2100.

Based on these figures, sea level elevations presented in Table 3 are applied to the site (workings in Appendix 5). 2065 projections are used reference the design life of the proposed structures.

Table 3 Present Day & Projected Inundation Levels for 2100 based on DPAC (2012) estimates.

DPAC (2012) Sea Levels	2015 DPAC	2065 DPAC	2100 DPAC
Sea Levels (m AHD)	0.11	0.41	0.89

6.5.3 Stillwater Levels

The effects of storm tide may be combined with sea levels projections to provide baseline water levels (reported in m AHD) which are referred to as still water level.

The still-water levels adopted for the site is based on 1% AEP storm tides and 2100 DPAC (2012) estimates (Table 4).

Table 4 Summary of Site Stillwater Levels for Present Day & Projected 2100 Inundation Levels based on DPAC (2012) estimates.

Stillwater Elevations	2015 DPAC	2065 DPAC	2100 DPAC
DPAC (2012) Sea Levels (m AHD)	0.11	0.41	0.89
Tidal Influence & Barometric Low Influence (m)	1.15	1.15	1.15
Summary (m AHD)	1.26	1.56	2.04

6.6 Site Hydrodynamics

Coastal process hydrodynamics were assessed at the site. Information collected is used to assist in interpreting site specific:

- Maximum site inundation levels;
- Effects of storm inundation levels on site erosion;
- Longer term recession trends.

Without consideration of site hydrodynamic wave models, these potential hazards cannot be addressed. Depending on the planning requirements and the level of site risk, this information may or may not have not have been utilised in the site inundation and/or erosion model. It is recognised however, that a site specific coastal processes study is imperative in any coastal vulnerability assessment which seeks to identify the potential hazards and potential risks to assets and life.

6.6.1 Methods

A site coastal process model presented herein is detailed in Appendix 5. Some of the information obtained for the models is extracted directly from the IPS (2015) inundation level tables. Other information has been collected from historical models such as Simulating Waves Nearshore (SWAN) significant offshore swell wave height models (Carley *et. al.* 2008). The wind fetch wave model has been developed based on the CEM (2008) and SPM (1984) formulations which interpret site bathymetry, topography and wind speeds.

Hydrodynamic risks are measured in terms of 1% AEP events. Site specific processes considered in this section include but are not limited to the following (some of which are detailed in Figure 8):

- Wave runup;
- Wave setup; and
- Wind setup.

A 300 mm freeboard value has been adopted by the IPS (2015) to account to for the Tasmanian Building Act 2000 regulations. Site hydrodynamic factors are included within this 300 mm freeboard zone which essentially defines any hydrodynamic inundation processes which are above the adopted still water levels. The 300 mm value will tend to overestimate inundation levels at some sites and underestimate inundation levels at other sites.

Given that hydrodynamic processes are largely site specific, GES develop hydrodynamic models for the specific sites of interest which are based on the following information:

- Tasmanian Aquaculture and Fisheries Information (TAFI) bathymetry data,
- Formulations in the CEM (2008), the SPM (1984) and ;
- Local wind conditions (AS/NZS 1170.2:2011).

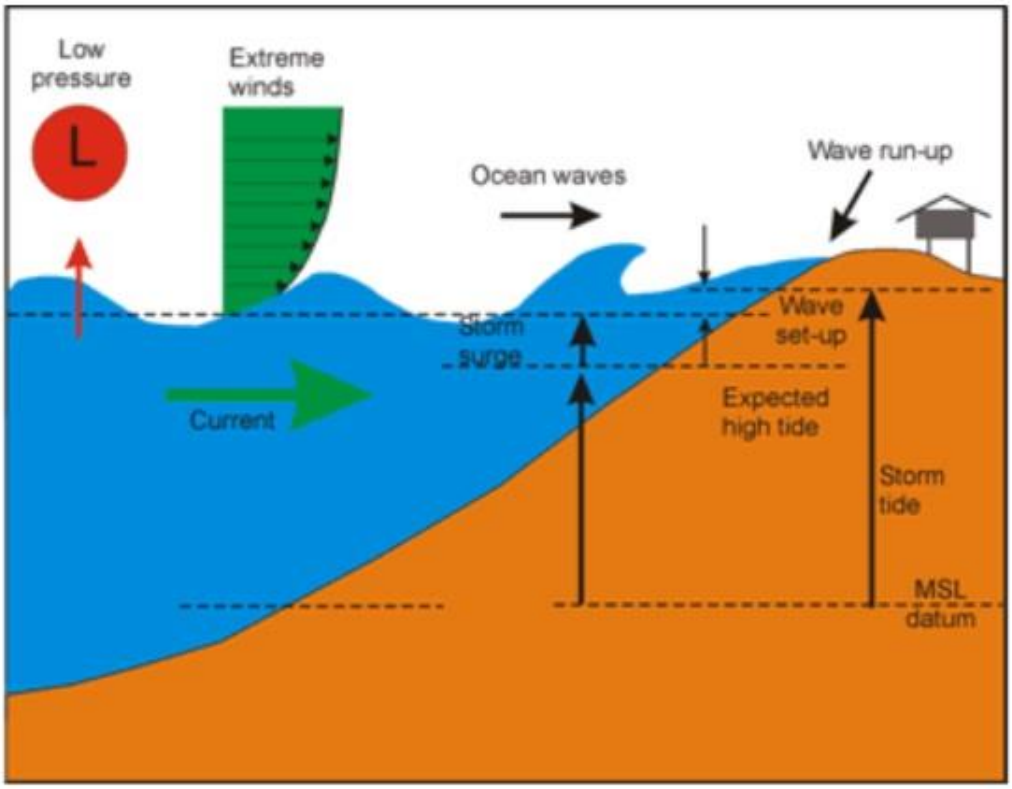

Figure 8 Hydrodynamic Parameters Associated with Storm Surge Events

As wind setup, wave setup and wave runup normally occur simultaneously during storm surge events, these components are combined with extreme tide and storm surge predictions to provide maximum inundation levels for the site. Wave models have been generated for the site to define the site specific hazards.

6.6.2 Site Wave Conditions

Table 5 provides a summary of the dominant waves intercepting the site.

Table 5 Summary of Dominant Waves Intercepting the Site

Wave Details	Swell Wave
Direction	South
Wave Height (m)	3.2
Period (s)	10.8
Approach Angle	0

6.6.3 Dominant Wave Characteristics

The most dominant wave originates from a southerly swell generated from the Southern Ocean (Table 6). The wave will approach the nearshore zone which has a 0.3 % grade bathymetry, breaking at an angle perpendicular to the shore and at a depth of 4.6 m.

Table 6 Details of the Dominant Wave Intercepting the Site

Wave Position	Parameter	Value
Nearshore	Origin	Swell Wave
	Direction	South
	Approach Angle	0
	Nearshore Wave Height (m)	3.2
	Period (s)	10.8
Breaking	Breaker Height (m)	3.7
	Breaking Depth (m)	4.6
	Breaking Angle	0
	Nearshore Gradient (%)	0.3
	Surf Similarity Parameter	0.38

6.6.4 Nearshore Hydrodynamics

Hydrodynamic variables calculated for the site are presented in Table 7. Inundation levels at the site are calculated from these individual components combined with the stillwater levels.

Table 7 Details of the Dominant

Coastal Process	Level
Wave Setup	0.43
Wave Runup	2.98
Wind Setup	0.17

6.7 Site Inundation Levels

Table 8 presents a summary of the site inundation levels based on 1% AEP still water, wind setup where applicable, wave runup and wave setup inundation levels for present day, 2065 building design life and 2100 DPAC scenarios.

Table 8 Summary of Site Inundation Levels

Inundation Levels	Present Day	DPAC 2065	DPAC 2100
Still Water Elevations (m AHD) Including Wind Setup Where Applicable	1.43	1.73	2.21
Wave Setup Elevations (m AHD)	1.86	2.16	2.64
Wave Runup (m AHD) 2° Beach/Embankment Slope	3.78	4.08	4.56

Stillwater and wind setup inundation scenarios for 2065 and 2100 are presented in Figures 9 and 10. These water levels are representative of the projected site inundation conditions and not wave runup conditions.

Wave setup at the site is expected to reach elevations of 2.16 m AHD by 2065 based on the projected DPAC 2012 sea levels. Wave runup will reach elevations of approximately 4.1 m AHD by 2065 and 4.56 m AHD by 2100 which is below the level of the current dune system.

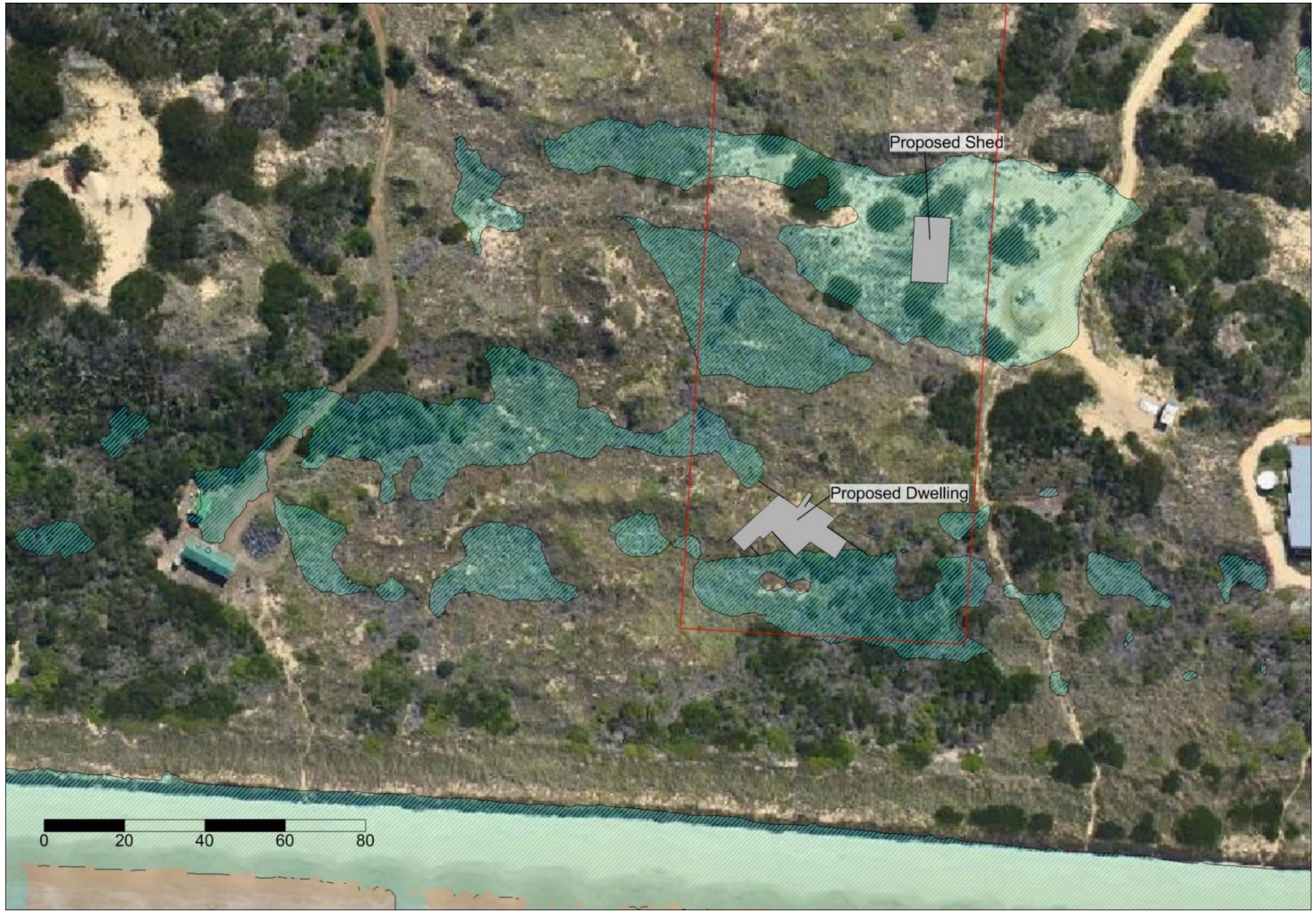

Figure 9 Site Inundation Given a 1% AEP Storm Event for 2065 combined with Wind Setup Conditions

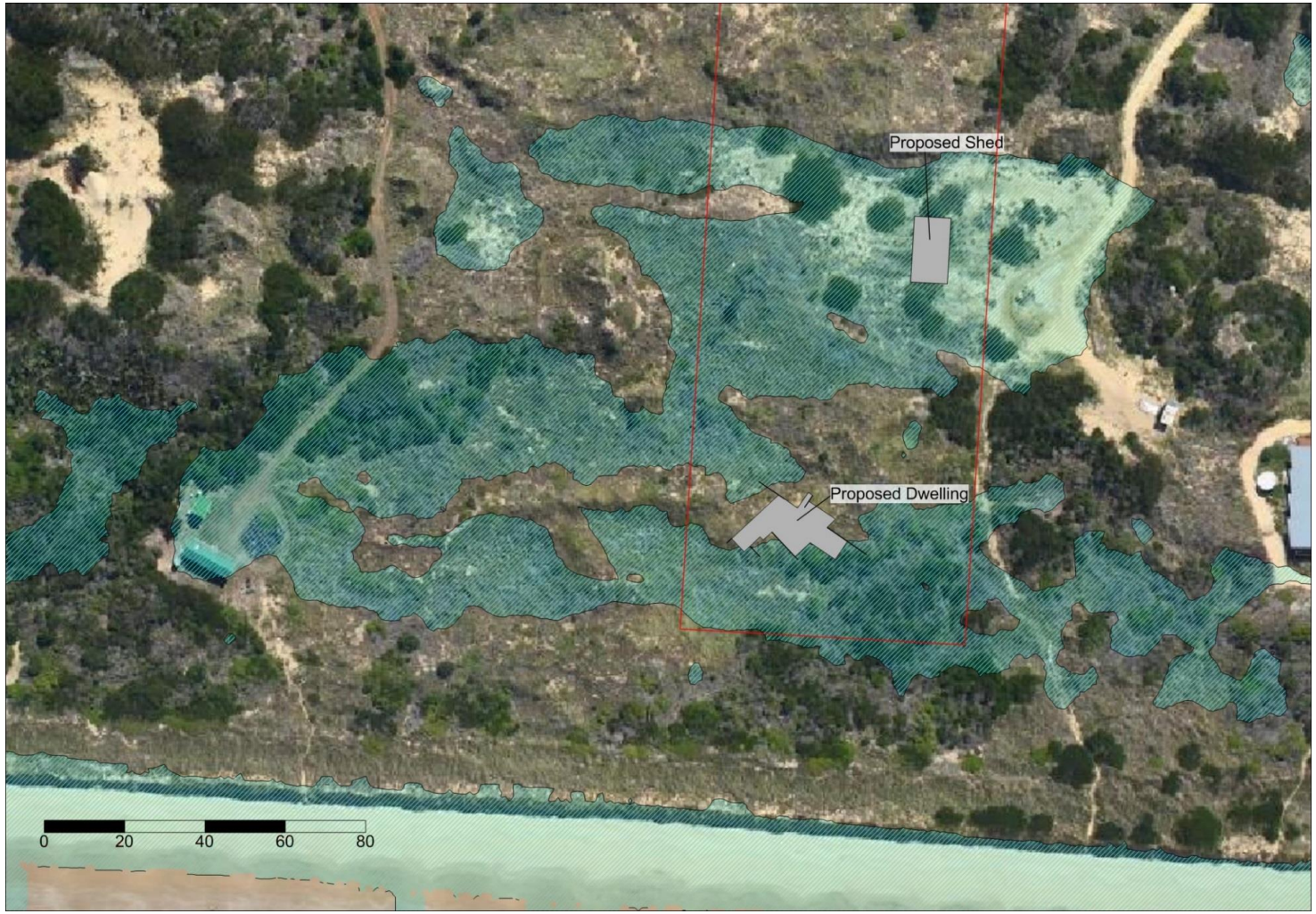

Figure 10 Site Inundation Given a 1% AEP Storm Event for 2100 combined with Wind Setup Conditions

6.8 Summary

The following can be concluded from the detailed second pass assessment:

- The future inundation potential of the site is largely depended on the resilience of the frontal dune system to storm erosion and in particular shoreline recession from sea level rise;
- Wave runup is expected to be in the order of 4.7 m AHD by 2065 which is below the level of the existing frontal dune system. By 2100, the wave runup will be above the level of the frontal dune system;
- A third pass assessment is required at the site to determine the extent to which the frontal dune is expected to be eroded by storm erosion demand and sea level risk induced recession.

7 Third Pass Assessment

7.1 Definitions

A third pass assessment would typically involve conducting a detailed site specific assessment of the local geomorphology and soils and how these may be influenced by erosional processes in terms of:

- Site hydrodynamics;
- Sea level rise induced recession; and
- Strom erosion demand.

As stated by Sharples & Donaldson (2014):

> "A limitation of all regional-scale coastal hazard assessments (whether First or Second Pass) is that particular coastal locations may have some locally distinctive features or processes that may confound any predictions of coast hazard impacts based on regional-scale assessments of inherent susceptibility and driving processes." "Hence, a logical Third Pass level of coastal hazard assessment is the detailed site-specific assessment of particular coastal locations, in which all possible site characteristics and processes are considered."

7.2 Previous Studies

GES are not aware of any detailed recession or storm erosion assessments that have been conducted at the site.

7.3 Scope of Works

Table 9 presents a summary of the various methods adopted by GES to identify erosion hazards in vulnerable coastal zones.

Table 9 Summary of Assessment Approaches for Identify Site Erosion Hazards

Investigative Approach	Investigation Details	Typical Application
Invasive Investigation.	Conduct borehole drilling or substrate profiling to make inferences about the susceptibility of the site to erosion	Where scouring is anticipated or building foundation can be established on a firm substrate
Site Historical Aerial Imaging	Assess historical long term shoreline position relative to sea levels at the time and how this may translate to future recession trends	Where the proposed development is in a medium to high risk erosion zone and recession models need confirmation or may not apply given the coastal setting
	Assess historical short term shoreline positions relative to known storm events to forward project sediment storm erosion demand.	Used where Tasmarc surveys are not available or there is no previous storm erosion modelling done for the site.
Tasmarc Surveys	Investigate historical beach profiles to determine storm erosion demand.	Where the development is on hydrodynamically active beach and more information is required to understand beach storm erosion processes
Sediment Budgets	Conduct a detailed assessment of sediment budgets.	Where the site is inferred to be influenced by water currents or longshore drift processes
Shoreline Recession Model	Development of a long term shoreline recession model based on projected DPAC (2012) sea level rise scenarios and using calculated closure depths and various Bruun Rule formulations (1988)	Where site is in an inferred to be in an erosion hazard zone and where the proposed development building cannot be founded on a stable foundation.
Storm Erosion Demand	Conduct a detailed assessment of site storm erosion vulnerability due to coastal processes as well as available geological and geomorphological information	Where site is in an inferred to be in an erosion hazard zone and where the proposed development building cannot be founded on a stable foundation.
Stable Foundation Zones	Development of a cross section through the site detailing zone of reduced foundation capacity and the stable foundation zone through Nielsen et. al. (1992) methods	Where site is in an inferred to be in an erosion hazard zone and where the proposed development building cannot be founded on a stable foundation.

GES have adopted the following 'third pass' methods to further assess hazards at the site:

- Short & Long term aerial imagery to assist in determining storm erosion demand;
- Shoreline recession model; and
- Stable foundation zone.

7.4 Aerial Imagery

GES conducted a detailed assessment of shoreline positions on the western end of Nine Mile Beach in December 2011. The historical images dating back to 1948 have been reviewed and it is confirmed that there is no visible evidence of shifting shoreline position at this part of the beach relative to 1948.

A more recent Google Earth satellite series has been reviewed to determine the position of the vegetation and frontal sand dune position relative to the residence at 988 Dolphin Sands Road. A total of six (6) Google Earth satellite images have been reviewed which include:

- 22/3/2008
- 21/10/209;
- 10/01/2009;
- 24/09/2012;
- 15/09/2013; and
- 12/04/2014

A resulting chart has been developed of the dune position (Figure 11). The chart indicates that the dune position on average has been receding and that there are no particular significant storm events that have resulted in erosion of the beach profile unlike other swell dominated beaches in the south or Tasmania.

Possibly the most similar beach to Nine Mile Beach in terms of sediment budgets would be Seven Mile Beach which has in part been prograding (growing) as a result of longshore drift processes distributing sand from Roches Beach and Cremorne Beach and possibly other beaches along the southern coastline (ie Hope and Clifton Beaches). Dominant southerly directed swell influence can create an oversupply of sediments directed northwards towards embayment's where the sediments are 'trapped' and deposited on beached which are aligned perpendicular to the active swell wave front.

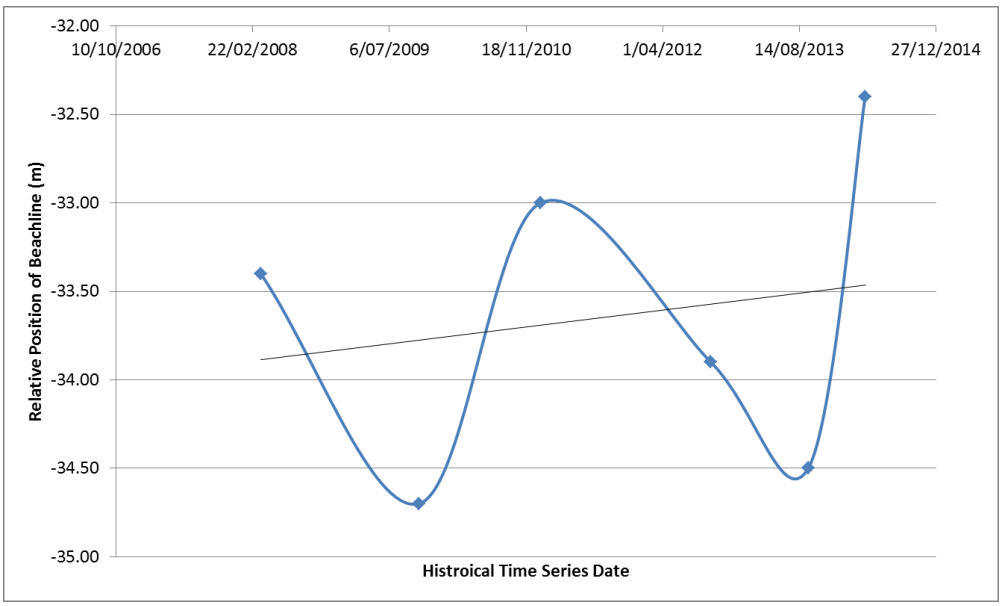

Figure 11 Distance to Frontal Dune Vegetation Line Relative to 988 Dolphin Sands Road Residence

This similar process is expected to be occurring at Nine Mile Beach which would explain the lack of any distinctive storm induced erosion in the satellite image time series. A storm erosion demand of $60m^3$ per metre is inferred for Nine Mile Beach.

7.5 Shoreline Recession

The Bruun Rule has been applied to the site to estimate the response of the shoreline profile to sea-level rise. The Bruun Rule is widely used by government and non-government bodies to determine recession rates on sandy shores which are at risk of inundation. The Bruun Rule states that a typical concave-upward beach profile erodes sand from the beach face and deposits it offshore to maintain constant water depth. There are a few cases where the Bruun rule cannot be applied, which include where longshore drift is predominant, where there is dominant influence of surrounding headlands and in environments where wave activity is minimal.

3.1.1 Closure Depths

The most contentious variable for the Bruun rule is the closure depth for which various formulations and methods exist. The closure depth may be defined as the depth offshore of a beach where depths do not change with time. The closure depth has been calculated based on the Hallermeier (1978) breaker wave height method using parameters outlined in Table 10.

Table 10 Variables Selected for Determining Closure Depths at the Site

Variable	Value
Significant (offshore) wave height (Hallermeier 1978) wave height	3.20
Wave Period (s)	10.80
Sand SG (g/cm^{-3})	2.65
Closure depth (m)	7.00

3.1.2 Bruun Rule Beach Recession Model

The standard Bruun Rule has been applied to the site to determine sea level rise induced recession from the dominant waves active at the site.

The Standard Bruun Rule is typically expressed as R = sL/Dh and is illustrated in Figure 12

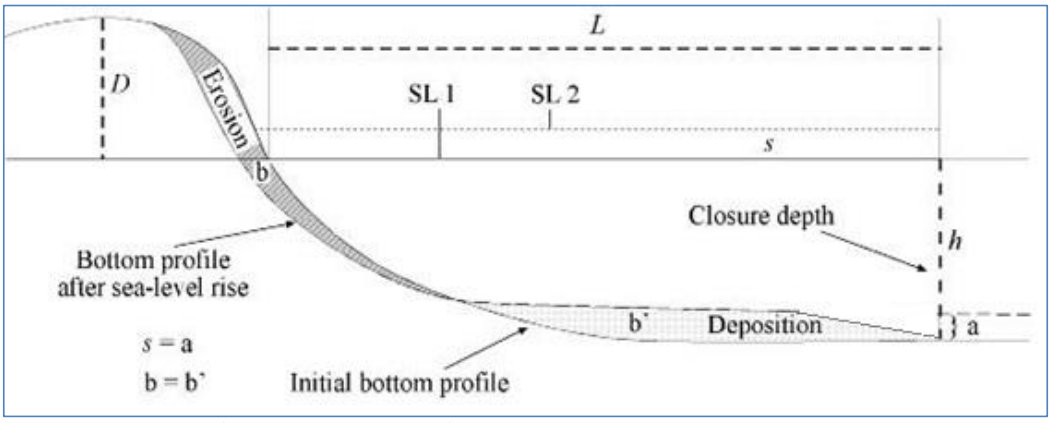

Figure 12 Summary of standard Bruun Rule for Calculating Beach Recession

Table 11 presents a summary of the Bruun Rule variables utilised in the site recession model which have been obtained from the digital elevation models for the site.

Table 11 Summary Bruun Rule Variables Utilised in the Site Recession Model

Variable	Symbol	Value
Length of Active Erosion Zone (m)	L	250.00
Profile Closure Depth (m)	h	7.00
Active Dune/Berm Height (m)	D	4.50

The recession rate given the various sea level rise scenarios are presented in Table 12.

Table 12 Calculated Bruun Rule Recession Rate at the Site

Variable	Symbol	2065 DPAC	2100 DPAC
Sea Level Rise above LiDAR baseline (m)	s	0.41	0.89
Horizontal Recession (m)	R	6.96	17.39

A horizontal recession value of 7.0 m is applicable for the site given 2065 DPAC projections and 17.4m given 2100 DPAC projections

As a general reference, the photographic series has recession rates (Table 13) which are within the same order of magnitude with the Bruun Rule calculations.

Table 13 Calculated Recession Rate at the Site based on the Short Google Imagery Time Series

Variable	2065 DPAC	2100 DPAC
Photographic Assessment LiDAR 2008	5.60	14.00

7.6 Stable Foundation Zone

A stable foundation zone assessment has been conducted for the site. The basis behind this particular assessment does not involve use of Nielsen et. al. (1992) methods for assessing stable foundation zones in sand.

A cross section has been constructed through the site to indicate the worst case scenario 2065 sea level rise scenario based on recession modelling (Figure 13 & 14). The storm erosion demand has been constructed based on Nielsen et. al. (1992) equations which use a 1:10 post storm gradient. A storm erosion demand of 60 m^3/m has been applied to the site to account for a 1% AEP storm event.

As indicated in the final section, the proposed development is within the stable foundation zone.

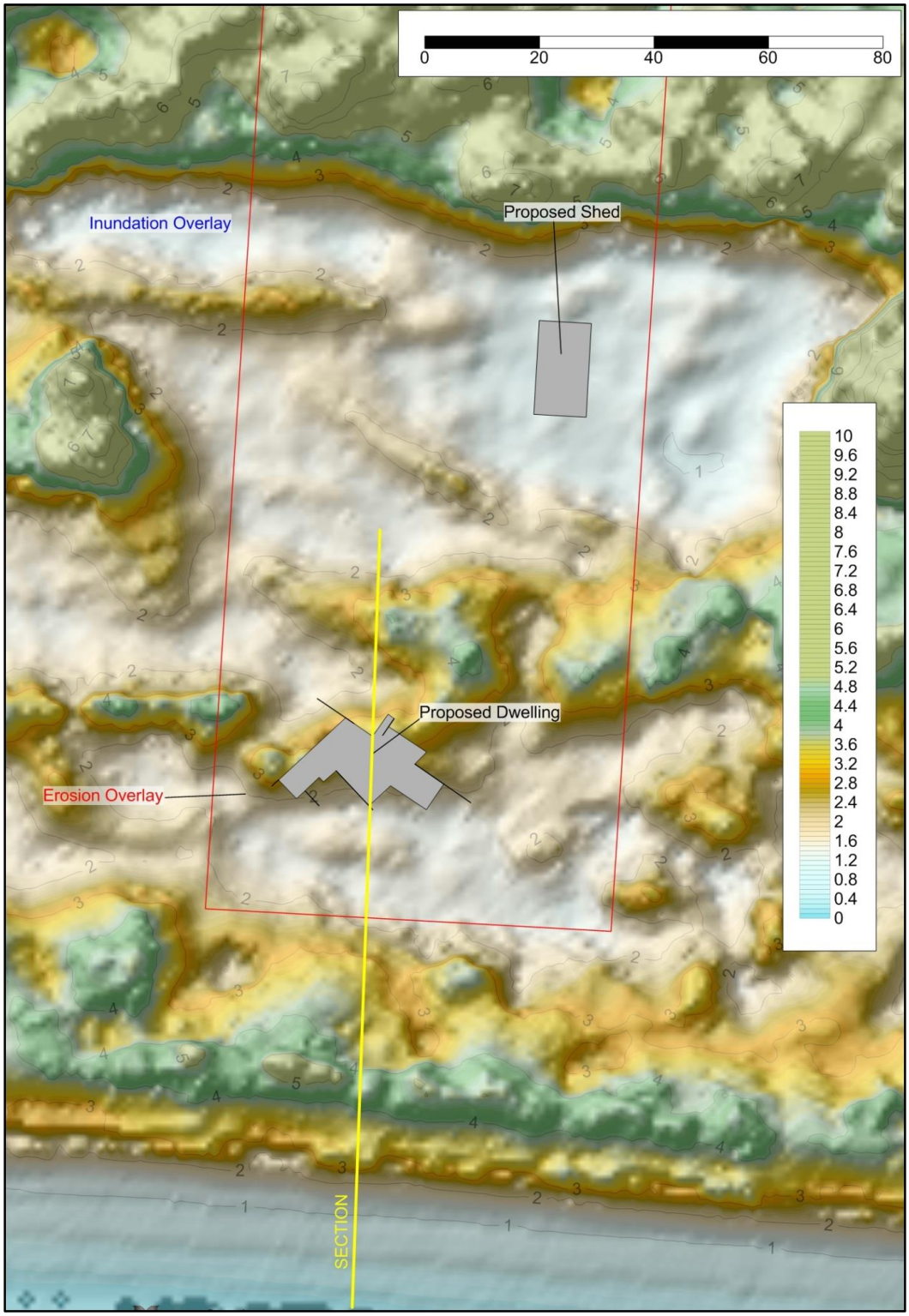

Figure 13 Site cross section delineated by the yellow line

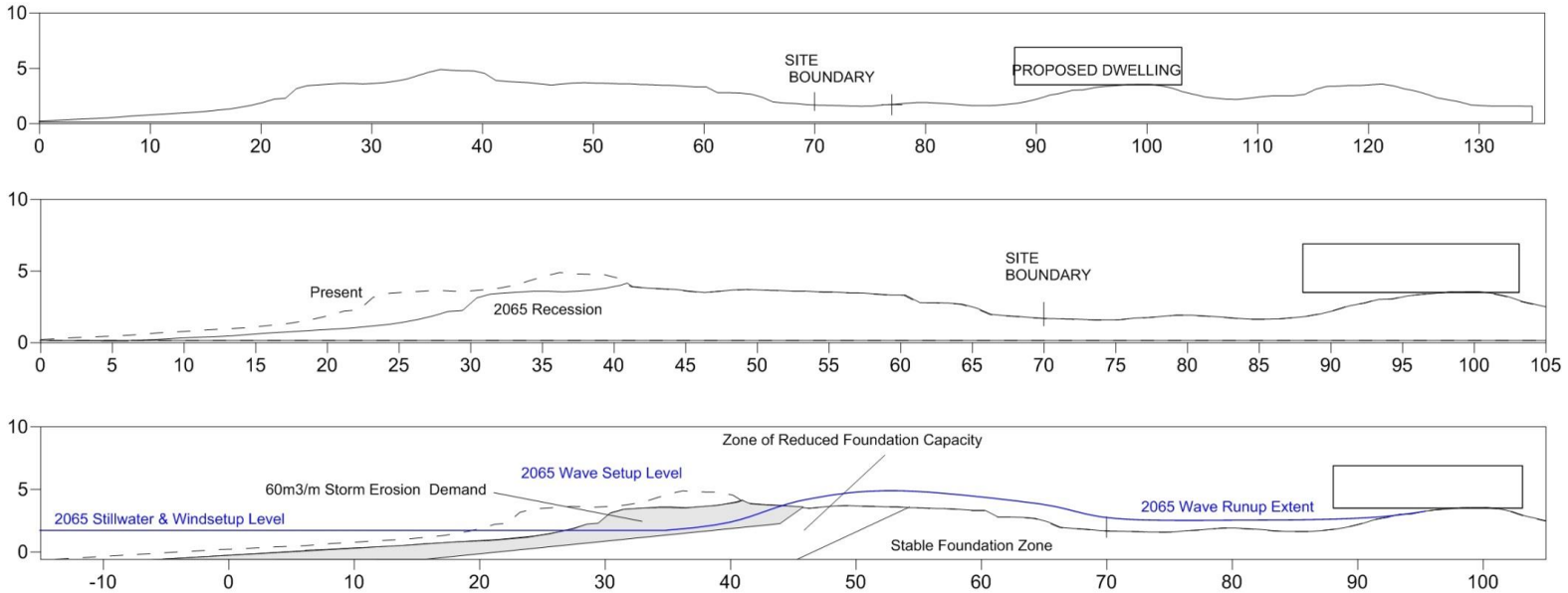

Figure 14 Site Cross Sections Demonstrating 2065 Recession, 60 m3/m Storm Erosion Demand, and Inferred Inundation Levels & Wave Runup Extent

7.7 Summary

The following can be concluded from the third pass assessment:

- It is likely that by 2065 that the frontal dune will be breached by wave runup due to combined effects of sea level rise induced recession and storm erosion events;
- The dune front is expected to remain above the combined 2065 stillwater, wind setup and wave setup level but below the wave runup level caused by minor storm events;
- During a major 1% ARI storm event, it is likely that the wave runup will reach the foundations of the proposed development but it is unlikely to cause any erosion;
- It is highly unlikely that the wave runup will extend beyond the extent of the proposed building;
- The wave runup is unlikely to reach the 3.4 m height of the dune in which the dwelling is proposed to be founded;
- Backdune inundation is limited by rates of seawater ingress through the frontal dune barrier and wave runup overtopping as well as the baseline groundwater levels in the back dune. By 2065, the groundwater levels in the back dune area are expected to be sufficiently and the frontal dune system is expected to have sufficient height to prevent complete inundation of the back dune area to stillwater levels (1.73 m AHD) during a storm tide event;
- By 2100, groundwater levels in the back dune area are likely to be above ground surface (pooling) and the frontal dune will be considerably lower which is likely to allow complete flooding of all back dune areas. Flooding will be a gradual process as the water from wave runup gradually fills the lower lying depression;
- The stable foundation zone is calculated to be within 30 m from the proposed building envelope;
- Modelling has not been conducted for the 2100 scenario as the 2065 life of the building is considered suitable for the proposed development;

8 Risk Assessment

The qualitative risk assessment criteria have been developed to identify key risks that may arise from building works in areas that are vulnerable to erosion or inundation hazards. The risk assessment is based on 2065 projected life of the building.

The criteria are based on a risk assessment matrix consistent with Australian Standard AS4360 on Risk Management (AS4360). The qualitative assessment of risk severity and likelihood (Appendix 6) were used to help provide a qualitative risk assessment based upon the coastal vulnerability assessment completed for the site.

A detailed risk assessment addressing the performance criteria is presented in Appendix 7. GES has established from the risk assessment that the level of risk is acceptable within the lifetime of the proposed development works. There are no medium or high risk ratings the proposed development.

9 Recommendations

Erosion and inundation risk at the site can be effectively managed through adequate placement of the proposed dwelling. The proposed shed is outside of the potential erosion risk area.

GES have provided a number of recommendations in Appendix 7 risk assessment which include:

- Placing the dwelling at an elevation of 3.2 m AHD over the surrounding dune above the building design life wave runup limit;
- It is recommended that the building is founded on piers at this location which are seated into the stable foundation zone at a depth of at least 0.5 m AHD;
- Any structures need to be resilient to corrosion from salt water sea mist and spray;
- The dune beneath the dwelling should be retained to prevent wave runup ingress towards the dwelling access road;
- The proposed shed is suitably placed away from any coastal inundation risk, although consideration needs to be given to ensure that it is elevated above 1.2 m AHD to prevent groundwater inundation; and
- There should be minimal disturbance to the surrounding dune systems to ensure the natural inundation barriers remain intact. Pathways to the beach should minimise erosion.

The proposed development presents an acceptable solution to managing potential site risks provided the recommendations in this report are adhered to in building and engineering design.

Kris J Taylor BSc (Hons)

Environmental & Engineering Geologist

10 Limitations

The following limitations apply to this report:

- Wave modelling in accordance with the CEM (2008), the SPM (1984) and wind parameters from AS/NZS 1170.2:2011;
- Published SWAN swell modelling information where available;
- Published water current information;
- Navionics, TAFI, Geoscience Australia and Australia Hydrographic Service bathymetry;
- Light Detection And Ranging (LIDAR) digital elevation model (metadata file in Appendix 1) is calibrated or assessed to the closest ground control point for determining relative accuracy (Appendix 2);
- Storm surge observations where applicable
- The LIST cadastral information
- Photogrammetric modelling of historic coastal recession and/or progradation for the site was not undertaken. However, historic aerial photographs for the project area were reviewed and incorporated into a geographic information system enabling preliminary measurements of dune variations.
- The values estimated in this report provide an order of magnitude for assessing climate change impacts and in particular climate change induced sea level rise impacts. The information is based on a collation of existing information and data, with some site specific modelling for planning purposes.

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Appendix 1 LIDAR Metadata Report

Metadata Report

Lidar

PI200803 – Tasmania

Acquisition Start Date	04 March 2008
Acquisition End Date	09 March 2008
Device Name	LM5600
Flying Height (AGL)	800m
INS/IMU used	AeroControl IID
Number of Runs	
Swath width	700m
Flight direction	Variable
Side Overlap	30%
Scan angle	60°
Horizontal datum	GDA 94
Vertical datum	AHD
Map projection	MGA zone 55
Description of aerotriangulation process used and residual results	None
Description of rectification process used	RiAnalyze / Riworld (see Calibration Report)
Spatial accuracy	0.10m
Surface type	Bare earth, water corrected
Average point separation	1.5pt/sqm
Laser return types	Full waveform
Data thinning	1mXY 0.25mZ
Laser footprint size	0.25m
Limitations of Data	none

Appendix 2 Development Standards Acceptable Solutions

Acceptable Solution Criteria for Development in a Waterways and Coastal Protection Code Area

Development Standard	Acceptable Solution	Performance Criteria to be Addressed
E11.7.1 Buildings & Works	Building and works within a Waterway and Coastal Protection Area must be within a building area on a plan of subdivision approved under this planning scheme.	*Not Applicable*
	Building and works within a Future Coastal Refugia Area must be within a building area on a plan of subdivision approved under this planning scheme.	*Not Applicable*
	Buildings and works within a Potable Water Supply Area must be within a building area on a plan of subdivision approved under this planning scheme.	*Not Applicable*
	Development must involve no new stormwater point discharge into a watercourse, wetland or lake.	*Not Applicable*
E11.7.2 Buildings and Works Dependent on a Coastal Location	An extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway must be no more than 20% of the size of the facility existing at the effective date.	*Not Applicable*
	No Acceptable Solution for dredging and reclamation.	*Not Applicable*
	No Acceptable Solution for coastal protection works initiated by the private sector.	*Not Applicable*

Acceptable Solution Criteria for Development in an Inundation Prone Areas Code Area

Development Standard	Acceptable Solution		Performance Criteria to be Addressed	
E15.7.1 Coastal Inundation High Hazard Areas	A1	No Acceptable solution	P1	*Not Applicable*
	A2	A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, there is no acceptable solution.	P2	*Not Applicable*
E15.7.2 Coastal Inundation Medium Hazard Areas	A1	No Acceptable solution	P1	*Yes*
	A2	An extension to an existing habitable building must comply with **one** of the following: (a) new habitable rooms must comply with both of the following: I. Floor level no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1, II. Floor area of the extension no more than 40 m2 from the date of commencement of this planning scheme; (b) new habitable rooms must be above ground level	P2	*Not Applicable*
	A3	A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must have a floor area no more than 40 m2.	P3	*Yes. Shed area ~150 m^2*
E15.7.3 Coastal Inundation Low Hazard Areas	A1	A new habitable building must comply with the following: Floor level no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1;	P1	*Not Applicable*
	A2	An extension to a habitable building must comply with either of the following: (a) floor level of habitable rooms is no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1; (a) floor area is no more than 60 m2	P2	*Not Applicable*
	A3	A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must have a floor area no more than 60 m^2.	P3	*Not Applicable*

Acceptable Solution Criteria for Development in a Coastal Erosion Hazard Code Area

Development Standard	Acceptable Solution		Performance Criteria to be Addressed	
E16.7.1 Buildings & Works	A1	No Acceptable solution	P1	*Yes*
E16.7.2 Buildings and Works Dependent on a Coastal Location	A1	An extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway must be no more than 20% of the size of the facility existing at the effective date.	P1	*No - no extension to an existing structure proposed.*
	A2	No Acceptable Solution for dredging and reclamation.	P2	*No – not applicable to development*
	A3	No Acceptable Solution for coastal protection works initiated by the private sector.	P3	*Yes- where recommendations are made*

Appendix 3 The LIST NRM Data

Feature	
Segment Id	11082
Segment Length (m)	100
Minimum Vulnerability: Coastal Vulnerability Mapping	Not a minimal vulnerability shoreline
Cliff Vulnerability: Coastal Vulnerability Mapping	Not a cliffed shoreline
Unclassified Vulnerability: Coastal Vulnerability Mapping	Not an unclassified vulnerability shoreline
Erosion Vulnerability: Coastal Vulnerability Mapping	Not a soft clayey-gravelly or colluvial shoreline
Sandy Vulnerability: Coastal Vulnerability Mapping	Open coast sandy shore backed by low-lying sandy plains
Muddy Vulnerability: Coastal Vulnerability Mapping	Not a muddy shoreline
Coastal Vulnerability0	Sandy beach or shoreline - fine to med grainsize
Coastal Vulnerability	Sloping sandy bottom in lowest intertidal to subtidal zone
Backshore Type Coastal Vulnerability	Dunes (one or more dune ridges with unconsolidated sediment plain)
Artificial Shore	No
Industry1 500M	No industry present within 500m
Industry2 500M	No industry present within 500m
Industry3 500M	No industry present within 500m
Industry1 1Km	No industry present within 1km
Industry2 1Km	No industry present within 1km
Industry3 1Km	No industry present within 1km
Foreshore Structure1	No structure present
Structure1 Use Frequency	NA
Foreshore Structure2	No structure present
Structure2 Use Frequency	NA
Foreshore Structure3	No structure present
Structure3 Use Frequency	NA
Foreshore Structure4	No structure present
Structure4 Use Frequency	NA
Construction Level 100M	No construction
Construction Level 500M	Part construction
Cleared Level 100M	No clearing
Cleared Level 500M	Partly cleared
Recreation Use1	Walking
Recreation Use1 Use Frequency	Medium use
Recreation Use2	Dog exercise
Recreation Use2 Use Frequency	Medium use
Recreation Use3	Swimming
Recreation Use3 Use Frequency	Low use
Biological Feature Sigvalue	
Protected Area	
Access1	No listed access
Access2	No listed access
Access3	No listed access
Access4	No listed access
Access5	No listed access
Vegetation Viability Coastal Values	Not viable but may be managed as a buffer area
Vegetation Significance Coastal Values	Non-threatened native
Coastal Values	Critically endangered (EPBC), endangered (EPBC) or endangered (TPS Act)
Vegetation Condition Coastal Values	Weed invasion 50-90% cover
Habitat Condition SE Strategy	Not assessed

Conservation Significance SE Strategy	Not assessed
Reserve Class CAR	Informal Reserve on other public land
Public Land Classification	Public Reserve
Coastal Zone Type PWS	
Marine Reserve	
LGA Reserve	
WHA	
Classification	4
Zoning	Open Space
Geomorphic Condition	Significantly disturbed
Actual Habitat Listed Significant SPP	One or more shorebird or seabird species present (contact Birds Tasmania for further detail)
Potential Habitat Listed Significant SPP	
Geovalue	1
Sensitivity TGD	9
Geomorphic Value	2
Tourism Use	No listed tourism use
European Heritage	No listed European heritage values
Carcinus Maenas	Unlikely
Crassostrea Gigas	Unlikely
Spartina Anglica	Absent
Undaria Pinnatifida	Unlikely
A Arenaria	Present
A Populifolia	Unknown
E Paralias	Unknown
E Villosa	Absent
T Junceiforme	Absent
Pollution Source1 500M	No pollution sources within 500m
Pollution Source2 500M	No pollution sources within 500m
Pollution Source3 500M	No pollution sources within 500m
Pollution Source1 1Km	No pollution sources within 1km
Pollution Source2 1Km	No pollution sources within 1km
Pollution Source3 1Km	No pollution sources within 1km
Biology Attribute Value	1
Geomorphic Attribute Value	2
Natural Value Index	1
Amenities Attribute Value	5
Recreational Tourism Value	2
Value0	
Human Use Value Index	3
Eco Disturbance Attribute Condition	2
Geomorphic Attribute Condition	4
Introduced Species Attribute Condition	3
Condition Index	3
Anthropogenic Modification Attribute Pressure	2
Pollution Attribute Pressure	1
Recreational Tourism Attribute Pressure	5
Pressure	5
Introduced Species Attribute Pressure	2
Pressure Index	3
Further Information	An explanatory report accompanies this dataset and can be obtained from http://www.aquenal.com.au/reports.htm or by emailing coastal.enquiries@environment.tas.gov.au

Appendix 4 Smartlines Directory

SMARTLINES

Theme	Class	Classifiers
***** Segment Length: 13,764 m; ABSAMP-ID: tas0192 *****		
Backshore Proximal	Foredune on sand to below sea level (564142), scale 10K, ref 219	* Fabric: Sand deposits to below sea level * Form: Shore-parallel ridge (foredune) * Mod: Single dune ridge
Backshore Distal	Dune or beach ridge plain; sand to below sea level (561043), scale 10K, ref 219	* Fabric: Sand deposits to below sea level * Form: Flat to gently sloping (<5°) undiff * Mod: Dune field or beach ridges undiff
Intertidal 1	Fine-medium sand beach (529010), scale 10K, ref 219	* Fabric: Fine - medium grained sand dominant * Mod: Beach (wave-dominated sandy shore)
Intertidal 2	Unclassified (909090)	
Subtidal 1	Sloping sandy bottom undiff (502010), scale 10K, ref 219	* Fabric: Sand undiff * Form: Sloping (moderately to steeply sloping 5° - 60°) * Mod: Sandy bottom undiff
Subtidal 2	Unclassified (909090)	
Backshore Profile	Very flat plains (110), scale 100K, ref 204	
Intertidal Slope	Moderate (200), scale 25K, ref 183	
Exposure to Wave Energy	High (400), scale 25K, ref 183	
Geology 1	Semi-lithified undeformed clastic sediments (101020), scale 25K-250K, ref 222	* Fabric: Dominantly siliceous clastics undiff * Form: Undeformed (flat-lying or only gently tilted, may be normal-faulted) * Mod: Semi-lithified (soft) material
Geology 2	Unclassified (909090)	
Muddy	Not identified as a muddy shore (000)	
Dunes	Dune-field undiff exposed to wave attack at seaward side (220)	
Sandy	Open coast sandy shore backed by soft sediment deposits to below sea-level (210)	
Coarse Sediment	Not identified as a coarse sediment shore (000)	
Undif Sediment	Not identified as an undifferentiated soft sediment shore (000)	
Coral	Not identified as a coral coast (000)	
Soft Rock	Not identified as a soft rock shore (000)	
Hard Rock	Not identified as a hard rock shore (000)	
Undifferentiated Rock	Not identified as an undifferentiated rock shore (000)	
Unclassified	Not an unclassified stability shoreline (000)	

Appendix 5 Hydrodynamic& Inundation Model

1 Introduction

GES have developed a 'second pass' site specific wave and inundation model based on the following:

- Sea level rise values extracted from DPAC (2012) sea level rise scenarios and 2010 baseline levels presented in the IPS (2015);
- Barometric low & astronomical tide 1% AEP values extracted from the IPS (2015) site specific inundation level tables;
- A site specific hydrodynamic model which factors in the following:
    - Wave setup;
    - Wave runup; and
    - Wind setup.
- This model is used in the assessment of site erosion conditions as part of a "Third Pass" Site Assessment.

2 Sea Level Rise

Input from the scientific community has concluded that sea levels have risen globally over the last century.The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5 2013) provided projections for sea-level rise for the twenty first century relative to 1986 to 2005 (Figure 1). For 2081 to 2100, the projected range was:

- 0.28 to 0.62 (average of 0.44) for the RPC2.6 model; and
- 0.52 to 0.98 (average of 0.74) for the RPC8.5 model.

The DPAC 2012 has adopted a different model which is based on the following sea level rise projections relative to 1990:

- 0.2 m rise by 2050
- 0.4 m rise by 2075
- 0.8 m rise by 2100

The IPS (2015) has adapted where levels based on a 2010 baseline.

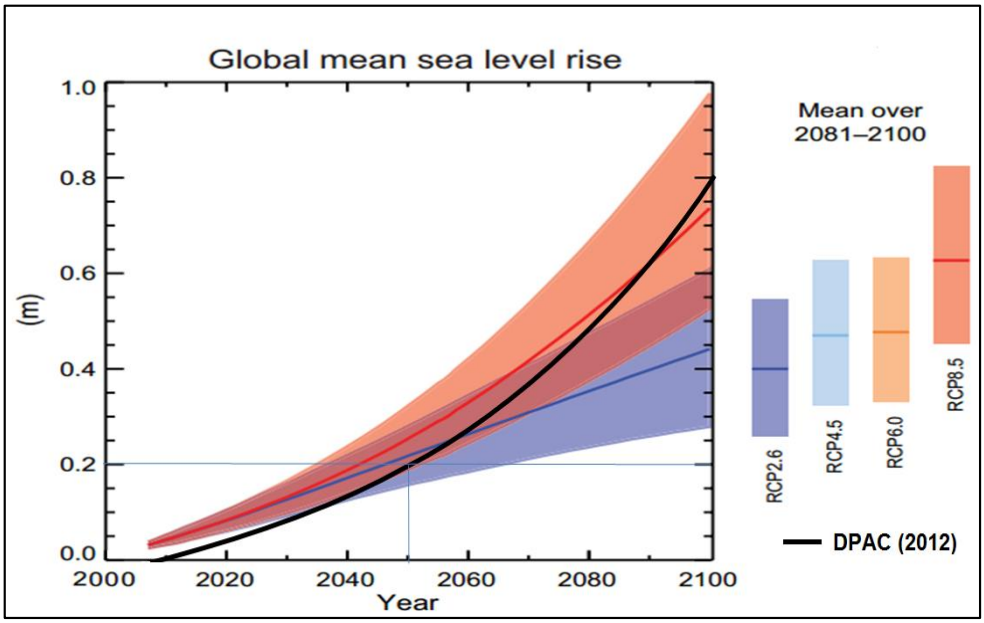

Figure 1 Projected Sea Level Changes based on the AR5 assessment (IPCC 2013) & DPAC Projected Sea Levels (2012).

These relative sea level rise rates have been back referenced to AHD83 which states a bench mark 0 m AHD of 1972. By 1986 and 1990, DPAC (2012)and IPAC bench marks had already had an incremental increase in sea level of 3 and 4 cm respectively since the m AHD benchmark. These variations are accounted for in the model presented in Table 1.

Also included in Table 1 is a backwards projection of sea levels based on global mean sea level from 1880 to 2011 (Source: CSIRO 2010 and Church and White 2011) which is calibrated relative to the base line datum points for the DPAC (2012) and IPCC AR5 (2013) scenarios. This information is useful for graphically inferring a relationship between historical site specific shoreline positions and relative sea level elevations at the time. Such an assessment is generally only conducted in a detailed third pass investigation.

Table 1 Estimates of Global Sea Level Rise are based on projections for DPAC (2012) & IPCC (2013) RPC8.5 averages

Year	IPS (2015)		IPCC (2013) RPC8.5 Mean	
	2010 Baseline (m)	m AHD83 (1972 Baseline)*	1986 Baseline (m)	m AHD83 (1972 Baseline)*
1972	-0.09	0	-0.03	0
1986	-0.062	0.028	0	0.03
2000	-0.025	0.065	0.03	0.06
2010	0	0.09	0.05	0.08
2015	0.02	0.11	0.07	0.1
2030	0.085	0.175	0.13	0.16
2050	0.2	0.29	0.25	0.28
2065	0.32	0.41	0.37	0.4
2070	0.37	0.46	0.42	0.45
2080	0.49	0.58	0.52	0.55
2100	0.8	0.89	0.74	0.77

* m AHD for Tasmania adopted in 1983 but based on 0 m sea level in 1972

For this report 0.41 m AHD and 0.89 m AHD sea level rise scenarios have been adopted based on 2065 life of the building and 2100 DPAC (2012) estimates.

3 Barometric Low & Astronomical Tides

Storm tide events may be defined in terms of the culmination of astronomical tide and storm surge events. Maximum storm tide inundation levels have been adopted for the site based on a 1% AEP that an inundation event will occur. Storm tide levels are obtained from Canute (ACE CRC) inundation hazard tables.

The storm tide level adopted for the site 1.15 m

4 Stillwater Levels

Still water levels are defined as the baseline sea levels at the time combined with:

- Barometric low pressure systems; and
- Tidal influence.

Absolute levels are based on 1% AEP events. Resulting still-water levels for present day and 2100 (DPAC 2012) are presented in Table 2.

Table 2 Present Day and Projected Stillwater Levels

Stillwater Elevations	2015 DPAC	2065 DPAC	2100 DPAC
DPAC (2012) Sea Levels (m AHD)	0.11	0.41	0.89
Tidal Influence & Barometric Low Influence (m)	1.15	1.15	1.15
Summary (m AHD)	**1.26**	**1.56**	**2.04**

5 Site Hydrodynamic Model

5.1 Offshore Significant Swell Waves

Significant offshore waves are used in the assessment of inshore wave conditions including wave runup and wave setup. Significant wave heights are also used to interpret storm erosion demand as well as closure depths which are used in modelling beach erosion and recession from sea level rise. Significant wave heights have been obtained from SWAN models for the site. Where applicable, procedures outlined in the SPM (1984) and the CEM (2008) have been used to interpret wave attenuation at the site. Table 3 presents a summary of the significant wave heights at the site.

Table 3 Summary of 1% AEP Attenuated Significant Offshore Wave Heights from Swell Activity

Parameter	Value
Swell Direction	S
Significant Nearshore Wave Height (m)	3.2
Wave Period (s)	10.8

5.2 Wave Summary

Breaker zone wave transformation calculations have been applied to the site based on procedures detailed in Dean & Darymple (1991). Waves approaching the site will intercept the sea bed at various gradients which will affect the wave form.

Table 4 presents a summary of the dominant wave conditions at the site and Table 5 summarises the breaking wave details which are used to model closure depths and wave setup.

Table 4 Details of the Main Waves Impacting the Site

Wave Details	Swell
Direction	S
Wave Height (m)	3.2
Period (s)	10.8
Approach Angle	0

Table 5 Details of primary 1% AEP significant wave used to model extreme wave conditions at the site

Dominant Wave Direction	S
Wave Type	Swell
Nearshore gradient (%)	0.3
Breaker Depth (m)	4.60
Breaker Height (m)	3.70
Angle of Breaker to Shoreline	0
Surf Similarity Parameter (SSP)	0.27

5.3 Wave Setup

Wave setup has been calculated to determine additional inundation heights on the beach based on procedures outlined in the CEM (2008) and SPM (1984) (Table 6). Wave setup is the superelevation of the water surface over still water levels due to onshore mass transport of the water by wave action alone. Parameters used in the calculation include deep water wave characteristics, breaker zone depths and shore gradients.

Table 6 Summary of Wave Setup at the Site

Variable	Value
Wave Direction	S
Wave Setup Height (m)	0.43

5.4 Wave Runup

Wave runup is considered an additional factor to be assessed on top of still water levels and wave setup (Carley et al. 2008). Wave runup is attributed to the transformation of wave energy as a result of the landward thrusting of water up the beach face to a level which is determined by variables presented in Table 7.

Calibration or verification of run-up calculations on beaches is best undertaken with either field measurements, a physical model or survey debris lines following major storm events. In this case, a wave runup model has not been calibrated for the site and is based on an R2 wave run-up level calculated from the methods of Mase (1989). For wave runup on beaches, the R2% value is the most commonly used, which is the runup exceeded by 2% of waves. The model assumes that extreme water levels are accompanied by extreme wind conditions. This is not unreasonable though, since both phenomena are caused by intense low pressure systems.

Table 7 Mase (1989) equation parameters used in calculating wave runup

Variable	Value
Wave Direction	S
Deep water wave height (m)	3.20
Mase 'a' Coefficient	1.86
Mase 'b' Coefficient	0.71
Lribarron Number	0.27
Slope (%)	3.6
Resulting wave runup level (m)	2.35

5.5 Wind Setup

Wind setup has been determined for the site based on methods outlined in Dean and Dalrymple (1991). The particular method selected is based the closed water body procedure, which is most applicable for the site based on the geometry of the coastline. Wind, fetch, bathymetry and coastline geometry were used to discern the wind direction which delivers the largest wind setup for the site which is determined to be from the south with a water elevation of 0.17 m.

6 Projected Inundation Levels

6.1 Site Wave Setup Inundation Levels

Wave setup elevations are presented in Table 8.

Table 8 Site 1% AEP Wave Setup Elevations for Present Day and 2100 Sea Level Rise Estimates

Wave Setup Elevations	2015 DPAC	2065 DPAC	2100 DPAC
DPAC (2012) Stillwater Levels (m AHD)	1.26	1.56	2.04
Wave Setup (m)	0.43	0.43	0.43
Wind Setup (m)	0.17	0.17	0.17
Summary (m AHD)	**1.86**	**2.16**	**2.64**

6.2 Site Wave Runup Levels

Wave runup elevations are presented in Table 9.

Table 9 Site R2 Wave Runup Elevations for Present Day and 2100 Sea Level Rise Estimates

Wave Runup Elevations	2015 DPAC	2065 DPAC	2100 DPAC
DPAC (2012) Stillwater Levels (m AHD)	1.26	1.56	2.04
Wave Runup (m) 4 % Beach/Embankment Slope	2.35	2.35	2.35
Wind Setup (m)	0.17	0.17	0.17
Summary (m AHD)	**3.78**	**4.08**	**4.56**

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Appendix 6 Quantitative Risk Assessment Tables

Consequence Index

Severity Level	Natural Environment	Legal/Government	Heritage	Community / Reputation/Media
(1) Insignificant	Limited damage to minimal area of low significance.	Low-level legal issue. On the spot fine. Technical non-compliance prosecution unlikely. Ongoing scrutiny/attention from regulator.	Low-level repairable damage to commonplace structures.	Low level social impacts. Public concern restricted to local complaints. Could not cause injury or disease to people.
(2) Minor	Minor effects on biological or physical environment. Minor short-medium term damage to small area of limited significance.	Minor legal issues, non-compliances and breaches of regulation. Minor prosecution or litigation possible. Significant hardship from regulator.	Minor damage to items of low cultural or heritage significance. Mostly repairable. Minor infringement of cultural heritage values.	Minor medium-term social impacts on local population. Could cause first aid injury to people. Minor, adverse local public or media attention and complaints.
(3) Moderate	Moderate effects on biological or physical environment (air, water) but not affecting ecosystem function. Moderate short-medium term widespread impacts (e.g. significant spills).	Serious breach of regulation with investigation or report to authority with prosecution or moderate fine possible. Significant difficulties in gaining future approvals.	Substantial damage to items of moderate cultural or heritage significance. Infringement of cultural heritage/ scared locations.	Ongoing social issues. Could cause injury to people, which requires medical treatment. Attention from regional media and/or heightened concern by local community. Criticism by Non-Government Organisations (NGO). Environmental credentials moderately affected.
Severity Level	**Natural Environment**	**Legal/Government**	**Heritage**	**Community / Reputation/Media**
(4) Major	Serious environmental effects with some impairment of ecosystem function. Relatively widespread medium-long term impacts.	Major breach of regulation with potential major fine and/or investigation and prosecution by authority. Major litigation. Future project approval seriously affected.	Major permanent damage to items of high cultural or heritage significance. Significant infringement and disregard of cultural heritage values.	On-going serious social issues. Could cause serious injury or disease to people. Significant adverse national media/public or NGO attention. Environment/management credentials significantly tarnished.
(5) Catastrophic	Very serious environmental effects with impairment of ecosystem function. Long term, widespread effects on significant environment (e.g. national park).	Investigation by authority with significant prosecution and fines. Very serious litigation, including class actions. Licence to operate threatened.	Total destruction of items of high cultural or heritage significance. Highly offensive infringements of cultural heritage.	Very serious widespread social impacts with potential to significantly affect the well being of the local community. Could kill or permanently disable people. Serious public or media outcry (international coverage). Damaging NGO campaign. Reputation severely tarnished. Share price may be affected.

Likelihood Index

Level	Descriptor	Description	Guideline
A	Almost Certain	Consequence is expected to occur in most circumstances.	Occurs more than once per month.
B	Likely	Consequence will probably occur in most circumstances.	Occurs once every 1 month – 1 year.
C	Occasionally	Consequence should occur at some time.	Occurs once every 1 year - 10 years.
D	Unlikely	Consequence could occur at some time.	Occurs once every 10 years – 100 years.
E	Rare	Consequence may only occur in exceptional circumstances.	Occurs less than once every 100 years.

Source: AS/NZS 4360:2004 Risk Management

Qualitative Risk Matrix

Likelihood of the Consequence	Maximum Reasonable Consequence				
	(1) Insignificant	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
(A) Almost certain	11 High	16 High	20 Extreme	23 Extreme	25 Extreme
(B) Likely	7 Moderate	12 High	17 High	21 Extreme	24 Extreme
(C) Occasionally	4 Low	8 Moderate	13 High	18 Extreme	22 Extreme
(D) Unlikely	2 Low	5 Low	9 Moderate	14 High	19 Extreme
(E) Rare	1 Low	3 Low	6 Moderate	10 High	15 High

Source: AS/NZS 4360:2004 Risk Management

Appendix 7 Quantitative Risk Assessment

Performance Criteria E15.7.2 P1 **A new habitable building must satisfy all of the following:**	**Relevance**	**Management Options**	**Managed Risk Assessment (where relevant)**			**Further Assessment Required**
			Consequence	**Likelihood**	**Risk**	
(a) floor level of habitable rooms must be no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1;	Proposed dwelling will be above the 2.3 Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1.		Insignificant (1)	Rare (E)	Low (1)	No
(b) risk to users of the site, adjoining or nearby land is acceptable;	The proposed dwelling expected to be above wave runup and stillwater levels.	The proposed dwelling should be elevated to at least 3.2 m AHD to be clear from wave runup.	Minor (2)	Unlikely (D)	Low (5)	No
(c) risk to adjoining or nearby property or public infrastructure is acceptable;	Proposed development will not impose any additional risk.		Insignificant (1)	Rare (E)	Low (1)	No
(d) risk to buildings and other works arising from wave run-up is adequately mitigated through siting, structural or design methods;	Wave runup expected near the dwelling but not at 3.2 m AHD.	Building should be sited on piers bedded to 0.5 m AHD into the stable foundation zone to reduce the risk of foundation undercutting.	Minor (2)	Unlikely (D)	Low (5)	No
(e) need for future remediation works is minimised;	Recommendations are within building life expectancy	As above. All structures are to be resilient to rusting	Minor (2)	Unlikely (D)	Low (5)	No
(f) access to the site will not be lost or substantially compromised by expected future sea level rise either on or off-site;	Minimum disturbance to roads and access is acceptable for the life of the building.	The dune beneath the dwelling should be retained to prevent wave runup ingress towards the dwelling access road.	Minor (2)	Unlikely (D)	Low (5)	No
(g) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works;	No requirement for coastal protection works.		Insignificant (1)	Rare (E)	Low (1)	No

Performance Criteria E15.7.2 P3 **A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must satisfy all of the following:**	**Relevance**	**Management Options**	**Preliminary Risk Assessment (where relevant)**			**Further Assessment Required**
			Consequence	**Likelihood**	**Risk**	
(a) risk to users of the site, adjoining or nearby land is acceptable;	The proposed shed is located away from coastal ingress and wave runup areas for the building the design life.	May be issues of rising groundwater levels longer term. Shed should be elevated where possible.	Insignificant (1)	Rare (E)	Low (1)	No
(b) risk to adjoining or nearby property or public infrastructure is acceptable;			Insignificant (1)	Rare (E)	Low (1)	No
(c) risk to buildings and other works arising from wave run-up is adequately mitigated through siting, structural or design methods;			Insignificant (1)	Rare (E)	Low (1)	No
(d) need for future remediation works is minimised;			Insignificant (1)	Rare (E)	Low (1)	No
(e) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works,	No requirement for coastal protection works.		Insignificant (1)	Rare (E)	Low (1)	No

Performance Criteria E16.7.1 P1 **Buildings and works must satisfy all of the following:**	**Relevance**	**Management Options**	**Preliminary Risk Assessment (where relevant)**			**Further Assessment Required**
			Consequence	**Likelihood**	**Risk**	
Not increase the level of risk to the life of the users of the site or of hazard for adjoining or nearby properties or public infrastructure;	The proposed dwelling expected to be above wave runup and stillwater levels.	The proposed dwelling should be elevated to at least 3.2 m AHD to be clear from wave runup.	Minor (2)	Unlikely (D)	Low (5)	No
Erosion risk arising from wave run-up, including impact and material suitability, may be mitigated to an acceptable level through structural or design methods used to avoid damage to, or loss of, buildings or works;	No need for structural mitigation.	Setback distances are acceptable based on the design life of the building.	Insignificant (1)	Rare (E)	Low (1)	No
Erosion risk is mitigated to an acceptable level through measures to modify the hazard where these measures are designed and certified by an engineer with suitable experience in coastal, civil and/or hydraulic engineering;	No need for structural mitigation.	Building should be sited on piers bedded to 0.5 m AHD into the stable foundation zone to reduce the risk of foundation undercutting.	Minor (2)	Unlikely (D)	Low (5)	No
Need for future remediation works	Recommendations are within building life expectancy	As above. All structures are to be resilient to rusting	Minor (2)	Unlikely (D)	Low (5)	No
Health and safety of people is not placed at risk	The risks are acceptable within the design life of the proposed development.		Minor (2)	Unlikely (D)	Low (5)	No
Important natural features are adequately protected	Particularly relevant to reduce inundation.	There should be minimal disturbance to the surrounding dune systems to ensure the natural inundation barriers remain intact. Pathways to the beach should minimise erosion.	Minor (2)	Unlikely (D)	Low (5)	No
Public foreshore access is not obstructed where the managing public authority requires it to continue to exist	Not Applicable					No
Access to the site will not be lost or substantially compromised by expected future erosion whether on the proposed site or off-site	Access to the site is from the north.	Dunes around dwelling need to remain intact to retain inundation free access.	Minor (2)	Unlikely (D)	Low (5)	No
Provision of a developer contribution for required mitigation works consistent with any adopted Council Policy, prior to commencement of works.	No need for structural mitigation.		Minor (2)	Unlikely (D)	Low (5)	No
Not be located on an actively mobile landform	Sand dunes not actively mobile		Insignificant (1)	Rare (E)	Low (1)	No

Site & soil evaluation and design report.

Proposed on-site wastewater management system at 1000 Dolphin Sands Rd, Swansea

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SITE AND SOIL EVALUATION REPORT – Design of onsite wastewater management system for new residence at 1000 Dolphin Sands Drive, Swansea.

BACKGROUND

This report and design information has been provided to assist the client in considering wastewater management options for a new residence and outbuilding at 1000 Dolphin Sands Rd, Swansea. The information provided in this Report provides Design Information, Plans and Specifications suitable for inclusion in supporting documentation for Development Application under LUPA and for a Special Plumbing Permit for installation of an on-site wastewater management system under the Plumbing Regulations 2004.

SITE INFORMATION

Location: 1000 Dolphin Sands Road, Swansea 7190
Owner: Warren Lashmar
PID: 5279223
Title Ref: 54666/157

Project Summary: Design of on-site wastewater management system to service new three bedroom residence and outbuilding.

This will be a staged project, comprising a small building/workshop, followed by a main residence to be constructed at a later date. It is intended to connect both buildings to a common onsite wastewater management system.

The new residence will be located close to the coast, in a secondary dune area, with the proposed wastewater land application area situated 20m inland of the Coastal Reserve boundary and approximately 70m - 90m from the high water mark; the outbuilding will be located 75m inland from the coastal Reserve boundary.

Soils on the site are uniform sands to an estimated depth of at least 6m. The proposed new on-site wastewater management system is an Advanced Enviro Septic system; this will permit the use of a compact land application area by the adoption of the higher design loading rate applicable to the use of wastewater treated to secondary standard.

The location selected for the outbuilding is unsuited for the establishment of an onsite wastewater management system land application area due to the presence of groundwater which is too close to the surface at this location to permit installation of an AES bed. The land application area will instead be located close to the house site, in an elevated position which should provide at least 3m vertical separation from groundwater.

Untreated wastewater will be pumped from the outbuilding to the onsite wastewater management system, using a Saniflo Sanicubic 1 macerator pump, with the house connected and discharging to the same by gravity, once constructed.

(See http://www.saniflo.com.au/)

Site Area: Approximately 2Ha.

Dominant Soil Categories:

(as per in AS/NZS 1547-2000)	Modified Emerson Test Required?	**N**
1,….2,…3,…4,….5,…6	If Yes, Emerson Class No:	**N/A**

Soil Profile:

A Christie Post Driver Soil Sampling Kit, comprising CHPD78 Christie Post Driver with Soil Sampling Tube (50mm OD x 1.6m) and a Seca Mighty Probe (1200mm) were used to obtain undisturbed soil cores or soil depth information in the vicinity of the proposed outbuilding; this area appears to be at the lowest point on the site and therefore one where the water table would be closest to the surface.

The soil profile on this site is largely uniform and is derived from beach and aeolian sands.

1. A Horizon: 0-5000mm+: sand grey to white with depth, damp to moist to wet with depth, massive, Category 1.

(From observation of test pits and exposures on site.)

Saturated sand was struck at a depth of 1300mm, which is presumed to represent the top of the water table, or at least be very close to it; see the section below headed "Groundwater" for further discussion of this issue.

Measured or Estimated Soil Permeability (m/d)

Estimated from textural classification.

A Horizon 3.0m+/day

Effluent Application Rates

(This is a recommendation to the designer advising how many litres of effluent should be applied to the soil for every square metre of absorption trench or other land application system.)

A-Horizon

1. Secondary treatment (with surface irrigation): 5mm/day
2. Secondary treatment with in-ground absorption trench/bed – 50mm/day
3. Primary treatment with in-ground absorption trench/bed – 20mm/day
4. Mound System: 32mm/day.

Geology:

MRT Geological Atlas 1:250000 shows the site as Quaternary-Holocene "Sand, gravel and mud of alluvial, lacustrine and littoral origin (Qh) ". This is consistent with observations on site.

"The geology and groundwater resources of Nine Mile Beach, eastern Tasmania" by Cromer (MRT) 2003 provides an excellent and detailed description of the local geology; it indicates that the beach/dunal sands on this site are likely to extend to a depth of 5m below sea-level.

Topography

Slopes: Overall slope at 3% or 2º, from North to South towards shoreline with Great Oyster Bay, however on a smaller scale, this is rendered largely irrelevant as the surface topography is complex with typical dunal undulations and cross-swales superimposed on the overall slope, and running west-east, parallel with the shoreline..

Drainage lines / water courses:
Apart from the waters of Great Oyster Bay, there is no open water close by, the groundwater in the soil profile underneath the proposed wastewater land application area would ultimately communicate with marine waters via outflow in the inter-tidal zone.

With approximately 70m downslope clearance from the land application area and use of secondary treatment, it is anticipated that wastewater derived contaminants and pathogens in groundwater seepage at the low water mark would be reduced to minimal levels.

Vegetation: Vegetation comprises typical mixed dune community recovering from recent bushfires, with Coastal Wattle (A. sophorae) dominant over a mixed understorey of marram grass, Poa and juncus reeds (in swales).

Site History (land use)
The area was subdivided for residential/shack use around 40 years ago.

Site Exposure and Climate.

Aspect: No predominant aspect, all-day sun throughout the year, exposed to prevailing winds.

Pre-dominant wind direction: North-westerly to south-westerly.

Climate: Is predominantly warm/dry, with hot summers and mild winters. Mean annual evapotranspiration of 738mm exceeds annual rainfall of 598mm. (ie ET significantly exceeds rainfall).

Environmental Issues

Location of sensitive vegetation, high water table, swamps, waterways etc.

Given the nature of the soil profile on this site, it is anticipated that predominant wastewater flow would be in a downward direction and except in the immediate land application area, inaccessible to all but the most deep-rooted vegetation, of which there is little to none on this site

The nearest open water is the coastal waters at the beach, 70m away; this body would not be affected by direct surface flows from a failed onsite wastewater management system on the development site as these would flow into and be retained by the existing dunal swales to the front and rear of the house site.

Site Stability
The shallow slopes and geology of this site result in low risk of slope instability, however care should be taken to minimise risk of wind-erosion of exposed sands after installation of the onsite wastewater management system; this can be achieved by stabilising disturbed surfaces with Jute Mesh Soil Saver or similar until natural vegetation regrowth can take over. Detailed rehabilitation recommendations are provided in Appendix 5.

Drainage
The selected land application area is well drained and not subject to inundation or standing water, although there may be standing water in some dune swales following long periods of heavy rainfall.

Groundwater
There is a well-known extensive and exploitable groundwater resource underlying Dolphin Sands; whilst considered to be hard (significantly mineralised) by Tasmanian standards, it is generally

uncontaminated by pathogens, with low salinity and is thus highly potable; it is consequently considered to be a resource of significant value by local residents in what is an area of low and poorly dependable rainfall. Groundwater here is generally accessed by water spears; these are lined shallow boreholes with an in-ground screen and which typically penetrate no more than 5-6m below the ground surface and are thus potentially prone to contamination by carelessly sited onsite wastewater management system land application areas.

Reference to the MRT online Groundwater Information Portal indicates that very few groundwater supply bores (water spears) have actually been registered with MRT, nonetheless, it is well known that almost every residence located in the Dolphin Sands area has a bore-water supply.

The underlying aquifer therefore requires appropriate protection measures to prevent contamination by wastewater contaminants from onsite wastewater management systems.

The publication "The geology and groundwater resources of Nine Mile Beach, eastern Tasmania" by Cromer (MRT) 2003, indicates that the groundwater table normally sits at approximately 1m above mean sea level, hence groundwater can be expected to be found much closer to the surface in low-lying back dune swales than under the surface of sand dunes, which rise 3 to 4m above the swales. Soil sampling indeed indicates that the water table is within 1500mmof the surface in the swale intended as the outbuilding site.

The MRT report indicates that the groundwater aquifer is unconfined with an approximate gradient of 1% which generally runs north and south from the centre of the Dolphin Sands spit, towards the beach and coastal waters of Great Oyster Bay or the estuary of Moulting Lagoon.

It is understood that in the vicinity of the development site, the aquifer gradient will be sloping towards the beach, with groundwater running slowly from north to south, hence it would be wise to locate any wastewater land application area well to the south of any water spear, either on this or on closely adjoining sites, such as the existing residence at 1010 Dolphin Sands Road.

Groundwater values will be protected by utilising a secondary wastewater treatment system (Advanced Enviro Septic), to minimise the concentration of potential wastewater contaminants acceding to groundwater; by locating the land application area in an elevated location on a sand-dune, rather than in a swale, so as to maximise vertical separation and by ensuring appropriate horizontal buffer distances between the land application area and both existing and future water spears.

The water spear servicing the adjoining house at 1010 Dolphin Sands Rd is located approximately 70m north of the Coastal Reserve, on the eastern side of the driveway; this is in an extension of the same swale which is proposed as the site for the outbuilding at 1000 Dolphin Sands. The water spear was located in the swale so as to minimise the depth required to drill to access groundwater; it is recommended, for similar reasons that the water spear to service the new development also be located in this swale, in the vicinity of the new outbuilding.

It is proposed to locate the onsite wastewater management system land application area in the vicinity of the house, approximately 50m to the south and thus down-gradient (aquifer) from the water spear. This will ensure minimal risk to groundwater quality in the zone of influence of either the future water spear on the subject land, or of the existing borehole at 1010 Dolphin Sands Rd.

Primary and Reserve Land Application Area

Primary and reserve land application areas to be located in close proximity to the proposed house.

Water Supply
Groundwater from water spear, possibly supplemented by tankwater derived from roof runoff.

On Site Wastewater Management System Options.

Suitable on-site wastewater management systems for this site would include conventional or improved septic tank systems with in-ground effluent absorption.

Given the irregular surface contours of the site an improved septic system, producing an advanced secondary treated quality wastewater with consequent reduction in required land application area is favoured.

The intention by the developer that this premises will be initially used primarily for holiday or shack purposes, favours an AES system as the preferred option, given the limited impact of long periods of underuse on the operational effectiveness of this system and its reduced vulnerability to shock loadings.

Loadings.
Three-bedroom residence, with assumed maximum occupancy of 5 persons. Per capita wastewater loading is estimated at 120 litres per day, giving a total loading of 600 litres per day. (See Loading Certificate in Appendix 9.)

Wastewater Land Application Area.
In-ground AES bed (producing secondary treated quality effluent); required basal area, (minimum).

= daily wastewater loading / Design loading rate for secondary treated effluent in absorption bed on Cat 1 soil

= 600 litres per day / 50mm day = **12.0m^2**

Sizing of Distribution Unit.
Minimum distribution unit sizing is determined by the requirement to provide 300mm clearance between ends and sides of AES pipes and edges of bed; 150mm horizontal separation between adjoining AES pipe units and 300mm clearance between AES pipes and the base of the bed.

The required total AES pipe length is determined by a maximum loading of 90L per day per 3m long section of AES pipe, with the pipe installed in this case as two parallel lengths, each of half of the required minimum pipe length.

Minimum pipe length = $\frac{\text{daily hydraulic loading}}{\text{90L/m/day}}$

= $\frac{\text{600L/day}}{\text{90L/m/day}}$

= **6.66 x 3m pipe units.**

AES pipe is supplied in 3m lengths, therefore this installation will require a total of 7 x 3m AES pipe lengths; the distribution unit will comprise 2 rows each of 2 pipe lengths (10.5m long), therefore the unit will be sized as follows (minimum):

Distribution unit length (minimum) = AES pipe length + (0.3m x 2)

	=	10.5m + 0.6m
	=	**11.1m**
Width of 2-pipe wide AES unit	=	1.35m
Area of AES	=	11.1m x 1.35m
	=	**15m^2**

As the basal area of the AES bed alone exceeds the required basal area of the land application system, calculated as per AS/NZS1547.2000 Appendix L, no system sand extension is required.

On-site wastewater management system design summary

	Septic tank discharging to Advanced Enviro Septic secondary treatment and land application system
Primary Treatment	Primary treatment by settlement in septic tank, discharged effluents flow by gravity to AES system and land application area.
Effluent Disposal	In-ground AES bed, with system sand minimum basal area of 12m^2.
Site Modifications	• Possible resculpting of sand-dunes to accommodate required land application area.
Location of AES in-ground absorption bed	• In vicinity of proposed house site, to30m from Coastal Reserve boundary.

Risk Management

The most significant limitations to on-site wastewater management capability for this site are as follows:

- Possible contamination of aquifer.
- Wind erosion of sand dune over land application area.
- Overflow of wastewater resulting from AES bed failure.

Constraint/limitation	Risk reduction measure
Possible contamination of aquifer.	• Secondary treatment of wastewater to minimise wastewater contaminants acceding to the water table. • Vertical separation of base of land application area from top of water table maximised by locating at elevated location in sand dune. • Significant horizontal separation (50m) from water spear, which will be located up-gradient in the aquifer from the land application area.
Wind erosion of sand dune over land application area.	• Reinstatement of sand dune immediately upon completion of installation. • Use of jute erosion-control matting to minimise wind erosion. • Planting of vegetation such as marram grass on disturbed areas to provide wind erosion protection.
Overflow of wastewater resulting from AES bed failure.	• Conservative sizing of bed basal area, minimising risk of failure leakage. • Significant setback distance (50m) between land application area and coastline Natural topography will retain wastewater on-site.

Date of Site Visit: 10th of February 2015

Weather Conditions:
(on the day of evaluation and during the last week)
Fine and dry with 10mm of rain falling during the previous six weeks.

Further Information.

For further detailed assessment and design information, together with operation and maintenance advice, please refer to the Appendices.

Statement.

This Site & Soil Evaluation has been undertaken in accordance with the relevant provisions of AS/NZS 1547:2012. Onsite Domestic Wastewater Management which accords with deemed to comply requirements of the Tasmanian Plumbing Code with respect to the design of on-site wastewater management systems requiring a Special Plumbing Permit.

The design of this on-site wastewater system is suitable for the proposed residence referred to in this report.

Please Note:
It is generally understood that the successful operation of an on-site wastewater disposal system is dependent upon a number of complex, interacting factors and that the operating life of in-ground absorption systems in particular may be limited. This system may require future maintenance or modification to ensure its continued satisfactory operation. The client is advised that such works are the responsibility of the property owner.

SITE ASSESSOR AND SYSTEM DESIGNER

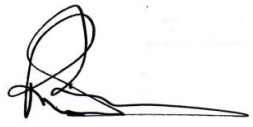
NAME: Richard Mason, Environmental Health Professional and Building Services Designer Hydraulic Restricted.

NAME OF ORGANISATION: Onsite Assessments Tas

ADDRESS: 20 Adelong Drive, Kingston, Tasmania, 7050

CONTACT DETAILS: 0418 589 309; richardmason@iprimus.com.au

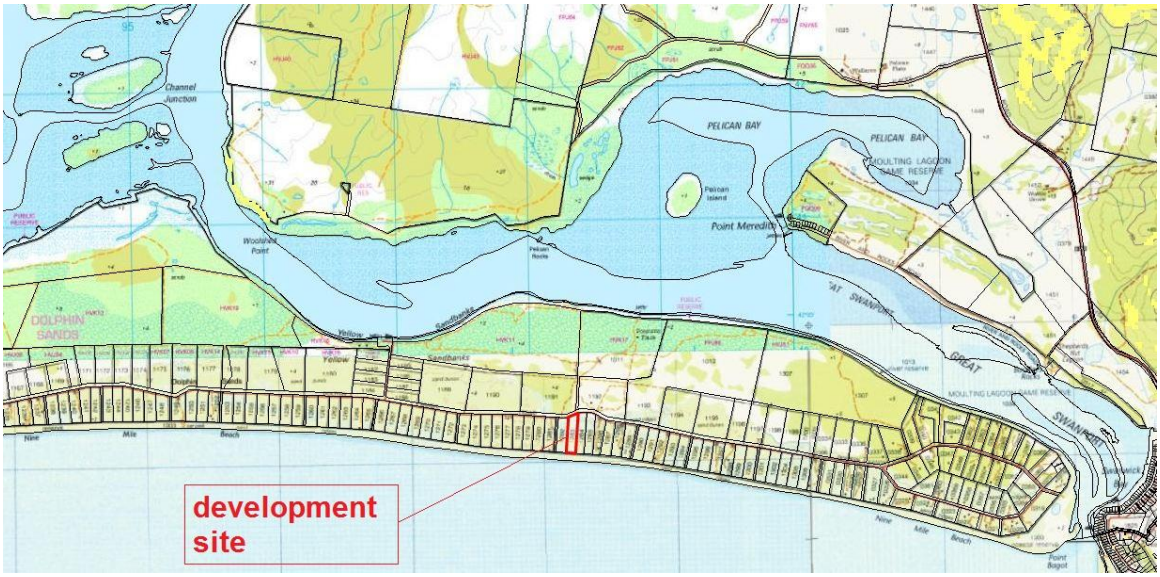
SIGNED:



DATED: 26th February 2015

APPENDICES

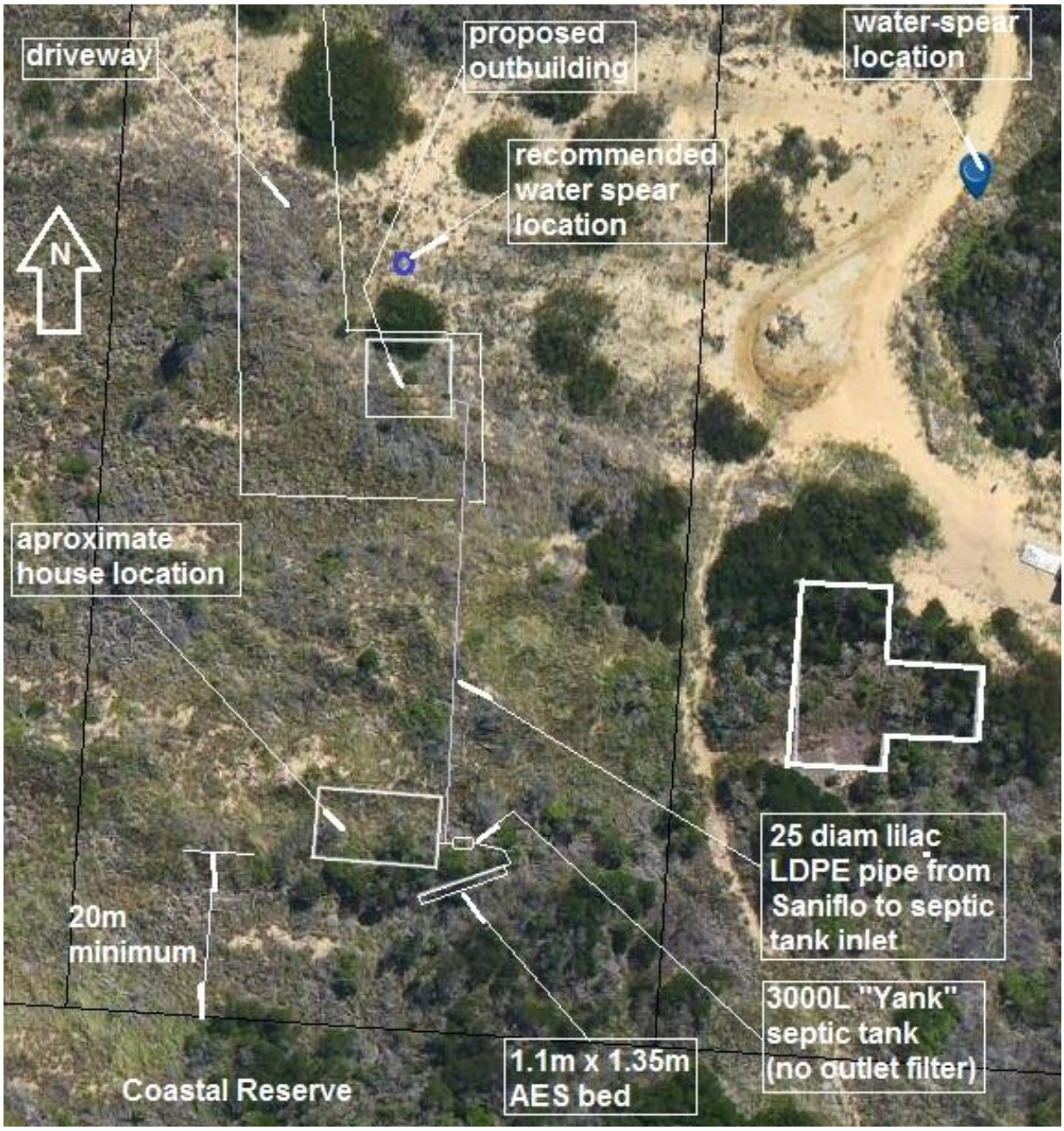
Appendix 1 – Site Location



Appendix 2 – Site Photo

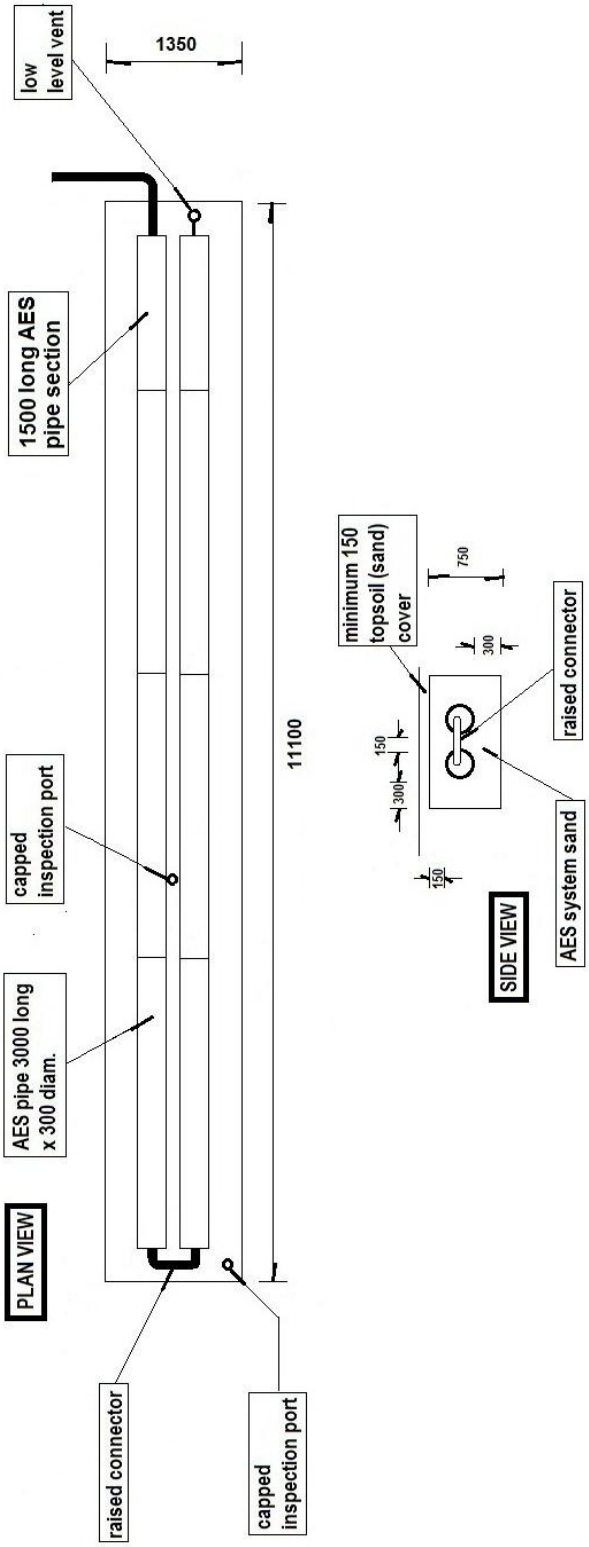
Panoramic view of development site taken from tall sand dune close to western boundary:

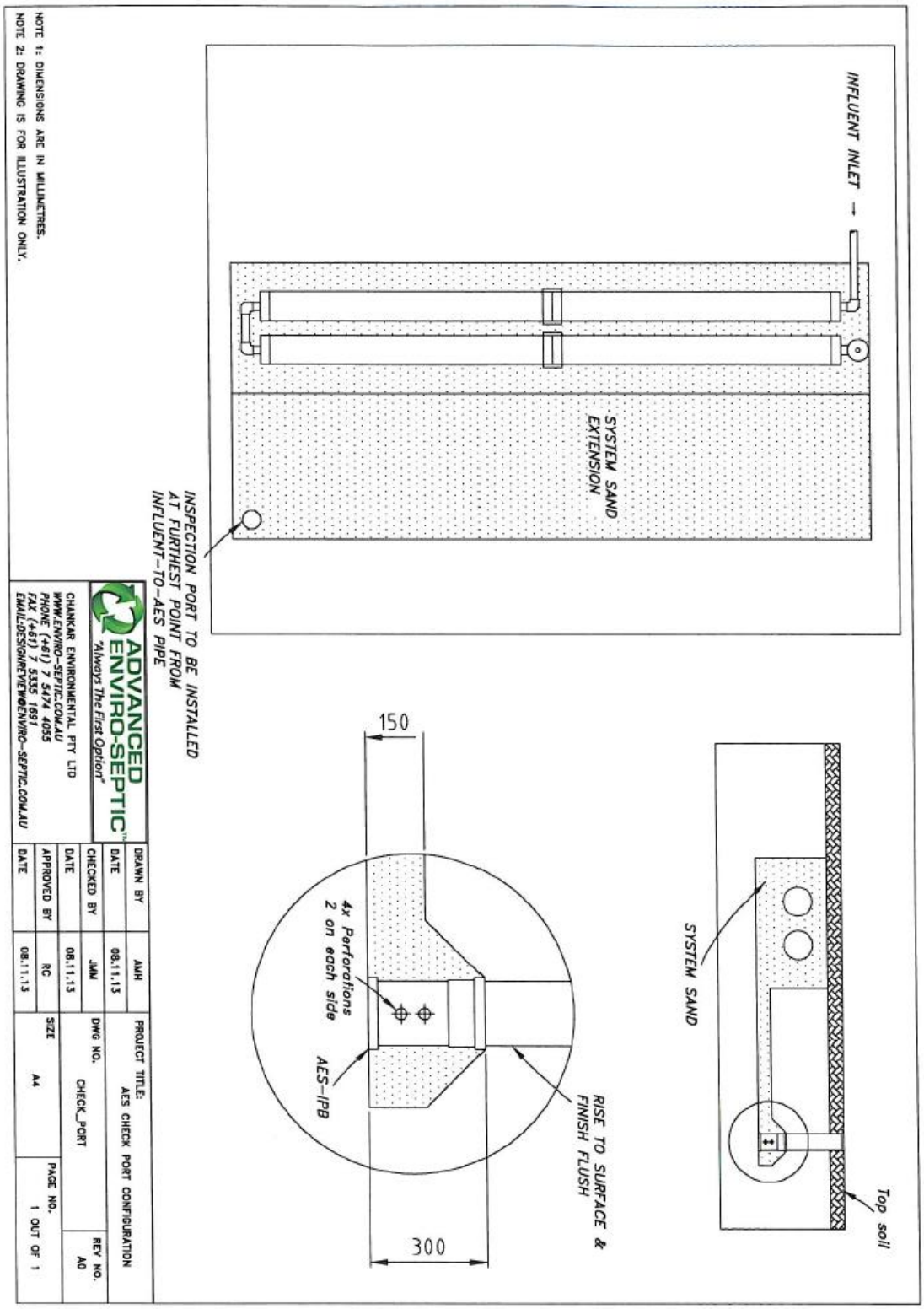
Appendix 3 – Septic tank system plan



Please note: This site plan is notional and based on verbal advice provided by the developer; at the time of writing, detailed, surveyed site development plans were not available. It is anticipated that the building designer will incorporate the onsite wastewater management system design criteria recommendations into the final overall building design/site development plan.

Appendix 4 – AES bed construction details.




INFLUENT INLET
SYSTEM SAND EXTENSION
INSPECTION PORT TO BE INSTALLED AT FURTHEST POINT FROM INFLUENT-TO-AES PIPE
SYSTEM SAND
Top soil
150
4x Perforations 2 on each side
AES-IPB
RISE TO SURFACE & FINISH FLUSH
300
NOTE 1: DIMENSIONS ARE IN MILLIMETRES.
NOTE 2: DRAWING IS FOR ILLUSTRATION ONLY.
ADVANCED ENVIRO-SEPTIC
"Always The First Option"
CHANKAR ENVIRONMENTAL PTY LTD
WWW.ENVIRO-SEPTIC.COM.AU
PHONE (+61) 7 5474 4055
FAX (+61) 7 5535 1691
EMAIL:DESIGN@ENVIRO-SEPTIC.COM.AU
DRAWN BY AMH 08.11.13
CHECKED BY JMM 08.11.13
APPROVED BY RC 08.11.13
PROJECT TITLE: AES CHECK PORT CONFIGURATION
DWG NO. CHECK_PORT
REV NO. A0
SIZE A4
PAGE NO. 1 OUT OF 1

Appendix 5 – AES bed design/installation specifications.

- This is an in-ground absorption system which comprises a 2 x AES pipe, 11.1m long x 1.35m wide x 0.75m deep in-ground bed, constructed generally in accordance with "Advanced Enviro-Septic Design & Installation Manual"; (see page 15 of manual provided with this document for the information of the client and installation agent) and Australian/New Zealand Standard 1547.2012 - On-site domestic wastewater management and located as per Wastewater System Plan in Appendix 1.
- Please note that this may at the installer's discretion be varied as a 3 X AES pipe system, 7.6m long x 1.8m wide, depending on the final topography and available, useable space of the land application area.
- Septic tank will be a 3050L capacity Yank Tank (by Global Water Tanks in Sorell) or septic tank of similar capacity.
- Wastewater will be distributed onto the system sand distribution bed totalling

14-15m^2 in area.

- Design assumes a 3 bedroom house with maximum likely full-time occupancy of 5 persons, each generating 120 litres of wastewater per day, for a total loading of 600L/day, as per Appendix H, Australian/New Zealand Standard 1547.2012 – On-site domestic wastewater management.

1. Site Preparation

- Rope off the site to prevent damage to the area during other construction activity on the lot. Vehicular traffic over the area shall be prohibited to avoid compaction.
- Excavate the existing soil surface, parallel with the contour (cross slope) to a depth of 750mm over the selected wastewater land application area. Rake/scarify the exposed soil surface and apply gypsum at a rate of 2kg/m^2 to combat potential soil dispersion.
- Install septic tank and AES bed in accordance with the AES site instructions (see below) and the design plans at Appendices 3 & 4.

2. Materials.

- Required materials and components are listed in Appendix 7.
- The AES pipe is laid in a bed of approved "system sand"; this is a coarse sand meeting the specifications as listed below:

AES system sand specifications:

Percentage Restrictions
35% **or less** of the total sand may be gravel.
40%-90% of the total sand is to be coarse and very coarse sand.

Gravel Quality Restrictions
No gravel is to exceed 9mm in diameter.
No gravel is smaller than 2mm in diameter.

Coarse Sand Quality Restrictions
No coarse sand is smaller than 0.5mm in diameter.
Fines Quality Restrictions
No more than 2% of the total sand may pass through a 75µm sieve.

3. Dune rehabilitation

- Given the complex terrain of parts of the dune system recommended for absorption bed installation, it is recognised that the excavations required to install the AES beds may require the removal of significant depths of sand overburden; this could engender a risk of wind erosion and the formation of sand blows unless care is taken to protect exposed sand surfaces in the medium term from these effects. Sand removed during excavation should be carefully stockpiled nearby and replaced in such a manner as to duplicate the original topography and soil profile as closely as possible, even if this means covering the absorption beds with as much as a metre of sand.

- Once the dune surfaces have been restored they should be protected from wind erosion whilst plantings of vegetation similar to that removed are re-established. If the land application area concerned is within a zone to be left clear for fire protection, different vegetation species suited for fire risk minimisation should be used. The developer should seek the advice of the Bushfire Hazard Management Practitioner in this regard.

- Exposed soil surfaces may be protected by mulching with straw and placing jute matting as detailed here (http://www.landplan.com.au/Erosion-Control-Weed-Control/SoilSaver-jute-mesh-for-erosion-control-seed-establishment.aspx?id=16&c=8) and replanting with locally provenanced groundcover species such as poa, marram or pigface planted through the mesh/net, into the underlying sandy loam topsoil.

- Alternatively, the exposed soils may be mulched with clean straw and covered with large mesh chicken wire, held down with fencing wire staples; groundcover species as described above may then be planted through the mesh which will robustly protect the mulch from scattering and burrowing animals such as rabbits for several years until the wire corrodes and ultimately disappears. This has the advantage of providing long term protection from erosion until such time as the newly planted vegetation reestablishes itself, even if this takes several years because of prolonged drought conditions.

- The main disadvantage of this approach is that as the wire corrodes, it may break into sharp pointed lengths capable of injuring people not wearing suitable footwear; although this risk can be minimised by use of fencing.

- Larger species such as coastal wattle etc can be encouraged to re-establish by laying cut brushwood bearing seed capsules over the mulched and matted/meshed surface; seed drop from the mature seed capsules will ensure rapid establishment of these species on the bare ground underneath.

- Comprehensive guidance on construction, excavation and revegetation in coastal areas is provided in the *Tasmanian Coastal Works Manual: A best practice management guide for changing coastlines (DPIPWE February 2011)*; it is recommended that all such works be conducted in accordance with the relevant recommendations therein.

ADVANCED ENVIRO-SEPTIC™ "Always The First Option"

Advanced Enviro-Septic™ Installation Instructions

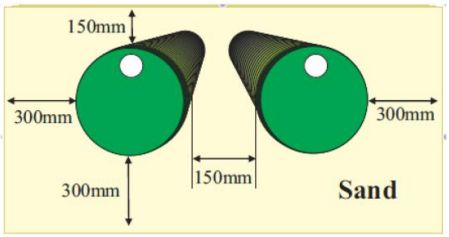
1. SET OUT

i. Set out should be in accordance with the design approved by Council.

ii. The length of each run of AES System pipe must be horizontal

iii. AES calculator footprint dimensions are based upon the DLR of the receiving soil and are the minimum foot print area.

iv. Any system extension must be to the down slope side unless the infiltration footprint is level.



AES Sand Coverage Minimums

2. EXCAVATION – (track machinery causes less compaction of the soil.)

i. Excavate as required leaving the base of excavation loose to aid infiltration. Strip and separate top soil for covering installation as per AS 1547:2012.
DO NOT damage infiltration area by driving equipment or walking on excavation prior to placement of sand layer. Refer to Appendix L Sec L7 of AS1547: 2012. Construction Techniques. Rip or scarify the infiltration area to a depth of 150 to 200mm minimum parallel to the AES pipe on all systems especially systems in Cat 4,5,6 soil with high clay content. (Refer to the design and report for this onsite installation)

"L7.1 Good construction technique AS 1547:2010
The following excavation techniques shall be observed so as to minimise the risk of damage to the soil:
(a) Plan to excavate only when the weather is fine;
(b) Avoid excavation when the soil has a moisture content above the plastic limit. This can be tested by seeing if the soil forms a 'wire' when rolled between the palms;
(c) During wet seasons or when construction cannot be delayed until the weather becomes fine, smeared soil surfaces may be raked to reinstate a more natural soil surface, taking care to use fine tines and only at the surface;
(d) When excavating by machine, fit the bucket with 'raker teeth' if possible, and excavate in small 'bites' to minimise compaction; and
(e) Avoid compaction by keeping people off the finished trench or bed floor.
In particular for trenches and beds:
(f) If rain is forecast then cover any open trenches, to protect them from rain damage;
(g) Excavate perpendicular to the line of fall or parallel to the contour of sloping ground; and
(h) Ensure that the inverts are horizontal.

CL7.1
Damage can be done by:
(a) Smearing, where the soil surface is smoothed, filling cracks and pores;
(b) Compacting, where the soil porosity is reduced; and
(c) Puddling, where washed clay settles on the base of the trench to form a relatively impermeable layer.
In particular, cohesive soils, or soils containing a significant quantity of clay, are susceptible to damage by excavation equipment during construction.

ii. If using a raised bed configuration ensure you have sufficient soil to cover entire mound or bring in enough sand to fill out batters prior to covering with topsoil etc. as per AS 1547:2012.

/2

3. SYSTEM SAND – Course washed sand with less than 2mm silt (ASTM C-33)

i. Place minimum150mm system sand to extension area and minimum 300mm under AES pipe footprint area.

ii. Place runs of AES System pipe roughly in position (THE FABRIC SEAM MUST BE AT THE TOP AND THE WHITE BIO-ACCELERATOR AT THE BOTTOM.) With 300mm minimum clearance to all footprint edges. Join lengths of AES with AES connectors. To do this slide fabric and fibre back on the 2 pipe ends to be joined and clip AES connector in place. Slide fabric back over connector.

iii. Place offset adaptors on each run with the 100mm hole at the top.

iv. Ensure minimum 150mm between AES system pipes. This can be done with pegs, short pieces of 150mm pvc or reusable AES Spacer Plates. One side provides the 300m spacing required for minimum system sand. The opposite side must have a minimum of 300mm of system sand beyond the edge of the AES System pipe.

v. Place system sand around AES pipes ensuring they stay level and in position. Remove and progressively position spacer plates or PVC pipe until all system pipes are surrounded by system sand to the top. **Walk sand between rows to aid compaction.**

vi. EXTENSION SAND depth is a minimum of 150mm.

4. CONNECTING ROWS

i. Connect rows with 100mm pipe as required with a maximum 100mm extending into the AES system pipe. (Raised connection – After placing raised connection pipes the top of the PVC pipe must be level with the top of the AES pipe. Lift and pack with sand.) This ensures airflow is not restricted and buffer capacity is maximised.

5. VENTING

i. Ensure the system has a High Vent and a low vent. As per design. Low vent is a minimum 150mm above ground. Vents can be located any distance from the system provide they have no water traps that can block oxygen flow through the system. The High Vent must be 3 meters higher than the low vent.

ii. Pressurised or steep gravity systems will require a **Velosity Diffuser**

6. BACK FILLING

i. Ensure a minimum of150mm System sand covers the AES pipes and PVC pipe work.

ii. Refer to the Onsite design and Council approval and ensure that all diversions drains or site specific requirements are correctly installed.

iii. Back fill with natural soil and compact. System extensions may require compaction in a couple of layers depending on the depth.

iv. On mounds and down slopes strip vegetation and place fill evenly and level to all sides to avoid breakout from low points during high seasonal loadings.

v. Cover excavation area with topsoil creating a finished surface level 50 to 100mm higher than the natural surface level ensuring that water sheds off the land application area and does not pond, compact lightly and seed or grass when completed.

For Installation support phone 0754744055

Appendix 6 - AES Design Calculation.

(Checked by Chankar Environmental)

ADVANCED ENVIRO-SEPTIC™ "Always The First Option"

Advanced Enviro-septic Design Calculator V8.1

"Always the BEST Option" until site and soil conditions rule it out.

Site Address	1000 Dolphin Sands Rd, Swansea TAS 7109				
Client Name	Warren Lasmar				
Designed By	Richard Mason (AES Cert No Qld 481)	Designers Ph Number	0418 589309	QBSA Lic Number	CC 6157 T (Tas)
Lic Plumber Name	TBA	Plumber Ph Number		Plumb / Drainer Lic Number	
Council Area	Glamorgan Spring Bay Council	AES Certif Number		Date	26.02.2015

This Calculator is a guide only, receiving soil classification, surface water, water tables and all other site constraints addressed by the design.

System Designers site and soil calculation data entry		IMPORTANT NOTES
Is this a new home installation Y or N	Y	>> Minimun single vent size is 80mm or 2 x 50mm house vents
Number of person	5	a septic tank outlet filter is NOT RECOMMENDED
Daily Design Flow Allowance Litre/Person/Day	120	
Number of rows required to suit site constrants	2	>> The maximum lth of a single AES pipe run is 30 meters
Infiltration surface Soil Category as established by site and soil evaluation. CATEGORY	1	
Design Loading Rate based on site & soil evaluation DLR (mm/day)	50	
Bore log depth below system Basel area	1000	>> Min depth below basel area is 600 mm to establish water table or restrictive layer
Enter System footprint Slope in % for standard AES systems to calculate extension	0%	
Is this design a gravity system with no outlet filter? Y or N	Y	>> A House Vent & LOW VENT required on this system
PLEASE CHECK YOU HAVE FALL FROM TANK TO AES SYSTEM PIPES		

COMMENTS :- *" The outcome must be important to everyone. "*

- Plumbers are reminded to practice good construction techniques as per AS 1547 and as provided on AES installation instructions supplied with components.

AES System Calculator Outcomes		
Total System load - litres / day (Q).	600	l/d
Min Length of AES pipe rows to treat loading	10.0	lm
Number of FULL AES Pipe lengths per row	4	lths
Total Capacity of AES System pipe in Litres	1484	ltr.
DO YOU WISH TO USE CUT LENGTHS OF PIPE IN THIS DESIGN? (ENTER Y)	Y	
IF YOU WISH TO USE A TRENCH EXTENSION DESIGN OPTION ENTER "Y"		

AES dimensions	AES System	System Extension
Lth m : (L)	11.1	11.1
Width m:(W)	1.35	0.00
Sand Depth :	0.75	FALSE
Area m2	15.0	0.0
Enter Custom Width m >		

AES INFILTRATION FOOT PRINT AREA - L = Q / (DLR x W)	Length		Width		Minimum AES foot print required .	
for this Basic Serial design is	11.1	x	1.35	=	15.0	m2 total

Code	AES System Bill of Materials.		
AES-PIPE	AES 3 mtr Lths required	7	lths
AESC	AESC Couplings required	6	
AESO	AESO Offset adaptors	4	
AESODV	AES Oxgen demand vent	1	
AES-IPB	AES 90mm Inspection port base	2	
	TOTAL SYSTEM SAND REQUIRED (Guide Only)	13	m3

PLEASE email your AES CALC and Drawings to
DESIGNREVIEW@ENVIRO-SEPTIC.COM.AU

Chankar Environmental Use Only

ADVANCED ENVIRO-SEPTIC™ "Always The First Option"

Digitally signed by Kane Dickson
DN: cn=Kane Dickson, o=Chankar Environmental, ou=Design Review, email=designreview@enviro-septic.com.au, c=AU
Date: 2015.02.27 07:53:38 +10'00'

Designreview@enviro-septic.com.au

> The AES Calculator is a design aid to allow checking of the AES components and configuration and is a guide only. Site and soil conditions referencing AS 1547:2012 are calculated and designed by a Quailified Designer

> Chankar Environmental has no responsibility for the soil evaluation, loading calculations or DLR entered by the designer for this calculator.

> AES pipes can be cut to lenght on site. They are supplied in 3 meter lths only.

Appendix 7 – Advice to Project manager and installer

Important notes for Project Manager.

It is vitally important to the future of the on-site wastewater management system to avoid damage to soil structure on the site, which would reduce soil permeability, leading to possible early failure of the effluent absorption area.

Actions that may damage soil structure include:

- Compaction, which reduces soil porosity;
- Smearing, where soil surfaces are smoothed, filling pores and cracks; and,

Project Manager Responsibilities.

The Project Manager must ensure that:

1. Before project construction work commences, the Effluent Absorption Area is properly identified on site and barricaded, fenced, roped or taped to prevent unauthorised access. This action should be documented both on the site plan and with the local Council.

2. Vehicles, earth-moving plant etc must not park or manoeuvre on the Effluent Absorption Area.

3. The Effluent Absorption Area is not used for the stockpiling of construction materials, excavated fill or other materials.

4. All water runoff resulting from the construction of driveways, cut & fill and other excavations is directed to discharge well away from and downslope of the Effluent Absorption Area.

Appendix 9 – Advice to Owner and Loading Certificate

A copy of the Advanced Enviro Septic (AES) Home Owners' Manual is provided in electronic form with this report; the home owner is advised to print two hard copies of this publication, one of which should be submitted to the Council in support of the Special Plumbing Permit Application, it is also available for down load at http://www.enviro-septic.com.au/wp-content/uploads/2012/08/AES-Owners-Manual.pdf.

The second copy should be retained and read for familiarisation purposes and the recommendations therein carefully followed in order to ensure optimal, nuisance free operation of the system with minimal environmental health impacts.

This loading certificate is provided in accordance with Clause 7.4.2(d) of AS/NZS 1547.2012.

Loading Certificate for Advanced Enviro Septic Installation at 1000 Dolphin Sands Road, Swansea TAS 7190

i. **System capacity** (medium-long term-AES bed) – 5 persons / 600litres/day.

ii. **Design criteria summary**:

- Effluent quality – advanced secondary
- Soil category - Uniform sand profile – Category 1
- Land application system - Absorption bed (see Appendix N of AS/NZS1547.2012)

iii. Reserve area.
An additional 100m^2 of suitably located land should be reserved from further development (such as buildings, driveway, paths, paved areas, importation of fill or excavations etc), for use as an alternate land application area in the event of a system failure which cannot be addressed by the measures outlined in the Home Owners' Manual.

iv. Water efficient fittings etc
Design assumes use of water efficient fixtures and fittings, eg 9L/min (max) showerheads, aerator fittings on taps and clothes washing machines/dishwashers with WELSS star ratings of 4.5 stars or above. (see https://apps5a.ris.environment.gov.au/wels-public/search-product-select-load.do))

v. Variation from design flows etc.
The system should successfully manage additional peak loadings which may result from occasional social gatherings provided that this does not exceed use by more 20 persons in a 24 hour period or more than three temporarily resident visitors (ie up to 8 persons total) for a period not exceeding 7 days. Visitors should be advised of the requirement to minimise time spent in showers; avoid running taps whilst cleaning teeth and other common sense water conservation measures.

vi. Consequences of changing wastewater characteristics.
The home owner should avoid disposing of wastes which would be additional to those normally disposed in a household sewerage system; in particular increases, in organic loadings such as from the use of sink-waste disposal units are to be avoided.

Use of household disinfectants or bactericides in anything more than small amounts and at recommended rates of dilution should also be avoided, as should the disposal of

antimicrobial drugs/antibiotics, solvents and other chemicals which may kill bacteria and other microorganisms required for effective wastewater treatment. See AES Home Owners' Manual for more information.

vii. Consequences of overloading the system.

Long term use by more than five residents or equivalent may result in overloading of the system, surfacing of effluent, public and environmental health nuisances, pollution of surface waters etc. Overloading may result from such uses as residential childcare, home-catering and other home-based businesses etc.

viii. Consequences of underloading the system.

Nil.

ix. **Consequences of lack of operation, maintenance and monitoring attention.**

The AES requires minimal intervention by the home owner, however it is not a zero-maintenance system; the home owner's operational maintenance requirements are detailed in the AES Home Owner's Manual.

Consequences of failure to observe these requirements may include any of the following:

- Spread of infectious diseases to your family and neighbours.
- Breeding of mosquitos and attraction of flies and rodents.
- Nuisance and unpleasant odours.
- Pollution of waterways, streams, beaches and shellfish beds.
- Contamination of bores, wells and groundwater.
- Excessive and unsightly weed growth.
- Alteration of local ecology

x. Other relevant considerations:

- Make sure that you have the septic tank desludged by an authorised contractor at three-yearly intervals. Failure to do this at the required frequency may result in carry-over of solids into the AES system, causing failure of the land application area, which may then require expensive reconstruction works.
- Discourage access by visitors or pets to the land application area.
- Livestock should not be allowed on or near the AES bed; if so kept, the land application area should be fenced off to prevent system damage and/or soil compaction.
- Do not allow vehicles on or near the land application area.
- Keep the surface and sub-surface cut-off drain above the land application area open and clear of debris to prevent rainwater flowing into the effluent absorption area.

Problems can occur with systems which have not been properly maintained and where absorption areas have become blocked or clogged. The warning signs are obvious and include:

- Effluent absorption area is wet or soggy with wastewater ponding on the surface of the ground.
- "Sewage" smells near the AES Bed area.
- Foul wet condition of solid waste in composting bin.

See AES Home Owner's Manual for more information.

Appendix 10 – AES Designer Certification.

Appendix 11 – Form 35B

CERTIFICATE OF THE RESPONSIBLE DESIGNER (PLUMBING WORK)

Form 35B **Sections 80(1)(b)**

To:

Owner Name: Warren Lashmar

Address: | Suburb: | Postcode:

Accredited Designer details

Name	Business Name
Richard Mason	Onsite Assessments Tas

Business Address	Suburb	Postcode
20 Adelong Drive	Kingston	7050

Accreditation Number	Phone Number	Fax Number	Email Address	Category
CC6157T	0418 589309		richardmason@iprimus.com.au	B.S. Design.Hydr. Restr

Details of proposed work:

Owner/Applicant	Lot Number	Designer's project reference Number
Warren Lashmar	54666/157	

Address	Suburb	Postcode
1000 Dolphin Sands Rd	Swansea	7190

Type of Work (eg. new building/ alteration/ addition/ repair/ re-erection/ other)

Advanced Enviro Septic (AES) system servicing new residence.

Description of the Design Work (Scope, limitations or exclusions):

☒ Deemed-to-Satisfy ☐ Alternative Solution (tick the appropriate box)

Design documents provided:

The following documents are provided with this certificate -

Document description:

Drawing numbers:	Prepared by:	Richard Mason	Date:	26.02.2015
Schedules:	Prepared by:	Richard Mason	Date:	26.02.2015
Specifications:	Prepared by:	Richard Mason	Date:	26.02.2015
Computations:	Prepared by:	Richard Mason	Date:	26.02.2015
Alternative solution proposals:	Prepared by:		Date:	
Test reports:	Prepared by:		Date:	

Director of Building Control - date approved 1 April 2014: *Building Act 2000* - Approved Form No 35B

Standards, codes or guidelines relied on in design process:

S/NZS1547.2012 On site domestic waste water management

Tas Dept of Justice Certificate of Accreditation - BSR0634/2013.

Any other relevant documentation:

Advanced Enviro Septic Design & Installation Manual,

Advanced Enviro-Septic Installation Instructions and,

Home Owners Manual. (All by Chankar Environmental Pty Ltd, 62 Rene Street, Noosaville QLD 4566

Site & soil evaluation and design report - Proposed on-site wastewater management system at 1000 Dolphin Sands Rd, Swansea, dated 26.02.2015, by Richard Mason, Onsite Assessments Tas

Attribution as designer:

I, Richard Mason .....a licenced plumber practitioner-certifier or an accredited building practitioner am responsible for the design of that part of the plumbing work or plumbing installation as described in this certificate;

The documentation relating to the design includes sufficient information for the assessment of the work in accordance with the *Building Act 2000* and sufficient detail for the plumber or builder to carry out the work in accordance with the documents and the Act;

This certificate confirms compliance of this design with the requirements of the Plumbing Code of Australia (PCA) and is evidence of suitability under Clause A2.2 of the PCA.

Digitally signed by Richard Mason
DN: cn=Richard Mason, o=Onsite Assessments Tas, ou, email=richardmason@iprimus.com.au, c=AU
Date: 2015.02.26 15:20:15 +11'00'

Designer Signed

26.02.2015
Date

Director of Building Control - date approved 1 April 2014:

Building Act 2000 - Approved Form No 35B

31ST July 2017

GLAMORGAN SPRING BAY COUNCIL
9 Melbourne Street
PO Box 6
Triabunna, Tasmania, 7190

Re: No. 1000 Dolphin Sands Road, Dolphin Sands
Application for discretionary application in accordance with Glamorgan Spring Bay Interim Planning Scheme 2015.

Chase. Wonder.

Dear Planning Officer,

Overview:

This application is for a proposed dwelling located at 1000 Dolphin Sands Road, Dolphin Sands, located in the Particular Purpose Zone 3 – Dolphin Sands under the Glamorgan Spring Bay Interim Planning Scheme 2015.

The proposal has been designed in accordance with standards and requirements set out in the Particular Purpose Zone 3. Please refer below to a detailed response that addresses each development standard applicable to the development, provides detailed response to applicable performance requirements and should be cross-referenced with the attached architectural drawings dated 31/07/2017 by S. Group.

Attachments:

1. Architectural Plans, dated 31/07/2017 prepared by S. Group
2. 1000 Dolphin Sands Road, Dolphin Sands Titles, dated 30/10/2014

t. 03 6251 3906 **w.** www.sgroup.com.au **e.** info@sgroup.com.au **abn.** 86996265268

Particular Purpose Zone 3 – Dolphin Sands

34.4.1 Building - DISCRETION

A1

Building height must be no more than 5m.

The proposed dwelling has a maximum building height of 5.68m, which is higher than the building height limit of 5m, due to site constraints and precedents set by neighbouring properties. Please refer to pages A201 and A202 – Elevations.

The proposed dwelling has been designed in a way that follows the natural landscape of Dolphin Sands, using a natural material palette and form. The height of the proposed dwelling allows the sand dunes to form naturally around it, allowing the natural landscape of the dunes to remain intact. The height of the proposed dwelling allows it be raised off the natural ground, and to have a lightweight building footprint.

34.4.2 Setback - COMPLIANT

A1

Building setback from frontage must be no less than 30m from a primary frontage with Dolphin Sands Road or Cambria Drive and not less than 20m from a secondary frontage.

The proposed dwelling has a primary frontage setback from Dolphin Sands Road of 234.2m, more than the required 30m. The proposed dwelling also has a setback of 20m from secondary frontage. Please refer to page A101 Site Plan.

A2

Building setback from side or rear boundaries must be no less than 10m.

The proposed dwelling has minimum side setbacks of 14m, more than the required setback of 10m. Please refer to page A101 Site Plan.

A3

Building setback to the Nine Mile Beach Crown Reservation must be no less than 20m.

n/a.

Chase. Wonder.

t. 03 6251 3906 **w.** www.sgroup.com.au **e.** info@sgroup.com.au **abn.** 86996265268

A4

All buildings are to be located in existing areas clear of native vegetation or within a building envelope shown on the title.

The proposed dwelling is located in an area clear of native vegetation Please refer to page A101 Site Plan.

34.4.3 Design – COMPLIANT

A1

External finishes of buildings must not be reflective.

The proposed dwelling has no external finishes that are reflective. Please refer to pages A201 and A202 Elevations.

A2

Colours of outer walls and roofs must be natural colours such as black, grey, brown and green and of a hue that is unobtrusive.

The proposed dwelling consists of natural colours of timber, black and grey. Please refer to pages A201 and A202 Elevations.

34.4.4 Fencing – COMPLIANT

A1

Fencing must comply with the following:

(a) fences along a frontage must be of post and wire construction
(b) height of fences along a frontage must be no more than 1.2m

There are no fences proposed.

Chase. Wonder.

t. 03 6251 3906 **w.** www.sgroup.com.au **e.** info@sgroup.com.au **abn.** 86996265268

I trust that the contents of this letter and the attached documentation have satisfactorily addressed the proposed dwelling at 1000 Dolphin Sands Road, Dolphin Sands. If there are any further questions or queries in relation to the above, please do not hesitate to contact me directly.

Yours Sincerely,

Dominique Petterwood

dpetterwood

.....

Designer 31/07/2017

Chase. Wonder.

t. 03 6251 3906 **w.** www.sgroup.com.au **e.** info@sgroup.com.au **abn.** 86996265268

REP 1

The General Manager
Glamorgan Spring Bay Council
9 Melbourne St
Triabunna TAS 7190

December 9th, 2021

[redacted]

RE: DA2021/231 – New Dwelling, 1000 Dolphin Sands Rd, Dolphin Sands

Dear Sir,

I hereby submit my representation in relation to the proposal for a new dwelling at 1000 Dolphin Sands Road, and wish to raise the following concerns:

1. The proposed residence is to be located significantly within an area identified as being subject to erosion. This has potential to destabilise the surrounding dunes, pose flood risk to neighbours, and impact the sustainability of the natural groundwater supply.
2. The degree by which the residence will impede on the erosion zone is shown figure 7 of the Site Geomorphology report. It is misleadingly referenced in architectural diagram A101, with no actual shading or boundary shown.
3. The proposed location of the residence is not in keeping with the set-back of the nearest neighbours at 1010 to the east, with an empty block being to the west. It is further into the erosion zone and closer to the Nine Mile Beach Reserve boundary. Inadequate setback from the beach impacts amenity of those on the beach and of the neighbouring properties.
4. The setback distance from the Nine Mile Beach boundary as provided by Larke & Creese are inconsistent between *Site Plan Image 4*, and the accompanying reports. The plans identify a 20m setback, at 2 set points, but the Bushfire Hazard Management Plan and the Coastal Vulnerability Assessment both identify only a 19m setback. Section 4.3 of the GES document states that the 20m setback is only “approximate”.
5. The applicant has failed to give any accurate details on visibility from the beach, main road, neighbouring properties, and residence at RA1010. This directly impacts on amenity, both overlooking and natural landscape. Clear and accurate illustration of detailed elevation calculations need to be provided. These amenities bare a foremost criterion in the appeal for this area and are underlined in the zone purpose statement 34.1.1.2 *To ensure that use or development has minimal disturbance to the natural environment and visual amenity of the area.*
6. The proposed residence is elevated, standing, according to plans provided, approximately 7m above ground level. Height restrictions for Dolphin Sands are set at 5m. Having this

degree of elevation is out of character and stands against the zone development standard outlined under 34.4.1

7. The elevation figures provided are inconsistent. The North, West and South elevations only reference *existing* ground, with the East elevation referencing NGL.

8. The Roof heights provided are only nominal estimates, and only reference the finished, built-up ground level, not the NGL. According to the scale and drawings provided, the heights appear to be understated by up to 1.4m above existing ground level, and cannot be determined above NGL.

9. The proposed residence is located so close to the beach that it will likely be visible from the beach to such a degree that is out of character with the surrounding area. There are photos of the views from the proposed site, but none looking back indicating the outline of the proposed dwelling and visibility from along the beach.

10. None of the proposed residence should be visible from any part of the beach as this will ruin the natural, remote, and private amenity of Nine Mile Beach. Zone regulation 34.4.2 requires setback be compatible with prevailing setbacks on nearby lots. Compatible – "(of two things) able to exist or occur together without problems or conflict". Prevailing – "having most appeal or influence". The main feature here is the beach and the natural flow of the sand dunes. Increased setback increases the overall appeal of this area. This regulation cannot be met.

    Zone regulation 34.4.2 further requires regard to amenity of adjoining lots and the visual impact of buildings when viewed in the landscape and from the foreshore.
    The setback from the boundary facing the beach and coastal reserve is insufficient and not consistent with its neighbour. The amenity of the natural flow of the dunes would be removed, as would there be visual impact caused by the building when the dunes are viewed from both within the landscape and on the foreshore.

11. The height of the finished residence exceeds the 5.0m maximum limit stipulated under solutions to Particular Purpose Zone 3, Section 34.4.1. Further, the applicant has not provided levels based on NGL. Even at the heights given, the proposed dwelling fails to satisfy 34.4.1 P1 criteria:

    a. It appears to be very obtrusive.

    b. It is not consistent with the surrounding development.

    c. It may unreasonably impact the visual amenity of the neighbouring lots, including any potential future building on the vacant lot to the west, through its height.

12. The Particular Purpose Zone Statement states:
    under 34.1.1.1: *To protect the environmentally fragile nature of the Dolphin Sands area particularly with respect to land stability, vegetation, wildlife and landscape amenity.*
    and under 34.1.1.2: *To ensure that use or development has minimal disturbance to the natural environment and visual amenity of the area.*
    In order to uphold the purpose for this special purpose zone, every step must be taken to keep development, building and activity away from the dunes, and especially those identified as being in the Coastal Erosion Hazard band. Consideration must be given that the proposed location for the dwelling is directly behind a dune that has been removed to gain vehicular access directly onto Nine Mile Beach through the reserve.

13. Maps obtained online via https://maps.thelist.tas.gov.au/, list many characteristics of the area. These characteristics highlight the importance of taking every extreme measure to protect the surrounding environment by maximising the setback from the shoreline. These include:

    a. Foreshore having Very High biological value and being vulnerable to disruption to natural creep and increased erosion.

    b. High tourism value

    c. Very High natural value.

    d. Coastal Vulnerability with open sandy shore backed by soft sediment plain with potential erosion and shoreline recession vulnerability

    e. Significantly disturbed foreshore with only moderate condition

    f. Coastal fauna significance with endangered species

    g. Altered coastal native vegetation requiring management.

    h. Coastal potential fauna habitat

    i. Area of soft sediment landform.

14. Amenity is not being preserved for neighbouring residents. This remote location provides a special array of amenity, including:

    a. Peace and tranquillity on our property and the coastal reserve. The excessive elevation of the proposed dwelling will allow sound to carry.

    b. Views of nature across dunes, vegetation and water. undisturbed by man-made obstacles or structures. The elevation of the proposed dwelling and proximity to the beach will make it stand out.

    c. Privacy on the beach without being overlooked. The proposed dwelling is angled towards the beach, overlooking a large opening which has been removed from the foredunes.

    d. Complete absence of streetlights and light from other dwellings entering neighbouring property or the coastal reserve. The elevation of the proposed dwelling and area of windows will allow light to enter the coastal reserve, the beach and at least one neighbouring house.

    e. Unfenced property boundaries, allowing flowing nature.

    f. Natural flow of dunes without visible buildings

    g. No man-made structures visible from the beach, dunes or as far out as the sand-bar depth in the bay.

    h. Residential area with very little activity

    i. Neighbours respecting the privacy of each other.

15. Building within the Coastal Erosion Hazard band falls subject to the Coastal Erosion Hazard Code section E, objectives of which include:

    b. Minimum impact on natural coastal processes, however the application does not sufficiently address the effect that the angle of the dwelling will have on changing the natural wind erosion process.
    c. protecting vulnerable coastal areas including landward transgression of sand dunes, however building over a sand dune is denying this natural landward transgression.

16. In keeping with the CEHC Code, Section E.16.1.1 identifies a purpose of the provisions to preclude development that will adversely impact coastal dynamics in a way detrimental to the development site and other property. Building on exposed dunes will change the dynamics. Building on dunes that lay within an area of coastal erosion will accelerate erosion and inundation of this and neighbouring lots, leading to loss of usable land, contamination of bore water, and potentially rendering the wastewater treatment inoperable.

17. CEHC Code section E16.7.1 includes the following:
    a. *not increase the level of …hazard for adjoining or nearby properties*., however inundation due to premature erosion will increase the hazard due to the water and the presence of snakes and insects that it will attract. Premature inundation may also create a hazard as it destabilises the hill on which a neighbouring house sits.
    b. *important natural features are adequately protected*, yet sand dunes are a prominent natural feature which will not be protected by building so close, nor by failing to address the significantly reduced height of the foredunes through the public reserve.

I believe the geographical documents show more suitable sites further inland from the proposed location of the dwelling which will allow the coastal erosion hazard band to be protected, and will allow the dwelling to be sited so as to not make such undue impact on the character of the area and the amenity of neighbours and beach goers. A lowering of height to be no more than 5m above NGL at any point would protect the natural landscape and amenity as intended under the Special Purpose Zone identification within the planning scheme.

Thank you for taking the time to consider the above points.

Yours Faithfully,

[redacted]

REP 2

Maree Tyrrell

From: [redacted]
Sent: Friday, 10 December 2021 12:51 PM
To: Planning
Subject: General Manager

Categories: Representation

To Mr Greg Ingham
General Manager
Glamorgan Spring Bay Council

Dear Mr Ingham

I would like to submit a representation on development application number DA2021 - 231 - 1000 Dolphin Sands Road.

I continue to be both amazed and frustrated by the high number of development applications that come before GSBC with blatant flaunting of the building regulations. Does Tasmania not have architects that can follow guidelines? I see this time and time again in Coles Bay, Swanwick, Bicheno, Swansea and Dolphin Sands.

Land titles along Dolphin Sands are a minimum size of 5 acres. This should give architects plenty of options for where to place buildings. The website coastalrisk.com.au was just recently brought to my attention by the Dolphin Sands Ratepayers Association. It highlights the significant flooding and inundation risk that all of Dolphin Sands is at. Residents are becoming increasingly concerned for the future of the area. This is no longer something that can go on being ignored. Residents need their council to stand up for their future, their way of life, their properties, and their safety. Our council needs to stop entertaining applications that place the future of the entire region at risk. Our council needs to look further ahead and make sure buildings are not approved to go anywhere near the sand banks that protect this area. Buildings need to be placed well away from where any possible future inundation may occur. In the case of this application for 1000 Dolphin Sands Road there is a clear high ground on the northern half of the land, well away from mapped future inundation.

Architects also need to be held accountable for not keeping to height regulations. Dolphin Sands is a very low lying area almost entirely surrounded by water. There are no hills, and very few trees. Anything over 5 meters in height does not preserve the amenity of the suburb. The plans make it impossible to know the final height of this development. There are heights marked 'nom C.O.S.' which just is not good enough. Very few of the heights marked actually measure from the natural ground level required by the code, so again it is impossible to know the actual finished height. The regulations limit height to 5 metres. The building would be below 5 metres but the architect has then unnecessarily raised the building on stilts making it much higher than the 5 metres above the natural ground.

Stop risking the future of a whole suburb. Save Dolphin Sands by strategic planning, strictly enforcing regulations, protecting erosion, flood and inundation prone areas, and keeping buildings well back from all water frontages.

Thank you.

[redacted]

REP 3

Maree Tyrrell

From: [redacted]
Sent: Friday, 10 December 2021 4:26 PM
To: Planning
Subject: Attention The General Manager on the matter of DA 2021 - 231 - RA1000

Categories: Representation

To whom it may concern,

My wife and I hereby present against approval of DA 2021 - 231 - RA1000 for proposed development on Lot 157 at Dolphin Sands Road.

The Particular Purpose Zone 3 purpose statements have both been compromised:

34.1.1.1 To protect the environmentally fragile nature of the Dolphin Sands area particularly with respect to land stability, vegetation, wildlife and landscape amenity.

34.1.1.2 To ensure that use or development has minimal disturbance to the natural environment and visual amenity of the area.

Applicant S Group has not met the building height or rear boundary set back standards specified under Part D Secion 34.0 of the Glamorgan Spring Bay Interim Planning Scheme 2015, and waste water design will detramentally impact the neighbouring land and surrounding environment before the expected life of the development is expected to end.

Roof height is beyond the 5m ceiling and plan detail is representative only of the post-build ground levels, not the original ground level before disturbance. The building is obtrusive within (above) the landscape so does not meet P1 of 34.4.1, and is beyond 5m in height so does not meet the acceptable solution A1.

The rear boundary set back is not consistent with either neighbouring alotment. Section 34.4.2 p3(d) is not met. Different figures have been quoted (19m, 20m) by the applicant, so A3 is not met either. Figure 14 (Site Cross Sections Demonstrating 2065 Recession, 60 m3/m Storm Erosion Demand, and Inferred Inundation Levels & Wave Runup Extent) even shows the tide coming up underneath the development, not meeting either of the zone purpose statements 34.1.1.1 or 34.1.1.2.

The waste water AES bed (page 12 of the Site & soil evaluation and design report) will be under water by 2065 (pages 12,16,21 of the Coastal vulnerability assessment). The images illustrate that the septic system will fail and start contaminating Great Oyster Bay and surrounding land before this date.

Yours Sincerely,
[redacted]

Warren Lushmar

Proposed Dwelling
1000 Dolphin Sands Road, DOLPHIN SANDS, Tas, 7190

DRAWING SCHEDULE:

Sheet No:	Drawing:	Rev:				Revision Date:	
A000	Cover	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21 17/12/21
A100	Location Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A101	Site Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A102	Floor Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21 17/12/21
A103	Roof Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A104	Reflected Ceiling Plan	A	B	C		07/12/2015	31/7/17 4/11/17
A105	Schematic Electrical	A	B	C		07/12/2015	31/7/17 4/11/17
A201	Elevations 01 & 02	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21 17/12/21
A202	Elevations 03 & 04	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21 17/12/21
A301	Section AA	A	B	C		07/12/2015	31/7/17 4/11/17
A302	Section BB	A	B	C		07/12/2015	31/7/17 4/11/17
A601	Glazing Schedule	A	B	C		07/12/2015	31/7/17 4/11/17
A602	Glazing Schedule	A	B	C		07/12/2015	31/7/17 4/11/17
A800	Plumbing & Drainage Plan	A	B	C	D	07/12/2015	31/7/17 4/11/17 28/9/21
A900	General Notes	A	B	C		07/12/2015	31/7/17 4/11/17
A901	Building Envelope Diagrams	A				17/12/21	

GENERAL INFORMATION:

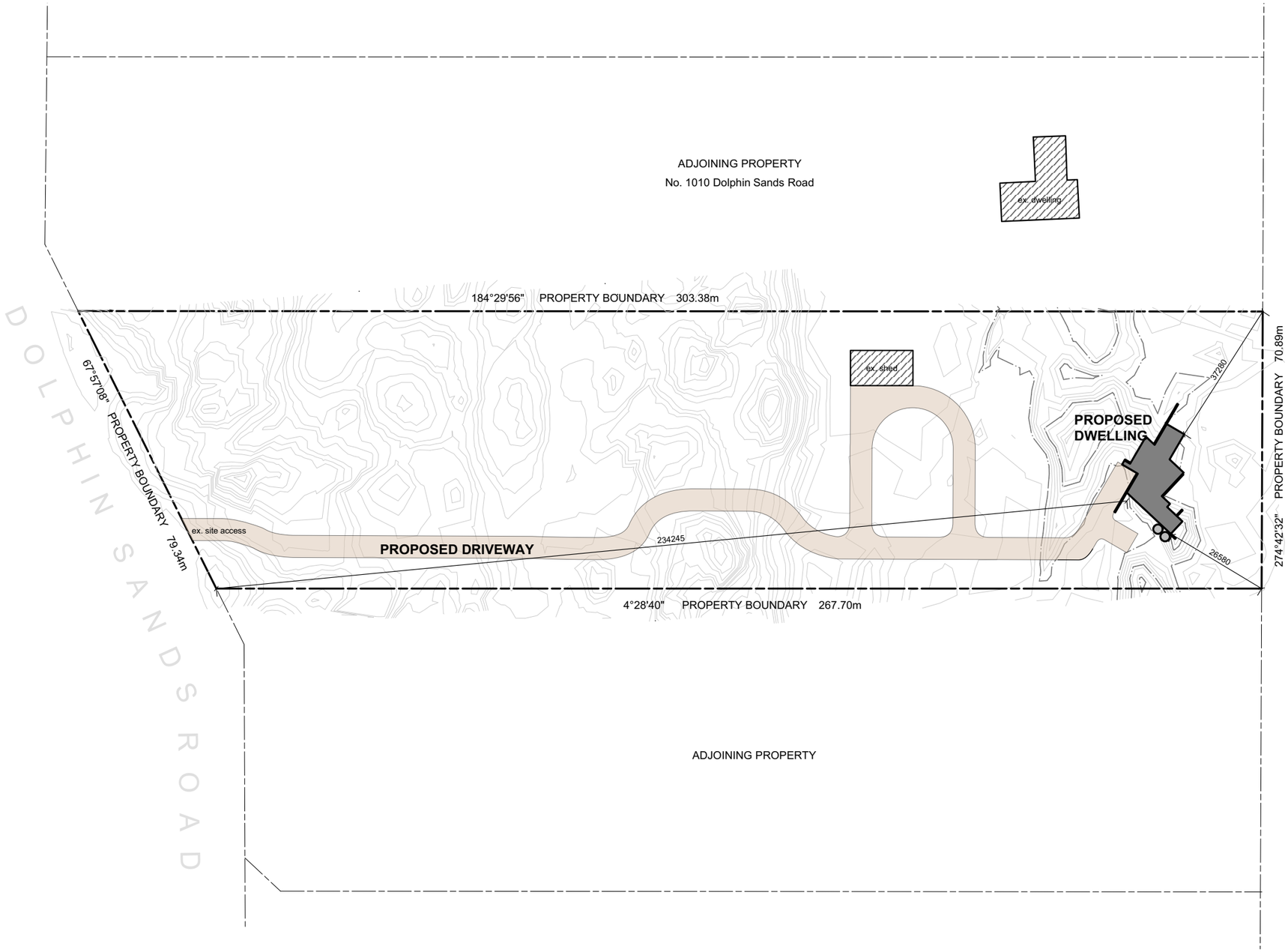
Accredited Architect:	**Sam Haberle**	
Accreditation Number:	**CC5618 U**	
Land Title Reference Number:	**C.T. 54666/157**	(Certificate volume and folio)
Municipality:	**Glamorgan-Spring Bay Council**	
Zoning:	**34.0 Particular Purpose**	
Planning Scheme Overlay:	**Interim Planning Scheme 2015**	
	Biodiversity Protection Area, Coastal Inundation Hazard Area, Coastal Erosion Area	
Soil classification:	**Class A**	Site classification to AS 2870-2011 (Reference report author)
Wind Classification:	**N3**	Site classification to AS 4055-2006 (Reference report author)
Climate Zone:	**7**	(www.abcb.gov.au map)
Alpine Area:	**N/A**	<300m AHD (BCA Figure 3.7.5.2)
Bushfire-prone Area BAL Rating:	**BAL 12.5**	As determined by registered Bushfire Assessor (AS3959-2009)
		Report Number:
Corrosion environment:	**Moderate**	For steel subject to the influence of salt water, breaking surf or heavy industrial areas, refer to BCA section 3.4.2.2 & BCA Table 3.4.4.2. Cladding and fixings to manufacturer's recommendations
Other Known site hazards:	**N/A**	High wind, earthquake, flooding, landslip, dispersive soils, sand dunes, mine subsidence, landfill, snow & ice or other relevant factors

For Development Application Only

S. *Chase. Wonder.*

REVISION E	DATE 17/12/21	DESCRIPTION Council RFI	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar		SCALE @ A3	DWG # A000
DWG Cover		DRAWN JF	
		CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au



NOTE:

All contours should be confirmed on site.

Dwelling location to be set out by registered surveyor discrepancies reported prior to commencement.

Drive to be suitably drained away from dwelling to SW pits + connected to mains.

Conveniently located taps to be installed for watering purposes.

Typically dress around house with top soil where not otherwise specified sow with grass seed set down 150mm from FFL max. Batter grade 1:20.

Garden edging typically treated pine when not against concrete.

Downpipes to be connected into council stormwater as soon as roof is installed.

Any change's to the construction and materials indicated in these drawings is to be approved by S. Group, the Engineer, the Building Surveyor, and the owner before proceeding with the work.

Use written dimensions only.
Do not scale drawings.

BUILDING AREAS:

Site Area:	2.281ha
Proposed Driveway:	2081.14m2
Proposed Dwelling:	155.11m2
Proposed Carport:	36.64m2
Proposed Decking:	68.07m2
Existing Garage:	144.0m2
Total Building Area: (excluding decking & driveway)	**335.64m2**
Site coverage percentage:	10.60%

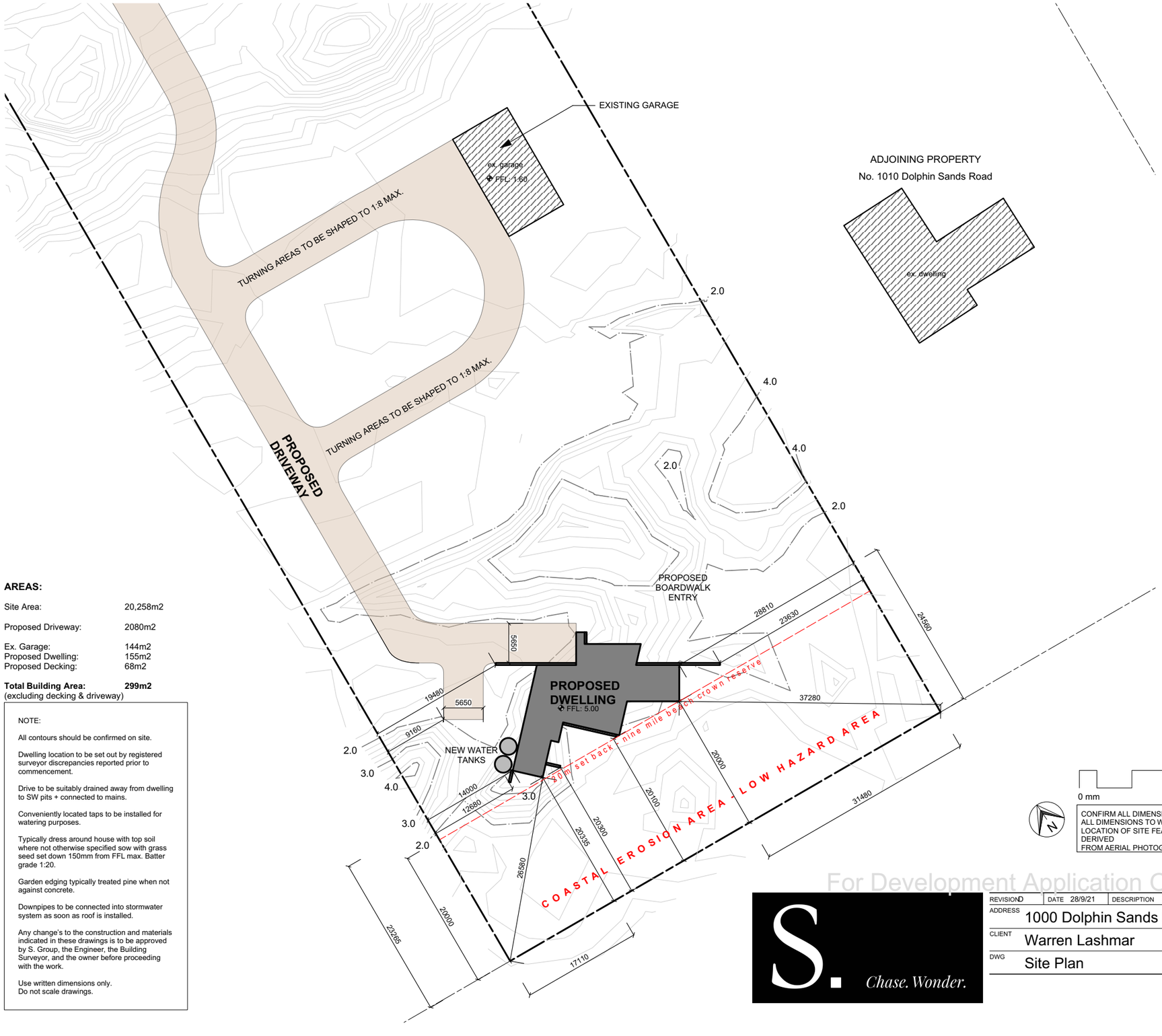
0 mm — 70,000mm

CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar			DWG # A100
DWG Location Plan		SCALE @ A3 1:2000	
		DRAWN JF	
		CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au



AREAS:

Site Area:	20,258m2
Proposed Driveway:	2080m2
Ex. Garage:	144m2
Proposed Dwelling:	155m2
Proposed Decking:	68m2
Total Building Area: (excluding decking & driveway)	**299m2**

NOTE:

All contours should be confirmed on site.

Dwelling location to be set out by registered surveyor discrepancies reported prior to commencement.

Drive to be suitably drained away from dwelling to SW pits + connected to mains.

Conveniently located taps to be installed for watering purposes.

Typically dress around house with top soil where not otherwise specified sow with grass seed set down 150mm from FFL max. Batter grade 1:20.

Garden edging typically treated pine when not against concrete.

Downpipes to be connected into stormwater system as soon as roof is installed.

Any change's to the construction and materials indicated in these drawings is to be approved by S. Group, the Engineer, the Building Surveyor, and the owner before proceeding with the work.

Use written dimensions only.
Do not scale drawings.

BUSHFIRE NOTES: (BAL-12.5)

To comply with Section 6 of AS3959-2009. Including, but not limited to the following:

FLOORING & SUBFLOOR SUPPORTS:
No special construction requirements.

DECKS:
No special construction requirements. Enclosed sub-floor space. No special requirements for materials except within 400mm of ground level. Decking to be non-combustible or bushfire resistant within 300mm horizontally and 400mm vertically from glazed element.

EXTERNAL WALLS:
Construction less than 400mm above ground level or decks etc. to be of non-combustible material, Min. 6mm fibre cement clad or bushfire resistant/naturally fire resistant timber.

JOINTS, VENTS & WEEPHOLES:
All external joints must be covered, sealed, overlapped, backed or butt-jointed to prevent gaps greater than 3mm. Vents and weepholes in external walls shall be screened with aluminium mesh with a maximum aperture of 2mm, except where the vents and weepholes have an aperture less than 3mm.

GLAZED WINDOWS:
Window frame and supporting frame shall be protected by a bushfire Shutter, powdercoated aluminium with Grade A safety glass minimum 4mm thickness or glass blocks. Openable portions of windows to be screened internally or externally with screens as described below. Aluminium screens within powdercoated aluminium frames must have a maximum aperture of 2mm. Gaps between the perimeter of the screen assembly and the window frame shall not exceed 3mm.

GLAZED DOORS:
Same specification as glazed windows above. However, non-combustible or 35mm solid timber for 400mm above threshold. Tight-fitting with weather strips at base. Door framing can be naturally fire resistant (high density) Timber.

ROOF:
To be non-combustible roof material (ie. Colorbond sheeting). The roof / wall junction shall be sealed, to prevent openings greater than 3mm, by the use of fascia and eaves lining.Roof ventilation openings, such as gable and roof vents, shall be fitted with aluminium ember guards with a maximum aperture of 2mm.
Roof to be fully sarked. The sarking shall:

a) be located on top of the roof framing, except that the roof battens may be fixed above the sarking;
b) cover the entire roof area including hips - with exception of ridges which should be ventilated to avoid condensation (see approved BSOL details within 'Condensation in Buildings' Tasmanian Designer's Guide); and
c) extend into gutters and valleys.
Any gaps greater than 3mm (such as under corrugations or ribs of roofing and between roof components) sealed at the fascia or wall line and at valleys, hips and ridges by -
(i) aluminium mesh with maximum aperture of 2mm; or
(ii) mineral wool; or
(iii) other non-combustible material; or
(iv) a combination of any of the above items.

ROOF PENETRATIONS:
Roof penetrations, including roof ventilators, roof-mounted evaporative cooler units, aerials, vent pipes and supports for solar collectors shall be adequately sealed at the roof to prevent gaps greater than 3mm. The material used for sealing shall be non-combustible.
Openings in roof ventilators or vent pipes shall be fitted with aluminium ember guards with a maximum aperture of 2mm.
Evaporative cooling units (fitted to the roof) to be fitted with non-combustible butterfly closers as close as practicable to the roof level, or the unit shall be fitted with non-combustible covers with aluminium mesh or perforated sheet with a maximum aperture of 2mm.

0 mm — 17500 mm

CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar			DWG # A101
DWG Site Plan		SCALE @ A3 1:500	
		DRAWN JF	
		CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au

WALL LEGEND:

Timber stud wall
Unless noted otherwise:
90x45 MGP10 Plates
90x35 MGP10 Noggings Mid-Height
90x35 MGP10 Studs @ 450cts.

300mm Permathene™ Gabion Wall
Sandstone Filled.

(internal) / (external)
Nom. 165mm Clad Studwork wall.
90mm Studwork Wall (internal)
55mm Horizontal & Vertical
Battens & Cladding (external)

FLOOR AREAS:

Proposed Dwelling:	187.11m2
Proposed Decking:	49.47m2
Total Area:	234.97m2

FLOOR FINISHES SCHEDULE:

CU	Carpet Underlay. To be selected.
CT	Ceramic Tiles (300x300). Colour to be selected.
TF	Timber Floorboard Overlay.
SC	Sealed Concrete.
DB	Timber Decking Boards. Merbau or simliar approved boards.

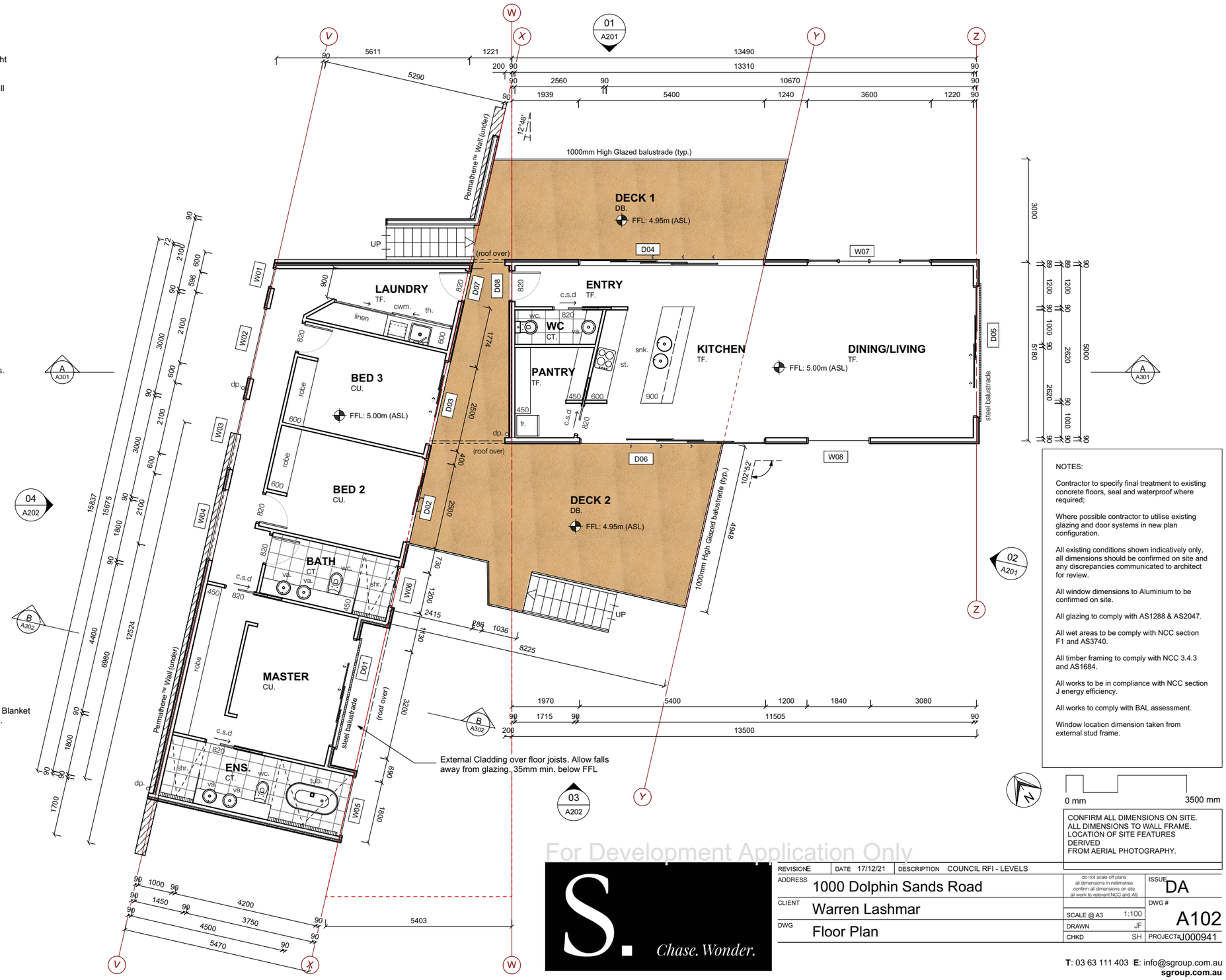
KEY:

wc.	Water Closet
ba.	Basin
va.	Vanity Unit
shr.	Walk-in Shower
tub.	Free standing Bath Tub
tr.	Towel Rail
snk.	Sink
bch.	Bench
st.	Stove with rangehood over
fr.	Fridge/Freezer
dwm.	Dish Washing Machine
cwm.	Clothes Washing Machine
th.	Trough
dsk.	Built-in Desk
sky.	Skylight
hp.	Heat Pump
s.a.	Interconnected Smoke Alarm
s.d	Face Sliding Door
c.s.d	Cavity Sliding Door
dp	Downpipe
hwc	Hot Water Cylinder
acu	Air Conditioning Unit
s/b	Switchboard

INSULATION REQUIREMENTS:
NCC 2016 PART 3.12. (Climate Zone 7)

Walls: Min. R2.5 (90mm) 'Pink' batts with vapour-permeable wall wrap.

Roof: R1.3 (55mm) 'Permastop' Building Blanket
R4.0 (195mm) 'PINK' Ceiling Batts.



NOTES:

Contractor to specify final treatment to existing concrete floors, seal and waterproof where required;

Where possible contractor to utilise existing glazing and door systems in new plan configuration.

All existing conditions shown indicatively only, all dimensions should be confirmed on site and any discrepancies communicated to architect for review.

All window dimensions to Aluminium to be confirmed on site.

All glazing to comply with AS1288 & AS2047.

All wet areas to be comply with NCC section F1 and AS3740.

All timber framing to comply with NCC 3.4.3 and AS1684.

All works to be in compliance with NCC section J energy efficiency.

All works to comply with BAL assessment.

Window location dimension taken from external stud frame.

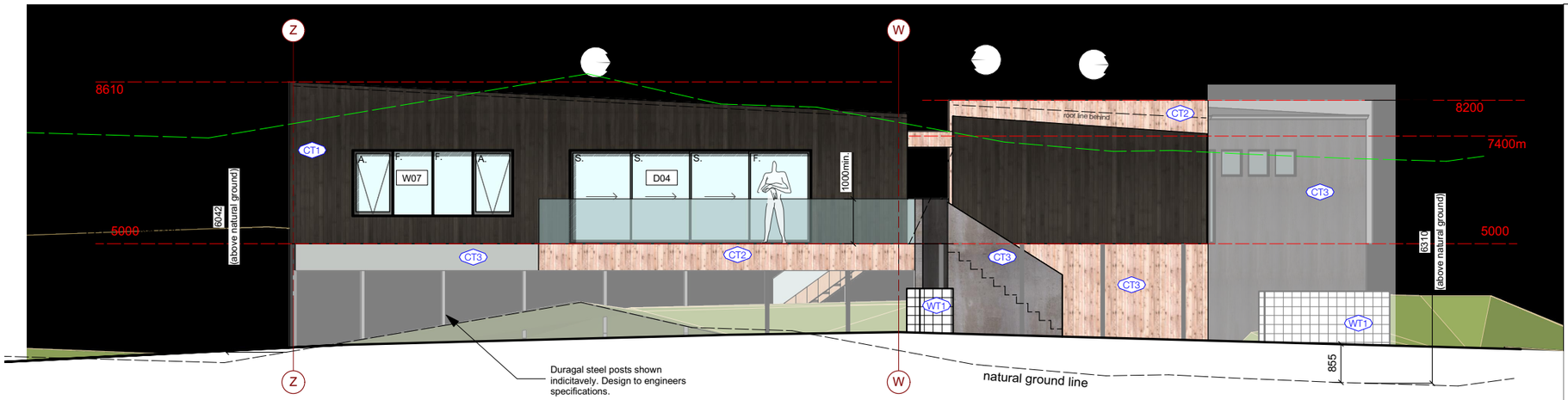
0 mm — 3500 mm

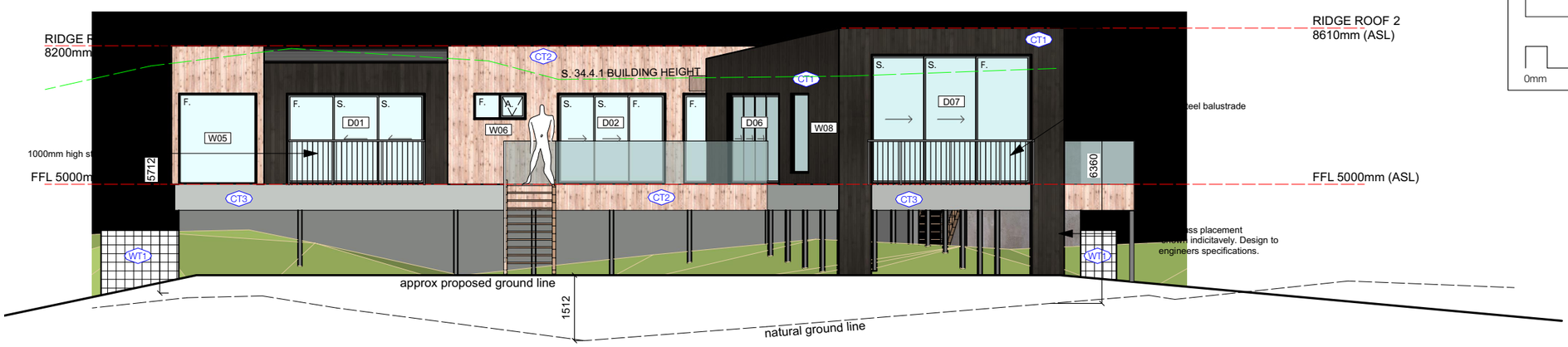
CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

S. *Chase. Wonder.*

REVISION	E	DATE 17/12/21	DESCRIPTION COUNCIL RFI - LEVELS
ADDRESS	1000 Dolphin Sands Road	do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT	Warren Lashmar		DWG # A102
DWG	Floor Plan	SCALE @ A3 1:100	
		DRAWN JF	
		CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au





CLADDING TYPES

CT1 Mortlock TrendplankTM spotted gum cladding, expressed screw fixing, black stain.

CT2 Mortlock TrendplankTM spotted gum cladding,expressed screw fixing, natural.

CT3 Easylap, james hardie textured paint finish (texture finish to manufacturers specifications and applied to cover fixings), joint painted to match

CT4 CSR™ Cemintel Barestone raw finish fastened secret screw fixing.

WT1 Permathene™ Gabion Wall (sandstone filled)

ALL CLADDINGS INSTALLED TO MANUFACTURERS SPECIFICATIONS

ALL COLOURS TO FUTURE SELECTION, COMPLIMENTARY AND RESPONSIVE TO SURROUNDINGS

BATTER TO COMPLY WITH NCC

GROUND LEVELS SHOWN INDICATIVELY, ENSURE FINISH SURFACE FALLS AWAY FROM STRUCTURE.

GLASS BALUSTRADE TO COMPLY WITH AS1288

COLOUR SCHEDULE
(or similar approved)

monument - C1 | charcoal - C2 | shale grey - C3

white - C4 | black - C5

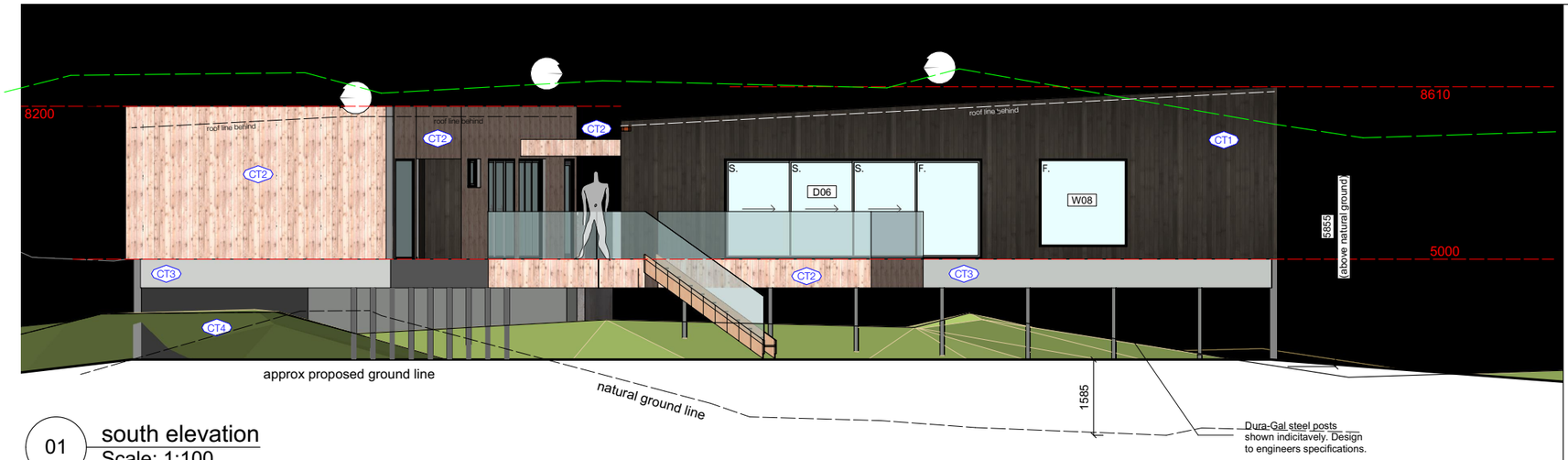
0mm 3500mm

For Development Application Only

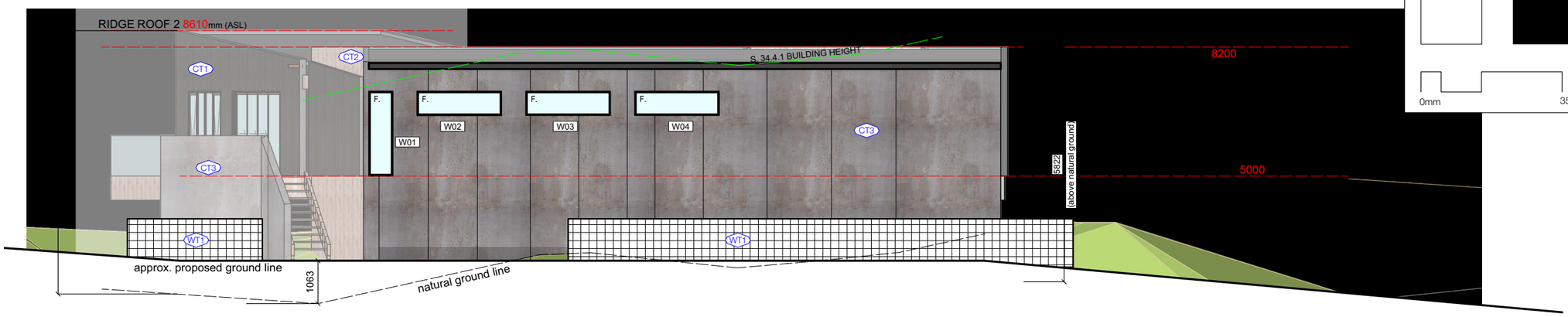
S. *Chase. Wonder.*

REVISION E	DATE 17/12/21	DESCRIPTION COUNCIL RFI - LEVELS	
ADDRESS	1000 Dolphin Sands Road	do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT	Warren Lashmar		DWG # A201
DWG	Elevations 01 & 02	SCALE @ A3 1:100 / DRAWN JF / CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au



01 south elevation
Scale: 1:100



04 west elevation
Scale: 1:100

CLADDING TYPES

CT1 Mortlock TrendplankTM spotted gum cladding, expressed screw fixing, black stain.

CT2 Mortlock TrendplankTM spotted gum cladding,expressed screw fixing, natural.

CT3 Easylap, james hardie textured paint finish (texture finish to manufacturers specifications and applied to cover fixings), joint painted to match

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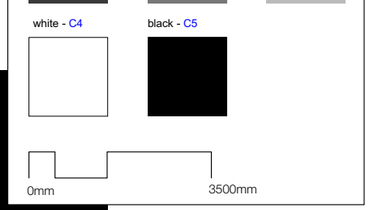
GLASS BALUSTRADE TO COMPLY WITH AS1288

COLOUR SCHEDULE
(or similar approved)

monument - C1 | charcoal - C2 | shale grey - C3

white - C4 | black - C5



For Development Application Only

S. *Chase. Wonder.*

REVISION E	DATE 17/12/21	DESCRIPTION COUNCIL RFI - LEVELS	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar			DWG # A202
DWG Elevations 03 & 04		SCALE @ A3 1:100	FFL 8200mm (ASL)
		DRAWN JF	
		CHKD SH	PROJECT# J000941

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sgroup.com.au

SANITARY PLUMBING TO AS 3500.2
TABLE 6.1: FIXTURE UNIT RATINGS:

Mark:	Fixture:	Outlet pipe size:
1.	Water Closet Pan	DN100
2.	Basin	DN40
3.	Sink	DN50
4.	Shower	DN40 or DN50
5.	Bath	DN40
6.	Though - laundry	DN40 or DN50

Note: Fixtures shown as "ex." are existing.

PLUMBING LEGEND:

Stormwater Line (100 UPVC) @ Min. 1% Falls.

Sewer Line (100 UPVC) @ Min. 1.65% Falls.

Wet Areas shown hatched. Refer Waterproofing details.

AG. Agricultural Pipe drain. (Must drain to SW pit.)

DWM. Dish washing machine. (38dia. Drain hose to sink trap)

CWM. Clothes washing machine. (38dia. Drain hose to trough trap)

I.O Inspection opening.

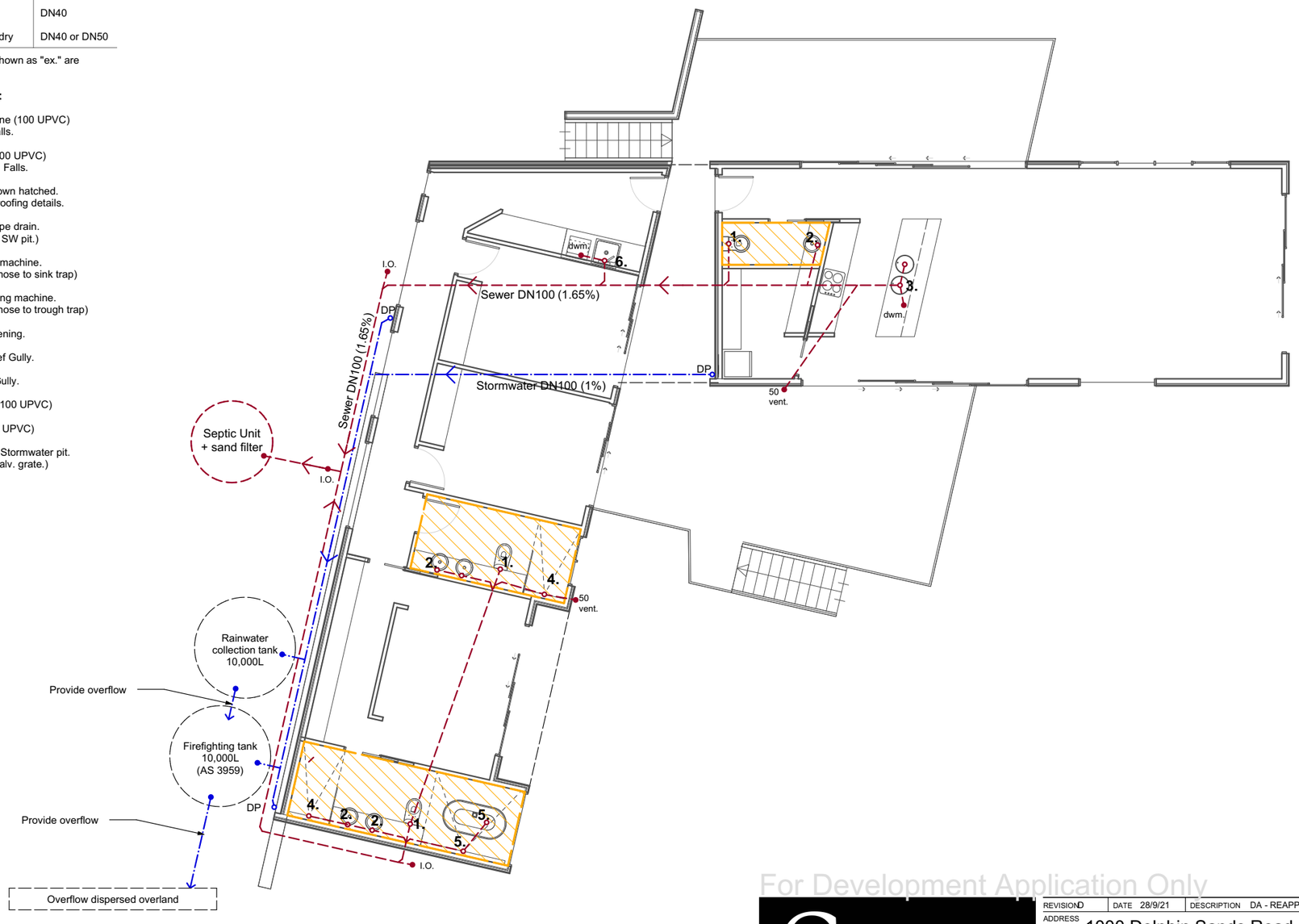
ORG. Overflow Relief Gully.

FW. Floor Waste Gully.

WS. Waste Stack (100 UPVC)

DP. Downpipe (90 UPVC)

PIT. 300sq x 450d Stormwater pit. (Removable galv. grate.)



PLUMBING NOTES:

All works to be carried out by a licensed plumber,
plumber / builder to take levels prior to construction
to ensure drainage lines can be connected to legal
points of discharge (connection points).

Cold water supply line from meter to house 25mm dia.
cold water branches 16mm dia.
hot water main line - 20mm dia.
hot water branches 16mm dia.

vacuum breaker back flow devices to fitted to all outside taps

Install inspection openings at major bends for stormwater and all low points of downpipes. All plumbing & drainage to be in accordance with local Council requirements.
Provide surface drain to back of bulk excavation to drain levelled pad prior to commencing footing excavation.

SERVICES
The heated water system must be designed and installed with Part B2 of NCC Volume Three - Plumbing Code of Australia.

Thermal insulation for heated water piping must:
A) be protected against the effects of weather and sunlight; and
B) be able to withstand the temperatures within the piping; and
C) use thermal insulation in accordance with AS/NZS 4859.1

Heated water piping that is not within a conditioned space must be thermally insulated as follows:
1. Internal piping
a) All flow and return internal piping that is -
i) within an unventilated wall space
ii) within an internal floor between storeys; or
iii) between ceiling insulation and a ceiling
Must have a minimum R-Value of 0.4 (ie 9mm of closed cell polymer insulation)

2. Piping located within a ventilated wall space, an enclosed building subfloor or a roof space
a) All flow and return piping
b) Cold water supply piping and Relief valve piping- within 500mm of the connection to central water heating system
Must have a minimum R-Value of 0.9 (ie 19mm of closed cell polymer insulation)

3. Piping located outside the building or in an unenclosed building sub-floor or roof space
a) All flow and return piping
b) Cold water supply piping and Relief valve piping- within 500mm of the connection to central water heating system
Must have a minimum R-Value of 1.3 (ie 25mm of closed cell polymer insulation)

Piping within an insulated timber framed wall, such as that passing through a wall stud, is considered to comply with the above insulation requirements.

Provide ag drain and backfill behind any retaining wall.
"Geofabrics - Megaflo" subsoil drainage system.

N

0 mm 3500 mm

CONFIRM ALL DIMENSIONS ON SITE.
ALL DIMENSIONS TO WALL FRAME.
LOCATION OF SITE FEATURES DERIVED
FROM AERIAL PHOTOGRAPHY.

S. *Chase. Wonder.*

REVISION D	DATE 28/9/21	DESCRIPTION DA - REAPPLICATION	
ADDRESS 1000 Dolphin Sands Road		do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS	ISSUE DA
CLIENT Warren Lashmar		SCALE @ A3 1:100	DWG # A800
DWG Plumbing & Drainage Plan		DRAWN JF	
		CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
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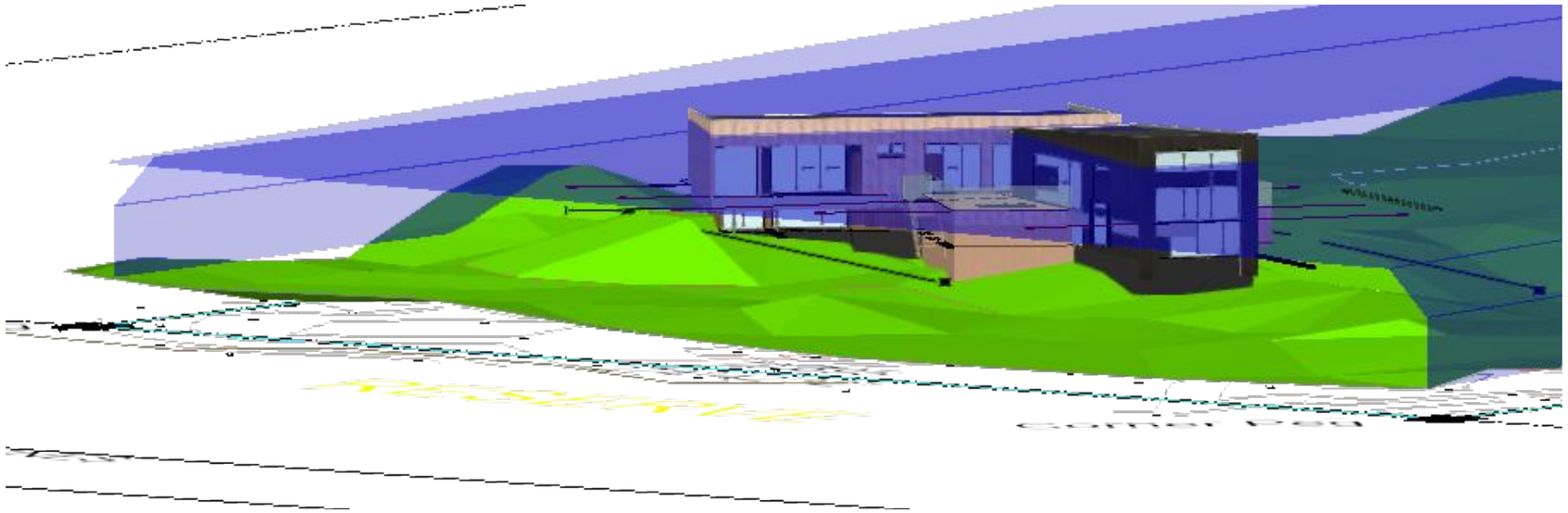
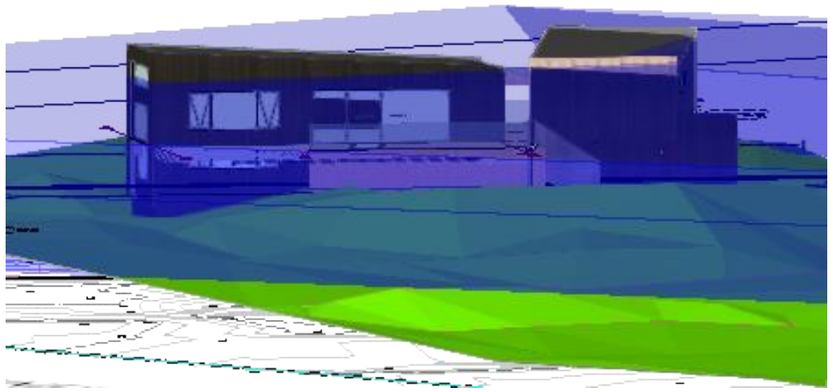
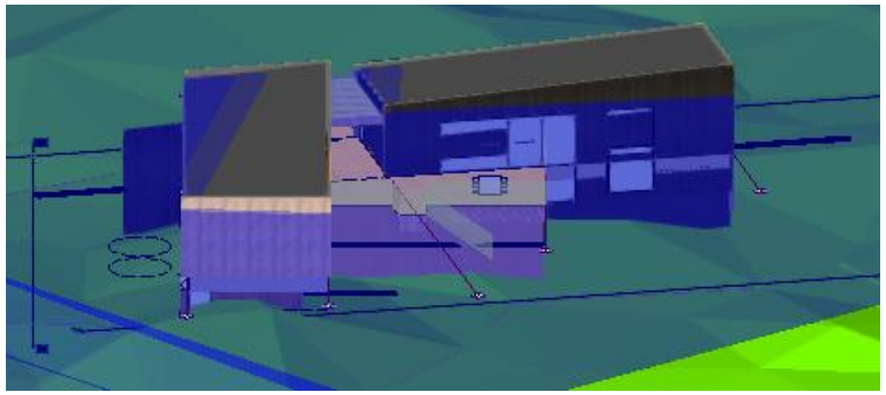


1 BUILDING ENVELOPE VIEW 1



2 BUILDING ENVELOPE VIEW 2



3 BUILDING ENVELOPE VIEW 3

FOR BUILDING APPROVAL

S. *Chase. Wonder.*

REVISION A	DATE 17/12/21	DESCRIPTION Council RFI	
ADDRESS 1000 Dolphin Sands Road	do not scale off plans all dimensions in millimetres confirm all dimensions on site all work to relevant NCC and AS		ISSUE BA
CLIENT Warren Lashmar		SCALE @ A3 1:100	DWG # A901
DWG Building Envelope Diagrams		DRAWN JF CHKD SH	PROJECT# J000941

T: 03 63 111 403 **E**: info@sgroup.com.au
sgroup.com.au

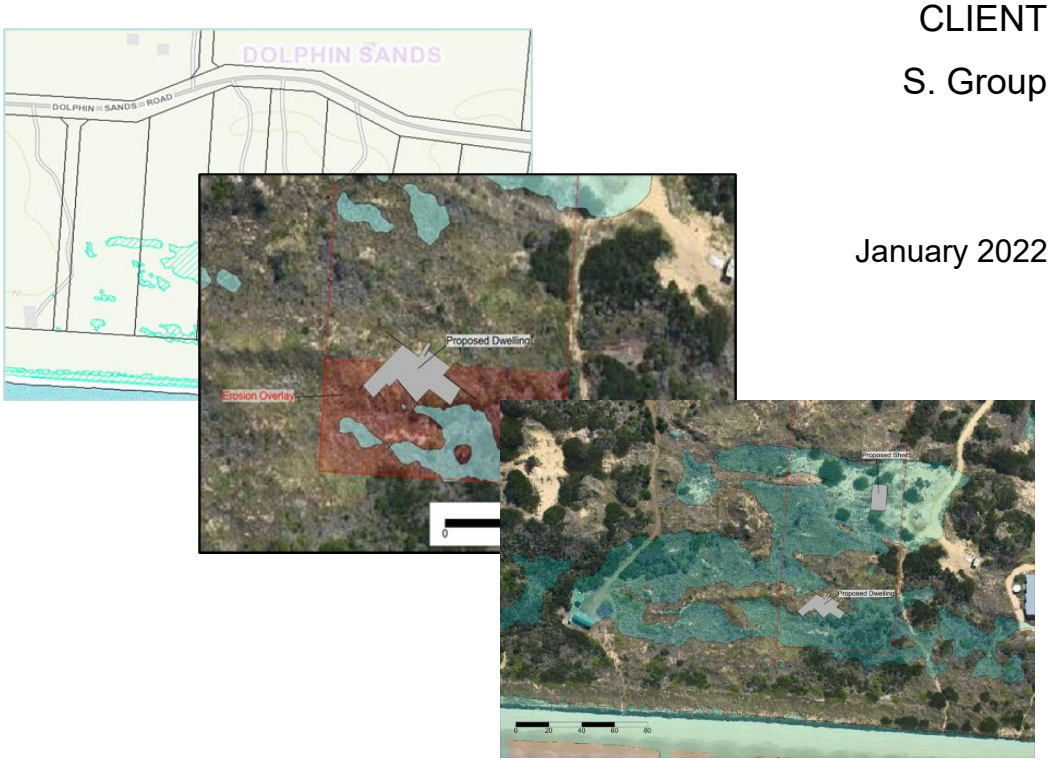
GEO-ENVIRONMENTAL SOLUTIONS

COASTAL VULNERABILITY ASSESSMENT

1000 Dolphin Sands Road

CLIENT

S. Group



January 2022

Geo-Environmental Solutions P/L 86 Queen Street Sandy Bay 7005. Ph 6223 1839 Fax 6223 4539

Tables

Figures

Executive Summary

Geo-Environmental Solutions Pty Ltd (GES) were contracted by S. Group to prepare a coastal erosion and inundation hazard assessment for a property at Dolphin Sands. The project area consists of a single cadastral title (CT 54666/157) located at 1000 Dolphin Sands Road, with an area of approximately 2.0 Ha (The Site).

An application to conduct construction works has triggered the assessment in accordance with the Glamorgan Spring Bay Interim Planning Scheme (IPS) 2022.

A 'first pass assessment' has been conducted for the site area by Sharples (2008) which involved an assessment of coastline geomorphology and vulnerability to inundation and erosion processes. This assessment has been reviewed and built upon in a 'second pass assessment' which involved site specific hydrodynamic modelling to further assess the site inundation and erosion risks. The need for a third pass assessment is based on the level of erosion risk and/or the occurrence of the site in an erosion hazard area which has been identified in the Department of Premier and Cabinet (DPAC 2012) mapping. Given that there is limited erosion information available, a third pass assessment has been conducted for the site.

The site is set back between 75 m and 370 m from present day sea-levels (approximately 0.1 m Australian Height Datum (AHD) based on DPAC (2012) adopted projections and ranges in elevation from 1.2 m AHD to 9 m AHD.

The site comprises of soft sediments which are vulnerable to the risk of erosion from storm events and beach recession from sea level rise.

Future site inundation potential is largely depended on the resilience of the frontal dune system to storm erosion and in particular shoreline recession from sea level rise. The third pass assessment has identified that the proposed development is acceptable within the 2072 design life of the building. The proposed dwelling is well within the stable foundation zone and above the wave runup levels expected from backshore wave attenuation.

It is highly unlikely that the distal back dune areas (north of the dwelling) will become inundated by coastal processes within the design life of the building due to the presence of the secondary dune ridges.

GES have conducted a risk assessment of the site by addressing performance criteria. Erosion and inundation risks at the site are acceptable for the design life of the building as per the findings and recommendations in this report.

List of Abbreviations

AHD	Australian Height Datum
AEP	Annual Exceedance Probability
ARI	Average Reoccurrence Interval
CEM	Coastal Engineering Model
CEHC	Coastal Erosion Hazards Code
DCP	Dynamic Cone Penetrometer
DEM	Digital Elevation Model
DPAC	Department of Premier and Cabinet
ERMP	Erosion Risk Management plan
GES	Geo-Environmental Solutions Pty Ltd
GIS	Geographical Information System
IPAC	Inundation Prone Areas Code
IPCC	Intergovernmental Panel on Climate Change
IPS	Interim Planning Scheme
LiDAR	Light Detection And Ranging
LIST	Land and Information System, Tasmania
MRT	Mineral Resources Tasmania
NCCOE	National Committee on Coastal and Ocean Engineering
SB	Soil Bore
SPM	Shoreline Protection Manual
SSP	Surf Similarity Parameter
SWAN	Simulating Waves Nearshore
TAFI	Tasmanian Aquiculture and Fisheries Institute
WRL	Water Research Laboratory (University of New South Wales)

1 Introduction

Geo-Environmental Solutions Pty Ltd (GES) were contracted by S. Group to prepare a coastal erosion and inundation hazard assessment for a property at Dolphin Sands. The project area consists of a single cadastral title (CT 54666/157) located at 1000 Dolphin Sands Road, with an area of approximately 2.0 Ha (The Site).

An application to conduct construction works has triggered the assessment in accordance with the Glamorgan Spring Bay Interim Planning Scheme (IPS) 2015. A 'first pass assessment' has been conducted for the site area by Sharples (2008) which involved an assessment of coastline geomorphology and vulnerability to inundation and erosion processes. This assessment has been reviewed and built upon in a 'second pass assessment' which involved site specific hydrodynamic modelling to further assess the site inundation and erosion risks.

The need for a third pass assessment is based on the level of erosion risk and/or the occurrence of the site in an erosion hazard area which has been identified in the Department of Premier and Cabinet (DPAC 2012) mapping. Given that there is limited erosion information available, a third pass assessment has been conducted for the site.

The site is set back between 75 m and 370 m from present day sea-levels (approximately 0.1 m Australian Height Datum (AHD) based on DPAC (2012) adopted projections and ranges in elevation from 1.2 m AHD to 9 m AHD.

GES have undertaken this assessment using available scientific literature and datasets. Estimations are determined by approximation with appropriate regional information applied where appropriate to site specific information. Data collection and site specific modelling was undertaken in assessment of the site.

2 Objectives

The objective of the site investigation is to:

- Identify which codes need to be addressed in terms of coastal vulnerability and identify the relevant performance criteria relevant to the project which need addressing;
- Conduct a literature review of all geological, geomorphologic, hydrodynamic information and any 'First or Second Pass Assessments' which are relevant to the site;
- Conduct a 'Second Pass Assessment' assessment of the site to determine projected sea level rise, storm tides and site specific hydrodynamic conditions and where applicable, GES's site specific soil investigation findings;
- Use the site specific inundation modelling to identify generalised site erosion potential;
- Conduct a 'Third Pass Assessment' where the site is identified as having an erosion risk based on the Second Pass Assessment;
- Where a Third Pass Assessment is required, conduct a detailed assessment of site erosion vulnerability in terms of long term beach recession and short term storm erosion. Cross sections will be generated and stable foundation zones will be indicated;
- Conduct a site risk assessment for the proposed development ensuring relevant performance criteria are addressed; and
- Where applicable, provide recommendations on methods and design approach to reduce inundation and erosion impact.

3 Site Details

3.1 Project Area Land Title

The land studied in this report is defined by the following title reference:

- CT 54666/157

This parcel of land is referred to as the 'Site' and/or the 'Project Area' in this report.

3.2 Project Area Regional Coastal Setting

The Project Area is located at Dolphin Sands on Nine Mile Beach to the east of Swansea (Figure 1).

The site is exposed to swell wave activity within Great Oyster Bay from the Southern Ocean which is determined to be considerably more dominant than potential wind fetch generated within the bay (Figure 2). The site is subject to coastal processes from the following wave conditions:

- Southerly wind fetch combined with Southern Ocean swell activity to form the dominant wave conditions at the site; and
- South easterly and south westerly wind fetch is not modelled in this assessment given that resulting wave heights will have minimal contribution to hydrodynamic process compared with southerly generated waved. Local wind generated waves are the dominant factor driving local longshore drift processes on the eastern and western ends of Nine Mile Beach. Given the site location within the centre of Nine Mile Beach, both south easterly and south westerly wind directions are expected to generate similar hydrodynamic conditions resulting in more balanced sediment distribution from longshore drift processes.

Figure 1. Regional Location of Project Area - The Land and Information System, Tasmania (LIST)

3.3 Project Area Local Setting

The site is located at 1000 Dolphin Sands Road on an elongated 2 Ha lot between Nine Mile Beach and Dolphin Sands Road. The site is relatively undisturbed and features blowout and ridge line dune systems. Neighbouring dwellings are built within 20 m of the coastal boundary.

Figure 2 Site Local Setting (The LIST)

4 Planning

4.1 State Coastal Policy

On 16 April 2003 the State Coastal Policy Validation Act 2003 came into effect. This Act replaces the former definition of the Coastal Zone in the State Coastal Policy 1996 and reinstates the Policy. The Act also validates all previous decisions made under the Policy. The following clauses are pertinent to the scope of this report:

1.1. NATURAL RESOURCES AND ECOSYSTEMS

1.1.2. The coastal zone will be managed to protect ecological, geomorphological and geological coastal features and aquatic environments of conservation value.

1.4. COASTAL HAZARDS

1.4.1. Areas subject to significant risk from natural coastal processes and hazards such as flooding, storms, erosion, landslip, littoral drift, dune mobility and sea-level rise will be identified and managed to minimise the need for engineering or remediation works to protect land, property and human life.

1.4.2. Development on actively mobile landforms such as frontal dunes will not be permitted except for works consistent with Outcome 1.4.1.

1.4.3. Policies will be developed to respond to the potential effects of climate change (including sea-level rise) on use and development in the coastal zone.

4.2 Interim Planning Scheme Overlays

4.2.1 Waterways & Coastal Protection Areas (WCPA) Overlay

The site falls outside of the Waterways & Coastal Protection Areas (WCPA) overlay (Figure 3).

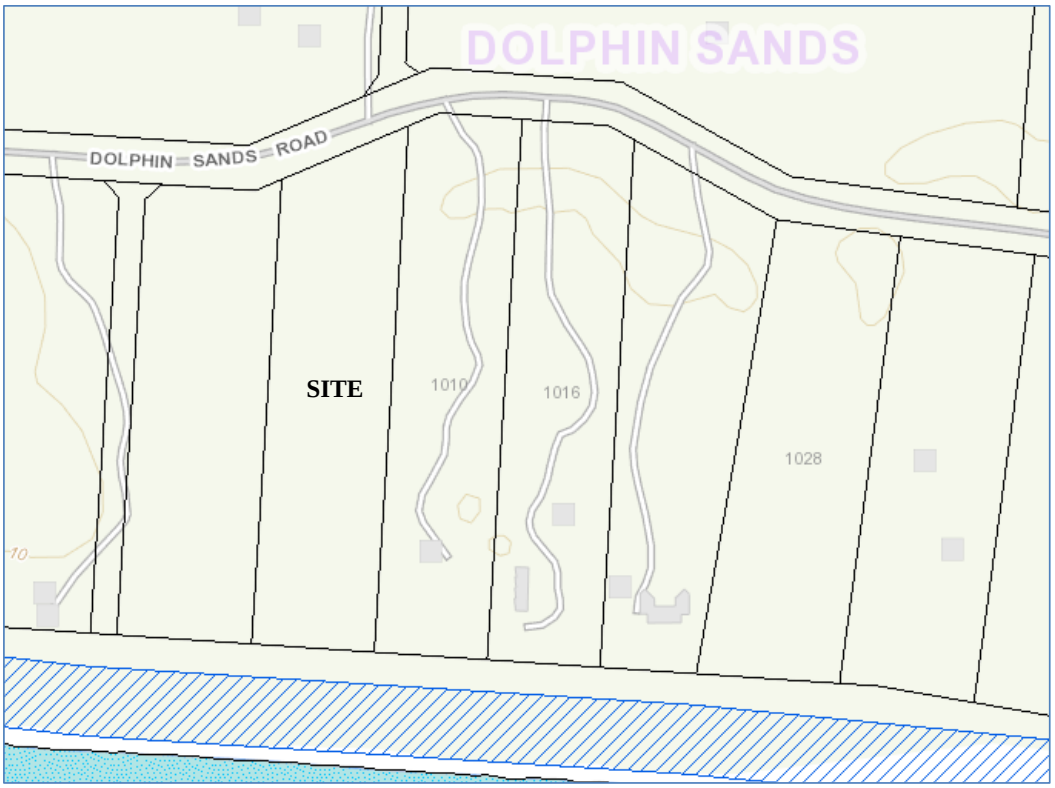


Figure 3 WCPA Overlay near the Site (The LIST)

4.2.2 Inundation Prone Areas Code (IPAC) Overlay

Parts of the site fall within the E15 Inundation Prone Areas Code (IPAC) overlay (Figure 4). The areas highlighted in Figure 4 are defined as low risk based on '*Vulnerable to a 1% AEP storm event in 2100*'.

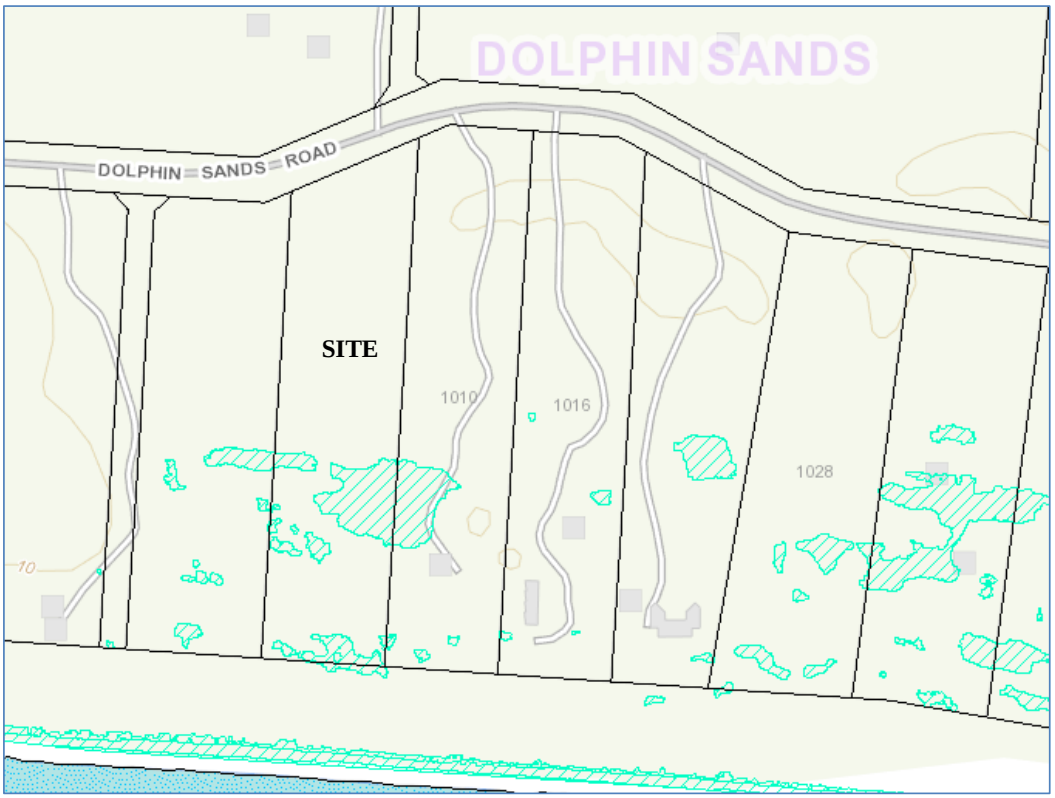


Figure 4 IPAC Overlay near the Site (The LIST)

4.2.3 Coastal Erosion Hazards Code (CEHC) Overlay

Part of the site falls within the Coastal Erosion Hazards Code (CEHC) overlay (Figure 5).

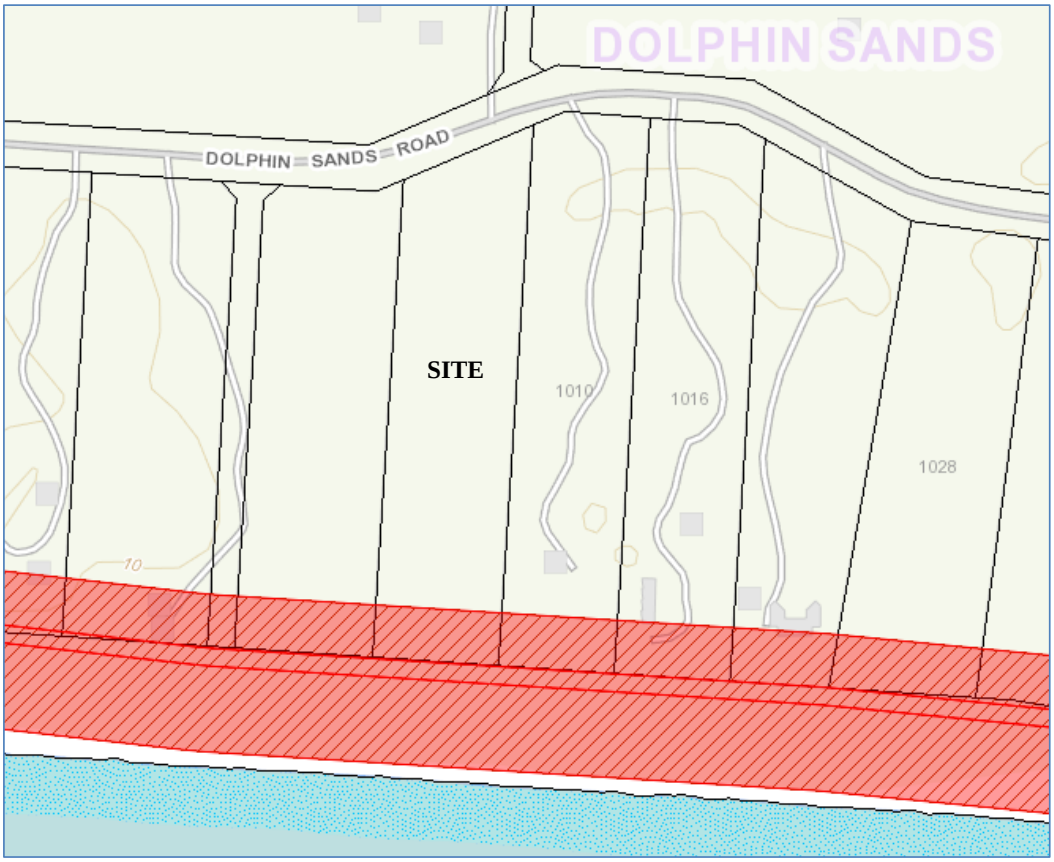


Figure 5 CEHC Overlay near the Site (The LIST)

4.3 Proposed Development

The proposed development comprises of two separate building structures:

- A proposed dwelling set back approximately 20 m from the coastal boundary positioned on a higher relief back dune landform which has an elevation up to 3.4 m AHD;
- A proposed shed located on lower lying topography (a blowout dune deflation hollow) to the north of the proposed dwelling which has an elevation of between 1.0 and 1.2 m AHD.

Table 1 below presents a summary of the parts of the site which fall within the various IPS (2015) code overlays (Figure 6). Relative elevations reported in Table 1 are constructed from climate futures LiDAR files (metadata presented in Appendix 1).

Table 1 Summary of Site Areas Falling Within Potential Coastal Vulnerability Zones

Site Location	Elevation Range (m AHD)	WCPA (E11) Overlay	IPAC (E15) Overlay Low Risk	IPAC (E15) Overlay Medium Risk	IPAC (E15) Overlay High Risk	CEHC (E16) Overlay
Proposed Shed	1.0 to 1.2	-	100%	-	-	-
Proposed Dwelling	3.0 to 3.5	-	-	-	-	70%
Inferred Driveway Access	>1.5 m AHD	-	-	-	-	-

- Overlay Outside of Inundation Zone

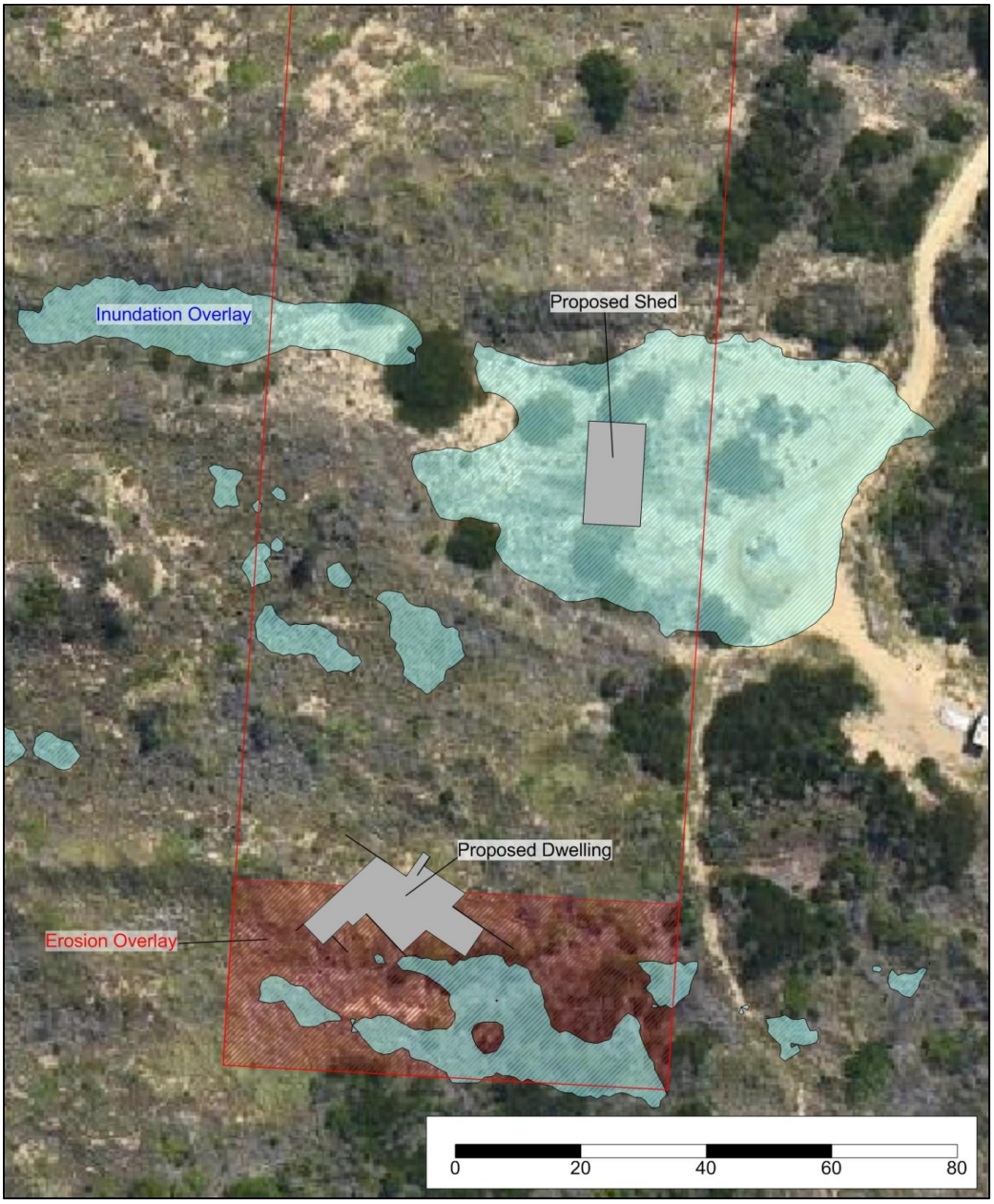


Figure 6 Proposed Development – Site Plan

4.4 Development Standard Criteria

Where applicable, the need for further performance criteria compliance is outlined in Appendix 2.

4.4.1 Waterways & Coastal Protection Code (WCPC)

Given that the site does not fall within the IPS WCPC zone, development standards E11 do not need to be addressed for the proposed development.

4.4.2 Inundation Prone Areas Code (IPAC)

The proposed site falls within the area mapped as IPS IPAC low hazard zone. Development standard E15 was addressed for the proposed development. According to Table E15.1, the actual shed has an elevation between 1.0 and 1.2 m AHD and needs to be assessed according to the medium hazard criteria (E15.7.2). The following performance criteria need to be addressed as detailed in Appendix 2:

- E15.7.2 P1; and
- E15.7.2 P3;

4.4.3 Coastal Erosion Hazards Code (CEHC)

Given that the site falls within the IPS CEHC zone, development standards E16 were addressed for the proposed development. The following performance criteria need to be addressed as detailed in Appendix 2:

- E16.7.1 P1

5 First Pass Assessment

5.1 Natural Resource Management (NRM) Mapping

The LIST presents a summary of the site coastal vulnerability over a 100 m section of the coastline near the site (Appendix 3). Table 2 presents a summary of the relevant site geomorphic information.

Table 2 Summary of Natural Resource Management (NRM) Mapping (The LIST)

Aspect	Description
Site Description	Open coast sandy shore backed by low-lying sandy plains
Shoreline	Sandy beach or shoreline - fine to med grainsize
Intertidal	Sloping sandy bottom in lowest intertidal to subtidal zone
Backshore	Dunes (one or more dune ridges with unconsolidated sediment plain)

5.2 Smartline Directory

Appendix 4 presents a summary of the Smartlines Database which was accessed to provide site specific geomorphic information. Key aspects of the site include:

- Foredune on sand to below sea level in the backshore area;
- Dune or beach ridge plain with sand to below sea level in the distal backshore areas;
- Fine-medium beach sand in the intertidal zone with a moderate intertidal sloe; and
- High exposure to wave energy, with dune field exposed to wave attack at seaward side.

5.3 Sharples Definition

Based on the Sharples (2006) assessment, the site is classified as:

- Open sandy shore backed by soft sediment plain - potential erosion and shoreline recession vulnerability

5.4 Summary

In summary, the following can be concluded for the site specific location based on the first pass geomorphology and coastal vulnerability information:

- The site comprises of soft sediments which are vulnerable to the risk of erosion from storm events and beach recession from sea level rise;
- There is no evidence of shallow underlying bedrock;
- There site is vulnerable to wave attack; and
- A second pass assessment is required at the site to determine the recession and erosion risk.

6 Second Pass Assessment

6.1 Definitions

Sharples & Donaldson 2014 define the following second pass assessment approach:

> "A second pass assessment builds upon a first pass assessment identification of coastal areas potentially susceptible to coastal hazards such as flooding and erosion, by building an understanding of regional variability in the processes that may drive flooding and erosion, so as to begin to differentiate between those susceptible areas that may be more or less at risk from these hazards. In most cases, the most important regional process that drives coastal hazards is the wave climate, encompassing average and extreme wave heights and directions experienced by the coast, and variation in exposure to these at different locations along a regional coast. "

6.2 Previous Studies

GES are not aware of any second pass assessments that have been conducted for Nine Mile Beach.

6.3 Scope of Works

GES have conducted a site specific second pass assessment. The following second pass assessment scope of works has been adopted for the site:

- Use site specific geology and geomorphology information to make inferences about the susceptibility of the site to erosion;
- Develop a comprehensive site specific wave model for the site based on methods outlined in the Shoreline Protection Manual SPM (1984) and the Coastal Engineering Model (CEM 2008) which will provide site specific information on actual inundation levels and site erosion potential;
- To identify short term hydrodynamics based on site specific 1% Annual Exceedance Probability (AEP) astronomical tide, barometric low (storm), wave runup, wave setup and wind setup conditions;
- Drawing on localised 1% AEP information made available in the IPS (2015) to understand site still water levels for year 2050 and 2100 and where applicable translate these to time frames to be more relevant to the design life of the proposed site works;
- Assess how changing hydrodynamic conditions including water currents at the site will impact on the proposed development with implications for site stability and flooding for a given time period;
- Conduct a 'third pass assessment' to determine site erosion risk;
- Provide a comprehensive risk assessment addressing all performance criteria and providing recommendations where applicable.

6.4 Site Physical Setting

6.4.1 Site Geology

The site geology is inferred to comprise of locally derived windblown sand (Figure 7). MRT mapping indicates the beach sand is of Quaternary age, but there is no differentiation beyond littoral its origin. Soils from the site are expected to comprise of beach and aeolian sands.

6.4.2 Site Geomorphology

A number beach erosion hollows are present in the back dune areas which are inferred to be deflation hollows (slacks) where sand has been winnowed out and deposited downwind of the prevailing wind direction. Dune form features indicate that the most dominant wind is from the northwest. It is possible

that acid forming tannins have accumulated in the slacks which have further lowered the landform through calcareous sand dissolution.

The proposed dwelling is located on a back dune ridge which is not part of the frontal dune system.

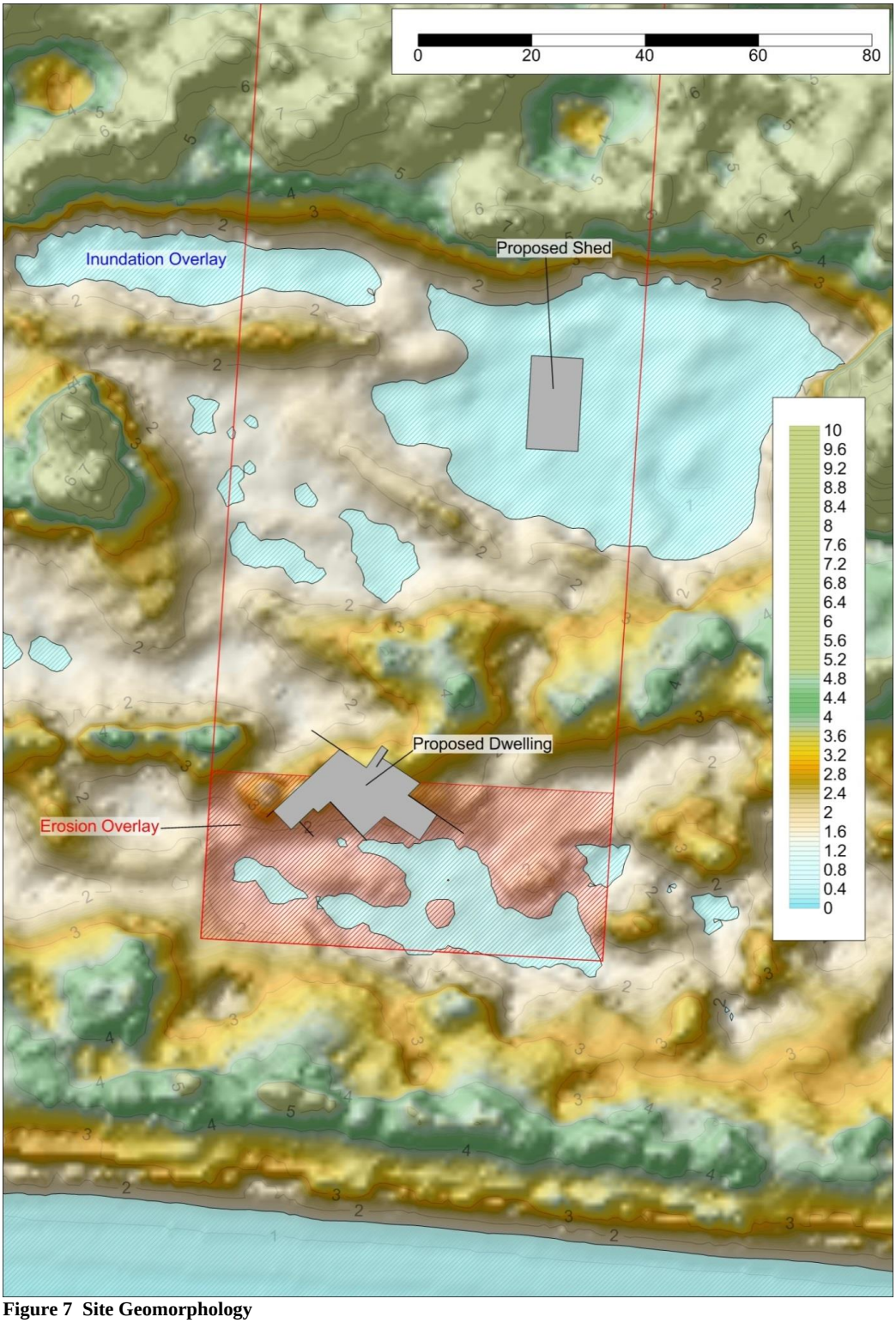


Figure 7 Site Geomorphology

6.5 Site Baseline Seawater Levels

6.5.1 Storm Tide

Storm tide events may be defined in terms of the culmination of astronomical tide and storm surge events. Maximum storm tide inundation levels have been adopted for the site based on a 1% AEP that an inundation event will occur. Storm tide levels are obtained from the IPS (2015) inundation hazard tables.

The storm tide level adopted for the site 1.15 m

6.5.2 Sea Level Rise

The IPS (2015) has adopted the following sea level rise estimates based DPAC projections with reference to a 2010 baseline:

- 0.2 m rise by 2050; and
- 0.8 m rise by 2100.

Based on these figures, sea level elevations presented in Table 3 are applied to the site (workings in Appendix 5). 2072 projections are used reference the design life of the proposed structures.

Table 3 Present Day & Projected Inundation Levels for 2100 based on DPAC (2012) estimates.

DPAC (2012) Sea Levels	2022 DPAC	2072 DPAC	2100 DPAC
Sea Levels (m AHD)	0.11	0.41	0.89

6.5.3 Stillwater Levels

The effects of storm tide may be combined with sea levels projections to provide baseline water levels (reported in m AHD) which are referred to as still water level.

The still-water levels adopted for the site is based on 1% AEP storm tides and 2100 DPAC (2012) estimates (Table 4).

Table 4 Summary of Site Stillwater Levels for Present Day & Projected 2100 Inundation Levels based on DPAC (2012) estimates.

Stillwater Elevations	2022 DPAC	2072 DPAC	2100 DPAC
DPAC (2012) Sea Levels (m AHD)	0.11	0.41	0.89
Tidal Influence & Barometric Low Influence (m)	1.15	1.15	1.15
Summary (m AHD)	1.26	1.56	2.04

6.6 Site Hydrodynamics

Coastal process hydrodynamics were assessed at the site. Information collected is used to assist in interpreting site specific:

- Maximum site inundation levels;
- Effects of storm inundation levels on site erosion;
- Longer term recession trends.

Without consideration of site hydrodynamic wave models, these potential hazards cannot be addressed. Depending on the planning requirements and the level of site risk, this information may or may not have not have been utilised in the site inundation and/or erosion model. It is recognised however, that a site specific coastal processes study is imperative in any coastal vulnerability assessment which seeks to identify the potential hazards and potential risks to assets and life.

6.6.1 Methods

A site coastal process model presented herein is detailed in Appendix 5. Some of the information obtained for the models is extracted directly from the IPS (2015) inundation level tables. Other information has been collected from historical models such as Simulating Waves Nearshore (SWAN) significant offshore swell wave height models (Carley *et. al.* 2008). The wind fetch wave model has been developed based on the CEM (2008) and SPM (1984) formulations which interpret site bathymetry, topography and wind speeds.

Hydrodynamic risks are measured in terms of 1% AEP events. Site specific processes considered in this section include but are not limited to the following (some of which are detailed in Figure 8):

- Wave runup;
- Wave setup; and
- Wind setup.

A 300 mm freeboard value has been adopted by the IPS (2015) to account to for the Tasmanian Building Act 2000 regulations. Site hydrodynamic factors are included within this 300 mm freeboard zone which essentially defines any hydrodynamic inundation processes which are above the adopted still water levels. The 300 mm value will tend to overestimate inundation levels at some sites and underestimate inundation levels at other sites.

Given that hydrodynamic processes are largely site specific, GES develop hydrodynamic models for the specific sites of interest which are based on the following information:

- Tasmanian Aquaculture and Fisheries Information (TAFI) bathymetry data,
- Formulations in the CEM (2008), the SPM (1984) and ;
- Local wind conditions (AS/NZS 1170.2:2011).

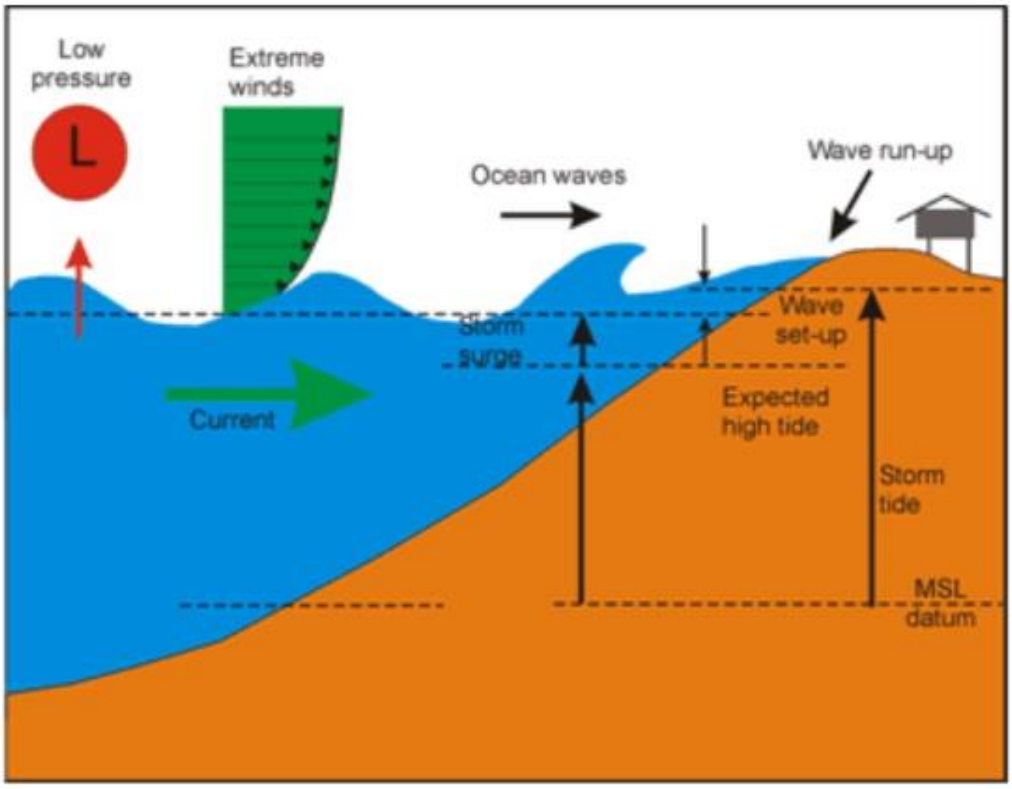


Figure 8 Hydrodynamic Parameters Associated with Storm Surge Events

As wind setup, wave setup and wave runup normally occur simultaneously during storm surge events, these components are combined with extreme tide and storm surge predictions to provide maximum inundation levels for the site. Wave models have been generated for the site to define the site specific hazards.

6.6.2 Site Wave Conditions

Table 5 provides a summary of the dominant waves intercepting the site.

Table 5 Summary of Dominant Waves Intercepting the Site

Wave Details	Swell Wave
Direction	South
Wave Height (m)	3.2
Period (s)	10.8
Approach Angle	0

6.6.3 Dominant Wave Characteristics

The most dominant wave originates from a southerly swell generated from the Southern Ocean (Table 6). The wave will approach the nearshore zone which has a 0.3 % grade bathymetry, breaking at an angle perpendicular to the shore and at a depth of 4.6 m.

Table 6 Details of the Dominant Wave Intercepting the Site

Wave Position	Parameter	Value
Nearshore	Origin	Swell Wave
	Direction	South
	Approach Angle	0
	Nearshore Wave Height (m)	3.2
	Period (s)	10.8
Breaking	Breaker Height (m)	3.7
	Breaking Depth (m)	4.6
	Breaking Angle	0
	Nearshore Gradient (%)	0.3
	Surf Similarity Parameter	0.38

6.6.4 Nearshore Hydrodynamics

Hydrodynamic variables calculated for the site are presented in Table 7. Inundation levels at the site are calculated from these individual components combined with the stillwater levels.

Table 7 Details of the Dominant

Coastal Process	Level
Wave Setup	0.43
Wave Runup	2.98
Wind Setup	0.17

6.7 Site Inundation Levels

Table 8 presents a summary of the site inundation levels based on 1% AEP still water, wind setup where applicable, wave runup and wave setup inundation levels for present day, 2072 building design life and 2100 DPAC scenarios.

Table 8 Summary of Site Inundation Levels

Inundation Levels	Present Day	DPAC 2072	DPAC 2100
Still Water Elevations (m AHD) Including Wind Setup Where Applicable	1.43	1.73	2.21
Wave Setup Elevations (m AHD)	1.86	2.16	2.64
Wave Runup (m AHD) 2° Beach/Embankment Slope	3.78	4.08	4.56

Stillwater and wind setup inundation scenarios for 2072 and 2100 are presented in Figures 9 and 10. These water levels are representative of the projected site inundation conditions and not wave runup conditions.

Wave setup at the site is expected to reach elevations of 2.16 m AHD by 2072 based on the projected DPAC 2012 sea levels. Wave runup will reach elevations of approximately 4.1 m AHD by 2072 and 4.56 m AHD by 2100 which is below the level of the current dune system.

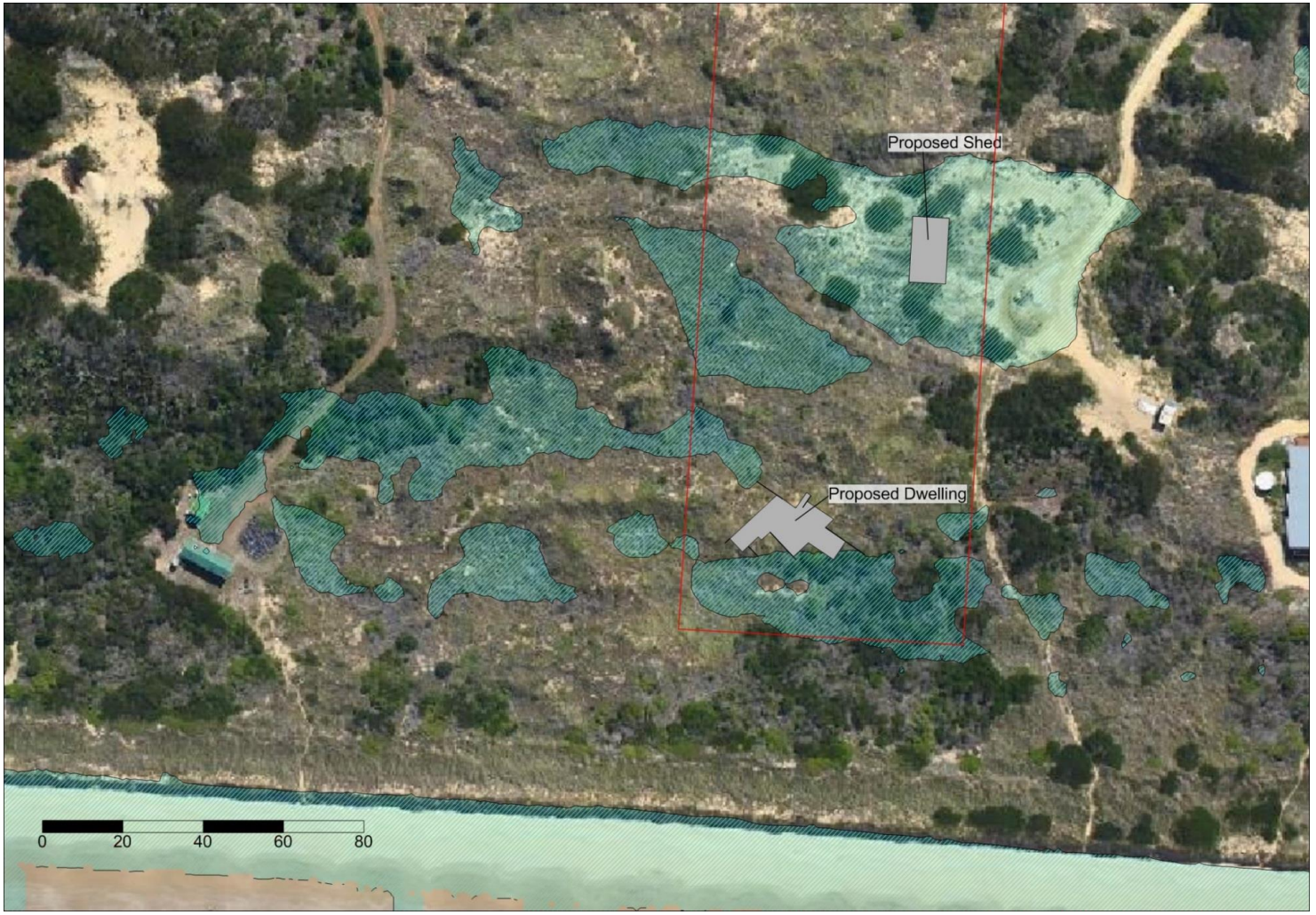


Figure 9 Site Inundation Given a 1% AEP Storm Event for 2072 combined with Wind Setup Conditions

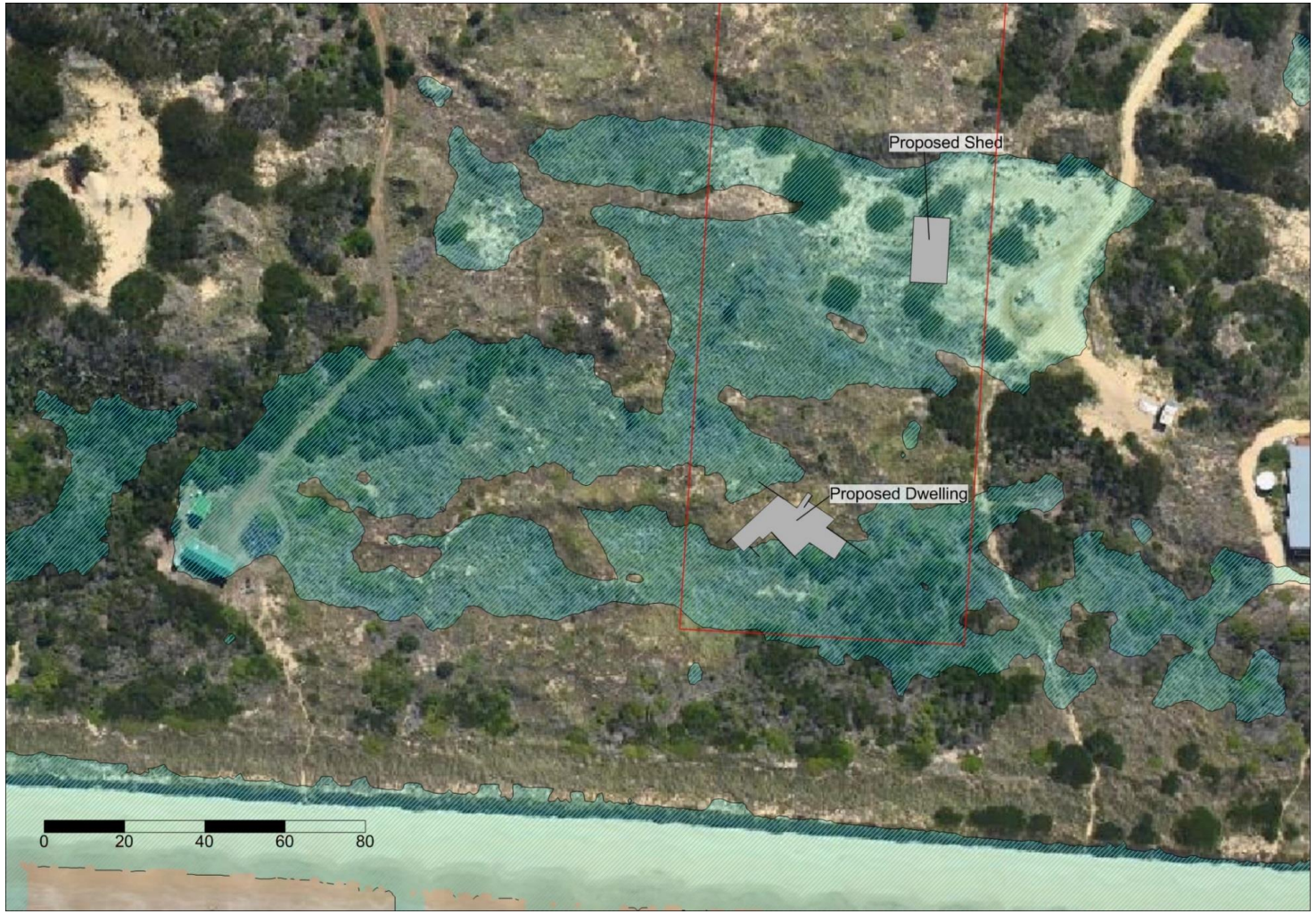


Figure 10 Site Inundation Given a 1% AEP Storm Event for 2100 combined with Wind Setup Conditions

6.8 Summary

The following can be concluded from the detailed second pass assessment:

- The future inundation potential of the site is largely depended on the resilience of the frontal dune system to storm erosion and in particular shoreline recession from sea level rise;
- Wave runup is expected to be in the order of 4.7 m AHD by 2072 which is below the level of the existing frontal dune system. By 2100, the wave runup will be above the level of the frontal dune system;
- A third pass assessment is required at the site to determine the extent to which the frontal dune is expected to be eroded by storm erosion demand and sea level risk induced recession.

7 Third Pass Assessment

7.1 Definitions

A third pass assessment would typically involve conducting a detailed site specific assessment of the local geomorphology and soils and how these may be influenced by erosional processes in terms of:

- Site hydrodynamics;
- Sea level rise induced recession; and
- Strom erosion demand.

As stated by Sharples & Donaldson (2014):

> "A limitation of all regional-scale coastal hazard assessments (whether First or Second Pass) is that particular coastal locations may have some locally distinctive features or processes that may confound any predictions of coast hazard impacts based on regional-scale assessments of inherent susceptibility and driving processes." "Hence, a logical Third Pass level of coastal hazard assessment is the detailed site-specific assessment of particular coastal locations, in which all possible site characteristics and processes are considered."

7.2 Previous Studies

GES are not aware of any detailed recession or storm erosion assessments that have been conducted at the site.

7.3 Scope of Works

Table 9 presents a summary of the various methods adopted by GES to identify erosion hazards in vulnerable coastal zones.

Table 9 Summary of Assessment Approaches for Identify Site Erosion Hazards

Investigative Approach	Investigation Details	Typical Application
Invasive Investigation.	Conduct borehole drilling or substrate profiling to make inferences about the susceptibility of the site to erosion	Where scouring is anticipated or building foundation can be established on a firm substrate
Site Historical Aerial Imaging	Assess historical long term shoreline position relative to sea levels at the time and how this may translate to future recession trends	Where the proposed development is in a medium to high risk erosion zone and recession models need confirmation or may not apply given the coastal setting
	Assess historical short term shoreline positions relative to known storm events to forward project sediment storm erosion demand.	Used where Tasmarc surveys are not available or there is no previous storm erosion modelling done for the site.
Tasmarc Surveys	Investigate historical beach profiles to determine storm erosion demand.	Where the development is on hydrodynamically active beach and more information is required to understand beach storm erosion processes
Sediment Budgets	Conduct a detailed assessment of sediment budgets.	Where the site is inferred to be influenced by water currents or longshore drift processes
Shoreline Recession Model	Development of a long term shoreline recession model based on projected DPAC (2012) sea level rise scenarios and using calculated closure depths and various Bruun Rule formulations (1988)	Where site is in an inferred to be in an erosion hazard zone and where the proposed development building cannot be founded on a stable foundation.
Storm Erosion Demand	Conduct a detailed assessment of site storm erosion vulnerability due to coastal processes as well as available geological and geomorphological information	Where site is in an inferred to be in an erosion hazard zone and where the proposed development building cannot be founded on a stable foundation.
Stable Foundation Zones	Development of a cross section through the site detailing zone of reduced foundation capacity and the stable foundation zone through Nielsen et. al. (1992) methods	Where site is in an inferred to be in an erosion hazard zone and where the proposed development building cannot be founded on a stable foundation.

GES have adopted the following 'third pass' methods to further assess hazards at the site:

- Short & Long term aerial imagery to assist in determining storm erosion demand;
- Shoreline recession model; and
- Stable foundation zone.

7.4 Aerial Imagery

GES conducted a detailed assessment of shoreline positions on the western end of Nine Mile Beach in December 2011. The historical images dating back to 1948 have been reviewed and it is confirmed that there is no visible evidence of shifting shoreline position at this part of the beach relative to 1948.

A more recent Google Earth satellite series has been reviewed to determine the position of the vegetation and frontal sand dune position relative to the residence at 988 Dolphin Sands Road. A total of six (6) Google Earth satellite images have been reviewed which include:

- 22/3/2008
- 21/10/209;
- 10/01/2009;
- 24/09/2012;
- 15/09/2013; and
- 12/04/2014

A resulting chart has been developed of the dune position (Figure 11). The chart indicates that the dune position on average has been receding and that there are no particular significant storm events that have resulted in erosion of the beach profile unlike other swell dominated beaches in the south or Tasmania.

Possibly the most similar beach to Nine Mile Beach in terms of sediment budgets would be Seven Mile Beach which has in part been prograding (growing) as a result of longshore drift processes distributing sand from Roches Beach and Cremorne Beach and possibly other beaches along the southern coastline (ie Hope and Clifton Beaches). Dominant southerly directed swell influence can create an oversupply of sediments directed northwards towards embayment's where the sediments are 'trapped' and deposited on beached which are aligned perpendicular to the active swell wave front.

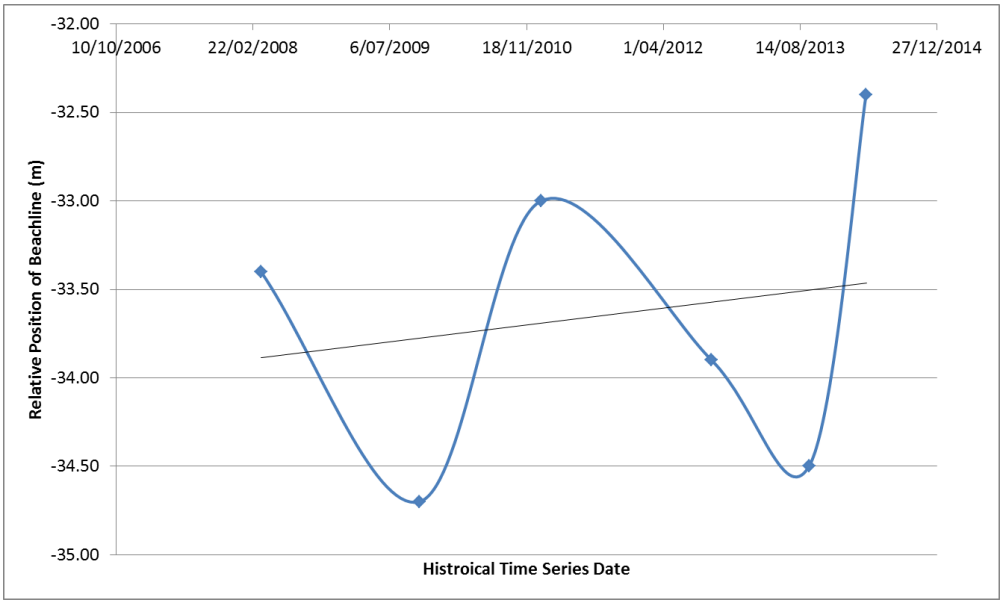


Figure 11 Distance to Frontal Dune Vegetation Line Relative to 988 Dolphin Sands Road Residence

This similar process is expected to be occurring at Nine Mile Beach which would explain the lack of any distinctive storm induced erosion in the satellite image time series. A storm erosion demand of $60m^3$ per metre is inferred for Nine Mile Beach.

7.5 Shoreline Recession

The Bruun Rule has been applied to the site to estimate the response of the shoreline profile to sea-level rise. The Bruun Rule is widely used by government and non-government bodies to determine recession rates on sandy shores which are at risk of inundation. The Bruun Rule states that a typical concave-upward beach profile erodes sand from the beach face and deposits it offshore to maintain constant water depth. There are a few cases where the Bruun rule cannot be applied, which include where longshore drift is predominant, where there is dominant influence of surrounding headlands and in environments where wave activity is minimal.

3.1.1 Closure Depths

The most contentious variable for the Bruun rule is the closure depth for which various formulations and methods exist. The closure depth may be defined as the depth offshore of a beach where depths do not change with time. The closure depth has been calculated based on the Hallermeier (1978) breaker wave height method using parameters outlined in Table 10.

Table 10 Variables Selected for Determining Closure Depths at the Site

Variable	Value
Significant (offshore) wave height (Hallermeier 1978) wave height	3.20
Wave Period (s)	10.80
Sand SG (g/cm^{-3})	2.65
Closure depth (m)	7.00

3.1.2 Bruun Rule Beach Recession Model

The standard Bruun Rule has been applied to the site to determine sea level rise induced recession from the dominant waves active at the site.

The Standard Bruun Rule is typically expressed as R = s(L/(D + h)) and is illustrated in Figure 12

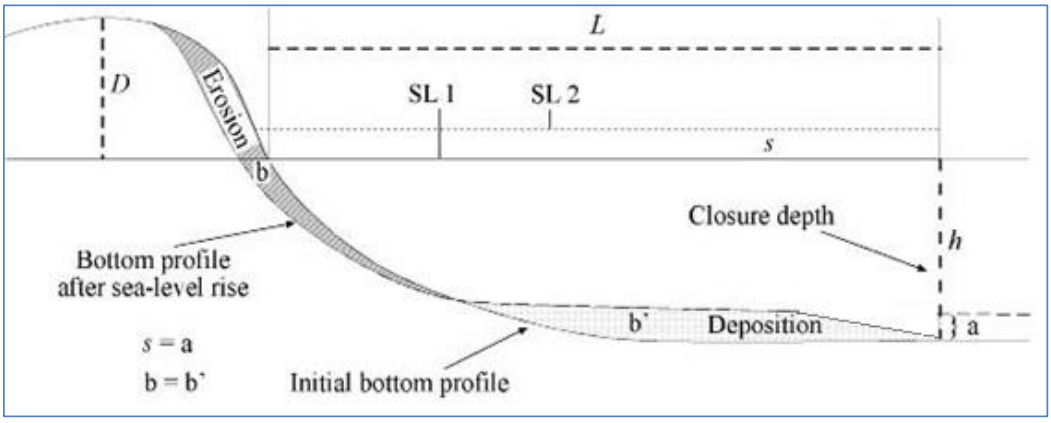


Figure 12 Summary of standard Bruun Rule for Calculating Beach Recession

Table 11 presents a summary of the Bruun Rule variables utilised in the site recession model which have been obtained from the digital elevation models for the site.

Table 11 Summary Bruun Rule Variables Utilised in the Site Recession Model

Variable	Symbol	Value
Length of Active Erosion Zone (m)	L	250.00
Profile Closure Depth (m)	h	7.00
Active Dune/Berm Height (m)	D	4.50

The recession rate given the various sea level rise scenarios are presented in Table 12.

Table 12 Calculated Bruun Rule Recession Rate at the Site

Variable	Symbol	2072 DPAC	2100 DPAC
Sea Level Rise above LiDAR baseline (m)	s	0.41	0.89
Horizontal Recession (m)	R	6.96	17.39

A horizontal recession value of 7.0 m is applicable for the site given 2072 DPAC projections and 17.4m given 2100 DPAC projections

As a general reference, the photographic series has recession rates (Table 13) which are within the same order of magnitude with the Bruun Rule calculations.

Table 13 Calculated Recession Rate at the Site based on the Short Google Imagery Time Series

Variable	2072 DPAC	2100 DPAC
Photographic Assessment LiDAR 2008	5.60	14.00

7.6 Stable Foundation Zone

A stable foundation zone assessment has been conducted for the site. The basis behind this particular assessment involves use of Nielsen et. al. (1992) methods for assessing stable foundation zones in sand.

A cross section has been constructed through the site to indicate the worst case scenario 2072 sea level rise scenario based on recession modelling (Figure 13 & 14). The storm erosion demand has been constructed based on Nielsen et. al. (1992) equations which use a 1:10 post storm gradient. A storm erosion demand of 60 m^3/m has been applied to the site to account for a 1% AEP storm event.

As indicated in the final section, the proposed development is within the stable foundation zone.

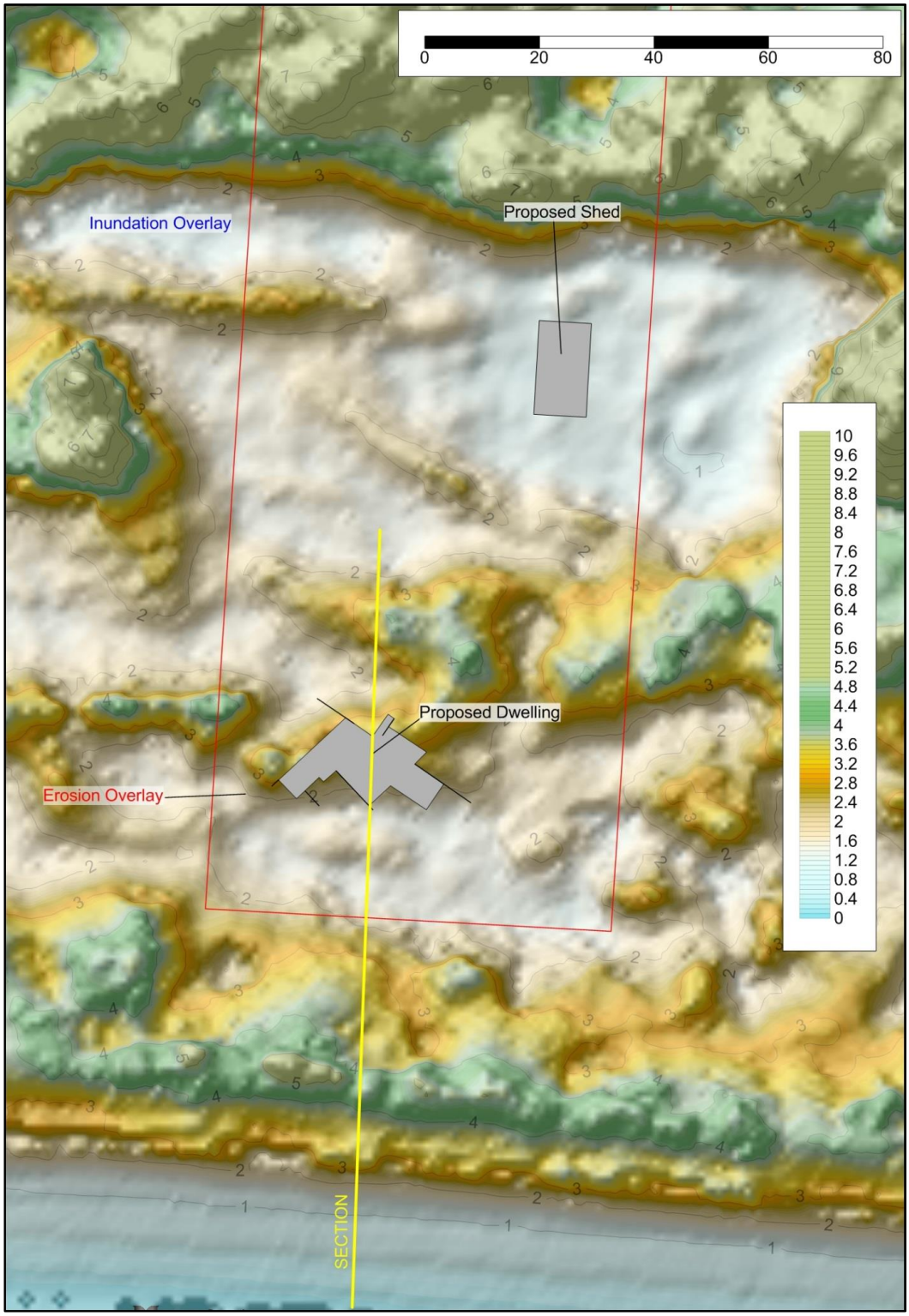


Figure 13 Site cross section delineated by the yellow line

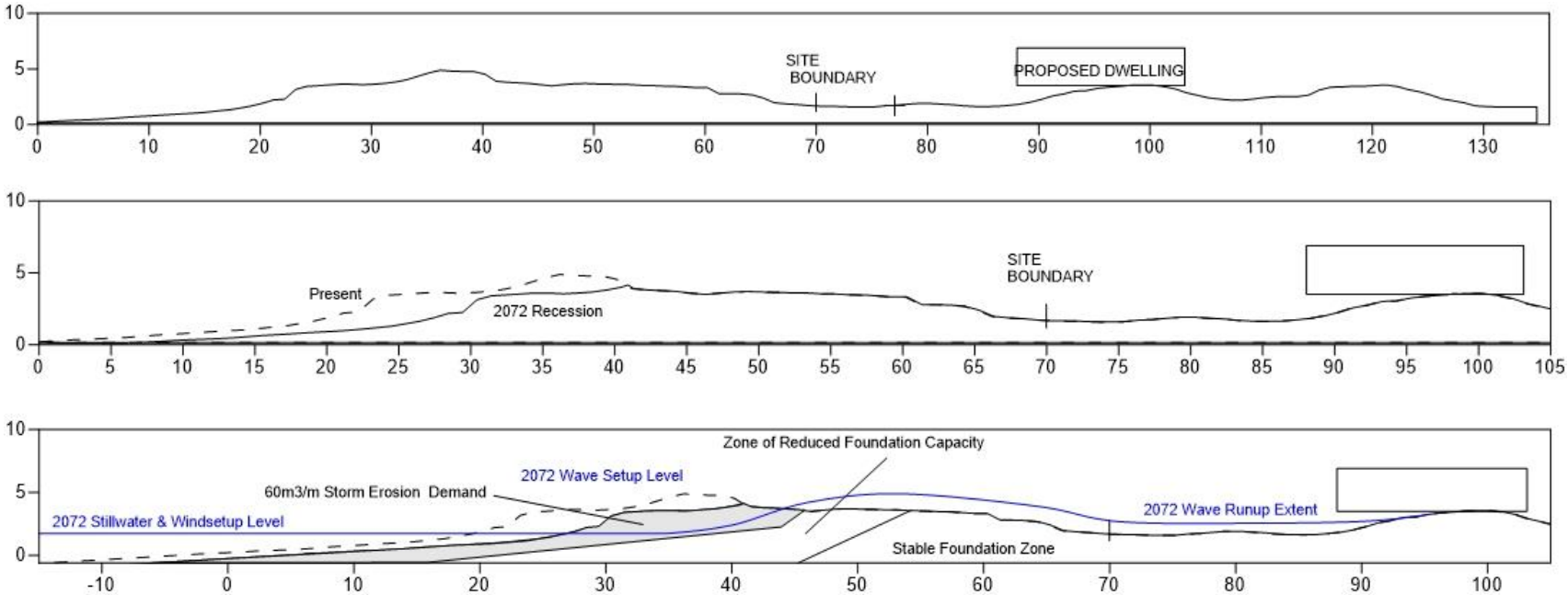


Figure 14 Site Cross Sections Demonstrating 2072 Recession, 60 m3/m Storm Erosion Demand, and Inferred Inundation Levels & Wave Runup Extent

7.7 Summary

The following can be concluded from the third pass assessment:

- It is possible that by 2072 that the frontal dune will be breached by wave runup due to combined effects of sea level rise induced recession and storm erosion events;
- The dune front is expected to remain above the combined 2072 stillwater, wind setup and wave setup level but may be below the wave runup level caused by minor storm events;
- During a major 1% ARI storm event, it is possible that the wave runup will reach the foundations of the proposed development but it is unlikely to cause any erosion;
- It is highly unlikely that the wave runup will extend beyond the extent of the proposed building;
- The wave runup is unlikely to reach the 3.4 m height of the dune in which the dwelling is proposed to be founded;
- Backdune inundation is limited by rates of seawater ingress through the frontal dune barrier and wave runup overtopping as well as the baseline groundwater levels in the back dune. By 2072, despite possibly elevated groundwater levels the frontal dune system is expected to have sufficient height to prevent complete inundation of the back dune area to stillwater levels (1.73 m AHD) during a storm tide event;
- By 2100, groundwater levels in the back dune area are likely to be at or above ground surface (pooling) and the frontal dune will be considerably lower which is likely to allow flooding of all back dune areas. Flooding will be a gradual process as the water from wave runup gradually fills the lower lying depression;
- The stable foundation zone is calculated to be within 30 m from the proposed building envelope;
- Modelling has not been conducted for the 2100 scenario as the 2072 life of the building is considered suitable for the proposed development;

8 Risk Assessment

The qualitative risk assessment criteria have been developed to identify key risks that may arise from building works in areas that are vulnerable to erosion or inundation hazards. The risk assessment is based on 2072 projected life of the building.

The criteria are based on a risk assessment matrix consistent with Australian Standard AS4360 on Risk Management (AS4360). The qualitative assessment of risk severity and likelihood (Appendix 6) were used to help provide a qualitative risk assessment based upon the coastal vulnerability assessment completed for the site.

A detailed risk assessment addressing the performance criteria is presented in Appendix 7. GES has established from the risk assessment that the level of risk is acceptable within the lifetime of the proposed development works. There are no medium or high risk ratings the proposed development.

9 Recommendations

Erosion and inundation risk at the site can be effectively managed through adequate placement of the proposed dwelling. The proposed shed is outside of the potential erosion risk area.

GES have provided a number of recommendations in Appendix 7 risk assessment which include:

- Placing the dwelling at an elevation of 3.2 m AHD over the surrounding dune above the building design life wave runup limit;
- It is recommended that the building is founded on piers at this location which are seated into the stable foundation zone at a depth of at least 0.5 m AHD;
- Any structures need to be resilient to corrosion from salt water sea mist and spray;
- The dune beneath the dwelling should be retained to prevent wave runup ingress towards the dwelling access road;
- The proposed shed is suitably placed away from any coastal inundation risk, although consideration needs to be given to ensure that it is elevated above 1.2 m AHD to prevent groundwater inundation; and
- There should be minimal disturbance to the surrounding dune systems to ensure the natural inundation barriers remain intact. Pathways to the beach should minimise erosion.

The proposed development presents an acceptable solution to managing potential site risks provided the recommendations in this report are adhered to in building and engineering design.

Kris J Taylor BSc (Hons)

Environmental & Engineering Geologist

10 Limitations

The following limitations apply to this report:

- Wave modelling in accordance with the CEM (2008), the SPM (1984) and wind parameters from AS/NZS 1170.2:2011;
- Published SWAN swell modelling information where available;
- Published water current information;
- Navionics, TAFI, Geoscience Australia and Australia Hydrographic Service bathymetry;
- Light Detection And Ranging (LIDAR) digital elevation model (metadata file in Appendix 1) is calibrated or assessed to the closest ground control point for determining relative accuracy (Appendix 2);
- Storm surge observations where applicable
- The LIST cadastral information
- Photogrammetric modelling of historic coastal recession and/or progradation for the site was not undertaken. However, historic aerial photographs for the project area were reviewed and incorporated into a geographic information system enabling preliminary measurements of dune variations.
- The values estimated in this report provide an order of magnitude for assessing climate change impacts and in particular climate change induced sea level rise impacts. The information is based on a collation of existing information and data, with some site specific modelling for planning purposes.

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Appendix 1 LIDAR Metadata Report

Metadata Report

Lidar

PI200803 – Tasmania

Acquisition Start Date	04 March 2008
Acquisition End Date	09 March 2008
Device Name	LM5600
Flying Height (AGL)	800m
INS/IMU used	AeroControl IID
Number of Runs	
Swath width	700m
Flight direction	Variable
Side Overlap	30%
Scan angle	60°
Horizontal datum	GDA 94
Vertical datum	AHD
Map projection	MGA zone 55
Description of aerotriangulation process used and residual results	None
Description of rectification process used	RiAnalyze / Riworld (see Calibration Report)
Spatial accuracy	0.10m
Surface type	Bare earth, water corrected
Average point separation	1.5pt/sqm
Laser return types	Full waveform
Data thinning	1mXY 0.25mZ
Laser footprint size	0.25m
Limitations of Data	none

Appendix 2 Development Standards Acceptable Solutions

Acceptable Solution Criteria for Development in a Waterways and Coastal Protection Code Area

Development Standard	Acceptable Solution	Performance Criteria to be Addressed
E11.7.1 Buildings & Works	Building and works within a Waterway and Coastal Protection Area must be within a building area on a plan of subdivision approved under this planning scheme.	*Not Applicable*
	Building and works within a Future Coastal Refugia Area must be within a building area on a plan of subdivision approved under this planning scheme.	*Not Applicable*
	Buildings and works within a Potable Water Supply Area must be within a building area on a plan of subdivision approved under this planning scheme.	*Not Applicable*
	Development must involve no new stormwater point discharge into a watercourse, wetland or lake.	*Not Applicable*
E11.7.2 Buildings and Works Dependent on a Coastal Location	An extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway must be no more than 20% of the size of the facility existing at the effective date.	*Not Applicable*
	No Acceptable Solution for dredging and reclamation.	*Not Applicable*
	No Acceptable Solution for coastal protection works initiated by the private sector.	*Not Applicable*

Acceptable Solution Criteria for Development in an Inundation Prone Areas Code Area

Development Standard	Acceptable Solution		Performance Criteria to be Addressed	
E15.7.1 Coastal Inundation High Hazard Areas	A1	No Acceptable solution	P1	*Not Applicable*
	A2	A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, there is no acceptable solution.	P2	*Not Applicable*
E15.7.2 Coastal Inundation Medium Hazard Areas	A1	No Acceptable solution	P1	*Yes*
	A2	An extension to an existing habitable building must comply with **one** of the following: (a) new habitable rooms must comply with both of the following: I. Floor level no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1, II. Floor area of the extension no more than 40 m2 from the date of commencement of this planning scheme; (b) new habitable rooms must be above ground floor	P2	*Not Applicable*
	A3	A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must have a floor area no more than 40 m2.	P3	*Yes. Shed area ~150 m^2*
E15.7.3 Coastal Inundation Low Hazard Areas	A1	A new habitable building must comply with the following: Floor level no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1;	P1	*Not Applicable*
	A2	An extension to a habitable building must comply with either of the following: (a) floor level of habitable rooms is no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1; (a) floor area is no more than 60 m2	P2	*Not Applicable*
	A3	A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must have a floor area no more than 60 m^2.	P3	*Not Applicable*

Acceptable Solution Criteria for Development in a Coastal Erosion Hazard Code Area

Development Standard	Acceptable Solution		Performance Criteria to be Addressed	
E16.7.1 Buildings & Works	A1	No Acceptable solution	P1	*Yes*
E16.7.2 Buildings and Works Dependent on a Coastal Location	A1	An extension to an existing boat ramp, car park, jetty, marina, marine farming shore facility or slipway must be no more than 20% of the size of the facility existing at the effective date.	P1	*No - no extension to an existing structure proposed.*
	A2	No Acceptable Solution for dredging and reclamation.	P2	*No – not applicable to development*
	A3	No Acceptable Solution for coastal protection works initiated by the private sector.	P3	*Yes- where recommendations are made*

Appendix 3 The LIST NRM Data

Feature	
Segment Id	11082
Segment Length (m)	100
Minimum Vulnerability: Coastal Vulnerability Mapping	Not a minimal vulnerability shoreline
Cliff Vulnerability: Coastal Vulnerability Mapping	Not a cliffed shoreline
Unclassified Vulnerability: Coastal Vulnerability Mapping	Not an unclassified vulnerability shoreline
Erosion Vulnerability: Coastal Vulnerability Mapping	Not a soft clayey-gravelly or colluvial shoreline
Sandy Vulnerability: Coastal Vulnerability Mapping	Open coast sandy shore backed by low-lying sandy plains
Muddy Vulnerability: Coastal Vulnerability Mapping	Not a muddy shoreline
Coastal Vulnerability0	Sandy beach or shoreline - fine to med grainsize
Coastal Vulnerability	Sloping sandy bottom in lowest intertidal to subtidal zone
Backshore Type Coastal Vulnerability	Dunes (one or more dune ridges with unconsolidated sediment plain)
Artificial Shore	No
Industry1 500M	No industry present within 500m
Industry2 500M	No industry present within 500m
Industry3 500M	No industry present within 500m
Industry1 1Km	No industry present within 1km
Industry2 1Km	No industry present within 1km
Industry3 1Km	No industry present within 1km
Foreshore Structure1	No structure present
Structure1 Use Frequency	NA
Foreshore Structure2	No structure present
Structure2 Use Frequency	NA
Foreshore Structure3	No structure present
Structure3 Use Frequency	NA
Foreshore Structure4	No structure present
Structure4 Use Frequency	NA
Construction Level 100M	No construction
Construction Level 500M	Part construction
Cleared Level 100M	No clearing
Cleared Level 500M	Partly cleared
Recreation Use1	Walking
Recreation Use1 Use Frequency	Medium use
Recreation Use2	Dog exercise
Recreation Use2 Use Frequency	Medium use
Recreation Use3	Swimming
Recreation Use3 Use Frequency	Low use
Biological Feature Sigvalue	
Protected Area	
Access1	No listed access
Access2	No listed access
Access3	No listed access
Access4	No listed access
Access5	No listed access
Vegetation Viability Coastal Values	Not viable but may be managed as a buffer area
Vegetation Significance Coastal Values	Non-threatened native
Coastal Values	Critically endangered (EPBC), endangered (EPBC) or endangered (TPS Act)
Vegetation Condition Coastal Values	Weed invasion 50-90% cover
Habitat Condition SE Strategy	Not assessed

Conservation Significance SE Strategy	Not assessed
Reserve Class CAR	Informal Reserve on other public land
Public Land Classification	Public Reserve
Coastal Zone Type PWS	
Marine Reserve	
LGA Reserve	
WHA	
Classification	4
Zoning	Open Space
Geomorphic Condition	Significantly disturbed
Actual Habitat Listed Significant SPP	One or more shorebird or seabird species present (contact Birds Tasmania for further detail)
Potential Habitat Listed Significant SPP	
Geovalue	1
Sensitivity TGD	9
Geomorphic Value	2
Tourism Use	No listed tourism use
European Heritage	No listed European heritage values
Carcinus Maenas	Unlikely
Crassostrea Gigas	Unlikely
Spartina Anglica	Absent
Undaria Pinnatifida	Unlikely
A Arenaria	Present
A Populifolia	Unknown
E Paralias	Unknown
E Villosa	Absent
T Junceiforme	Absent
Pollution Source1 500M	No pollution sources within 500m
Pollution Source2 500M	No pollution sources within 500m
Pollution Source3 500M	No pollution sources within 500m
Pollution Source1 1Km	No pollution sources within 1km
Pollution Source2 1Km	No pollution sources within 1km
Pollution Source3 1Km	No pollution sources within 1km
Biology Attribute Value	1
Geomorphic Attribute Value	2
Natural Value Index	1
Amenities Attribute Value	5
Recreational Tourism Value	2
Value0	
Human Use Value Index	3
Eco Disturbance Attribute Condition	2
Geomorphic Attribute Condition	4
Introduced Species Attribute Condition	3
Condition Index	3
Anthropogenic Modification Attribute Pressure	2
Pollution Attribute Pressure	1
Recreational Tourism Attribute Pressure	5
Pressure	5
Introduced Species Attribute Pressure	2
Pressure Index	3
Further Information	An explanatory report accompanies this dataset and can be obtained from http://www.aquenal.com.au/reports.htm or by emailing coastal.enquiries@environment.tas.gov.au

Appendix 4 Smartlines Directory

SMARTLINES

Theme	Class	Classifiers
***** Segment Length: 13,764 m; ABSAMP-ID: tas0192 *****		
Backshore Proximal	Foredune on sand to below sea level (564142), scale 10K, ref 219	* Fabric: Sand deposits to below sea level * Form: Shore-parallel ridge (foredune) * Mod: Single dune ridge
Backshore Distal	Dune or beach ridge plain; sand to below sea level (561043), scale 10K, ref 219	* Fabric: Sand deposits to below sea level * Form: Flat to gently sloping (<5°) undiff * Mod: Dune field or beach ridges undiff
Intertidal 1	Fine-medium sand beach (529010), scale 10K, ref 219	* Fabric: Fine - medium grained sand dominant * Mod: Beach (wave-dominated sandy shore)
Intertidal 2	Unclassified (909090)	
Subtidal 1	Sloping sandy bottom undiff (502010), scale 10K, ref 219	* Fabric: Sand undiff * Form: Sloping (moderately to steeply sloping 5° - 60°) * Mod: Sandy bottom undiff
Subtidal 2	Unclassified (909090)	
Backshore Profile	Very flat plains (110), scale 100K, ref 204	
Intertidal Slope	Moderate (200), scale 25K, ref 183	
Exposure to Wave Energy	High (400), scale 25K, ref 183	
Geology 1	Semi-lithified undeformed clastic sediments (101020), scale 25K-250K, ref 222	* Fabric: Dominantly siliceous clastics undiff * Form: Undeformed (flat-lying or only gently tilted, may be normal-faulted) * Mod: Semi-lithified (soft) material
Geology 2	Unclassified (909090)	
Muddy	Not identified as a muddy shore (000)	
Dunes	Dune-field undiff exposed to wave attack at seaward side (220)	
Sandy	Open coast sandy shore backed by soft sediment deposits to below sea-level (210)	
Coarse Sediment	Not identified as a coarse sediment shore (000)	
Undif Sediment	Not identified as an undifferentiated soft sediment shore (000)	
Coral	Not identified as a coral coast (000)	
Soft Rock	Not identified as a soft rock shore (000)	
Hard Rock	Not identified as a hard rock shore (000)	
Undifferentiated Rock	Not identified as an undifferentiated rock shore (000)	
Unclassified	Not an unclassified stability shoreline (000)	

Appendix 5 Hydrodynamic& Inundation Model

1 Introduction

GES have developed a 'second pass' site specific wave and inundation model based on the following:

- Sea level rise values extracted from DPAC (2012) sea level rise scenarios and 2010 baseline levels presented in the IPS (2015);
- Barometric low & astronomical tide 1% AEP values extracted from the IPS (2015) site specific inundation level tables;
- A site specific hydrodynamic model which factors in the following:
    - Wave setup;
    - Wave runup; and
    - Wind setup.
- This model is used in the assessment of site erosion conditions as part of a "Third Pass" Site Assessment.

2 Sea Level Rise

Input from the scientific community has concluded that sea levels have risen globally over the last century. The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5 2013) provided projections for sea-level rise for the twenty first century relative to 1986 to 2005 (Figure 1). For 2081 to 2100, the projected range was:

- 0.28 to 0.62 (average of 0.44) for the RPC2.6 model; and
- 0.52 to 0.98 (average of 0.74) for the RPC8.5 model.

The DPAC 2012 has adopted a different model which is based on the following sea level rise projections relative to 1990:

- 0.2 m rise by 2050
- 0.4 m rise by 2075
- 0.8 m rise by 2100

The IPS (2015) has adapted where levels based on a 2010 baseline.

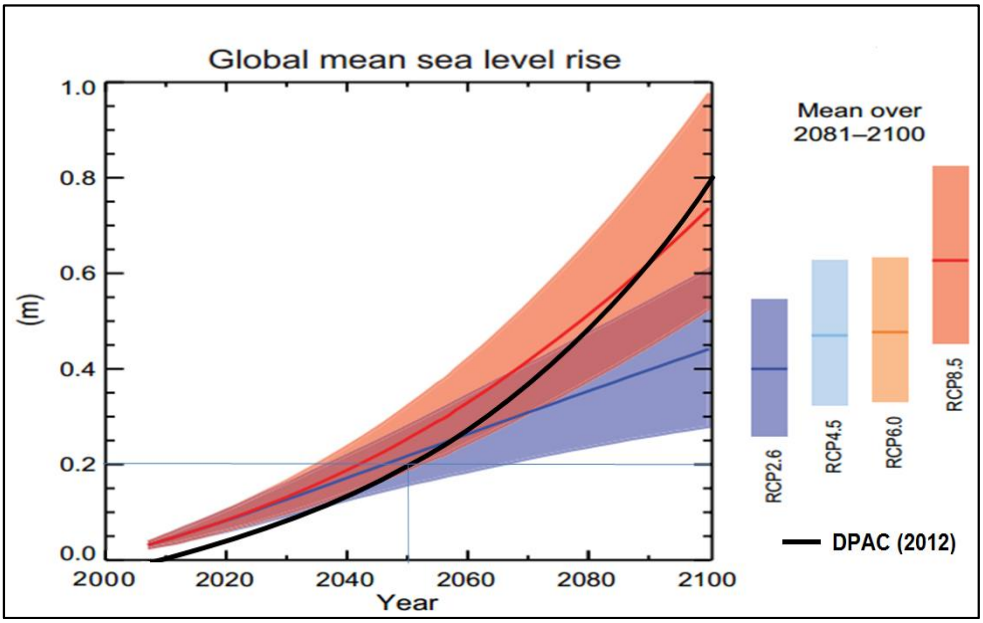

Figure 1 Projected Sea Level Changes based on the AR5 assessment (IPCC 2013) & DPAC Projected Sea Levels (2012).

These relative sea level rise rates have been back referenced to AHD83 which states a bench mark 0 m AHD of 1972. By 1986 and 1990, DPAC (2012) and IPAC bench marks had already had an incremental increase in sea level of 3 and 4 cm respectively since the m AHD benchmark. These variations are accounted for in the model presented in Table 1.

Also included in Table 1 is a backwards projection of sea levels based on global mean sea level from 1880 to 2011 (Source: CSIRO 2010 and Church and White 2011) which is calibrated relative to the base line datum points for the DPAC (2012) and IPCC AR5 (2013) scenarios. This information is useful for graphically inferring a relationship between historical site specific shoreline positions and relative sea level elevations at the time. Such an assessment is generally only conducted in a detailed third pass investigation.

Table 1 Estimates of Global Sea Level Rise are based on projections for DPAC (2012) & IPCC (2013) RPC8.5 averages

Year	IPS (2015)		IPCC (2013) RPC8.5 Mean	
	2010 Baseline (m)	m AHD83 (1972 Baseline)*	1986 Baseline (m)	m AHD83 (1972 Baseline)*
1972	-0.09	0	-0.03	0
1986	-0.062	0.028	0	0.03
2000	-0.025	0.065	0.03	0.06
2010	0	0.09	0.05	0.08
2022	0.02	0.11	0.07	0.1
2030	0.085	0.175	0.13	0.16
2050	0.2	0.29	0.25	0.28
2072	0.32	0.41	0.37	0.4
2070	0.37	0.46	0.42	0.45
2080	0.49	0.58	0.52	0.55
2100	0.8	0.89	0.74	0.77

* m AHD for Tasmania adopted in 1983 but based on 0 m sea level in 1972

For this report 0.41 m AHD and 0.89 m AHD sea level rise scenarios have been adopted based on 2072 life of the building and 2100 DPAC (2012) estimates.

3 Barometric Low & Astronomical Tides

Storm tide events may be defined in terms of the culmination of astronomical tide and storm surge events. Maximum storm tide inundation levels have been adopted for the site based on a 1% AEP that an inundation event will occur. Storm tide levels are obtained from Canute (ACE CRC) inundation hazard tables.

The storm tide level adopted for the site 1.15 m

4 Stillwater Levels

Still water levels are defined as the baseline sea levels at the time combined with:

- Barometric low pressure systems; and
- Tidal influence.

Absolute levels are based on 1% AEP events. Resulting still-water levels for present day and 2100 (DPAC 2012) are presented in Table 2.

Table 2 Present Day and Projected Stillwater Levels

Stillwater Elevations	2022 DPAC	2072 DPAC	2100 DPAC
DPAC (2012) Sea Levels (m AHD)	0.11	0.41	0.89
Tidal Influence & Barometric Low Influence (m)	1.15	1.15	1.15
Summary (m AHD)	**1.26**	**1.56**	**2.04**

5 Site Hydrodynamic Model

5.1 Offshore Significant Swell Waves

Significant offshore waves are used in the assessment of inshore wave conditions including wave runup and wave setup. Significant wave heights are also used to interpret storm erosion demand as well as closure depths which are used in modelling beach erosion and recession from sea level rise. Significant wave heights have been obtained from SWAN models for the site. Where applicable, procedures outlined in the SPM (1984) and the CEM (2008) have been used to interpret wave attenuation at the site. Table 3 presents a summary of the significant wave heights at the site.

Table 3 Summary of 1% AEP Attenuated Significant Offshore Wave Heights from Swell Activity

Parameter	Value
Swell Direction	S
Significant Nearshore Wave Height (m)	3.2
Wave Period (s)	10.8

5.2 Wave Summary

Breaker zone wave transformation calculations have been applied to the site based on procedures detailed in Dean & Darymple (1991). Waves approaching the site will intercept the sea bed at various gradients which will affect the wave form.

Table 4 presents a summary of the dominant wave conditions at the site and Table 5 summarises the breaking wave details which are used to model closure depths and wave setup.

Table 4 Details of the Main Waves Impacting the Site

Wave Details	Swell
Direction	S
Wave Height (m)	3.2
Period (s)	10.8
Approach Angle	0

Table 5 Details of primary 1% AEP significant wave used to model extreme wave conditions at the site

Dominant Wave Direction	S
Wave Type	Swell
Nearshore gradient (%)	0.3
Breaker Depth (m)	4.60
Breaker Height (m)	3.70
Angle of Breaker to Shoreline	0
Surf Similarity Parameter (SSP)	0.27

5.3 Wave Setup

Wave setup has been calculated to determine additional inundation heights on the beach based on procedures outlined in the CEM (2008) and SPM (1984) (Table 6). Wave setup is the superelevation of the water surface over still water levels due to onshore mass transport of the water by wave action alone. Parameters used in the calculation include deep water wave characteristics, breaker zone depths and shore gradients.

Table 6 Summary of Wave Setup at the Site

Variable	Value
Wave Direction	S
Wave Setup Height (m)	0.43

5.4 Wave Runup

Wave runup is considered an additional factor to be assessed on top of still water levels and wave setup (Carley et al. 2008). Wave runup is attributed to the transformation of wave energy as a result of the landward thrusting of water up the beach face to a level which is determined by variables presented in Table 7.

Calibration or verification of run-up calculations on beaches is best undertaken with either field measurements, a physical model or survey debris lines following major storm events. In this case, a wave runup model has not been calibrated for the site and is based on an R2 wave run-up level calculated from the methods of Mase (1989). For wave runup on beaches, the R2% value is the most commonly used, which is the runup exceeded by 2% of waves. The model assumes that extreme water levels are accompanied by extreme wind conditions. This is not unreasonable though, since both phenomena are caused by intense low pressure systems.

Table 7 Mase (1989) equation parameters used in calculating wave runup

Variable	Value
Wave Direction	S
Deep water wave height (m)	3.20
Mase 'a' Coefficient	1.86
Mase 'b' Coefficient	0.71
Lribarron Number	0.27
Slope (%)	3.6
Resulting wave runup level (m)	2.35

5.5 Wind Setup

Wind setup has been determined for the site based on methods outlined in Dean and Dalrymple (1991). The particular method selected is based the closed water body procedure, which is most applicable for the site based on the geometry of the coastline. Wind, fetch, bathymetry and coastline geometry were used to discern the wind direction which delivers the largest wind setup for the site which is determined to be from the south with a water elevation of 0.17 m.

6 Projected Inundation Levels

6.1 Site Wave Setup Inundation Levels

Wave setup elevations are presented in Table 8.

Table 8 Site 1% AEP Wave Setup Elevations for Present Day and 2100 Sea Level Rise Estimates

Wave Setup Elevations	2022 DPAC	2072 DPAC	2100 DPAC
DPAC (2012) Stillwater Levels (m AHD)	1.26	1.56	2.04
Wave Setup (m)	0.43	0.43	0.43
Wind Setup (m)	0.17	0.17	0.17
Summary (m AHD)	**1.86**	**2.16**	**2.64**

6.2 Site Wave Runup Levels

Wave runup elevations are presented in Table 9.

Table 9 Site R2 Wave Runup Elevations for Present Day and 2100 Sea Level Rise Estimates

Wave Runup Elevations	2022 DPAC	2072 DPAC	2100 DPAC
DPAC (2012) Stillwater Levels (m AHD)	1.26	1.56	2.04
Wave Runup (m) 4 % Beach/Embankment Slope	2.35	2.35	2.35
Wind Setup (m)	0.17	0.17	0.17
Summary (m AHD)	**3.78**	**4.08**	**4.56**

7.0 References

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Appendix 6 Quantitative Risk Assessment Tables

Consequence Index

Severity Level	Natural Environment	Legal/Government	Heritage	Community / Reputation/Media
(1) Insignificant	Limited damage to minimal area of low significance.	Low-level legal issue. On the spot fine. Technical non-compliance prosecution unlikely. Ongoing scrutiny/attention from regulator.	Low-level repairable damage to commonplace structures.	Low level social impacts. Public concern restricted to local complaints. Could not cause injury or disease to people.
(2) Minor	Minor effects on biological or physical environment. Minor short-medium term damage to small area of limited significance.	Minor legal issues, non-compliances and breaches of regulation. Minor prosecution or litigation possible. Significant hardship from regulator.	Minor damage to items of low cultural or heritage significance. Mostly repairable. Minor infringement of cultural heritage values.	Minor medium-term social impacts on local population. Could cause first aid injury to people. Minor, adverse local public or media attention and complaints.
(3) Moderate	Moderate effects on biological or physical environment (air, water) but not affecting ecosystem function. Moderate short-medium term widespread impacts (e.g. significant spills).	Serious breach of regulation with investigation or report to authority with prosecution or moderate fine possible. Significant difficulties in gaining future approvals.	Substantial damage to items of moderate cultural or heritage significance. Infringement of cultural heritage/ scared locations.	Ongoing social issues. Could cause injury to people, which requires medical treatment. Attention from regional media and/or heightened concern by local community. Criticism by Non-Government Organisations (NGO). Environmental credentials moderately affected.
(4) Major	Serious environmental effects with some impairment of ecosystem function. Relatively widespread medium-long term impacts.	Major breach of regulation with potential major fine and/or investigation and prosecution by authority. Major litigation. Future project approval seriously affected.	Major permanent damage to items of high cultural or heritage significance. Significant infringement and disregard of cultural heritage values.	On-going serious social issues. Could cause serious injury or disease to people. Significant adverse national media/public or NGO attention. Environment/management credentials significantly tarnished.
(5) Catastrophic	Very serious environmental effects with impairment of ecosystem function. Long term, widespread effects on significant environment (e.g. national park).	Investigation by authority with significant prosecution and fines. Very serious litigation, including class actions. Licence to operate threatened.	Total destruction of items of high cultural or heritage significance. Highly offensive infringements of cultural heritage.	Very serious widespread social impacts with potential to significantly affect the well being of the local community. Could kill or permanently disable people. Serious public or media outcry (international coverage). Damaging NGO campaign. Reputation severely tarnished. Share price may be affected.

Likelihood Index

Level	Descriptor	Description	Guideline
A	Almost Certain	Consequence is expected to occur in most circumstances.	Occurs more than once per month.
B	Likely	Consequence will probably occur in most circumstances.	Occurs once every 1 month – 1 year.
C	Occasionally	Consequence should occur at some time.	Occurs once every 1 year - 10 years.
D	Unlikely	Consequence could occur at some time.	Occurs once every 10 years – 100 years.
E	Rare	Consequence may only occur in exceptional circumstances.	Occurs less than once every 100 years.

Source: AS/NZS 4360:2004 Risk Management

Qualitative Risk Matrix

Likelihood of the Consequence	Maximum Reasonable Consequence				
	(1) Insignificant	(2) Minor	(3) Moderate	(4) Major	(5) Catastrophic
(A) Almost certain	11 High	16 High	20 Extreme	23 Extreme	25 Extreme
(B) Likely	7 Moderate	12 High	17 High	21 Extreme	24 Extreme
(C) Occasionally	4 Low	8 Moderate	13 High	18 Extreme	22 Extreme
(D) Unlikely	2 Low	5 Low	9 Moderate	14 High	19 Extreme
(E) Rare	1 Low	3 Low	6 Moderate	10 High	15 High

Source: AS/NZS 4360:2004 Risk Management

Appendix 7 Quantitative Risk Assessment

Performance Criteria E15.7.2 P1 **A new habitable building must satisfy all of the following:**	**Relevance**	**Management Options**	**Managed Risk Assessment (where relevant)**			**Further Assessment Required**
			Consequence	**Likelihood**	**Risk**	
(a) floor level of habitable rooms must be no lower than the Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1;	Proposed dwelling will be above the 2.3 Minimum Level for the Coastal Inundation Low Hazard Area in Table E15.1.		Insignificant (1)	Rare (E)	Low (1)	No
(b) risk to users of the site, adjoining or nearby land is acceptable;	The proposed dwelling expected to be above wave runup and stillwater levels.	The proposed dwelling should be elevated to at least 3.2 m AHD to be clear from wave runup.	Minor (2)	Unlikely (D)	Low (5)	No
(c) risk to adjoining or nearby property or public infrastructure is acceptable;	Proposed development will not impose any additional risk.		Insignificant (1)	Rare (E)	Low (1)	No
(d) risk to buildings and other works arising from wave run-up is adequately mitigated through siting, structural or design methods;	Wave runup expected near the dwelling but not at 3.2 m AHD.	Building should be sited on piers bedded to 0.5 m AHD into the stable foundation zone to reduce the risk of foundation undercutting.	Minor (2)	Unlikely (D)	Low (5)	No
(e) need for future remediation works is minimised;	Recommendations are within building life expectancy	As above. All structures are to be resilient to rusting	Minor (2)	Unlikely (D)	Low (5)	No
(f) access to the site will not be lost or substantially compromised by expected future sea level rise either on or off-site;	Minimum disturbance to roads and access is acceptable for the life of the building.	The dune beneath the dwelling should be retained to prevent wave runup ingress towards the dwelling access road.	Minor (2)	Unlikely (D)	Low (5)	No
(g) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works;	No requirement for coastal protection works.		Insignificant (1)	Rare (E)	Low (1)	No

Performance Criteria E15.7.2 P3 **A non-habitable building, an outbuilding or a Class 10b building under the Building Code of Australia, must satisfy all of the following:**	**Relevance**	**Management Options**	**Preliminary Risk Assessment (where relevant)**			**Further Assessment Required**
			Consequence	**Likelihood**	**Risk**	
(a) risk to users of the site, adjoining or nearby land is acceptable;	The proposed shed is located away from coastal ingress and wave runup areas for the building the design life.	May be issues of rising groundwater levels longer term. Shed should be elevated where possible.	Insignificant (1)	Rare (E)	Low (1)	No
(b) risk to adjoining or nearby property or public infrastructure is acceptable;			Insignificant (1)	Rare (E)	Low (1)	No
(c) risk to buildings and other works arising from wave run-up is adequately mitigated through siting, structural or design methods;			Insignificant (1)	Rare (E)	Low (1)	No
(d) need for future remediation works is minimised;			Insignificant (1)	Rare (E)	Low (1)	No
(e) provision of any developer contribution required pursuant to policy adopted by Council for coastal protection works,	No requirement for coastal protection works.		Insignificant (1)	Rare (E)	Low (1)	No

Performance Criteria E16.7.1 P1 **Buildings and works must satisfy all of the following:**	**Relevance**	**Management Options**	**Preliminary Risk Assessment (where relevant)**			**Further Assessment Required**
			Consequence	**Likelihood**	**Risk**	
Not increase the level of risk to the life of the users of the site or of hazard for adjoining or nearby properties or public infrastructure;	The proposed dwelling expected to be above wave runup and stillwater levels.	The proposed dwelling should be elevated to at least 3.2 m AHD to be clear from wave runup.	Minor (2)	Unlikely (D)	Low (5)	No
Erosion risk arising from wave run-up, including impact and material suitability, may be mitigated to an acceptable level through structural or design methods used to avoid damage to, or loss of, buildings or works;	No need for structural mitigation.	Setback distances are acceptable based on the design life of the building.	Insignificant (1)	Rare (E)	Low (1)	No
Erosion risk is mitigated to an acceptable level through measures to modify the hazard where these measures are designed and certified by an engineer with suitable experience in coastal, civil and/or hydraulic engineering;	No need for structural mitigation.	Building should be sited on piers bedded to 0.5 m AHD into the stable foundation zone to reduce the risk of foundation undercutting.	Minor (2)	Unlikely (D)	Low (5)	No
Need for future remediation works	Recommendations are within building life expectancy	As above. All structures are to be resilient to rusting	Minor (2)	Unlikely (D)	Low (5)	No
Health and safety of people is not placed at risk	The risks are acceptable within the design life of the proposed development.		Minor (2)	Unlikely (D)	Low (5)	No
Important natural features are adequately protected	Particularly relevant to reduce inundation.	There should be minimal disturbance to the surrounding dune systems to ensure the natural inundation barriers remain intact. Pathways to the beach should minimise erosion.	Minor (2)	Unlikely (D)	Low (5)	No
Public foreshore access is not obstructed where the managing public authority requires it to continue to exist	Not Applicable					No
Access to the site will not be lost or substantially compromised by expected future erosion whether on the proposed site or off-site	Access to the site is from the north.	Dunes around dwelling need to remain intact to retain inundation free access.	Minor (2)	Unlikely (D)	Low (5)	No
Provision of a developer contribution for required mitigation works consistent with any adopted Council Policy, prior to commencement of works.	No need for structural mitigation.		Minor (2)	Unlikely (D)	Low (5)	No
Not be located on an actively mobile landform	Sand dunes not actively mobile		Insignificant (1)	Rare (E)	Low (1)	No

Profit and Loss

Glamorgan Spring Bay Council
For the 7 months ended 31 January 2022

Account	YTD Actual	YTD Budget	Budget Var	Var %	2021/22 Budget	Notes
Trading Income						
Rate Revenue	9,834,941	9,835,703	(762)	0%	9,867,631	
Statutory Charges	497,986	422,338	75,648	18%	724,013	1
User Charges	623,950	382,767	241,183	63%	656,156	2
Grants	594,109	477,742	116,367	24%	1,617,100	3
Interest & Investment Revenue	219,488	220,086	(598)	0%	519,441	
Contributions	117,629	81,667	35,962	44%	140,000	4
Other Revenue	1,120,590	1,360,822	(240,232)	-18%	2,275,056	5
Total Trading Income	**13,008,692**	**12,781,125**	**227,567**	**2%**	**15,799,397**	
Gross Profit	**13,008,692**	**12,781,125**	**227,567**	**2%**	**15,799,397**	
Capital Grants						
Grants Commonwealth Capital - Other	371,428	871,428	(500,000)	-57%	5,717,462	
Grants Commonwealth Capital - Roads to Recovery	262,978	389,499	(126,521)	-32%	664,065	
Grants State Capital - Other	131,123	349,122	(217,999)	-62%	532,903	
Total Capital Grants	**765,529**	**1,610,049**	**(844,520)**	**-52%**	**6,914,430**	6
Other Income						
Net Gain (Loss) on Disposal of Assets	45,708	0	45,708	0%	0	
Other Income - PPRWS Reimbursement of Principal Loan	0	0	0	0%	102,609	
Total Other Income	**45,708**	**0**	**45,708**	**0%**	**102,609**	
Operating Expenses						
Employee Costs	2,730,389	2,925,416	(195,027)	-7%	4,975,840	7
Materials & Services	4,635,098	4,787,251	(152,153)	-3%	7,952,266	
Depreciation	1,673,630	1,673,630	0	0%	2,869,085	
Interest	88,168	132,475	(44,307)	-33%	227,106	8
Other Expenses	123,563	131,537	(7,974)	-6%	225,505	
Total Operating Expenses	**9,250,847**	**9,650,309**	**(399,462)**	**-4%**	**16,249,802**	
Net Profit	**3,757,845**	**3,130,816**	**627,029**	**20%**	**(450,405)**	
Total Comprehensive Result (incl Capital Income)	**4,569,081**	**4,740,865**	**(171,784)**	**-4%**	**6,566,634**	
Capital Works Program (Current Year WIP)						
Work in Progress Capital Works - Plant Internal	75,547	0	75,547	0%	0	
Work In Progress Payroll - Salaries and Wages	71,457	0	71,457	0%	0	
Work in Progress Capital Works - On Costs	33,942	0	33,942	0%	0	
Work in Progress Capital Works - Contractor Costs	1,153,043	0	1,153,043	0%	0	
Work in Progress Capital Works - Other Costs	69,707	0	69,707	0%	0	
Work in Progress Capital Works - Materials	443,566	0	443,566	0%	0	
Work in Progress Capital Works - Consultancy	74,484	0	74,484	0%	0	
Work in Progress Capital Works - Plant Hire External	7,176	0	7,176	0%	0	
Total Capital Works Program (Current Year WIP)	**1,928,924**	**0**	**1,928,924**	**0%**	**0**	

Notes:

1. Statutory charges are above forecast due to higher development / plumbing applications and food/health permit renewals.
2. User charges are up on forecast due to early collection of marina fees $50K, higher variable water charges $130K and higher miscellaneous private works $20K.
3. Grant revenue is up on forecast due to bringing forward of unspent State funding from last financial year.
4. Contributions are above forecast with Stormwater and public open space $60K above and Subdivisions $19K below.
5. Other Revenue is down on forecast due to medical centre income $260K less than expected year to date.
6. Total Capital Grants are down on forecast due to timing of Commonwealth grant payments in line with project milestones.
7. Employee costs are on track, whilst carrying some vacancies and minor natural attrition as indicated by the variance.
8. Interest expenses are down by 18% due to quarterly nature of installment repayments.

Statement of Financial Position

Glamorgan Spring Bay Council
As at 31 January 2022

Account	31 Jan 2022	30 Jun 2021
Assets		
Current Assets		
Cash & Cash Equivalents	3,547,504	3,018,850
Trade & Other Receivables	3,463,377	926,374
Other Assets	40,800	273,191
Total Current Assets	**7,051,682**	**4,218,415**
Non-current Assets		
Trade & Other Receivables	0	3,243
Investment in Water Corporation	30,419,394	30,419,394
Property, Infrastructure, Plant & Equipment	143,877,037	144,779,771
Total Non-current Assets	**174,296,431**	**175,202,408**
Total Assets	**181,348,112**	**179,420,823**
Liabilities		
Current Liabilities		
Trade & Other Payables	969,146	1,189,660
Trust Funds & Deposits	325,836	361,562
Provisions	664,932	664,932
Contract Liabilities	0	949,850
Interest bearing Loans & Borrowings	178,972	458,263
Trade & Other Payables - Debtor Suspense Account	250	0
Total Current Liabilities	**2,139,136**	**3,624,268**
Non-current Liabilities		
Provisions	69,486	69,486
Interest Bearing Loans & Borrowings	7,838,574	7,844,169
Total Non-current Liabilities	**7,908,059**	**7,913,655**
Total Liabilities	**10,047,195**	**11,537,922**
Net Assets	**171,300,917**	**167,882,901**
Equity		
Current Year Earnings	3,406,758	1,683,188
Retained Earnings	82,682,948	81,033,102
Equity - Asset Revaluation Reserve	84,672,844	84,672,844
Equity - Restricted Reserves	538,367	493,767
Total Equity	**171,300,917**	**167,882,901**

Statement of Cash Flows

Glamorgan Spring Bay Council
For the 7 months ended 31 January 2022

Account	YTD Actual	2020/21 Actual
Operating Activities		
Receipts from customers	9,391,936	11,963,619
Payments to suppliers and employees	(8,065,487)	(13,745,304)
Receipts from operating grants	594,109	1,343,056
Dividends received	207,000	207,000
Interest received	12,488	20,989
Cash receipts from other operating activities	522,598	1,149,744
Net Cash Flows from Operating Activities	**2,662,643**	**939,104**
Investing Activities		
Proceeds from sale of property, plant and equipment	48,308	217,237
Payment for property, plant and equipment	(2,011,416)	(7,759,220)
Receipts from capital grants	1,016,029	3,826,281
Other cash items from investing activities	215,234	(212,892)
Net Cash Flows from Investing Activities	**(731,845)**	**(3,928,594)**
Financing Activities		
Trust funds & deposits	(36,676)	(172,910)
Net Proceeds/(Repayment) of Loans	(274,886)	1,066,733
Other cash items from financing activities	(1,090,582)	3,422,376
Net Cash Flows from Financing Activities	**(1,402,145)**	**4,316,199**
Net Cash Flows	**528,654**	**1,326,709**
Cash and Cash Equivalents		
Cash and cash equivalents at beginning of period	2,951,806	1,625,097
Cash and cash equivalents at end of period	3,480,460	2,951,806
Net change in cash for period	**528,654**	**1,326,709**

Capital Works Detail

Glamorgan Spring Bay Council

For the period 1 July 2021 to 31 January 2022

New Capital	Actual YTD	Adj Budget	2021/22 Budget	Government Funding	Council Funding	Project Progress	Details	Government Funding
Roads, Footpaths, Kerbs								
Freycinet Drive - Kerb at Kayak Rental to stop flooding	32,695	32,695	30,000	32,695		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Strip Rd Little Swanport - concrete overlay to hardstand floodway	4,580	30,000	30,000	30,000		Design progressing	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
R2R - Nugent Rd Seal	-		50,000			Complete		
Bicheno walkway	285,787	343,790	403,000	403,000		99% complete	Carried Forward from 2020/21	Drought Relief
DRG Swanwick Rd Footpath	-					Complete stage 1		
CDG Dolphin Sands Road shared pathway	-					Retention paid		
Triabunna Road Realignment re Cenotaph/RSL corner	21,043	315,000	115,000	315,000		Tenders closed - evaluating.	Carried Forward from 2020/21	Drought Relief
Swansea Main Street Paving	54,117	932,309	1,000,000	1,000,000		Design progressing		Fed Grant Funding
Total Roads, Footpaths, Kerbs	**398,222**	**1,653,794**	**1,628,000**	**1,780,695**	**-**			
Parks, Reserves, Walking Tracks, Cemeteries								
Swansea Cricket Practice Nets	-							Community Infrastructure Fund - Round 2
Swansea Boat Trailer Parking	168,292	254,000	450,000	500,000		Complete	Carried Forward from 2020/21	DPIPWE Funds
Bicheno Triangle	30,274	557,696	580,000	600,000		Design continuing		Fed Grant Fund
Bicheno Gulch	59,230	1,420,655	1,490,000	1,500,000		Design continuing		Fed Grant Fund
Coles Bay Foreshore	51,490	932,147	950,000	1,000,000		Design continuing		Fed Grant Fund
Jetty Rd Bicheno - Beach Access, timber walkway installation	13,771	10,500	10,500	10,500		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Buckland Walk - rehabilitation	-	35,000	60,000	-	35,000		Carried Forward from 2020/21	
Total Parks, Reserves, Walking Tracks, Cemeteries	**323,058**	**3,209,998**	**3,540,500**	**3,610,500**	**35,000**			
Stormwater & Drainage								
Freycinet Drive CB Rock Line drain and culvert	18,728	30,000			30,000	complete	Carried Forward from 2020/21	
Triabunna Yacht club main install	24,521	15,000			25,000	Complete	Carried Forward from 2020/21	
Bicheno Esplanade install new mains to 3 houses	-	25,000			15,000		Carried Forward from 2020/21	
49 Rheban Rd to West Shelley Beach instal	-	70,000			70,000	commenced	Carried Forward from 2020/21	
Holkham Crt Flood Mitigation	27,860	258,500	265,000		125,000	Culvert Design Recieved	Carried Forward from 2020/21	
Total Stormwater & Drainage	**71,108**	**398,500**	**265,000**	**-**	**265,000**			
Plant & Equipment								
Crane Gantry Swansea - safe water tank removal	6,723	22,765	20,000	-	22,765	complete		
Total Plant & Equipment	**6,723**	**22,765**	**20,000**	**-**	**22,765**			
Total New Capital	**799,110**	**5,285,057**	**5,453,500**	**5,391,195**	**322,765**			

Renewal of Assets	Actual YTD	2021/22 Budget	2021/22 Budget	Government Funding	Council Funding	Project Progress	Details	Government Funding
Roads, Footpaths, Kerbs								
RTR - RSPG Rheban Rd Resheeting / realignment for bridge	-	100,000	100,000	50,000	50,000	complete	Carried Forward from 2020/21	RTR
Resheet - Old Coach Rd 3km	59,481	50,200	50,000		50,200	complete		
Resheet - Sally Peak Rd 1km	16,053	16,800	17,000		16,800	Complete		
Resheet - Sand River Rd 1km	15,000	16,800	17,000		16,800	Complete		
Resheet - Seaford Rd 1km	17,450	33,470	34,000		33,470	complete		
Resheet - Strip Rd 2km	-	8,222	34,000		8,222			
Resheet - Bresnehans Rd 0.5km	642	17,000	8,500		17,000	commenced		
Resheet - Medora St Pontypool 1km	-	33,478	17,000		33,478			
Resheet Nugent Rd	17,216	17,216	16,000		17,216	Complete		
Reseal	5,066	443,300	443,300		443,300	commenced		
Resheet - Mt Murray Rd	29,775	160,174	-		160,174	complete		
Emergency repairs Wielangta Rd	-	106,000				barrier hire		
Community Infrastructure Fund - Round 3	-	35,000	221,174	221,174		awaiting confirmation of projects		Community Infrastructure Fund - Round 3
Redesign and relocation of the Triabunna School crossing	4,880	31,000	31,000	31,000		consulting school on design		Community Infrastructure Fund - Round 3
Design	10,980	29,200	29,200		29,200			
Contingency	-	40,000	40,000		40,000	council contribution west shelly		
Total Roads, Footpaths, Kerbs	**176,542**	**1,137,860**	**1,058,174**	**302,174**	**915,860**			
Parks, Reserves, Walking Tracks, Cemeteries								
Spring Bay Recreation Ground Upgrade	-	150,000	-	150,000			New Grant	State Government
Bicheno BMX track refurbishment	18,080	20,000	20,000	20,000		complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Total Parks, Reserves, Walking Tracks, Cemeteries	**18,080**	**170,000**	**20,000**	**170,000**	**-**			
Stormwater, Drainage								
Alma Rd and Fieldwick Lane - Rockline drain and culvert improvements	90,452	125,000	125,000	125,000		90% complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Stormwater management planning, investigation & design	38,601	85,000	100,000		85,000	continued	Carried Forward from 2020/21	
39 West Shelley Beach Orford Main Upgrade	78,050	50,226	-			Materials procured	Carried Forward from 2020/21	
Stormwater and drainage to be allocated	-		77,000		-		Carried Forward from 2020/21	
Total Stormwater, Drainage	**207,103**	**260,226**	**302,000**	**125,000**	**85,000**			
Buildings & Facilities								
RSL Cenotapth - new memorial c/fw project	-	18,442	10,000		10,000	Waiting on streetworks	Carried Forward from 2020/21	
Triabunna Medical Centre - Car Park reseal and line mark	25,658	45,000	45,000	45,000		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Bicheno Medical Centre - Car Park reseal and line mark	25,596	52,305	55,000	55,000		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Triabunna Marina - improve public facilities and shelters	40,016	40,863	40,863	40,863		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Triabunna Marina Area Shelter	-	15,000				Complete		Community Infrastructure Fund - Round 2
Coles Bay Tennis Courts - Basketball hoop installation	1,365	1,910	3,000	3,000		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Buckland Community Hall - ramp access	5,564	42,845	45,000	45,000		In progress	Carried Forward from 2020/21	Community Infrastructure Fund
Buckland Community Hall - stairs	51,230	51,230	55,000	55,000		In progress	Carried Forward from 2020/21	Drought Relief
Bicheno Medical Centre - Refurb Treatment Room	25,000	25,000	25,000	25,000		In progress	Carried Forward from 2020/21	Community Infrastructure Fund
Swansea Courthouse Drainage Works	-	10,000	10,000	25,000		Complete	Carried Forward from 2020/21	Community Infrastructure Fund
Swansea Child Care Fencing	1,170	15,260	-			Complete		Community Infrastructure Fund - Round 2
Swansea Community Hall - Toilet Refurbishment	53,705	53,705				Complete	Carried Forward from 2020/21	Community Infrastructure Fund
Swansea SES CCTV	1,163	1,718				Complete	Carried Forward from 2020/21	Community Infrastructure Fund
Install Solar Panels on the Swansea Community Hub building	-	636					Carried Forward from 2020/21	Men's Shed grant fund
Swansea Cricket Practice Nets	-	35,000					Community Infrastructure Fund - Rou	Community Infrastructure Fund - Round 3
Swansea Courthouse - refurbish toilet and install disabled/unisex toilet	-	75,000	60,000	60,000		Concept		Community Infrastructure Fund - Round 3
Coles Bay Community Hall - Replacement of Annexe, Medical Room, Kitchen and Library	1,450	180,000	180,000	180,000		Design progressing		Community Infrastructure Fund - Round 3
Spring Beach Toilet Refurbishment	-	65,000	65,000	65,000		Sched 2022		Community Infrastructure Fund - Round 3
Total Buildings & Facilities	**231,916**	**728,914**	**593,863**	**598,863**	**10,000**			

Marine Infrastructure	Actual YTD	2021/22 Budget	2021/22 Budget	Government Funding	Council Funding	Project Progress	Details	Government Funding
Pylon Replacement - Marina	49,875	100,000	100,000		100,000	In progress		
Saltworks Toilet	-	100,000	245,000	245,000		Design progressing		Community Infrastructure Fund - Round 3
Saltworks Jetty Upgrade	-	99,123	100,000	100,000		Design progressing	Carried Forward from 2020/21	State Grant
Total Marine Infrastructure	**49,875**	**299,123**	**445,000**	**345,000**	**100,000**			
Bridges, Culverts								
Orford Bridge Replacement	-					revegation complete	Contract Complete. Rehabilitation to finalise project	$1.02m project started May 2019. Fully Federal Grant funded
Holkham Crt Culvert	-	56,087	50,000	56,087		Draft Design received	Carried Forward from 2020/21	Community Infrastructure Fund
RTR - EMF Rheban Rd Griffith River Bridge	322,393	277,526	280,000	300,000		bridge 99%	Carried Forward from 2020/21	RTR 25% EMF75%
Total Bridges, Culverts	**322,393**	**333,613**	**330,000**	**356,087**	**-**			
Plant & Equipment								
IT Computer Equipment	17,337	30,000	30,000		30,000			
Medical Equipment	-	20,000	20,000		20,000			
Misc. Plant & equipment replacements/contingency	-	13,062	-		13,062			
Replace vehicle loading crane	18,325	16,659	-		16,659			
Replace Ute x 2 (2007/2008)	55,365	58,009	57,000		58,009	complete		
Replace Mayor Vehicle (2016)	-	-	37,000		-			
Replace Tipper Truck (2014)	-	76,675	80,000		76,675	complete		
Replace Medium Truck (2014)	-	93,006	80,000		93,006	Procurement commenced		
Replace Toro Groundmaster (2014)	27,995	25,450	40,000		25,450	complete		
Replace Tandem Trailer	4,883	4,883	6,000		4,883	complete		
Total Plant & Equipment	**123,905**	**337,744**	**350,000**	**-**	**337,744**			
Total Renewal Capital	**1,129,814**	**3,267,480**	**3,099,037**	**1,897,124**	**1,448,604**			
Total Capital Works	**1,928,924**	**8,552,537**	**8,552,537**	**7,288,319**	**1,771,369**			

GLAMORGAN SPRING BAY COUNCIL

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COMMUNITY SMALL GRANTS APPLICATION FORM

Name of applicant	Eastcoast Regional Development Organisation (ERDO)
Postal address	PO Box 96 Triabunna 7190
Contact person	Jane Teniswood
Role if group applying	Author of Career Booklet & Project Manager of the Stepping into the Future EXPO
Contact number	[redacted]
Email address	[redacted]
Is your organisation an incorporated body?	☑ Yes ☐ No

Project title and brief description (If insufficient space, please attach additional sheet)

Explore the Possibilities- Career and Employment Opportunities in Tasmania-

From the experience of running five 'Stepping into the Future' EXPO's at The Village, ERDO has identified a need to print a booklet to help individuals,and organisations, negotiate a way through an overload of information, both on the internet and in written form. The booklet will list organisations that provide a human voice at the end of the phone and will be based on information cards produced by ERDO in the past. Through Salvation Army, RAW and other agencies 20,000 of the 'we'can help' booklets have been distributed across Tasmania in the last 12 months and Salvation Army are looking to do a reprint.

Latest research indicates many will experience up to five career changes and 17 different employers in their working lives. Educational institutions and training bodies are in a constant state of change, and often unable to keep up with the needs of employers, so it is important individuals of all ages are empowered to explore the opportunities by themselves and know how to connect to the world of available opportunities and support. Through COVID it has emerged that up to 40% of people living in regional areas, have no access to the internet or cannot afford access to either their computers or their phones.

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Outline intended outcomes of the project (for example, benefits of the project to the community, support from any other groups or organisations.

Target Group

- students in schools considering career pathways
- teachers and parents mentoring young people in navigating available information
- those looking for work for the first time
- those looking for new employment /career change
- self –employment opportunities
- prisoners re-entering community

Distribution

Career EXPO's

Schools

Training Organisations : UTAS, TasTAFE, Private Providers

Support Agencies –Employment Hubs, Employment Agencies, Skill Trading Centres, Making Apprenticeships Easy, MEGT Apprenticeship, Councils, Eastcoast & Southern Networks

Launch of Booklet

The career booklet for Tasmanians will be launched at The Village at the **'Stepping into the Future'** Twilight EXPO on March 31st between 5pm– 7pm.

Feedback from the October 2021 the Triabunna School Principal, Jamie Harwood,

"I just wanted to say a huge well done for the career expo. So far I have only had positive feedback from staff and students. One of the teachers said this morning they hadn't been that keen on taking the kids over as they hadn't thought it would be engaging for the kids but ended up wanting to stay longer as the kids were so engaged and keen. Student feedback has also been really positive every student I've spoken to has been able to say something about their experience. "

This EXPO will target the broader community as well as students who can come by themselves or with families. The October 2021 EXPO, and Triabunna, received extensive publicity from ABC with Leon Compton setting up a broadcast outside IGA and Mel Bush interviewing Jane Teniswood on a night program.

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Funding sought from Council	$1,000.00
Funding to be contributed by you or your organization	$500.00
Funding to be contributed from other organisations (Provide details below of confirmed or anticipated contributions Confimed funding of $1,000.00 has been received through Local Jobs Program (Australian Government Initiative and additional $1,000.00 has been received to promote Twilight EXPO (contact Stacey Joseph) To date sponsorship, varying, between $500.00 – $1,000.00, has been received from two organisations, with four other organisations considering sponsorship.	$1,000.00
Total Project Expenses	$5,500.00

Signed	[redacted]
Name (Please print)	Jane Teniswood
Date	7/02/2022
*Details of other contributors:	Attached is a quote from Impress for print run of 10,000 and 20,000 The quantity printed will depend on the number of sponsors.

Attention: Jane
Client: Jane Teniswood
Date: 07/02/2022

Item: Careers in Tasmania – Booklet
Pages: 16
Size: 105mm x 148mm
Printing: Print full colour throughout
Stock: Cover – 200gsm Text – 115gsm Satin
Finishing: Saddle Stitch
Delivery: 1 point in Tasmania

Prepress: From supplied files
2.5 hours prepare print files $180.00+ GST

Print Qty:		
	10,000	$2994.00 + GST
	20,000	$4896.00 + GST

Artwork: File supplied to specifications
This quote is subject to sighting final artwork and to our conditions of supply
Delivery: Turnaround time is 7/10 working days from receiving artwork
Payment: 30 Days
This quote is current for 60 days from the above date

We appreciate the opportunity to quote, please feel free to contact me at any time

Regards Margie

Impress Print
46 Don Road Devonport TASMANIA 7310
Phone: 03 6424 5900
info@impressprint.com.au
www.impressprint.com.au

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COMMUNITY SMALL GRANTS PROGRAM APPLICATION PACKAGE

A funding scheme initiated by the Glamorgan Spring Bay Council to assist community development in the municipality.

GUIDELINES FOR APPLICANTS

The Glamorgan Spring Bay Council [redacted] provides small grants to individuals and community organisations and groups to assist them to undertake programs and activities within the Glamorgan Spring Bay municipal area.

Council receives requests for more funding than is available and consequently funds under the programs are limited. The majority of grants will be restricted to no more than $1,000, however, in certain circumstances, Council may consider increasing the allocation.

There is no specific funding period. Applications for funding assistance shall be considered throughout the year until such time as the available funds have been exhausted.

ELIGIBILITY

- Applications must be from not-for-profit organisations as defined as follows:
  - Its main operating purpose is other than to provide goods and services for profit.
  - Other than in the case of winding up, no member/owner has the right to surpluses of the entity.
  - That entity does not have the right to transfer ownership to members/owners.

- Any resident of the Glamorgan Spring Bay municipal area who has been selected on merit to participate or compete in any event or project of state, national or international significance may seek funding assistance.

- Projects should aim to:
  - Address relevant community issues of significance.
  - Be initiated within the community and actively involve local people.
  - Improve access and encourage wider use of facilities.

COUNCIL PROCESS REQUIREMENTS

- Application:
  - Complete the Community Small Grants Application form.
  - Provide a plan or sketch of the proposed project (if applicable).
  - Provide a copy of the project budget and evidence of basis of costs.

- Successful applicants after project completion:
  - Complete the Community Small Grants Acquittal form.
  - Provide a brief written report of the success or otherwise of the project prior to the conclusion of the financial year, together with a photo (if applicable).
  - Provide most recent financial statement or evidence of expenditure.

For further information, please contact the Community & Communications Officer
Phone: (03) 6256 4777
Email: community@freycinet.tas.gov.au
PO Box 6, Triabunna 7190

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COMMUNITY SMALL GRANTS APPLICATION FORM

Name of applicant	Amos Family BiCentenary Committee Inc
Postal address	82 Glen Gala Rd Cranbrook Tas 7190
Contact person	Jennifer Amos
Role if group applying	Board member
Contact number	[redacted]
Email address	
Is your organisation an incorporated body?	☑ Yes ☐ No

Project title and brief description (If insufficient space, please attach additional sheet)

2 x Interpretation panels to be situated in the grounds of the Gala Kirk Uniting Church, Cranbrook. These panels will be an educational guide to an understanding of the Scottish cairn and surrounding landscape which will be unveiled at the Amos Family Bicentenary 19/20 March 2022. A project presented to & approved by Council. They will be manufactured by a locally connected company 'Red Arrow' (Tim Williams of The Springs Road Swansea) from quality, durable, Corten materials. It is anticipated that the cairn with the interpretation panels at Gala Kirk, along with its cemetery, which are all open to the public, will provide additional interest to the already regularly visited heritage site by, tourists, local travellers & school children.

Plan of project and quote atttached.

Outline intended outcomes of the project (for example, benefits of the project to the community, support from any other groups or organisations.

Increase awareness of local history in the Glamorgan Spring Bay Municipal district which includes:

- An understanding of the First Nations Aboriginal people who lived in the local area
- A brief history of the Amos family, first European settlers to the district who contributed greatly to the development of the local community, its organisations and infrastructure, including the first municipal council of Glamorgan. The Amos family has given active community service from its arrival in 1821 until the present time including a number of former Wardens & Councillors of Glamorgan.
- A brief explanation of the relevance of the cairn and its surrounding landscape in relation to the pre & post colonial periods.

Funding sought from Council	$1000
Funding to be contributed by you or your organisation	$1904
Funding to be contributed from other organisations (Provide details below of confirmed or anticipated contributions *)	$
Total Project Expenses	$2904

Signed	[redacted]
Name (Please print)	
Date	12/01/2000
*Details of other contributors:	Rod Amos: Vice-Chairperson of the Amos Family BiC Committee Inc & designer Jane Amos: Board member Mark Lawrence: landscaper/stone-mason Tim Williams; Red Arrow Di Bricknell: Diartist

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COMMUNITY SMALL GRANT ACQUITTAL FORM
(To be filled out by successful recipient of Grant Funds)

Name of successful applicant	
Postal address	
Contact person	
Role if group applying	
Contact number	
Email address	
Is your organisation an incorporated body?	☑ Yes ☐ No

Project title and brief description of how the project achieved the outcomes intended.

INCOME	
Funds received from Council	$
Funding from your organisation	$
Funding from other organisations	$
TOTAL funding received	$
EXPENDITURE List expenditure receipts	
	$
	$
	$
	$
	$
	$
TOTAL expenditure	$
Total Funding less Total Expenditure	$

Signed by recipient	
Date signed	

GLAMORGAN SPRING BAY COUNCIL

Council Office: 9 Melbourne Street, Triabunna
PO Box 6, Triabunna, Tas, 7190
Telephone: (03) 6256 4777
Fax: (03) 6256 4774
Email: admin@freycinet.tas.gov.au
Website: www.gsbc.tas.gov.au

Enquiries: Planning Department
Planning ref: DA 2019 / 374
Property file: 2-3300-330

27 March 2020

Amos Bicentennial Committee
PO Box 95
BATTERY POINT TAS 7004

Dear Sir/Madam

DEVELOPMENT APPLICATION - Memorial
Amos Bicentennial Committee
RA14876 Tasman Highway Swansea

I am pleased to advise that the above application has been approved.

A copy of the planning permit and approved plans is enclosed.

This letter is to serve notice to you as applicant of this decision pursuant to section 57(7) or 58(3) of the *Land Use Planning And Approvals Act 1993* (LUPAA).

Pursuant to section 61 of LUPAA, the applicant may appeal against this decision to the Resource Management and Planning Appeal Tribunal (RMPAT).

Any appeal must be instituted within fourteen days after the day on which this notice was served.

To lodge an appeal or to obtain any information relating to the lodgment or conduct of an appeal please contact RMPAT on (03) 6165 6794, rmpat@justice.tas.gov.au or GPO Box 2036, Hobart TAS 7001. The RMPAT office is located at Level 6, 144 Macquarie Street, Hobart and is open from 8:45 am to 5:00 pm, Monday through to Friday, excluding public holidays. Please note the email size limit for RMPAT is 10 MB.

Yours sincerely

Ian Pearce
Acting General Manager

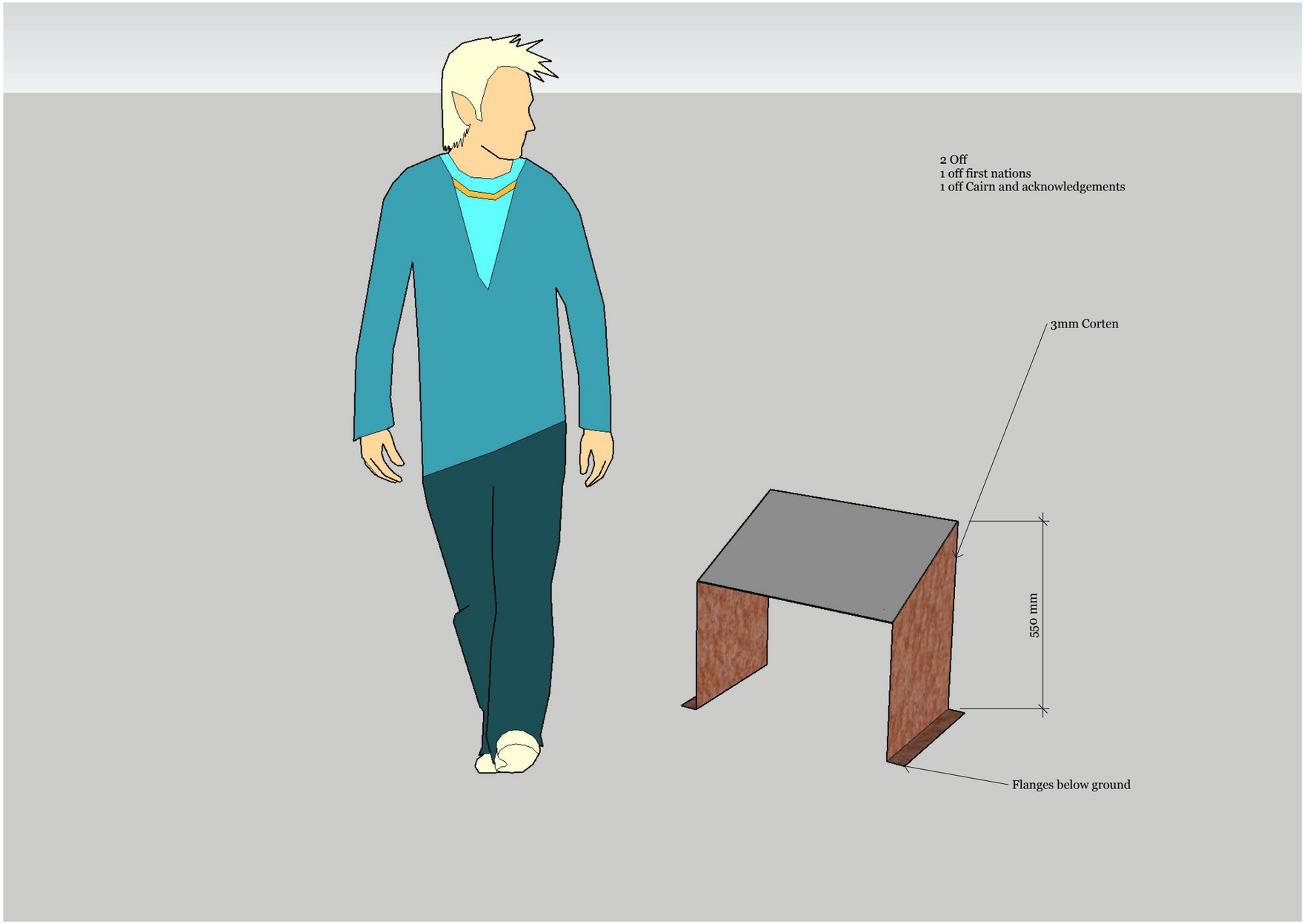
Red Arrow
20 Maxwells Rd
Cambridge
ph 6248 5413

5th January 2022

Estimate # 2

Amos Family interpretation

Items	**Cost**
Graphic design (Ingraphic detail) see below	$960
As per my usual work practice, the costing includes three drafts of the artwork: an initial draft for approval of the concept, a second draft for approval of any changes to the content, and a final draft for approval of the print files. Any changes beyond these three drafts will be considered additional work, to be charged at my standard rate of $120 + GST per hour.	
One off Corten Timeline sign Aprox 1200 x 350	$1,200
One off corten Low to Ground (LTG) sign aprox 320 x 300	$480
All sign panels are 3mm marine grade aluminium with a high res PVC print and a UV resistant clear laminate. 316 Stainless trubolts supplied Includes delivery to site.	
Total	**$2,640**
GST	**$264**
Grand Total	**$2,904**



Red Arrow
20 Maxwells Rd
Cambridge Tasmania
7170

03 6248 5413
www.redarrow.com.au

Client
Amos Family

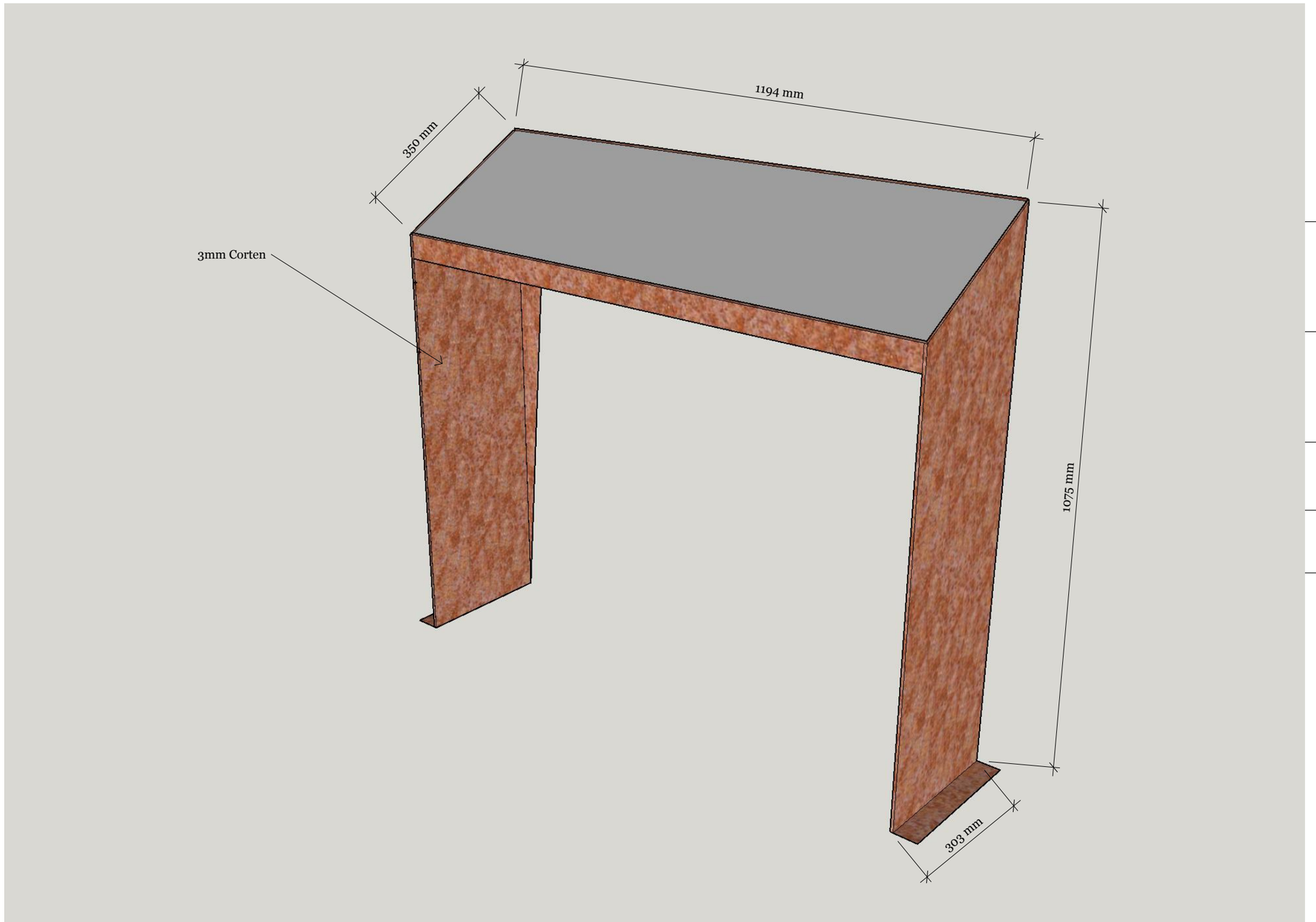
Project
Cranbrook
Cairn

Drawn
Tim Williams

Date
13th December
2021

Description

LTG corten sign frame
Dimension are
approximate



Red Arrow
20 Maxwells Rd
Cambridge Tasmania
7170

03 6248 5413
www.redarrow.com.au

Client
Amos Family

Project
Cranbrook
Cairn

Drawn
Tim Williams

Date
13th December
2021

Description

Corten timeline
frame


redarrow
projects
about
Whole of site signage,
Arthur Historic Site
Previous project | Next project
Proje
Robert Ashford

The Amos Family

Brothers Adam and John Amos arrived in Hobart Town aboard the ship *Emerald* in March 1821. Originally from the Scottish borders, the Amos family spent several years in Pembrokeshire, Wales where Adam rented a farm from George Meredith and John used his skills as a millwright to earn his living. George Meredith and Joseph Archer had chartered the *Emerald* and the Amos family was encouraged to join them on their journey to Van Diemen's Land.

After a reconnaissance trip to the East Coast of Tasmania, Adam and John and their families finally settled on land along the Swan River at Cranbrook and after an initial grant of 1700 acres, further grants over the next decade brought their holding to around 6,400 acres.

Adam named his property Glen Gala and on his death in 1845, the property was divided between his three sons – James (Gala Mill), John (Glen Heriot) and Adam (Glen Gala). Further grants and land acquisitions over the years included Spring Vale, Brook Lodge and Melrose.

John named his property Cranbrook and his descendants still farm the family properties today. John built a mill at Glen Gala that was superseded by the Gala Mill built in 1842 and operated by his nephew James (James the Miller). John also built the Riversdale Mill south of Cranbrook.

John's son James and his wife Mary Ann built Craigie Knowe as their residence in the 1840s.

James Amos of Cranbrook and John Amos of Glen Heriot were elected to the Glamorgan Municipal Council which was established in 1860. It was the first rural municipality founded in Australia.

Map of Glamorgan.

First Nations People of the East Coast

The Paredareme (*Paytirami*) nation consisted of 10 bands totalling approximately 700-800 people, including the Loontitetermairrelehoinner (*Luntaytamiriliyuyna*), making it the largest nation in lutruwita (Tasmania). The boundary extended from St Patricks Head in the north to the Tasman Peninsula in the south. Bands migrated inland for the summer to hunt native animals returning to the coast for seafood and birdlife Moulting Lagoon and Schouten Island held plentiful reserves of these.

Tongerlongeter (*Tukalunginta*) was a great warrior and leader of the Paredareme (*Paytirami*) in the 1820s and 30s. He is renowned for his effective frontier resistance against the European invasion during the period of the Black Wars. After agreeing to an armistice he was exiled to Wybalenna (Flinders Island) where he died in 1837.

Of local interest is the Aboriginal Lookout stone on Craigie Knowe, which overlooks the district. Aboriginal middens can be found along the coast.

'In *palawa kani,* the language of Tasmanian Aborigines'

Cairn symbolism

The vertical structure of the cairn in a horizontal landscape denotes the arrival of Scots in a new land and setting down of roots.

The cairn sits within a broader landscape, and symbolises two different concepts of land "stewardship". Traditional owners freely traversed their tribal landscape. The Europeans settled on distinct parcels of land.

The path and landscaping leading to the cairn represents the arrival of European settlement. The cairn symbolises the establishment of the Amos family in the district.

As it rises, it represents the family expanding in the colony. The path leading away from the cairn signifies the process of acclimatisation, assimilation and dispersal within the new country. Once Scots-then Tasmanians-and now Australians.

Acknowledgements

Cairn Design/Project Manager:	Rod Amos
Stone Artisan:	Mark Lawrence/Doug Poole
Consultant Architect:	Leigh Woolley
Project Officers:	David Amos (Cranbrook) Bob Greenhill (Glen Gala)
Interpretation:	Jane, Jennie and Julian Amos


GLAMORGAN
SOMERSET
MONMOUTH
PEMBROKE
FINGAL
SEYMOUR
AVOCA
CLEVELAND
BEVERLEY
LLEWELLIN
St. CUTHBERTS
LEIPSIC
BICHENO
LLANDAFF
CAMPBELL TOWN
MAITLAND
GRINDELWALD
AUBURN
Great Swan Port
SWANSEA
TUNBRIDGE
NEWSTEAD
EAST GRINSTEAD
CORNWALLIS
WALTON
OATLANDS
ANDOVER
Freycinet
Peninsula
Geographe Strait
Schouten I.
PONTYPOOL
SWANSTON
BOTHWELL
APSLEY
KEMPTON
ELDERSLIE
TRIABUNNA
ORFORD
BUCKLAND
Maria I.
PONTVILLE
BRIGHTON
RICHMOND
NEW NORFOLK
RISDON
NEWTOWN
LEWISHAM
CARLTON
Marion B.
40
50
42
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20
30
40
50

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COMMUNITY SMALL GRANTS APPLICATION FORM

Name of applicant	Glamorgan Suicide Awareness Network
Postal address	80 Glen Gala Rd Cranbrook 7190
Contact person	Sherry King Treasurer
Role if group applying	Treasurer
Contact number	[redacted]
Email address	
Is your organisation an incorporated body?	☑ Yes ☐ No

Project title and brief description (If insufficient space, please attach additional sheet)

Mental Health First Aide Course.
GSAN are promoting a MHFA Course for the Glamorgan Shire, to bring greater awareness to the Community of Suicide and Mental Health Issues. The course is for 6 Comittee members and 9 ambulance/Community Volunteers. We are requesting $1000 to go toward the costs of the course.

Outline intended outcomes of the project (for example, benefits of the project to the community, support from any other groups or organisations.

The MHFA Course is critical for First Responders. The outcome for the other participants is an increased awarness of community members who are at risk of suicide, also family members of victims who would need care and support. Room Hire and Catering would be supplied by GSAN.

Funding sought from Council	$ 1000.00
Funding to be contributed by you or your organisation	$ 2080.00
Funding to be contributed from other organisations (Provide details below of confirmed or anticipated contributions *)	$ 0
Total Project Expenses	$ 3080.00

Signed	[redacted]
Name (Please print)	Sherry King
Date	27/1/22
*Details of other contributors:	

RAW WORKPLACE Alive & Well

Glamorgan Suicide Awareness Network
Sherry King (Treasurer)
80 Glen Gala Rd
Cranbrook
TAS 7190

By Email: glamorganspn@gmail.com

Dear Sherry,

RE: Quotation

Thank you for the opportunity to quote Mental Health First Aid training for the Glamorgan Suicide Awareness Network. As discussed you will arrange venue and catering for the training, if you have any issues with that, please let us know.

Our only requirements if you have your own facilities to conduct the training is that the room is large enough to meet any Covid restrictions and can use a projector on a screen/wall that everyone can see when seated.

If you have any questions, please contact us to discuss them.

Item Number	Description	Costs
MHFA-SAI	Mental Health First Aid Accredited Course and resources	$4,000.00
	Not for Profit 30% Discount	$1,200.00
	Sub Total	$2,800.00
	GST Included	$280.00
	Total Cost	$3,080.00

Mental health first aid is the help given to someone developing a mental health problem or in a mental health crisis. The first aid is given until appropriate professional treatment is received or until the crisis resolves.

The Standard Mental Health First Aid (MHFA) course is an accredited course based on the international MHFA Guidelines and to date 2 million mental health first aiders have been trained in 23 countries.

www.rawtas.com.au
ABN: 65 712 033 425
ADDRESS: 73 High Street, Oatlands, Tas, 7130
PHONE: (03) 6254 1092

RAW RURAL Alive & Well
RAW Workplace is a social enterprise initiative from Rural Alive & Well

RAW WORKPLACE Alive & Well

The Program has been well evaluated and found to be effective in improving mental health literacy, reducing stigma, and increasing helping behaviours.
These evaluations were conducted in workplaces and community settings.
Further information and links to MHFA related evaluations visit www.mhfa.com.au Taking a course will provide you with the tools to help someone who is experiencing:

- Panic attacks
- Suicidal thoughts and behaviours
- Non suicidal self-injury
- Acute psychosis (such as hallucinations or delusions)
- Overdose/withdrawal from alcohol or drug use
- Exposure to a traumatic event

You will be given time to hone your skills through role-plays, scenarios and activities making it easier to use them in real-life.

Course duration: 12 hours over 2 days.

Yours sincerely

Ashley Steele

Date: 29.11.2021

www.rawtas.com.au
ABN: 65 712 033 425
ADDRESS: 73 High Street, Oatlands, Tas, 7130
PHONE: (03) 6254 1092

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GLAMORGAN SPRING BAY COUNCIL

GLAMORGAN SPRING BAY COUNCIL

Guidelines for Section 24 Special Committees of Council

Updated: 27th October 2020, Version 7 (Appendix A)

Decision No: 337/20

GLAMORGAN SPRING BAY COUNCIL

Table of Contents

GLAMORGAN SPRING BAY COUNCIL

GLAMORGAN SPRING BAY COUNCIL

1 Background

The *Local Government Act 1993* ("the Act") provides Councils with the power to establish Section 24 Special Committees of Council to assist Council to carry out its duties. Council establishes Section 24 Committees to assist with the management of facilities and to carry out other functions on behalf of the Council. Section 24 Committees discuss issues, ideas, solutions and the progression of ideas with possible recommendations to Council, which is responsible for any final decisions. Please see appendix A for current list of Section 24 Special Committees of Glamorgan Spring Bay Council.

Section 24 Committees provide advice and recommendations to Council on a wide range of issues, including, but not limited to:

- Community needs
- Community concerns/ideas
- Maintenance requirements
- Facility improvements
- Safety issues
- Health programs
- Funding/grant opportunities
- Any matter that Council refers to a Section 24 Committee
- Any matter a Section 24 Committee deems is the business of Council and relates to the function of that Committee

2 Roles

2.1 Committee Members

The primary duty of a committee member is to assist with developing the best possible solutions for Council's infrastructure, community services, user needs and programs by providing advice in respect to current and future requirements.

Committee members have an important role to play. They have a responsibility to actively contribute to meetings providing Council with additional perspectives, ideas and opinions.

Any Committee member can be elected as chairperson, deputy chairperson, secretary and treasurer.

2.2 Councillor/s

The role of the Councillor/s on a Section 24 Committee is to act on behalf of Council and in the best interests of the residents and ratepayers of Glamorgan Spring Bay. Councillors communicate between the elected members of Council and the Committee. Councillors need to be cognisant of the Local Government Act to ensure that all legislative requirements are met.

GLAMORGAN SPRING BAY COUNCIL

No more than two Councillors will be elected to a Section 24 Committee as Council representatives. However, any elected member may apply to be included as a Committee member in their own right, as an individual or as a representative of a group.

Local Government Elections are held every four (4) years in October, after which new Councillor representatives are elected to all committees at the first Council Meeting (or a Special Council Meeting) held after the declaration of the polls. However, at the end of each two (2) year period Councillor representation can be reviewed.

2.3 Council Employees

A Council Officer may be assigned to a committee to provide guidance to that committee on matters relating to operational elements, policy, historic information etc. Council employees are not members of the committee per se and therefore have no voting rights. Council may provide administrative support to committees that require it (e.g. NRM Committee, Marine Infrastructure Committee).

3 Responsibilities

3.1 Committee Members

It is the responsibility of a committee member to:

- Understand the aims and objectives, roles and responsibilities of the committee;
- Attend committee meetings or, if absence from a meeting is unavoidable, to inform the committee Chair in advance of their inability to attend;
- Arrive at meetings well prepared with respect to agenda issues;
- Participate fully through discussion of issues and general business;
- Undertake tasks requested by the Chair and/or the responsible Council Officer;
- Be objective when making decisions and to take account of all views;
- Not use abusive or threatening language during committee meetings;
- Debate agenda items in a constructive and informative manner;
- Observe confidentiality and discretion in dealing with the business and outcomes of the Committee;
- Accurately portray decisions passed by the committee;
- Declare interests and avoid any potential conflict of interest in committee affairs (see Item 4.15 in this document).

3.2 Chair

The Chairperson is responsible for adhering to the agenda, while encouraging full and balanced participation by all members. Where the Chair is not available, members present will appoint the Chair for the meeting.

GLAMORGAN SPRING BAY COUNCIL

The Chairperson's overall responsibilities are to:

- Open, facilitate and close meetings;
- Welcome members and thank people for attending and for any work done outside the meetings;
- Ensure meetings conclude at the scheduled finishing time or before;
- Keep the discussion focused on the business of the meeting and making sure that the important things get done first and other things are held over, if necessary.
- Liaise between the Committee and outside bodies;
- Act as a representative of the Committee if this is needed, making sure to express only the view of the Committee, not personal ones;
- Ensure there is a quorum present;
- Encourage full and balanced participation/debate by all the members and that committee members act appropriately and respectfully towards others;
- Be sensitive about any differences of opinion that arise and try to help resolve these; to ensure that the Committee can continue to work effectively together;
- Clarify points that have been made and sum-up discussions to bring them to a close if necessary, to ensure everyone understands the decisions being considered;
- Coordinate the actions to be progressed so that they are shared as equally as possible and still get completed;
- Adjourn the meeting if necessary;
- Control the voting process;
- Sign the Minutes;
- Inform the Council of any resignations of Committee members;
- Declare and enforce closed session requirements when confidential matters are to be discussed;
- Ensure all views are submitted to Council when a consensus cannot be reached on an issue.

3.3 Secretary or Council Officer

It is the Secretary (or in some instances a Council Officer) who takes the minutes and maintains the documents of a Section 24 Committee including details of membership, correspondence and any other documentation regarding the operations of the Committee. The Secretary also needs to provide Council with a copy of all relevant information.

Key secretarial tasks include

- Providing support to the Chairperson to ensure meetings run smoothly;
- Sending out notices of the date, time and place for each Committee meeting;
- Preparing the agenda for each meeting, in consultation with the Chairperson;
- Opening all mail addressed to the Committee and reading the mail before each meeting to summarise important information;
- Keeping an accurate record of members and Committee members to show who is entitled to vote and to receive notices;
- Preparing a list of visitors and apologies for the Chairperson;
- Ensuring that minutes are kept and that these are distributed to members and Council;
- Being a contact person for new members;
- Ensuring all correspondence is dealt with appropriately.

GLAMORGAN SPRING BAY COUNCIL

A few useful tips follow to help make taking minutes a little more manageable:

- Record the names of those present and those who have sent their apologies. If it is easier for you, you can circulate a list for people to record their own names.
- Make sure that reports to be delivered to the meeting by the Treasurer, Secretary and any sub-committees or working groups are in writing as these can then be attached to the rest of the minutes as an accurate record of what was reported to the meeting.
- At the start of the next meeting, the minutes should be confirmed as a true and correct record of what took place and be signed by the Chairperson. Try not to read the previous minutes word-for-word at the start of the meeting, as it is time consuming.
- Record all decisions reached, for example, "It was decided not to recommend the purchase of a security system to Council until September".
- Record the exact wording of all motions put, including who put the motion, who seconded the motion and whether the motion was carried or defeated, for example, Alice Smith/John Jones "That the Treasurer's Report be accepted." Carried.
- Record any action agreed to be taken by members of the Committee, for example, "Peter Smith agreed he would bring a list of local suppliers of pine bark to the next meeting."
- Minutes should be impartial, not representing just one person's view.

3.4 Treasurer

This section is relevant to Section 24 Special Committees who manage finances.

The Treasurer is the custodian of the Committee's funds and it is important that these are managed in accordance with this document.

The Treasurer has a range of financial responsibilities including:

- Preparing and presenting the annual budget;
- Managing financial transactions for the Committee;
- Ensuring all fees and charges are accounted for;
- Sending out accounts and paying bills;
- Maintaining an accurate record of all income and expenditure;
- Providing the Committee with a report each meeting about the current financial situation;

The following documents are to be provided each financial year:

- Bank statements for the financial year.
- Copies of your bank statements for the 12 month period, this includes operating accounts and term deposits.
- Cheque butts, receipt books and deposit books.
- Invoices paid (crossed when paid with reference to cheque number, amount paid, date paid).
- Cash book and bank reconciliations.
- Balance sheet (if applicable).

- Chair's report (or summary of committee's actions during the year).
- Copies of all meeting minutes including evidence of approval of payments and financial reports.
- Copies of audit certificates/report (if available).

Please Note: As a committee constituted by Council, it is a requirement to provide Council with detailed and accurate financial records of the committee's activity during the financial year. These should be provided to Council's General Manager no later than the end of the 2nd week of July in any given year. Council is required to reflect the financial activity of committees in its consolidated accounts records. Committees should aim to apply sound bookkeeping practices to ensure compliance with requirements.

4 Meeting Procedures

4.1 General Information

Committees must have a Chairperson and Secretary with some requiring a Treasurer or a Secretary/Treasurer. All Committees have a Terms of Reference outlining purpose, roles and responsibilities, reporting and other requirements. Any new Terms of Reference or changes to Terms of Reference must be referred to Council for consideration and endorsement.

The newly elected Committee is responsible for determining when meetings are convened. To ensure the effectiveness of committees, Council has determined a minimum number of meetings per year (See Appendix A - *Special Committees).* This will allow for a reasonable and regular timeframe for issues to be discussed in a timely manner.

For committees that are required to hold Annual General Meetings, these should occur during the month of July or as soon as possible thereafter in accordance with this document. If appropriate, meetings should be held throughout the municipal area.

4.2 Notice of Meeting

A minimum of seven (7) days notice is required to be provided to committee members detailing date, time and location.

A notice of meeting is to be advertised in the local newspapers/newsletters and/or Council noticeboards and on the Council web-site at least seven (7) days prior to the meeting.

4.3 Agenda

The Agenda is to be provided to all committee members a minimum of seven (7) days prior to the meeting. Circulating the agenda to members before the meeting lets people know what is to be discussed.

GLAMORGAN SPRING BAY COUNCIL

4.4 Minutes

It is essential to have a correct record of the proceedings of a meeting. The minutes serve as a general record and attendance register; in the case of later doubt or dispute, they are a legally acceptable reference.

Not everything discussed needs to be recorded. Note key points, agreed actions, summary of issues and any decisions made (see Item 3.3 for more detailed guidelines on taking minutes).

Individual recommendations or dissent from recommendations will only be recorded at the specific request of a member.

Where there is a split vote, all views should be submitted to Council.

A copy of the draft Minutes will be distributed to committee members no more than fourteen (14 days) after each meeting. Council is to be provided the approved Minutes from a committee meeting as soon as possible after that meeting to appear on the next Ordinary Meeting of Council Agenda.

It is the responsibility of the Councillor representative to write a short report to Council after each committee meeting for Council's information and to be placed on the next Ordinary Meeting of Council Agenda.

4.5 Quorum

A quorum will be half the number of members (rounded down if uneven number) plus one e.g. for a 7 member committee a quorum would be 4. If a quorum is not present a Committee meeting cannot proceed.

4.6 Urgent Meetings

If an urgent meeting is necessary, the Committee Chair is required to provide the notice of the meeting and the agenda at least five (5) days prior to the meeting date. Details of the meeting will be advertised in a prominent location on Councils web-site. Where possible, the notice of meeting is to be advertised in the local newspaper/ newsletter and/or Council noticeboards and be open to the public unless deemed closed by the Chair.

4.7 Observers/Members of the Public

All committee meetings will be open to the public.

Observers are not permitted to make comment or engage in the meeting without being requested by the Chair.

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4.8 Appointment of Committee Members

All Committee members are appointed by Council following an expression of interest process with responses from individuals or interest groups.

Expressions of interest (EOI) will be by public advertisement in local newspapers/newsletters, on Council's website, Council noticeboards, via direct contact with those who can provide expertise and by other methods deemed appropriate. An EOI form will be given to prospective committee members to provide, for example, contact details, skills, interests, any potential conflicts of interest and reasons for wanting to join a specific Section 24 Special Committee of Council.

The Council has the final responsibility for determining the membership. As a general rule committees should abide by minimum and maximum numbers as outlined in Appendix A Special Committees. If a large number of expressions of interest are received for any given Section 24 Committee that exceeds the recommended number of committee members, the Councillor representatives on that committee, the Mayor or Deputy Mayor (if the Mayor is not available) and the Council Officer will review the expressions of interest and the terms of reference. This will determine the individuals to be accepted based on skills, interests and expertise relevant to the committee.

4.9 Termination of Appointment

A Committee member may resign by giving written notification to the Chair.

If a member is unable to fulfil their responsibilities they should resign to allow the Council to appoint a member who can meet the commitment required.

Appointments may also be terminated by the Council for a variety of reasons including misbehaviour, inefficiency or incompetence.

Any action by a member that demonstrates their unwillingness or inability to comply with the obligations and responsibilities of committee membership, as outlined in this document, may be grounds for termination of appointment.

An appointment may also be terminated if:

(i) the member without reasonable excuse fails to disclose a conflict of interest; or

(ii) the member is absent from two (2) consecutive meetings of the Committee without informing the Chair of an official apology.

If there is a dispute between members of the committee or another party which is unresolved, the Chairperson must notify the General Manager.

(i) The General Manager may nominate an independent negotiator or staff member with appropriate skills to help resolve the dispute.
(ii) If the dispute remains unresolved then this matter will be brought to Council to make a decision.

The final decision reached is binding on all parties to the dispute.

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4.10 Alternate Member (Proxy)

The Council will not appoint alternative members. It is important that committees have a stable membership to ensure continuity and consistency in decision-making and advice.

4.11 Council Direction

The Council may from time to time direct the committee to consider certain issues, seek submissions from the relevant body or individuals or provide specific recommendations back to Council.

4.12 Sub-Committees

A committee may establish a sub-committee with or without additional members to provide advice and recommendations on particular matters. The sub-committee should be convened and chaired by a member nominated and appointed at a Committee meeting. The sub-committee is responsible to the Committee that established it.

GLAMORGAN SPRING BAY COUNCIL

4.13 Conduct of Volunteer Committee Members

The Council's Volunteer Policy gives a clear understanding of responsibilities in terms of expected behaviour as a volunteer when dealing with each other, Councillors, Council employees and members of the community. The Volunteer Policy applies during committee meetings and any dealings on behalf of the committee. The Volunteer Policy is available for review on Council's website www.gsbc.tas.gov.au

Volunteers have a responsibility:

- To be reliable and punctual.
- To notify the Chair if unable to attend meetings or perform duties.
- To be accountable and accept constructive feedback.
- To undertake relevant training when necessary to perform designated volunteer tasks.
- To ask for support when needed.
- To carry out agreed duties.
  To respect decisions made by the committee.
- To respect confidentiality at all times.
- To provide truthful and accurate information to Council, fellow volunteers and community members.
- To register with Council and complete and sign any relevant documentation.
- To comply with Council's WHS practices to protect themselves, fellow volunteers, staff and community members.
- To comply with Council's policies and procedures, particularly in regard to dangerous and emergency situations.
- To immediately report all incidents, accidents, illnesses and risks to health and safety.
- To notify Council of any potentially hazardous situations or unsafe working conditions.
- To report any damage to Council or other parties' equipment or possessions.
- To provide parent/guardian consent if the volunteer is under 18 years of age.

Sitting committee members who are not Councillors or Council staff are volunteers and as such are covered by Councils insurance policy.

The actions undertaken by Section 24 Special Committee members, in the proper execution of the committee power and responsibilities, are covered by Council's existing public liability policy.

Confidentiality:

Volunteers working with Council must keep all privileged information in relation to Council, employees and community members confidential. Volunteers are expected to maintain the same standards of confidentiality as Council's paid employees. This includes information held by the Council; information shared between volunteers and the designated managers; and information about particular circumstances.

Volunteers are required to read and sign the Glamorgan Spring Bay Council Confidentiality Agreement. Any breach of this confidentiality requirement will be taken seriously and lead to:

- The termination of the volunteer's services.
- Any other action deemed necessary by the General Manager.

Please contact the General Manager's office on (03) 6256 4759 if you require copies of the Confidentiality Agreement.

4.14 Conflict of Interest

Members of Section 24 Special Committees of Council may from time to time have a conflict of interest when discussing matters. This section provides an outline of what constitutes a conflict of interest and the process to be taken when a conflict of interest arises.

A Committee member who has a direct or indirect interest in any matter decided or under consideration by the committee must disclose the nature of interest to the Committee and this must be recorded in the Minutes.

Being a member of a Council committee is a position of trust that involves obligations to the community and to the Council. It must be clear to everyone that you are not using your position to serve your own interests or the interests of a close associate. For this reason, the Act requires members of Council committees to disclose conflicts of interest and not participate in a decision (discussion or vote) if they have a conflict of interest.

"At any meeting of a special committee … a member must not participate in any discussion, or vote on any matter, in respect of which the member –
(a) has an interest; or
(b) is aware or ought to be aware that a close associate has an interest."

Furthermore, the *Local Government Act 1993* states that:

"A member has an interest in a matter if the ... member or close associate would, if the matter were decided in a particular manner, receive, have an expectation of receiving or be likely to receive a pecuniary benefit or pecuniary detriment."

The Act determines that a close associate of a committee member is:

a) a body corporate of which the member is a director or a member of the governing body; or
b) a proprietary company in which the member is a shareholder; or

c) a public company in which the member is directly or indirectly a substantial shareholder; or
d) a beneficiary under a trust or an object of discretionary trust of which the ... member is a trustee; or
e) a business partner of the member; or
f) the employer or an employee of the member; or
g) a person from whom the member has received, or might reasonably be expected to receive a fee, commission or other reward for providing professional or other services in relation to a matter being dealt with or to be dealt with by the Council committee; or
h) the spouse or partner of the member, member's son or daughter; or
i) the son, daughter, brother, sister, mother or father of the member or of their spouse or partner.

Failure to disclose a conflict of interest may be an offence that can be prosecuted in a court of law. It is your responsibility and duty to identify and disclose your conflicts of interest when required to. It is important to note that, while another person may assist you in deciding or determining whether you have a conflict of interest, they cannot make the decision for you. Irrespective of what assistance or advice you receive from someone else, legally you remain responsible for your own actions.

4.15 Getting Help

In addition to this section assistance with conflict of interest matters or concerns may be sought by contacting:

- The Council's General Manager or other experienced Council Officer authorised by the General Manager to provide such assistance; or
- The Local Government Association of Tasmania (LGAT) - Phone (03) 6233 5966
- The Local Government Division – Phone (03) 6232 7022

4.16 Making Disclosures

Conflicts of interest must be disclosed in Section 24 Special Committees. These committees are delegated a power or duty by the Council.

There are four steps to take when disclosing a conflict of interest:

1. Tell the committee that you have a conflict of interest. This must be done immediately before the matter is discussed.
2. Tell the Chairperson that you are leaving the meeting.
3. Leave the room and any area where you can see or hear the meeting and item being discussed, until the matter has been concluded and you are recalled to the meeting.
4. In accordance with *Local Government Act 1993* Section 48A (4) a member of a special committee … by notice in writing, is to advise the General Manager of the details of any interest declared under this section within 7 days of that declaration.

When the minutes are considered for adoption at the next meeting, ensure that you check that your disclosure has been recorded correctly. The declared interest will also be recorded in Council's Register of Interests in accordance with the Local Government Act 1993.

4.17 Notification of Interest (knowledge of interest of another member)

Local Government Act 1993 Section 53:

Any person who considers that a member has an interest in a matter to be, or being dealt with by the Section 24 Special Committee, may notify the General Manager in writing of the interest.

4.18 Exemptions

The *Local Government Act 1993* Section 52 – Non-application of Part, prescribes that:

(1) This part does not apply to a member or close associate who has any pecuniary interest in any matter if:

The benefit or detriment is one received in common with all or a substantial proportion of the electors of the municipal area (at least 5% or 1,000 electors, whichever is lesser).

Council may decide to exempt a member from a committee for a period not exceeding 12 months, if the member has a potential pecuniary interest in a matter only because of being appointed or nominated as a member due to expertise arising from direct involvement in an activity that gives rise to that potential pecuniary interest.

5 Public Liability Insurance

Public liability insurance indemnifies the insured against legal liability resulting from damage to property, loss of use of property and death or bodily injury to members of the general public, where the loss, damage or injury to the property or third party was caused by a negligent act on the part of the insured. Public liability insurance does not cover breaches of professional duty and is not the same as personal accident injury insurance.

Council is covered by public liability insurance which extends to all Council committees. Without public liability insurance, venues such as halls or sporting grounds cannot be hired out to the public.

Public liability insurance is to be sought from all other users of facilities including individuals, groups, businesses and contractors such as caterers, bands and mowing contractors prior to the event or works commencing.

Users of Council facilities are required to be covered by public liability insurance to the value of $10,000,000.

The committee must ensure that users of facilities complete a *Facility Use Application* (this can be found at www.gsbc.tas.gov.au/Community/Council Facilities Hire Package). A copy of this application should be forwarded to Council as soon as possible. Information required includes but is not restricted to:

- Event type e.g., football grand final;
- Time of day the event will start and finish;
- Day/days of operation;
- Approximate number of people attending the event;
- Hirer name and contact details;
- Current copy of public liability insurance certificate (if applicable);
- Alcohol licence (if required).

For events that are of an abnormal or irregular nature and which are large in size or have a larger than normal risk attached to them (carnival, large sporting event, music concert, food and wine festival etc.), an event management plan may need to be completed and passed onto Council's Risk Management Officer.

Place of Assembly Licences are now only required for large events attracting more than 1,000 people over a 2 hour period.

Council should be contacted with information on an event at least one month prior to discuss requirements.

6. Risk Management and Workplace Health and Safety

Council has certain obligations under the *Workplace Health and Safety Act 2012* and Risk Management Principles and Guidelines - AS/NZS ISO 31000:2009. Under these obligations, Council is to provide and maintain, as far as is reasonably practicable, a healthy and safe environment for its committees, public and volunteer workers. The Committee can help Council achieve this by:

- Supervising volunteers; and
- Informing Council of any hazards the committee becomes aware of.

Both the lessee (user of facilities) and lessor (committee) have certain rights and responsibilities in regard to lease and hire agreements. The lessor for example, has a responsibility to ensure leased facilities and venues are safe for use, whilst the lessee has a responsibility to hold adequate and appropriate insurance cover for liability exposure.

7. Hire Agreement

Council hire agreement requires the lessees to declare if they intend to sell liquor. The licence will usually specify that any organisation intending to sell or supply liquor on Council owned or operated premises must provide evidence that they hold an appropriate permit or licence prior to sale or supply. Contact the Commissioner of Licensing for further information (Hobart: 03 6166 4040, Launceston: 03 6777 2777).

GLAMORGAN SPRING BAY COUNCIL

7.1 Activity Conducted

This will describe what actually occurs (such as meetings, training special events, markets, educational or children's activities, productions, weddings, tournaments, childcare, shows, equestrian events, etc.)

7.2 Group Type

Describe the type of group participating as opposed to the name of the group. For example youth, senior citizens, scout, cricket, netball, pony clubs etc.

7.3 Frequency

Describe how many times the facility will be used for these activities in one year.

7.4 Fee Charges

Hire rates, fees and charges are in accordance with the Annual Fees & Charges endorsed by Council on the recommendation of the committee each financial year and available on Council's website. These may vary from facility to facility within the municipal area.

7.5 Public Liability Insurance

The issuing of the hall hire permit is subject to the applicant providing evidence to Council of appropriate public liability insurance as part of the *Facility Use Application*.

8 Emergency Information

This section is relevant to Section 24 Special Committees who manage Council owned facilities.

8.1 Emergency Procedures in Council Buildings

Council provides each facility for the safe enjoyment of its tenants, lessees, licensees, hirers, invitees and their guests. As part of this responsibility, Council provides and maintains emergency equipment such as hoses and/or extinguishers for firefighting purposes and evacuation procedures for user groups of the facility. In return, the tenant/hirer agrees to:

- Keep displayed in prominent locations emergency notices and fire procedures;
- Not interfere with any emergency equipment or notices. Replacement or repair of such equipment caused by mischievous use shall be at the tenant/hirer's expense;
- The tenant/hirer will immediately notify the Committee and Council if an emergency occurs. Council's after hours contact telephone number is 03 6256 4777;

- The tenant/hirer must notify the committee and Council if fire-fighting equipment is used; and
- The tenant/hirer must be aware of proper procedures for and be responsible for the safe and orderly evacuation of guests from the facility if an emergency situation occurs.

9 Public Events

Many public events are held at Council facilities throughout the year. When these events are organised by a third party (neither Council nor the Council Committee) there are a number of compliance matters the group needs to abide by.

Due to the complexity of the requirements for compliance, committees should advise the event organisers to contact Council during the planning stage for advice on the types of licences and permits required.

GLAMORGAN SPRING BAY COUNCIL

Appendix A: List of Section 24 Special Committees

As at 27th October 2020, Decision 337/20

Section 24 Committee	Council Representatives	Minimum Meetings Per Year	Minimum - Maximum Number of Committee Members
Marine Infrastructure Committee	Clr Grant Robinson (South) Clr Keith Breheny (North)	4	Minimum 10 Maximum TBC
Orford Hall Committee	Deputy Mayor Jenny Woods	4	Minimum 5 Maximum 11
Buckland Hall Committee	Clr Annie Browning Clr Cheryl Arnol	4	Minimum 5 Maximum 11
Triabunna Hall Committee	Clr Grant Robinson Clr Keith Breheny	4	Minimum 5 Maximum 11
Bicheno Hall Committee	Clr Michael Symons	4	Minimum 5 Maximum 11
Cranbrook Hall Committee	Clr Annie Browning	4	Minimum 5 Maximum 11
Swansea Hall Committee	Clr Keith Breheny	4	Minimum 5 Maximum 11
Coles Bay Hall Committee	Clr Michael Symons Clr Rob Churchill	4	Minimum 5 Maximum 11
Tasmanian Seafarers' Memorial Committee	Clr Cheryl Arnol	2	Minimum 5 Maximum 9
Spring Bay Eldercare Committee	Clr Keith Breheny	4	Minimum 5 Maximum 11
Spring Bay Memorial Trust*	*Not currently active**	TBC	TBC
Natural Resource Management Committee	Clr Cheryl Arnol Clr Annie Browning	4	Minimum 15 Maximum TBC
Youth Council	Clr Cheryl Arnol Clr Rob Churchill	4	Minimum 9
Triabunna Recreation Ground Advisory Committee	Deputy Mayor Jenny Woods Clr Cheryl Arnol	4	Minimum 5 Maximum 11
Prosser River Mouth Master Plan Advisory Group	Clr Grant Robinson Clr Keith Breheny	4	TBC

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Code for Tenders and Contracts

Date first issued/approved	March 2008
Source of approval/authority	Council resolution xxxxx [Insert]
Last reviewed	24/05/2016
Next review date	January 2024
Version number	4.0
Strategic Plan reference e.g. priority area and strategy	[Insert]
Related policies	Risk Management Policy Fraud Control Policy Corporate Credit Card Policy Gifts and Donations Policy Code of Conduct Policy
Publication of policy	Code and any amendments available for public inspection at Councils Offices during ordinary office hours. Code available for purchase at reasonable charge Code available on Councils website

Department responsible for policy development	Works & Infrastructure
Responsible Officer	Director Works & Infrastructure

This Code for Tenders and Contracts is based on a guide developed by the Local Government Association of Tasmania

CONTENTS

CODE FOR TENDERS AND CONTRACTS

1 INTRODUCTION

This Code for Tenders and Contracts (Code) provides a policy framework on purchasing and tendering requirements for Council.

2 LEGISLATION

In accordance with Part 16, Division 2A, Section 333A and 333B of the Local Government Act 1993 (Act), Council must comply with this Code when acquiring goods and services.

Detail contained in the Code is consistent with the requirements of the Local Government (General) Regulations 2005 (Regulations), Regulations 23 – 28 inclusive.

3 PURPOSE

The Code aims to:

3.1 ensure compliance with relevant legislation

3.2 enhance value for money through fair, competitive, non-discriminatory procurement

3.3 promote the use of resources in an efficient, effective and ethical manner

3.4 encourage probity, accountability and transparency in decision making

3.5 provide reasonable opportunity for competitive local businesses to supply to Council

3.6 minimise the cost to suppliers of participating in the tendering process

3.7 allow Council to appropriately manage risk

3.8 promote Council's economic, social and environmental plans and policies

4 SCOPE

4.1 Policy vs. procedures

The Code essentially provides a high level overview of Tender and Contract requirements as they apply to Council. Although some procedural detail associated with Council tender and contract management systems and processes is included in this document, additional lower level detail is held in Council procedure documents.

Consistent with the requirements specified in regulation 28, Council will establish and maintain local level procedures to:

4.1.1 ensure all potential service providers are provided with the same information relating to

the requirements of an open tender process or contract and are given equal opportunity to meet the requirements

4.1.2 that fair and equitable consideration is given to all tenders or quotations received

4.1.3 deal honestly with and be equitable in the treatment of all potential service providers

4.1.4 ensure a prompt and courteous response to all reasonable requests for advice and information from potential or existing service providers

4.1.5 protect commercial in confidence information and

4.1.6 review each tender process to ensure that each tender is in accordance with the Regulations and this Code

Council will also establish and maintain procedures for:

4.1.7 amending or extending a tender once it has been released

4.1.8 opening tenders

4.1.9 the consideration of tenders that do not fully conform with the tender requirements

4.1.10 handling complaints regarding processes related to the supply of goods or services

4.2 Employees and service providers

The Code will apply to Council, council employees and agents and any service provider wishing to compete for Council business or provide goods, services or works to Council (including contractors, subcontractors, consultants and suppliers)

Wherever reasonably possible service providers engaged by Council will also apply the Code when seeking Tenders or Quotations from subcontractors and suppliers.

5 PROCUREMENT PRINCIPLES

Council will have regard to the following principles when acquiring goods and services:

5.1 Open and Effective Communication

The Council will ensure that the purchasing process is impartial, open and encourages competitive offers.

In practice this means that Council will:

5.1.1 use transparent and open purchasing processes so that service providers and the public are able to have confidence in the outcomes

5.1.2 adequately test the market through seeking quotations or via tender as appropriate

5.1.3 avoid biased specifications

5.1.4 treat all service providers consistently and equitably

5.1.5 ensure a prompt and courteous response to all reasonable requests for advice and

information from service providers

5.2 Value for Money

The Council will ensure that it is buying at the most competitive price available, but value for money does not necessarily mean buying at the lowest price.

In practice this means that Council will consider

5.2.1 the contribution the good or service makes to achieving Council's strategic plans or policies

5.2.2 the value of the acquisition and potential benefits against the costs of that purchase

5.2.3 an assessment of risks associated with the purchase including the preferred procurement method

5.2.4 how well goods or services meet needs

5.2.5 maintenance and running costs over the lifetime of a product

5.2.6 disposal value

5.2.7 time constraints

5.2.8 the impact of the procurement decision on the local economy, such as through industry development and employment creation

5.2.9 the impact of the procurement decision on the environment, such as through minimising waste and reducing demand for goods and services which have a direct impact on the environment (such as printing, utilities and travel)

5.2.10 the impact of the procurement decision on the society, (social value generated) such as through the elimination of discrimination and the promotion of equal opportunity, training, and other identified social objectives

5.3 Enhancement of the capabilities of the local business industry

The Council will ensure that where local capacity exists it will seek to engage the local market and encourage participation in tender and quotation processes.

In practice this means that **Council** will:

5.3.1 actively seek quotes from local businesses that are able to provide quality goods and or services

5.3.2 where local capability exists, ensure that discretionary elements of specifications do not prevent local business from competing

5.3.3 not give preferential treatment to local service providers where it cannot be reasonably justified

5.4 Ethical behaviour and fair dealing

The Council will promote procurement practice that is honest, legal, ethical, fair and unbiased

In practice this means that **Council** will:

5.4.1 comply with legal requirements

5.4.2 conduct all business in the best interests of the Council

5.4.3 be as effective and efficient as possible when sourcing, ordering and paying for goods and services.

5.4.4 expect individuals involved in procurement processes to declare and act upon any conflicts of interest that may be seen to influence impartiality

5.4.5 ensure that specifications are clear

5.4.6 ensure that any Service Provider is not provided with information or clarification that is not provided equally to all service providers

5.4.7 maintain confidentiality at all times in dealing with service providers

5.4.8 ensure that conditions of contract are not excessively onerous

5.4.9 decline gifts or benefits offered by those involved in the procurement process, particularly from service providers

In practice this means that Council expects **service providers** to

5.4.10 ensure that they are well acquainted with Council requirements identified in this Code

5.4.11 are familiar with particulars relating to a specific tender and quotation processes including the relevant specifications

5.4.12 not submit a tender or quotation unless they have the financial, technical. physical, management resource or other capabilities to fulfil Council's requirements

5.4.13 not seek to influence a procurement process by improper means or collude with other service providers

5.4.14 declare and act upon any conflicts of interest that may be seen to influence impartiality

5.4.15 comply with all applicable legislative, regulatory and statutory requirements, including Acts of the Commonwealth and State, regulations, by laws and proclamations made or issued under such Acts and lawful requirements or directions of public and other authorities

5.4.16 not offer gifts or benefits to a Council officer for the discharge of official business

6 PROCUREMENT METHODS

While open and fair competition may often best achieved by undertaking a tender process where all interested parties have an opportunity to bid, there are times when this practice will not deliver the most advantageous outcome for the Council. In such instances, other market approaches may be more

appropriate.

The Council will, having regard to the procurement principles and any other factors considered relevant by the Council, in its absolute discretion, determine the appropriate method that will be employed to procure goods and services at any particular time.

6.1 Non Tender – processes for acquisition of goods and or services

6.1.1 Direct Purchasing

This is where Council purchases from a single source, without first obtaining competitive bids.

This method will be used only for low value, low risk goods and services where the Service Provider already has a successful history with the Council. Methods for Direct Purchasing include Credit Card.

6.1.2 Purchase Orders

Purchase Orders usually have limited terms and conditions. Their use may also be in conjunction with a Standing Contract or Multiple Use Register or detailed formal contract simply to manage the account commitment. For the purposes of purchase where a purchase order is used in isolation to other contract controls, the upper limit of value for a purchase order in isolation is $10,000 plus gst.

This method may be used for low value, low risk goods and services and will not be used for non routine, high value and high risk goods and services.

6.1.3 Quotations (Informal)

This is where Council will only enter into a contract where 2 quotations from suitable service providers able to provide the goods or services have been sought.

Records must be kept of quotations received and quotations approved. If written quotations cannot be obtained Council must keep detailed written records of the oral quotation obtained including details of the commercial terms of the quotation.

This method may be used for low value, low risk goods and services where the options for goods or service supply are known to be limited and or historically the provider delivers value to council. The limit of value for this method is $30,000 plus gst.

6.1.4 Request for Quotations (RFQ)

This is a more formal quotation process. Council will enter into a contract where 3 written (including email) quotations from suitable service providers able to provide the goods and or services have been sought. Where less than 3 suitable service providers are reasonably available, records outlining this circumstance will be kept.

Council must keep detailed written records of the quotations obtained including details of the commercial terms of the quotation.

This method may be suitable for simple, largely price based purchases.

Purchasing goods and or services through the **National Procurement Network** (NPN) is an option for Councils. Purchasing through this mechanism involves an RFQ process. Items with a financial value above the prescribed amount may be legitimately purchased through the Network RFQ process. Use of the Network as a purchasing option for Councils is justified under the Regulations. See section 10 - Exemptions, point 10.4.

Request for quotation values will be limited to $100,000 gst exclusive, unless through the NPN and may include quarry material supply as an example of purchase types.

6.2 Tender - processes for acquisition of goods and or services

The Act and Regulations require that Council invite Tenders for any Contract it intends to enter into for the supply or provision of goods or services valued at or above a prescribed amount. The prescribed amount is $100,000 (GST exclusive).

That said, Council may also determine that tenders should be called in certain circumstances as appropriate, where the estimated value of the purchase is less than the prescribed amount.

Council's threshold for tenders is $100,000.

6.2.1 Open Tenders

An open tender process is an invitation to tender by public advertisement. There are generally no restrictions regarding who can submit a tender, however, service providers are required to submit all required information and will be evaluated against stated selection criteria. Where selection criterion exists, for example registration with the Department of State Growth for Bridge construction over threshold values, these will be applied to the tender process.

General Manager - responsibilities

Consistent with the Regulations (Regulation 24) Council will ensure that when open tenders are used as a method of procurement; the General Manager will invite tenders.

The General Manager will advertise the tender locally via the daily newspaper circulating in the municipal area and on via Councils website – making the tender available to all qualified and interested bidders.

The public notice will identify:

6.2.1.1 clearly the nature of the goods and or services the Council requires

6.2.1.2 the period within which the tender must be lodged (must be at least 14 days after the date on which the notice is published)

6.2.1.3 where the tender must be lodged

6.2.1.4 details of a person from whom more detailed information relating to the tender may be obtained

The General Manager will ensure that prospective tenderers are provided with details regarding:

6.2.1.5 the specifications of the goods and or services required

6.2.1.6 the duration of the contract, including any extensions that are specified in the contract

6.2.1.7 any mandatory tender specifications and contract conditions

6.2.1.8 objective criteria for evaluating the contract and

6.2.1.9 must make reference to the Council Code for Tenders and Contracts

Purchasing Thresholds Summary	
Direct Purchasing (Credit Card)	**$2000**
Purchase Orders (in isolation)	**$10,000**
Quotations (Informal)	**$30,000**
RFQ (Formal)	**<$100,000**
Tenders	**>$100,000**

Service Provider – responsibilities

A person submitting a response in relation to a Council public tender must do so in writing.

The Service Provider must specify the goods and or services tendered for, provide details of the goods and or services being offered and must lodge the tender within the period specified in the public notice.

6.2.2 Multi Staged Tender

There are occasions – although usually limited (because the process can be resource intensive), where Council may use a multi stage tender process. Reference is made to this process in the Regulations at Regulation 26.

This tender method will be used by Council to gain knowledge about the market, obtain industry input – where it is unclear what goods and services are available or to shortlist appropriate suppliers before seeking offers.

At each stage in this process, service providers may be culled to those who are most suited to the specific contract requirements. Service providers will be evaluated against criteria determined by Council.

Once a short list of potential service providers is developed, these service providers may be invited to participate in an open tender process.

General Manager - responsibilities

As a first stage in this process, the General Manager will request – expressions of interest from prospective tenderers.

The General Manager will advertise the expression of interest locally via the daily newspaper circulating in the municipal area and via Councils website.

The public notice will identify:

6.2.2.1 clearly the nature of the goods and or services the Council requires

6.2.2.2 contract identification details

6.2.2.3 the period within which the expression of interest must be lodged

6.2.2.4 where the expression of interest must be lodged

6.2.2.5 details of a person from whom more detailed information relating to the expression of interest may be obtained

The General Manager will ensure that prospective tenderers are provided with details regarding:

6.2.2.6 the specifications of the goods and or services required

6.2.2.7 objective criteria for evaluating the expression of interest

6.2.2.8 the method of evaluating expressions of interest against the criteria

6.2.2.9 details of any further stages in the tender process

6.2.2.10 must make reference to the Council Code for Tenders and Contracts

At the final stage of a Multi Staged Tender process, the General Manager will invite all service providers who have met the criteria determined by the Council, to tender for the supply of goods and or services

If only one service provider meets the criteria determined by Council, the Council may contract with that supplier after

6.2.2.11 a tender from that Service Provider or

6.2.2.12 a decision by the absolute majority of the council to do so.

Service Provider – responsibilities

A person submitting a response in relation to a Council expression of interest must do so in writing.

The service provider must specify the goods and or services the expression of interest relates to, provide details of the goods and or services being offered and must lodge the expression of interest within the period specified in the public notice.

6.3 Ongoing Supply Arrangements - Goods and Services

6.3.1 Standing Contract

A Council, through an open tender process, may establish a standing contract in which a single tenderer or multiple tenderers may be contracted for a specified period to provide specified goods or services during that period without the need for a further tender process. Reference is made to this process in the Regulations at Regulation 23.

Service providers listed on a standing contract panel will be selected following an evaluation process.

Council may legitimately purchase directly from a service provider listed on a standing contract panel.

Council may implement its own standing contract arrangements or may make use of goods and or services

panels that have been negotiated for example for Tasmanian Councils via LGAT as a member of the National Procurement Network or via similar arrangements through State Government.

6.3.2 Multiple Use Register

A multiple use register is a list, intended for use in more than one procurement process, of pre qualified providers, who have satisfied the conditions for participation or inclusion on the register. Reference is made to the multi use register process in the Regulations at Regulation 23.

Council may establish a multi use register of service providers who meet criteria established by the Council in respect to the supply of particular categories of goods and services.

Inclusion on a multi use register provides certainty for potential service providers that they have been recognised as meeting conditions for participation.

Council will invite tenders for a contract for the supply of goods and or services from all Service Providers included on a multiple use register for a particular category of goods and or services.

General Manager - responsibilities

As per Regulation 28, Council will establish and maintain procedures for the use of multiple use registers for contracts valued at under the current prescribed amount, excluding GST.

Essential procedural requirements include that, the Council will invite applications from service providers for inclusion on a multiple use register by advertising locally via the daily newspaper circulating in the municipal area and via Councils website.

The public notice will identify:

6.3.2.1 clearly the nature of the goods and or services the Council requires

6.3.2.2 any identification details associated with the register

6.3.2.3 the period within which the application must be lodged

6.3.2.4 where the application must be lodged

6.3.2.5 details of a person from whom more detailed information relating to the multiple use register may be obtained

The General Manager will ensure that applicants are provided with information regarding:

6.3.2.6 the specifications of the goods and or services required

6.3.2.7 the criteria for evaluating the applications

6.3.2.8 the method of evaluating applications against the criteria

6.3.2.9 must make reference to the Council Code for Tenders and Contracts

Council may accept an application for inclusion on the multiple use register or reject an application.

If Council rejects the application, the General Manager will advise the applicant of the reasons for rejection.

If Council accepts the application the General Manager will advise the applicant of the category their application will be included in on the multiple use register.

The multiple use register will be reviewed by Council at least every 2 years.

Council will allow a service provider to apply for inclusion on the multiple use register at any time unless the service provider has made an application in the previous 12 months and the application has not been accepted.

6.3.3 Strategic Alliances

Council may choose to procure goods and or services through contract arrangements already established and administered by other organisations, including:

6.3.3.1 LGAT through the National Procurement Network

6.3.3.2 State Government Contracts and

6.3.3.3 any other purchasing group of which Council is a member e.g. Tasmanian LGAT Procurement Network, Southern Tas Waste Management Group

7 CALCULATING THE VALUE OF A PURCHASE

7.1 Price

The dollar value of the purchase may be calculated as follows:

7.1.1 **single one-off purchase** – the total amount, or estimated amount, of the purchase (excluding GST)

7.1.2 **multiple purchases** – the gross value, or the estimated gross value, of the purchases (excluding GST); or

7.1.3 **ongoing purchases over a period of time** – the annual gross value, or the estimated annual gross value, of the purchases (excluding GST).

As per Regulation 23, Council will not split a single procurement activity into 2 or more separate contracts for the primary purpose of avoiding the requirement to publicly invite tenders.

7.2 Non price considerations

Council will ensure that it is buying at the most competitive price available, but quantifying the value of a purchase does not simply mean buying at the lowest price. Specific issues that will be taken into account by Council that relate to non price related matters are identified in the Principles section at 5.2.

8 GOODS AND SERVICES TAX (GST)

All procurement thresholds are GST exclusive

Tenders and quotations must be sought on a GST exclusive basis.

9 EXTENSION OF CONTRACTS ENTERED INTO

Consistent with Regulation 23, Council may extend a contract entered into:

9.1 as specified in the contract or

9.2 if the contract does not specify extensions, by an absolute majority.

10 EXEMPTIONS

The Regulations identify circumstances where Council is not required to issue a public tender process.

The exemption circumstances identified in Regulation 27 – Non application of the public tender process are:

10.1 an emergency if, in the opinion of the general manager, there is insufficient time to invite tenders for the goods or services required in that emergency

10.2 a contract for goods or services supplied or provided by, or obtained through, an agency of a State or of the Commonwealth

10.3 a contract for goods or services supplied or provided by another council, a single authority, a joint authority or the Local Government Association of Tasmania

10.4 (ca) a contract for goods or services obtained as a result of a tender process conducted by another council, a single authority, a joint authority, the Local Government Association of Tasmania or any other local government association in this State or in another State or a Territory

10.5 a contract for goods or services in respect of which a council is exempted under another Act from the requirement to invite a tender

10.6 a contract for goods or services that is entered into at public auction

10.7 a contract for insurance entered into through a broker

10.8 a contract arising when a council is directed to acquire goods or services due to a claim made under a contract of insurance

10.9 a contract for goods or services if the council resolves by absolute majority and states the reasons for the decision, that a satisfactory result would not be achieved by inviting tenders because of–

10.9.1 extenuating circumstances or

10.9.2 the remoteness of the locality or

10.9.3 the unavailability of competitive or reliable tenderers

10.9.4 a contract of employment with a person as an employee of the council

General Manager - responsibilities

The General Manager will authorise non use of the public tender process in accordance with the exemption directions identified above.

11 ENGAGING A THIRD PARTY TO MANAGE A PROCUREMENT PROCESS

Council may engage third parties to manage the procurement process for individual projects. The use of a third party as an agent or consultant to advise on, arrange or manage a procurement process does not exempt Council from complying with Council procurement policy and procedures.

Should Council engage a third party to manage a procurement process, it will be ensured that material is included in the contractual arrangements with the third party that requires the third party to comply with Council procurement policy and procedures.

12 REPORTING PROCEDURES

Council is obliged to report at a minimum on a series of procurement matters.

12.1 Procurement at or above the prescribed amount

As per Regulation 23, Council will report in its Annual Report details of any contract for the supply or provision of goods and or services valued at or above the currently legislated prescribed amount of $100,000.

Council may also at its absolute discretion report detail of instances of procurement below the prescribed amount identified in the Regulations.

12.2 Contract Extension

As per Regulation 23, Council will report in its Annual Report, the details of any extension of a contract, where Council agreed to extend a contract by an absolute majority and the pre existing contract did not specify extensions.

Detail that will be reported for 12.1 and 12.2 at a minimum as required under the Regulations is:

12.2.1 a description of the contract

12.2.2 the period of the contract

12.2.3 the periods of any options for extending the contract

12.2.4 the value of any tender awarded, or if a tender was not required, the value of the contract excluding GST

12.2.5 the business name of the successful contractor

12.2.6 the business address of the successful contractor

12.3 Emergency Provision

As per Regulation 27 Council will report in its Annual Report, the details of all instances where non

application of the public tender process has been applied as a result of an emergency, where in the opinion of the General Manager, there was insufficient time to invite tenders for the goods and services required in that emergency.

12.4 Other Circumstances

As per Regulation 27 Council will report in its Annual Report, the details of all instances where non application of the public tender process has been applied because Council agreed by absolute majority, that a satisfactory result would not have been achieved if tenders were invited because of

12.4.1 extenuating circumstances

12.4.2 the remoteness of the locality

12.4.3 the unavailability of competitive or reliable tenderers

12.4.4 a contract of employment with a person as an employee of the Council

Detail that will be reported for 12.3 and 12.4 at a minimum as required under the Regulations is:

12.4.5 a description of the reason for not inviting public tenders

12.4.6 a description of the goods and or services acquired

12.4.7 the value of the goods and or services acquired

12.4.8 the name of the supplier.

In addition to ensuring the above reporting occurs, as per Regulation 28, the General Manager will establish and maintain procedures for reporting to Council circumstances where a public tender or quotation process was not used and reasonably should have been.

13 WORK HEALTH AND SAFETY

Council will abide by the requirements of the Works Health and Safety Act 2012 and Regulations. Where Safety in Design is required as a component of a purchasing process for a constructed outcome the requirements will be built into the purchase processes.

The safe performance of contractors will be considered in the evaluation of offers for high risk works forming a part of a procurement process.

As a means to identify and manage risks and eliminate hazards procurement of chemical products will seek to deliver the safest and least harmful outcomes.

14 DELEGATION

The General Manager is responsible for implementation of this Code.

The General Managers Financial Delegations Register supports the implementation of this code.

15 REVIEW OF THE CODE

Consistent with the requirements identified in Section 333B of the Act, Council will formally review this Code at least every 4 years.

The Code may be modified on an as needs basis from time to time by Council to reflect changed operational requirements.

16 BREACH OF THE CODE

Council will take all reasonable steps to comply with this Code.

Council will not be liable in any way to a Service Provider or any person for a breach of this Code.

If any employee of the Council, or a body controlled by the Council breaches this Code, Council may take disciplinary action, if in its absolute discretion it considers it appropriate to do so.

If a Service Provider commits a breach of this Code, Council may, in its absolute discretion, take action against that Service Provider.

17 ACCOUNTABILITY

Consistent with Section 333B of the Act, as a measure of accountability and transparency, the General Manger will:

17.1 make a copy of this Code and any amendments, available for public inspection at the Council's offices during ordinary office hours and

17.2 make copies of this Code available for purchase at reasonable charge and

17.3 publish a copy of the Code on the Council's internet site – free of charge.

Glamorgan Spring Bay Council

Application to utilise Council Facility – Rec Grounds etc

I Todd Skipworth
(Name)

for and on behalf Atlas Events Pty Ltd hereinafter called the "permit holder"
(Organisation, Business, Group)

of Address PO Box, 62 Battery Point, TAS , 7004

of Telephone 0448 561 557

Hereby make application to the **The Glamorgan Spring Bay Council**
(Council)

to use the Coles Bay Esplanade & Greenspace
(Location of Council Facility / Land)

for the purpose of Coles Bay Triathlon
(Name of the activity)

Term of Permit

The Permit shall be for the term of 2 Days
(Days / Months)

commencing on the 4th day of March
(eg 3rd/4th) *(Month)*

20122 and expiring on the 5th day of March **201**22

Use of Facility

Details of Specific Date(s), Time(s) and Event :

Friday the 4th of March will be used to setup the transition, registration and finish line area. Saturday the 5/03 will be the event day with the first event beginning at 10:30am and running through to 4:30pm. Competitors will use the transition are on the greenspace adjacent to the Esplanade to rack their bikes and as a Finish Line. The Esplanade roadway itself will be used by runners for the run leg of the course.

The issuing of this permit is subject to:-

1 The permit holder agreeing to the General Conditions of the permit as contained herein.

2 The permit holder agreeing to all Special Conditions which the Council may determine.

3 The Permit Holder paying the prescribed fee of $ to hire facility & $ for public liability cover.
A tax Invoice will be provided.

Last Updated 11 December 2012

4 The Permit Holder providing a copy of all appropriate insurances as required by Council.

5 All electrical equipment brought on site is "Tested & Taged" in accordance with AS/NZS 3760: 2003

6 This permit being signed by a Council representative.

7 If alcohol is to be served or available a "RESPONSIBLE OFFICER" must be appointed.
(Refer to notes 4 & 16)

General Conditions of Permit

1 The permit holder, where appropriate, shall ensure that it is licensed or registered to carry out the activity authorised by the issuing of this permit.

2 The permit is not transferable.

3 The permit holder shall comply with and give all notices required by any Act of Parliament, Ordinance, Regulation or By-law relating to the activity.

4 Alcohol consumption will be prohibited without the prior permission of Council. If applicable this should be indicated above as part of the event details. If as part of your event you intend on selling liquor on Council's premise, you must firstly obtain a liquor license from the Commissioner of Licensing (Launceston 6777 2777 or Hobart 6166 4040). Once obtained a copy of this license needs to accompany this application.

5 No adhesive tape, bluetack or drawing pins shall be used on walls or ceilings (if applicable). If suitable anchors are provided, decorations may be hung from them (if applicable).

6 No polish, floor speed or other material is to be used on the floor without the prior written approval of the Council who shall reserve the right to refuse the same (if applicable)

7 The permit holder shall ensure that any breakages of glass or spillage of food or drink are cleaned up immediately.

8 At the completion of the function, all toilets must be cleaned, floors must be swept, tables, chairs and other furniture placed in their original positions (if applicable) and all areas cleaned to the satisfaction of Council. Failure to do so may result in cleaning fees being charged.

9 All litter resulting form any function must be removed from the hall (if applicable) and adjoining Council property before 12.00 noon the following day.

10 The permit holder shall ensure that all doors and windows are securely fastened and lights extinguished when leaving the hall (if applicable).

11 The use of the property may be granted up to 24 hours prior to the time of hire for decorating purposes subject to other bookings during that period.

12 Repairing and/or replacing any damaged furniture, fixtures or fittings will be the responsibility of the permit holder. If any necessary repair or replacement is not undertaken within a reasonable time, Council may repair and/or replace and recover the costs from the permit holder.

Last Updated 11 December 2012

13 Normal hire charges may be applied if a cancellation is not received at the Council office at least seven days prior to the reserved date.

14 This permit may be revoked by Council if the permit holder fails to comply with a condition of the permit and may be revoked in any other justifiable circumstance.

15 As discussed, as the operator you are responsible for ensuring any other contactor or sub-contractor have public liability insurance in place, indemnifying Council of any claim which may result from this event.

16 (a) Will Alcohol be served or available – Please circle - YES NO

(b) Who is the "Designated Person" responsible for alcohol on the site –

Print name…Todd Skipworth……

(c) "Responsible Serving of Alcohol" – Please indicate what measures will be put in place –

Participants are given 2 x drink vouchers with their race entry and are not permitted any more drinks than their 2 vouchers
……
……
……

(d) Duties of RESPONSIBLE OFFICER – Ensure compliance with Permit Conditions and Legal Requirements.

17 Will any activities involving aircraft, helicopters or skydiving take place? YES NO

I acknowledge that I have read and understand the permit conditions and agree to abide by the said conditions.

Signed for and on behalf of the permit holder

Name	Todd Skipworth	Date	1/02/2022
Position	Director	Signature	

Signed by or on behalf of the Council

Name		Date	
Position		Signature	

Council Authorisation

Insurance Yes / No Permit Approved/Denied Fee $

Signed Date

Last Updated 11 December 2012

SLE Worldwide Australia Pty Limited.
Insuring the world's fun

Certificate of Currency

Type of Cover:	Broadform Liability
The Insured:	Triathlon Australia Inc
Period Of Insurance:	30 June 2021 To 4:00pm on 30 June 2022
The Business:	Organisation and running of sanctioned triathlon, duathlon, paratriathlon aquathon, multisport and/or single discipline events where appropriate and including recognised training sessions and recognised participation programs. The development and training of coaches, race officials and race coordinators. The preparation of national teams for qualification and participation in Olympic Games, World Championships, Age Group Events and key International Events. Governance, development and promotion of the sport of Triathlon in Australia, social activities including awards presentations, fundraising, BBQs and other social gatherings.
Affiliated Event Organiser	Coles Bay Half - Coles Bay Half (05 Mar 2022 - 05 Mar 2022)
Interest Noted:	*The specified entity(ies) below are hereby noted under this Policy for their respective rights and interests in Triathlon Australia and/or Triathlon Australia organised or sanctioned events;* Glamorgan Spring bay Council, Tri South , Tri North.
Limits of Liability:	**Public Liability** $ 20,000,000 any one Occurrence **Products Liability** $ 20,000,000 any one Period of Insurance Property in Physical or Legal Control $ 250,000 limited in the aggregate Advertising Injury $ 20,000,000 any one Occurrence
Insurer:	Underwritten for certain underwriters at Lloyd's of London & Chubb Insurance Australia Limited by their agent SLE Worldwide Australia Pty Ltd. under binding authorities B128416380W20 & 001-2020 respectively. $ 15,000,000 x $5,000,000 Underwritten for certain underwriters at Lloyd's of London & Chubb Insurance Australia Limited by their agent SLE Worldwide Australia Pty Ltd. under binding authorities B128416380W20 & 001-2020 respectively.
Policy Number:	205095510305
Geographical Limits:	Worldwide

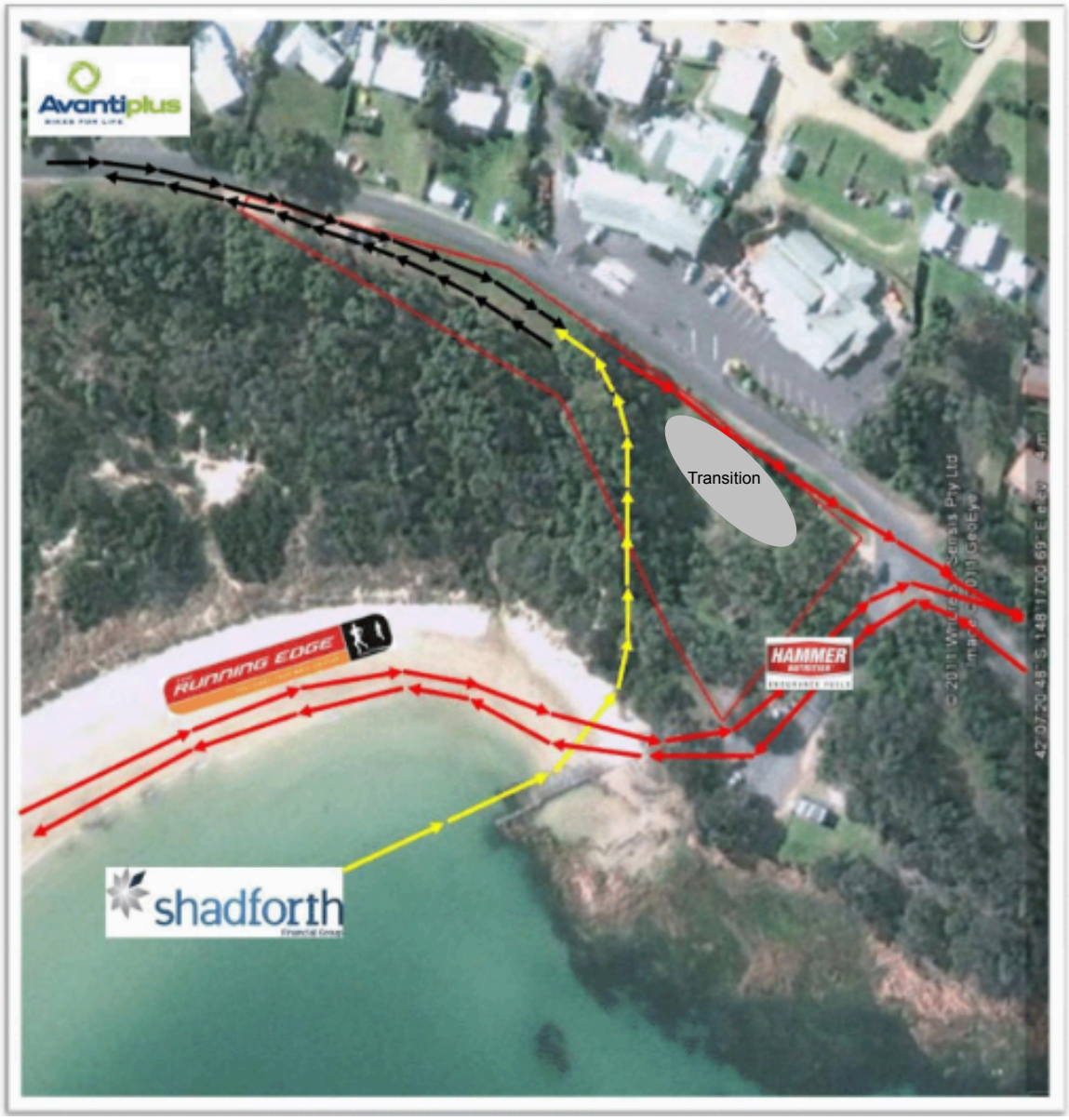
Broker: V INSURANCE GROUP
Level 25, 123 Pitt Street
Sydney NSW

Stamped & Dated: 9 July 2021

SLE Worldwide Australia Pty Limited is acting under the authority of the Insurers and will be effecting this contract of insurance as agent of the Insurer and not the Insured. ABN 15 066 698 575 AFSL License No: 237268

Please Note: Whilst an expiry date has been indicated, it should be known this policy can be cancelled at any time in the future. Accordingly reliance should not be placed on the expiry date.


This plan has been prepared as a guide for Traffic Management purposes only and is not to scale.
The positions of the signs and equipment on this plan are only the suggested locations, as they may need to be revised onsite to improve visibility and/or effectiveness.
Altus Traffic does not accept any responsibility for compliance of this plan when implemented or monitored by others.
When this plan is installed, any changes made will be recorded into the sign diary and the signage will comply with the Australian Standard AS 1742.3, 2019, traffic act 1925, the Roads and Jetties Act 1935 & AustRoads Guides TTM
www.mvation.com
ROAD CLOSED AHEAD
EVENT AHEAD
REDUCE SPEED
Bike ride
Green line
ROAD CLOSED
Transition area
Red line
Reserve Rd
Freycinet Dr
Bradley Dr
Perey St
ROAD CLOSED AHEAD
Brooker St
Cosgrove St
Peyton Ave
ROAD CLOSED
Run Blue line
Harold St
Garnet Ave
ROAD CLOSED
Marshall
Esplanade
Jetty Rd
500
Date: 12/1/2022 Author: Jan Thorpe 13400 Project: Coles Bay Triathlon
Comments:
TGS for Coles Bay Triathlon
Date to be held 05/3/2022


Avantiplus
Transition
HAMMER
shadforth

RESPECT | HEALTH | ENJOYMENT | BELONGING | ACHIEVEMENT

TRIATHLON AUSTRALIA

RACE PERMIT

Permit Number: TAS7950/080222

Thank you for submitting Coles Bay Half, to be held between **05 March 2022** and **05 March 2022** for sanctioning approval.

Triathlon Australia sanctioning for the above event, in accordance with your application for sanctioning, and any subsequent correspondence, is granted subject to the following conditions:

* Prior to the event, you conduct a safety inspection of the course, and at the participants' briefing you advise all competitors of the safety hazards on the course. The event should be modified if the course hazards cannot be safely controlled. This includes situations such as dangerous surf conditions or Bureau of Meteorology tsunami warnings.
* All participants sign a "Participants' Agreement" prior to the event, indicating that they understand and accept the major risks associated with the event
* The event has appropriate insurance coverage
* Approval is obtained from all other stakeholder authorities
* Every part of the course must be accessible to an emergency vehicle. Procedures for any off-road access must be included in the event's risk management plan.

Please consider this RACE PERMIT to be formal Triathlon Australia sanctioning approval (subject to the above conditions).

This race permit validates your previously issued Certificate of Currency.

Have an enjoyable and safe event,

Peter Adams
On Behalf of Triathlon Australia

AIS

Department of State Growth
Salamanca Building Parliament Square
4 Salamanca Place, Hobart TAS
GPO Box 536, Hobart TAS 7001 Australia
Ph. 6777 1951
Email Vili.Siale@stategrowth.tas.gov.au Web www.stategrowth.tas.gov.au

Tasmanian Government

Todd Skipworth
Atlas Events - Coles Bay Half
By email: todd@myatlasevents.com.au

Dear Todd

Coles Bay Half Triathlon

I refer to your request to use the following State road(s) for the above event:

Coles Bay Road, between Coles Bay and a point to the north of Friendly Beaches Road	Coles Bay	Saturday 5 March 2022

The Department of State Growth has no objection to the use of the above State road(s) as proposed and authority is hereby provided under the *Roads and Jetties Act 1935*, Section 16 for the display of traffic control devices as shown in the traffic management plan submitted with your request, subject to the following conditions:

- The event and relevant traffic management arrangements are to be advertised in the media well in advance of the event. (As a guide, 2 weeks advance notice should be sufficient for most events.)
- Traffic control must be provided by suitably trained, qualified and experienced personnel in accordance with the Traffic Control for Works on Roads – Tasmanian Guidelines 2020. The event organiser is responsible for all costs associated with providing appropriate traffic management for the event.
- The event organiser is responsible for the cost of repair of any damage to any State road or related infrastructure, including guide posts and railings, resulting from activities around the event.
- Tasmania Police approval for any road closure is necessary and must be obtained by you.
- The event organiser is responsible for obtaining any other required approvals from relevant authorities.
- This event permit does not include authority to display temporary signs advertising this event on a State road. The application, guidelines and requirements for signs and pre-approved locations for display of signs can be found at https://www.transport.tas.gov.au/roads_and_traffic_management/permits_and_bookings/advertising_a_community_event.

- The event organiser will save and keep indemnified the Crown in the right of the State of Tasmania against all or any costs, claims, proceedings and demands whatsoever and by whomsoever arising out of or in respect of the conduct of the event in the State road reservation.

- The event organiser will consider, and make adequate provision for:
    - Vehicular access and parking
    - Access by pedestrians, public transport and emergency services
    - Consultation with affected stakeholders
    - Consultation with Tasmania Police

If you have any queries in relation to this authority, please contact Vili Siale on the above number.

Yours sincerely

Garry Hills
Principal Analyst Traffic Engineering

Delegate of
Minister for Infrastructure and Transport
Michael Ferguson MP

27 January 2022

cc: General Manager, Glamorgan-Spring Bay Council

Tasmanian Government

Use of a State Road for a Public Event Application

Department of State Growth

Applicant Details

Applicant First Name:	Todd	**Applicant Last Name:**	Skipworth
Organisation Name:	Atlas Events - Coles Bay Half		
Postal Address:	PO BOX 62	**Contact Number:**	0448561557
Contact Email Address:	todd@myatlasevents.com.au	**Confirm Email Address:**	todd@myatlasevents.com.au

Event Details

Event Name:	Coles Bay Half	**Event Location:**	Coles Bay
Description Of Event:	The Coles Bay Triathlon is held within the natural reserves of beautiful Coles Bay, on the east coast of Tasmania, Australia. A 1.9 km swim, 90 km ride and 21.1 km run (Half), 375/10/2.5 (Enticer) and 500/20/5 (Sprint)		
Proposed Start Date:	05/03/2022	**Proposed Start Time:**	08:00 AM
Proposed End Date:	05/03/2022	**Proposed End Time:**	04:30 PM
Participant Numbers:	300	**Participant Children:**	Yes
Spectator Numbers:	100	**Spectator Children:**	Yes

Assembly Area Details

Does Event Involve Assembly Area?	Yes
Details Of Assembly Area:	Village Green, Iluka
Why Assembly Area Was Chosen:	It allows athletes access to their bikes from the swim portion of the event without disrupting traffic or needing to cross roads, thereby minimising traffic disturbance
Has Place Of Assembly Licence:	Yes
If No Licence, Why?	
How Will The Site Be Accessed:	Coles Bay Triathlon.jpg.pdf
Provision For Street Parking:	Off-street car parks and allocated on street parking is sufficient and has been since 2011. Most competitors stay within walking distance of the event start

Traffic Management

Will Event Impact On Traffic Flow?	Yes
If No Impact, Why?	
Traffic Management Control	Local SES

Organisation:			
Contact Name:	Kelvin Jones	Contact Number:	0418376129
Contact Email:	todd@myatlasevents.com.au	Confirm Email:	todd@myatlasevents.com.au
Authorisation Previously Issued?	Yes		
Year Issued:	2020	Reference Number:	
TMP Same As Submitted For Previous Year?	Yes		
Traffic Management Plan Or Guidance Scheme Certification:	Coles Bay TMP.zip		
Require A Temporary Closure:	Yes	Road Affected By Partial Closure:	Coles Bay Rd, Esplanade
Type Of Closure:	Partial closure	Road Affected By Total Closure:	
Other Supporting Documents:	Coles Bay_App _ Docs.zip		

GLAMORGAN SPRING BAY COUNCIL

9 Melbourne Street (PO Box 6)
Triabunna TAS 7190
03 6256 4777
03 6256 4774
admin@freycinet.tas.gov.au
www.gsbc.tas.gov.au

COMMUNITY SMALL GRANTS PROGRAM APPLICATION PACKAGE

A funding scheme initiated by the Glamorgan Spring Bay Council to assist community development in the municipality.

GUIDELINES FOR APPLICANTS

The Glamorgan Spring Bay Council's Community Small Grants Program provides small grants to individuals and community organisations and groups to assist them to undertake programs and activities within the Glamorgan Spring Bay municipal area.

Council receives requests for more funding than is available and consequently funds under the programs are limited. The majority of grants will be restricted to no more than $1,000, however, in certain circumstances, Council may consider increasing the allocation.

There is no specific funding period. Applications for funding assistance shall be considered throughout the year until such time as the available funds have been exhausted.

ELIGIBILITY

- Applications must be from not-for-profit organisations as defined as follows:
  - Its main operating purpose is other than to provide goods and services for profit.
  - Other than in the case of winding up, no member/owner has the right to surpluses of the entity.
  - That entity does not have the right to transfer ownership to members/owners.

- Any resident of the Glamorgan Spring Bay municipal area who has been selected on merit to participate or compete in any event or project of state, national or international significance may seek funding assistance.

- Projects should aim to:
  - Address relevant community issues of significance.
  - Be initiated within the community and actively involve local people.
  - Improve access and encourage wider use of facilities.

COUNCIL PROCESS REQUIREMENTS

- Application:
  - Complete the Community Small Grants Application form.
  - Provide a plan or sketch of the proposed project (if applicable).
  - Provide a copy of the project budget and evidence of basis of costs.

- Successful applicants after project completion:
  - Complete the Community Small Grants Acquittal form.
  - Provide a brief written report of the success or otherwise of the project prior to the conclusion of the financial year, together with a photo (if applicable).
  - Provide most recent financial statement or evidence of expenditure.

For further information, please contact the Community & Communications Officer
Phone: (03) 6256 4777
Email: community@freycinet.tas.gov.au
PO Box 6, Triabunna 7190

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COMMUNITY SMALL GRANTS APPLICATION FORM

Name of applicant	Atlas Events Pty Ltd
Postal address	PO Box 62, Battery Pt, TAS 7004
Contact person	Todd Skipworth
Role if group applying	Director
Contact number	0448561557
Email address	todd@myatlasevents.com.au
Is your organisation an incorporated body?	☑ Yes ☐ No

Project title and brief description (If insufficient space, please attach additional sheet)

The Coles Bay Triathlon is held within the natural reserves of beautiful Coles Bay on the Ea
Having run for more than a decade it is one of the longest running events of it's kind in Tas
Race of the Triathlon Tasmania State Series and is sanctioned by Triathlon Australia. An ic
a must do for every triathlete in Tasmania and draws competitors from all over Australia to
Rated as one of the most scenic triathlons in Australia there are 3 event distances for come
abilities as well as a kids Aquathon. Half Distance 1.9km Swim, 90km Bike, 21.1km Run. T
swim, 10km bike & 2.5km run & the sprint 500m swim, 20km bike, 5km run.

Outline intended outcomes of the project (for example, benefits of the project to the community, support from any other groups or organisations.

1. Draw participants to the Coles Bay region to stay and enjoy all that it has to offer
2. Involve the local community in an activity that can benefit them physically, mentally and
- Providing an event they can train for and compete in
- Providing an event they can be proud of that showcases their local area and community
- Involving them in the running of the event either as a paid staff or volunteer
3. Showcase the Coles Bay region to mainland triathletes and their families

Funding sought from Council	$3000
Funding to be contributed by you or your organisation	$45,000
Funding to be contributed from other organisations (Provide details below of confirmed or anticipated contributions *)	$15,000
Total Project Expenses	$60,000

Signed	
Name (Please print)	Todd Skipworth
Date	31/01/2021
*Details of other contributors:	Events Tas - Event Ready Grant (Submitted, awaiting approval) Event sponsors (My Ride, Just Swim, Speedo, Epic Pharmacy, Aida Care)

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COMMUNITY SMALL GRANT ACQUITTAL FORM
(To be filled out by successful recipient of Grant Funds)

Name of successful applicant	
Postal address	
Contact person	
Role if group applying	
Contact number	
Email address	
Is your organisation an incorporated body?	☑ Yes ☐ No

Project title and brief description of how the project achieved the outcomes intended.

INCOME	
Funds received from Council	$
Funding from your organisation	$
Funding from other organisations	$
TOTAL funding received	**$**
EXPENDITURE List expenditure receipts	
	$
	$
	$
	$
	$
	$
TOTAL expenditure	**$**
Total Funding less Total Expenditure	**$**

Signed by recipient	
Date signed	

Date: 1/02/2022

To:

Glamorgan Spring Bay Council,

I write to you on behalf of the Coles Bay Triathlon to request the support of the Glamorgan Spring Bay Council for this important annual community event.

Now in it's 12th year the Coles Bay Triathlon has become the ultimate race in the Triathlon Tasmania State Series. A bucket list race for Tasmanian and mainland triathletes, the race brings 300+ participants and supporters to the Coles Bay area.

We would ask you to consider offering in-kind support to the value of $1,500 to help with

1. Permit and application fees
2. Portable toilet hire
3. Waste removal and
4. Use of green space

Additionally we would like to ask that council consider a $1,500 cash contribution to help make the event a success. This will be used to promote the Coles Bay Triathlon on social media and through direct marketing campaigns.

In recognition of your support we will proudly display the Glamorgan Spring Bay Council logo on our event website and in all digital event material sent to competitors. If you have any tear drop banners or bunting we will display this prominently in the transition and finish line area over event weekend to showcase the councils support of the event.

We are grateful for the opportunity each year to run an event in such a unique and inspiring location and thank you in advance for any support you can offer to help showcase the region through the Coles Bay Triathlon.

Kind Regards,

Todd Skipworth
Director, Atlas Events

ATLAS EVENTS PTY LTD
ABN 35 650 446 512
PO BOX 62 Battery Point, Tasmania, 7004
Email: info@myatlasevents.com.au

CRIME

OUR REF: 020231

NOTE: Where a coverage heading incorporates provision for an amount to be inserted (e.g. Sub-Limit) but no amount is recorded, no cover is provided under this policy.

INSURED Glamorgan Springbay Council including subsidiary or controlled companies now or previously existing or hereafter formed or acquired.

ABN AND ITC DETAILS	ABN 95 641 533 778 ITC 100.00%	
GEOGRAPHICAL SCOPE	Anywhere in the world	
INSURING CLAUSES	A. Employee Theft Coverage	$1,000,000
	B. Premises Coverage	$1,000,000
	C. In Transit Coverage	$1,000,000
	D. Forgery Coverage	$1,000,000
	E. Computer Fraud Coverage	$1,000,000
	F. Funds Transfer Fraud Coverage	$1,000,000
	G. Counterfeit Currency Fraud Coverage	$1,000,000
	H. Credit Card Fraud Coverage	$1,000,000
	I. Client Coverage	$1,000,000
	J. Expense Coverage	$250,000
GOVERNING LAW OF CONTRACT	Australian	
PERIOD OF INSURANCE	From: 1 January 2022 at 4 PM Local Time (VIC).	
	To: 30 June 2023 at 4 PM Local Time (VIC).	
DEDUCTIBLE/EXCESS	Insuring Clauses A – I	$25,000
	Insuring Clauses J	Nil
EXTENSIONS APPLICABLE TO ALL SECTIONS	Nil	
RETROACTIVE DATE	Unlimited	
POLICY WORDING	Chubb Crime Wording (Ed. 05/07), including Cryptocurrency Exclusion and Social Engineering Fraud Enhancement Endorsement	

Endorsement(s):

- Crime Enhancement Endorsement
- Cryptocurrency Exclusion
- Social Engineering Fraud Enhancement Endorsement

SUMMARY OF COSTS

Class of Protection	Premium including statutory charges and invoice administration fee Renewal Premium 18 Months	Recommended Insurer	Preferred Option
Crime	$19,982.63	Chubb Insurance Australia Limited	
Crime	$20,023.92	AIG Insurance Limited	

Renewal Premium: Represents the risk carriers final renewal terms based on completed proposal forms.

Note the renewal of the policy is for an 18 month period through to 30 June 2023

Recommended Insurer: Represents our preferred insurer for 2022/2023 policy placement (01 January 2022 to 30 June 2023). Please refer to individual policy quotation provided in this Renewal Report for more detail.

Our Fee structure noted in the above table, includes provision of the services set out in the "Risk Advisor Appointment / Service Agreement" section of this Report.

Please note an Administration Fee of $200 (plus GST) is applicable per policy invoice for new business and renewals (Except Nil transactions).