GLAMORGAN SPRING BAY COUNCIL

ORDINARY COUNCIL MEETING – 25 JANUARY 2022

ATTACHMENTS

Agenda Report			Page No
4.1	Attachment A	Application Documents	1
	Attachment B	Representations	142
	Attachment C	Supporting Documents	149
5.1	Attachment 1	Profit & Loss for the period ending 31 December 2021	157
	Attachment 2	Balance Sheet as at 31 December 2021	158
	Attachment 3	Statement of Cash Flows for the period ending 31 December 2021	159
	Attachment 4	Capital Works as at 31 December 2021	160
8.2	Attachment 1	Draft Council Advertising Policy	163
8.3	Attachment 1	Draft Council Workshop Policy	168
8.4	Attachment 1	2022 National General Assembly – discussion paper	176
	Attachment 2	2022 Federal Election Priorities	185
8.5	Attachment 1	Swansea Courthouse and Council Chambers Draft Business Plan	201
	Attachment 2	Swansea Courthouse Management Committee Terms of Reference	209
	Attachment 3	Swansea Courthouse Management Committee 2021 Annual Report	213
8.6	Attachment 1	Draft Stormwater System Management Plan	220
8.8	Attachment 1	Audit Panel Charter	285
8.9	Attachment 1	Minutes of Meeting – 30 November 2021	292

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 ☒

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.

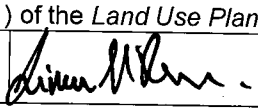
The intended recipients of personal information collected by Council may include its officers, agents or contractors or data service providers and contractors engaged by the Council from time to time.

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
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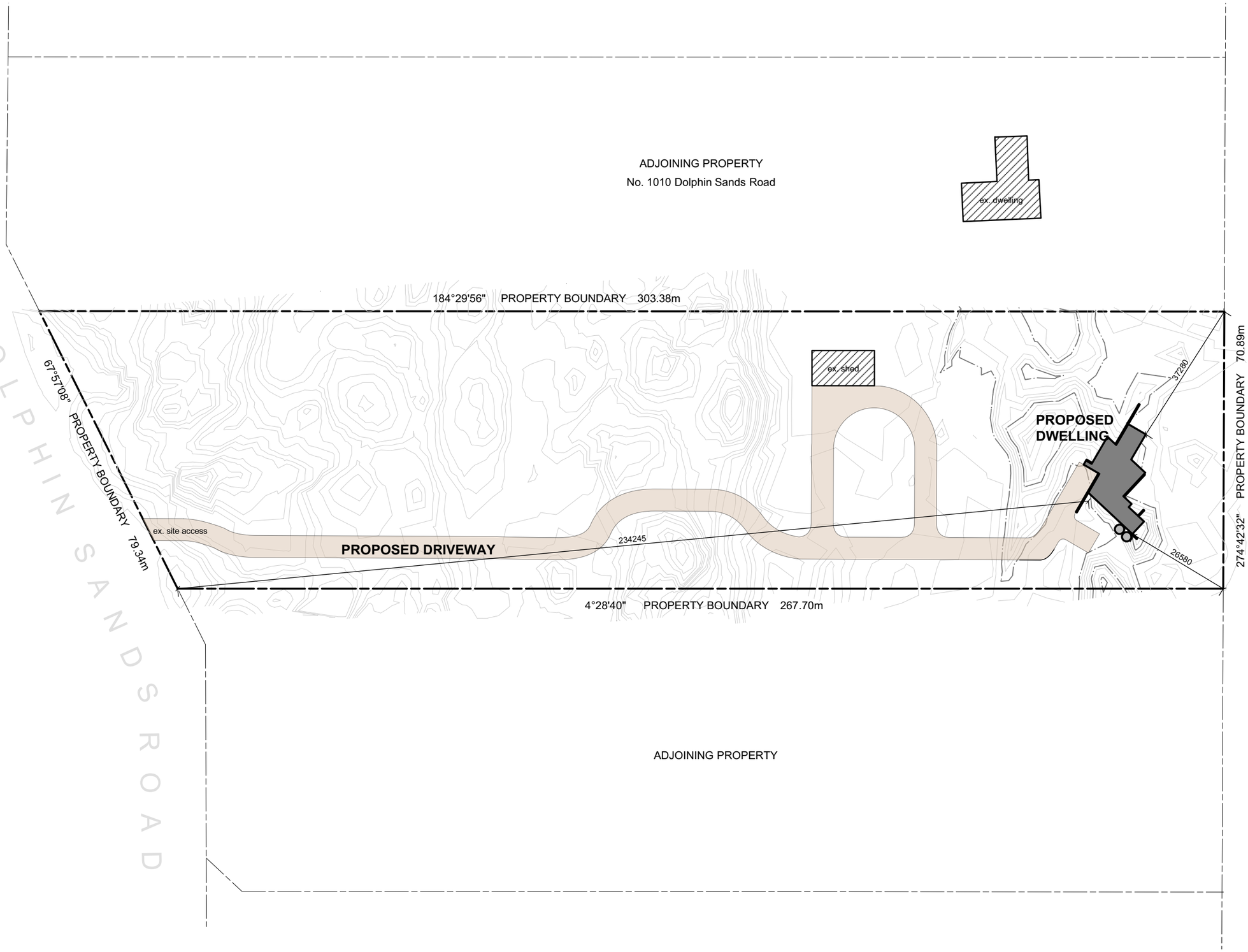

NOTE:

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.

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

S. *Chase. Wonder.*

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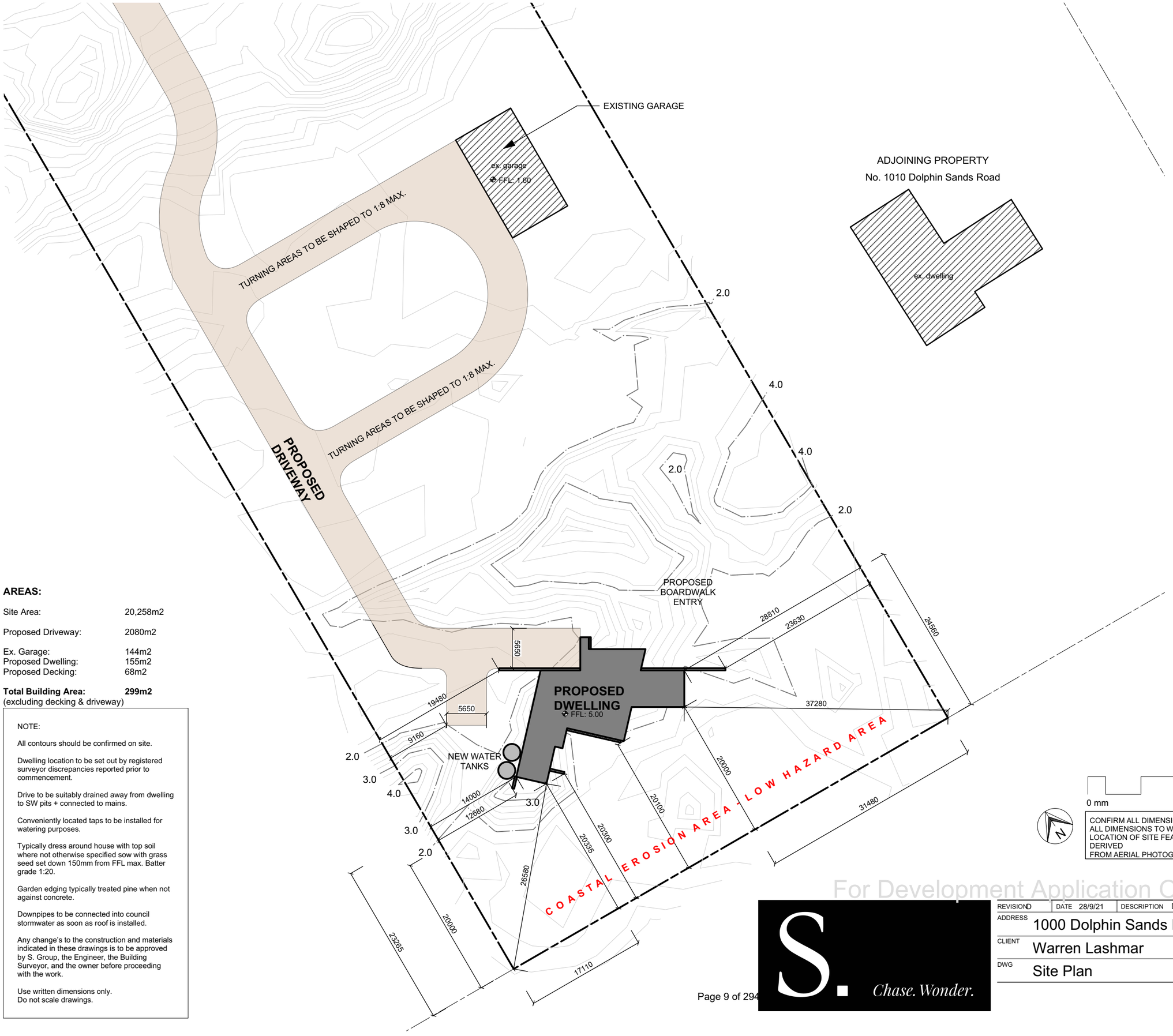


AREAS:

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.

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

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

S. Chase. Wonder.

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.

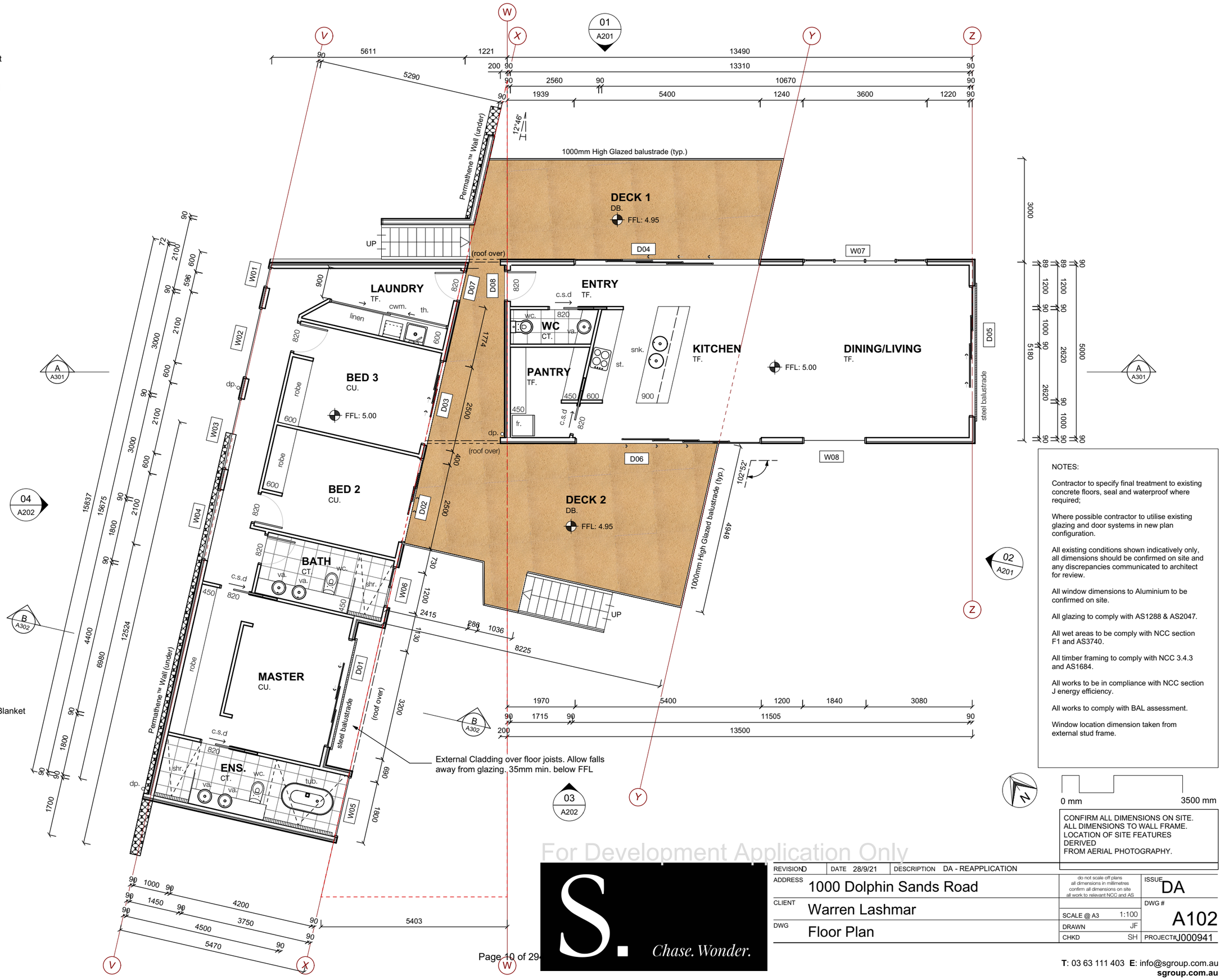
KEY:

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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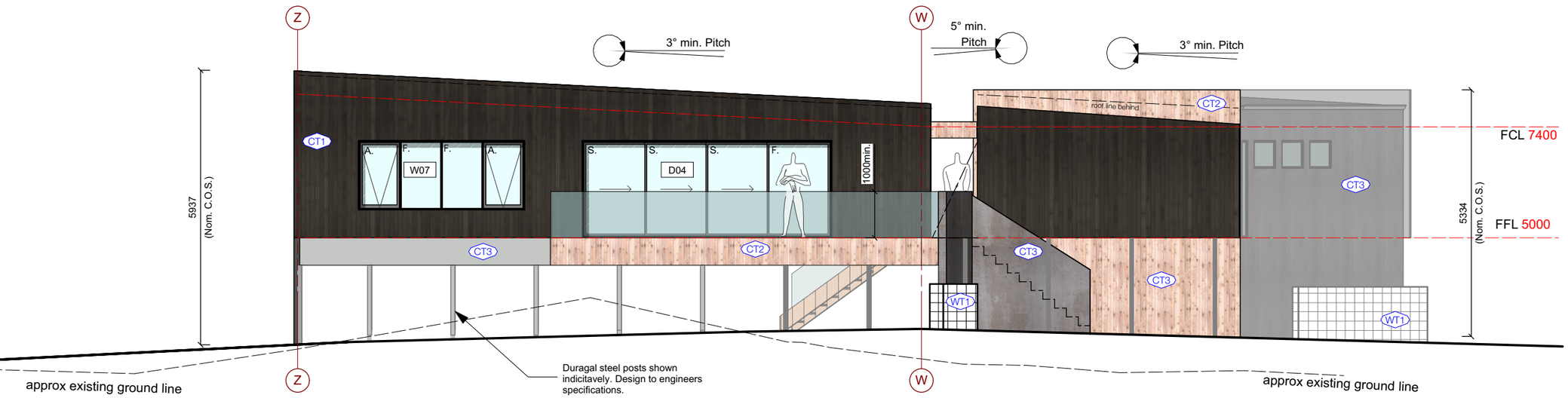
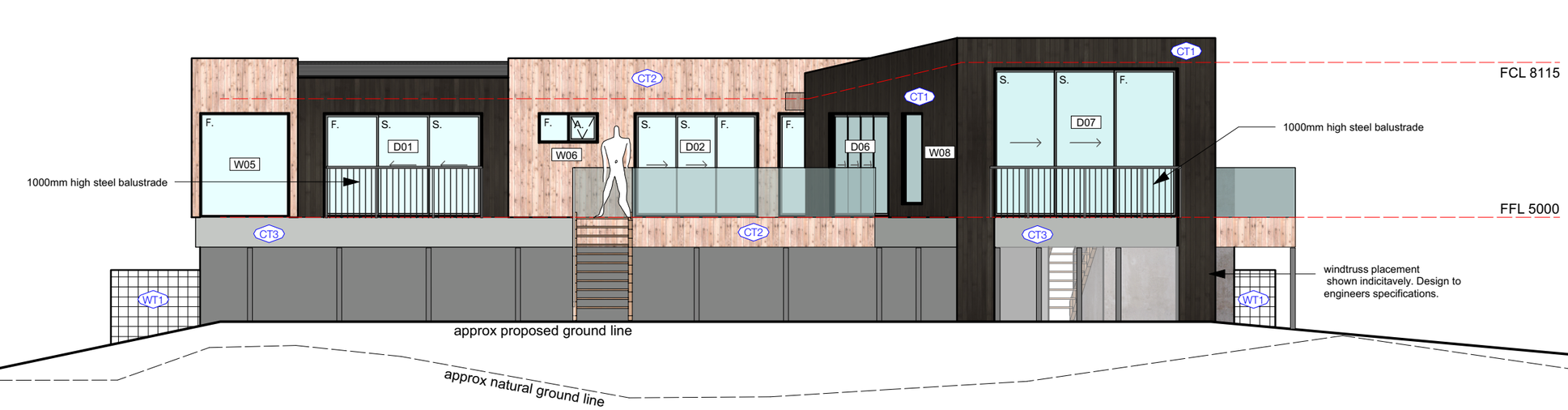




CLADDING TYPES

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

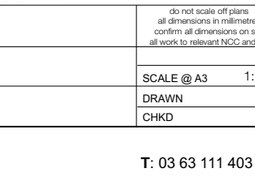
GROUND LEVELS SHOWN INDICATIVELY, ENSURE FINISH SURFACE FALLS AWAY FROM STRUCTURE.

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			DWG # A201
DWG Elevations 01 & 02	SCALE @ A3 1:100	DRAWN JF	
		CHKD SH	PROJECT# J000941

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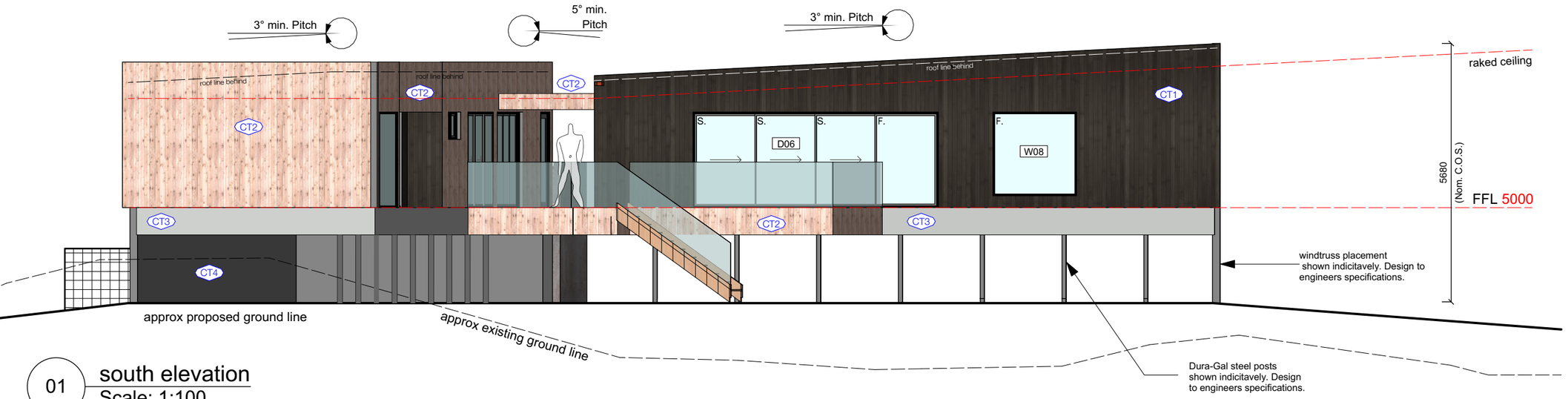
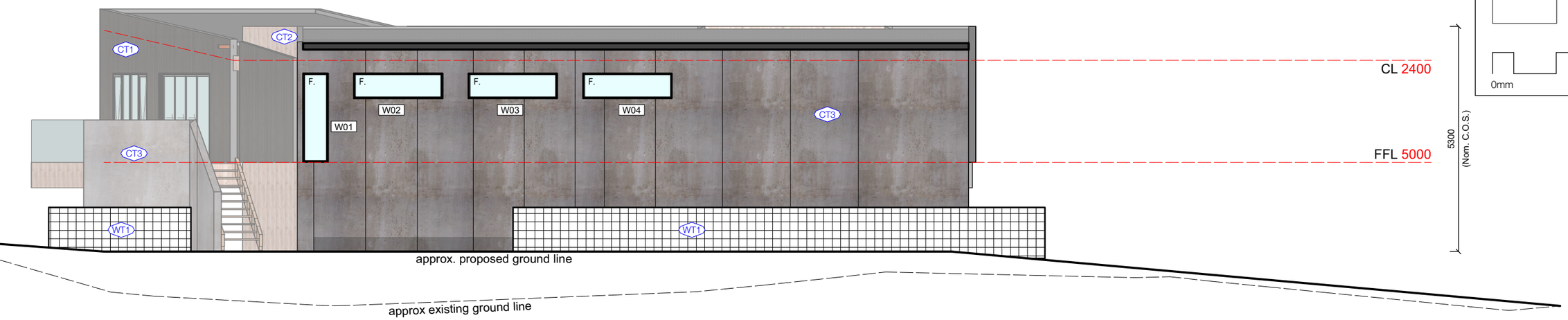


01 south elevation
Scale: 1:100



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

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

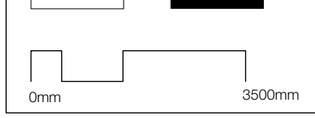
GROUND LEVELS SHOWN INDICATIVELY, ENSURE FINISH SURFACE FALLS AWAY FROM STRUCTURE.

GLASS BALUSTRADE TO COMPLY WITH AS1288

COLOUR SCHEDULE
(or similar approved)

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

white - C4 | black - C5



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 # A202
DWG Elevations 03 & 04		SCALE @ A3 1:100	
		DRAWN JF	
		CHKD SH	PROJECT# J000941

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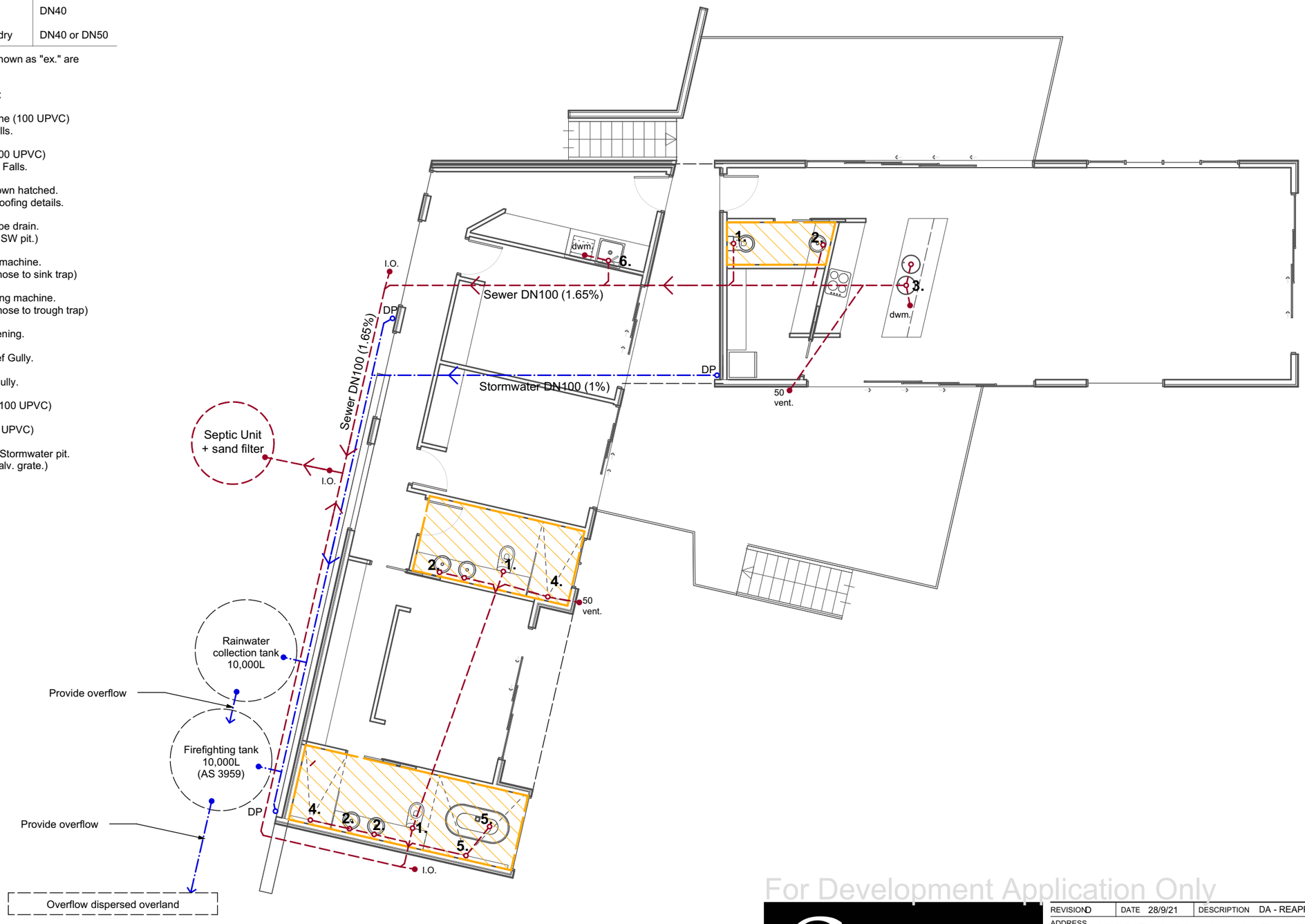
SANITARY PLUMBING TO AS 3500.2 TABLE 6.1: FIXTURE UNIT RATINGS:

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.

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

S. Chase. Wonder.
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S. Group
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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.

LARK & CREESE
LAND AND ENGINEERING SURVEYORS

15486-01

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

CONTENTS:

		Page Number
1.	SUMMARY	3
2.	LOCATION	4
3.	SITE DESCRIPTION	5
4.	PROPOSED DEVELOPMENT	7
5.	BUSHFIRE ASSESSMENT	8
6.	COMPLIANCE	13
7.	CONCLUSIONS AND RECOMMENDATIONS	16
8.	REFERENCES	17

ATTACHMENT 1 - BUSHFIRE HAZARD MANAGEMENT PLAN

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.

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.

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

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

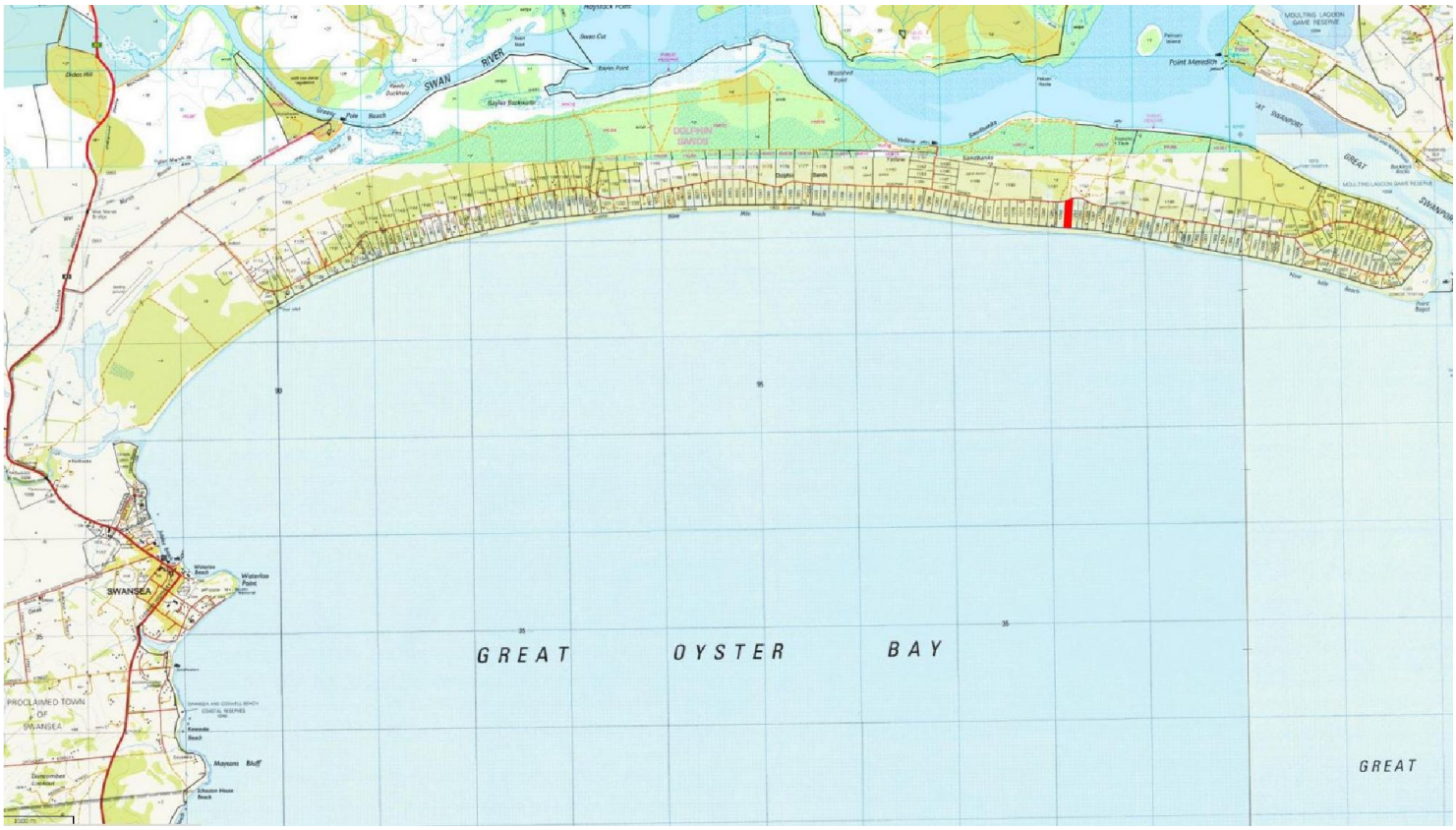

IMAGE 1: Site Location (Source *The LIST*)

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.

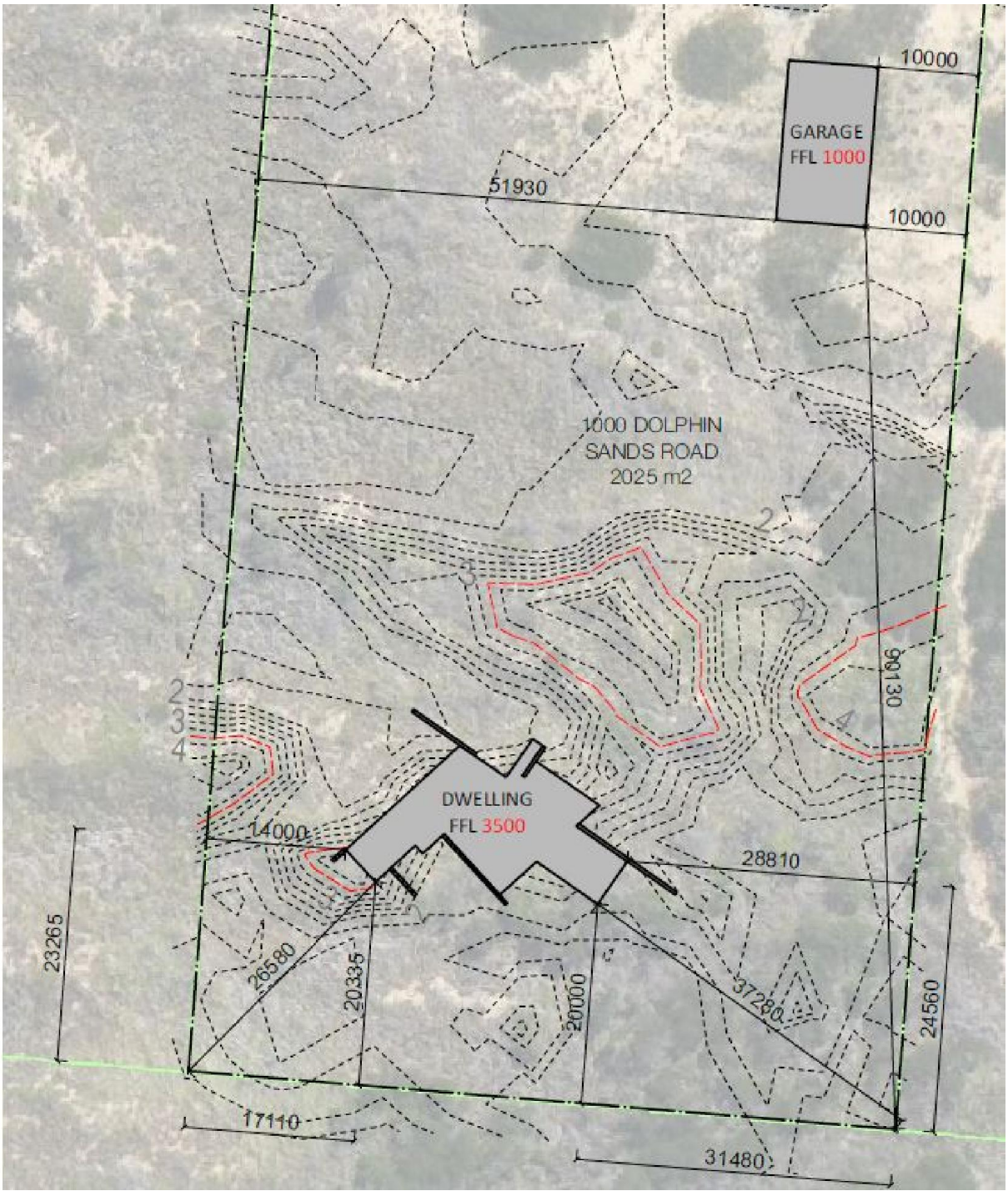

IMAGE 4: Site Plan

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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*

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

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

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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

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).

- 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

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

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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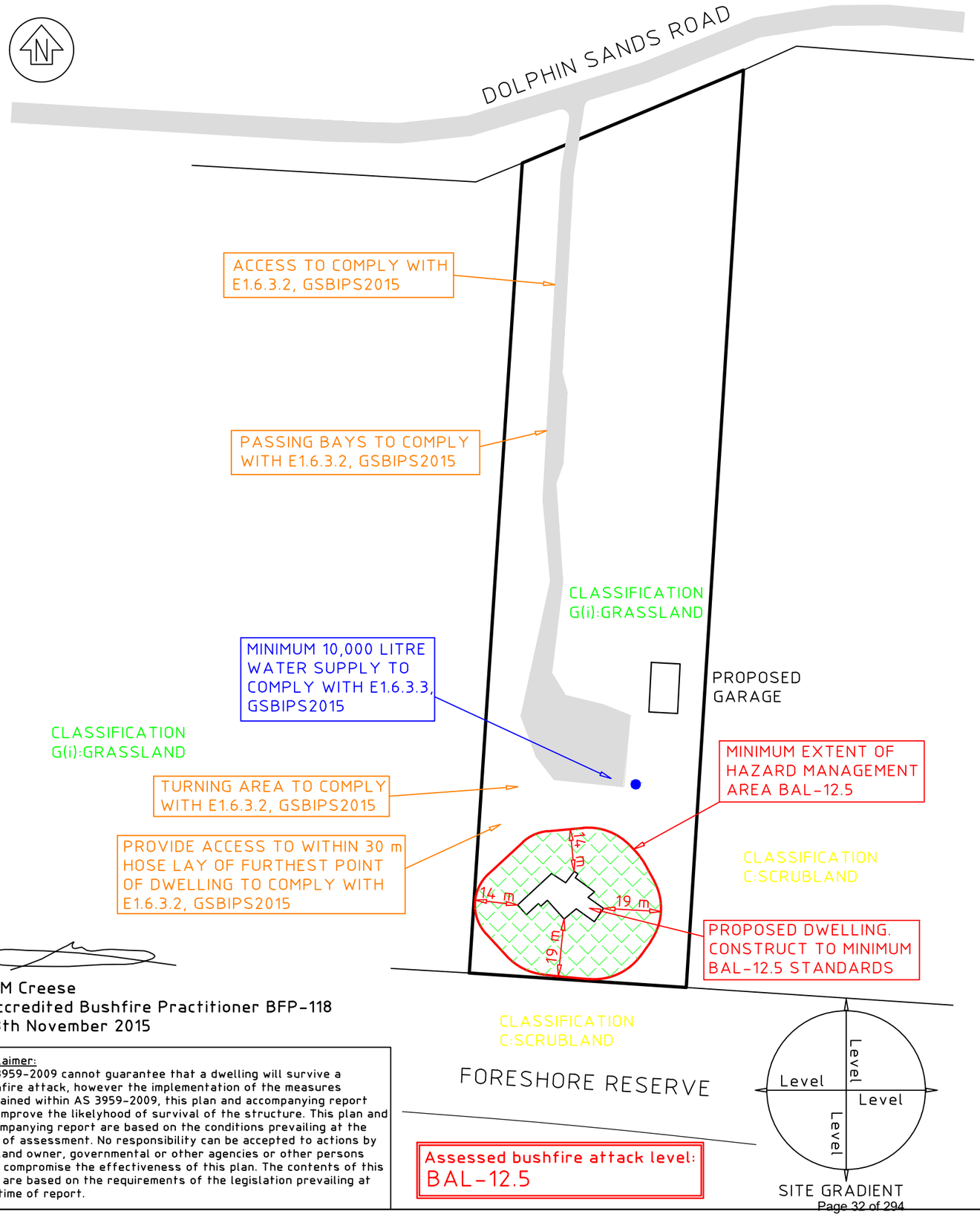
ATTACHMENT 1



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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Table of Contents

1. Summary 3
2. Proposal and Site Description 5
3. Native Vegetation 7
4. Introduced Plants 11
5. Discussion 12
6. Discussion 19
7. Legislative Implications 22
8. Conclusions 24
9. References 25

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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].

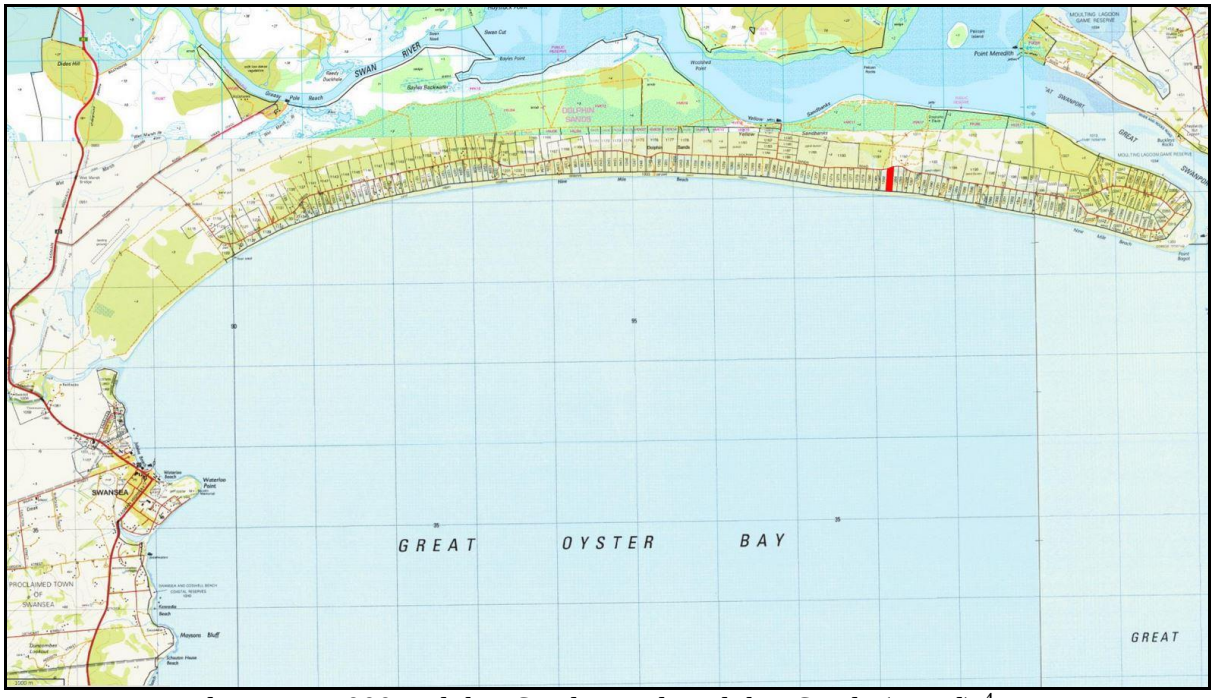

Figure 1 – Locality map, 1000 Dolphin Sands Road, Dolphin Sands (in red) [4].

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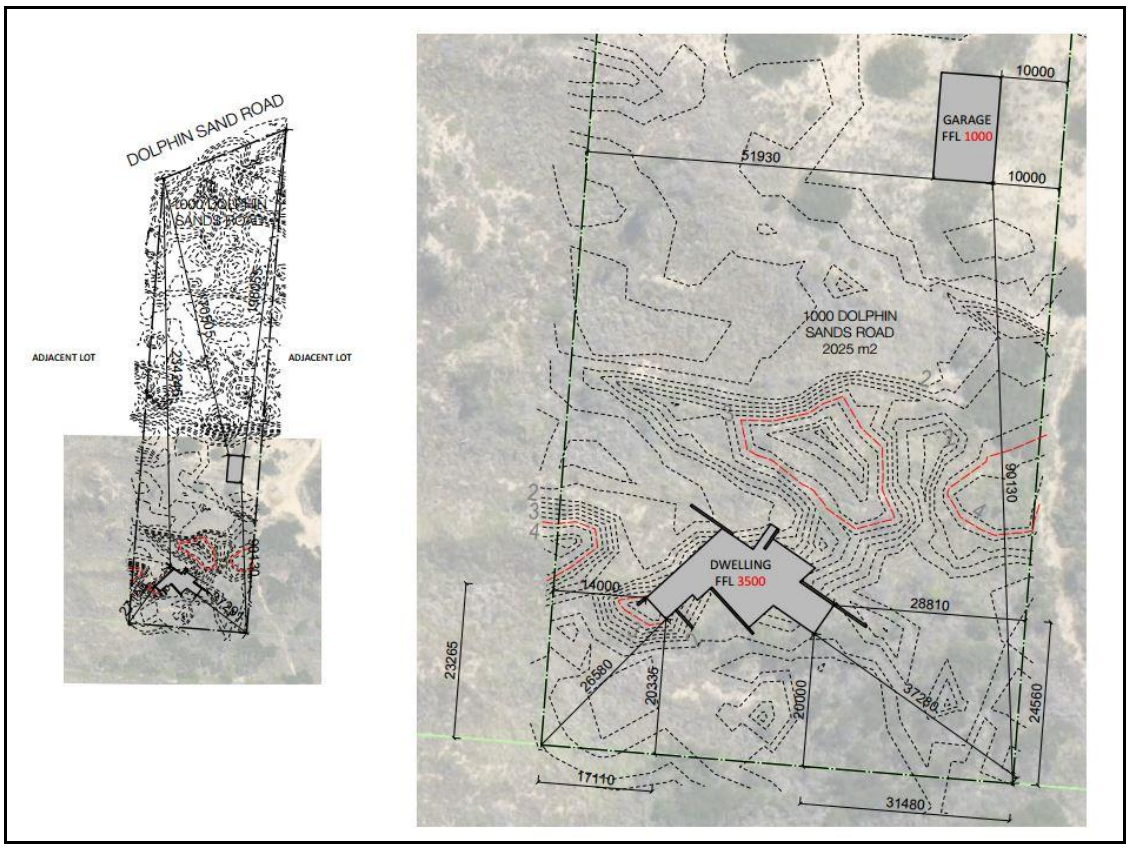

Figure 2 – Proposal site plan 1000 Dolphin Sands Road, Dolphin Sands.

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

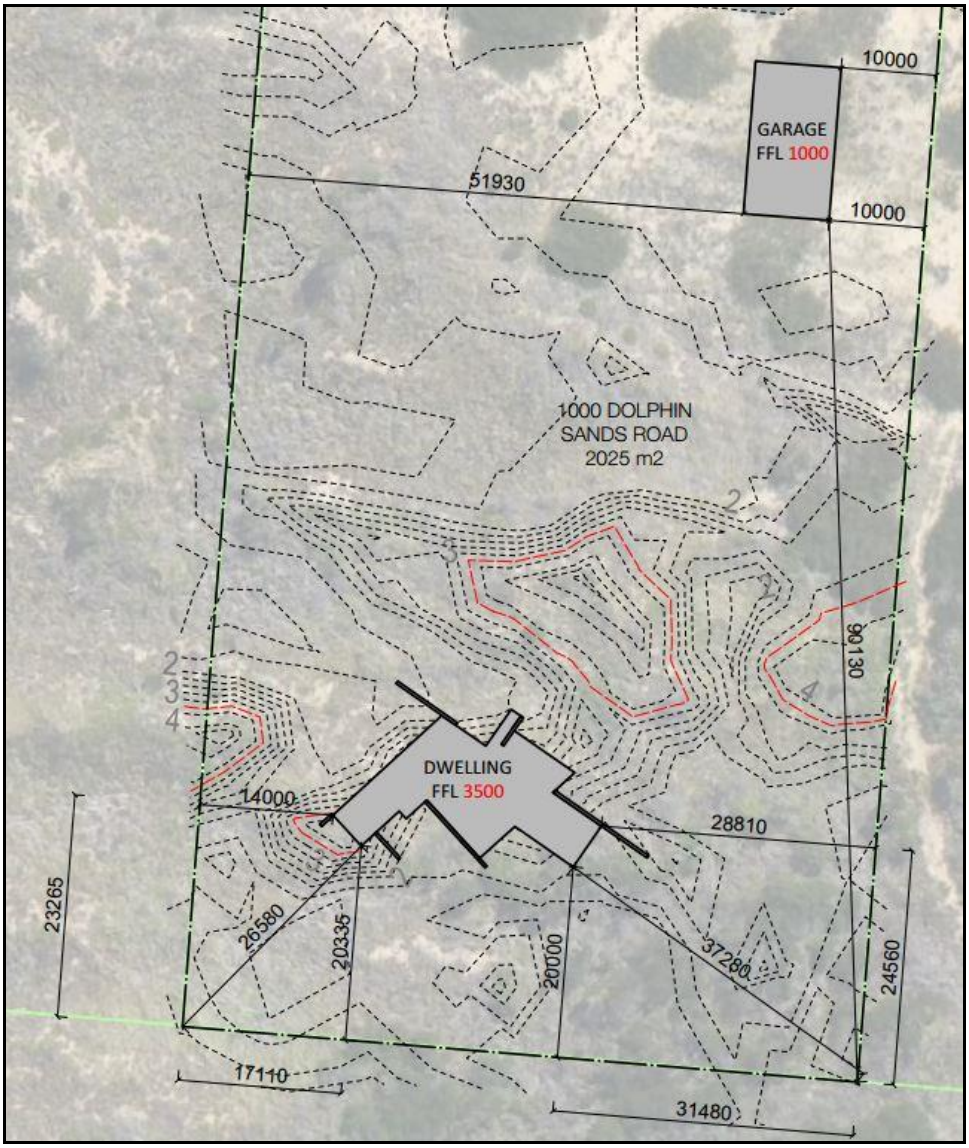

Figure 10 – Proposal site plan.

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.

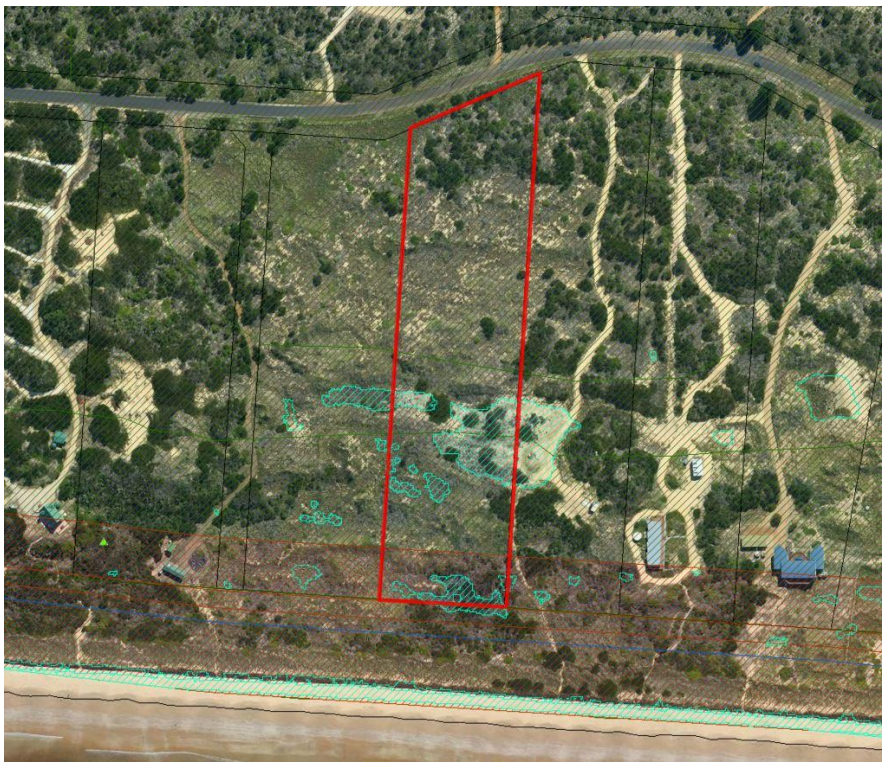

Figure 11 – Image showing extent of the Biodiversity Protection Area encompassing the entire allotment (green), Coastal Erosion Hazard Area (red) and potential Coastal Inundation Hazard Areas (light green) within the allotment (Ref: Image Google earth 2015).

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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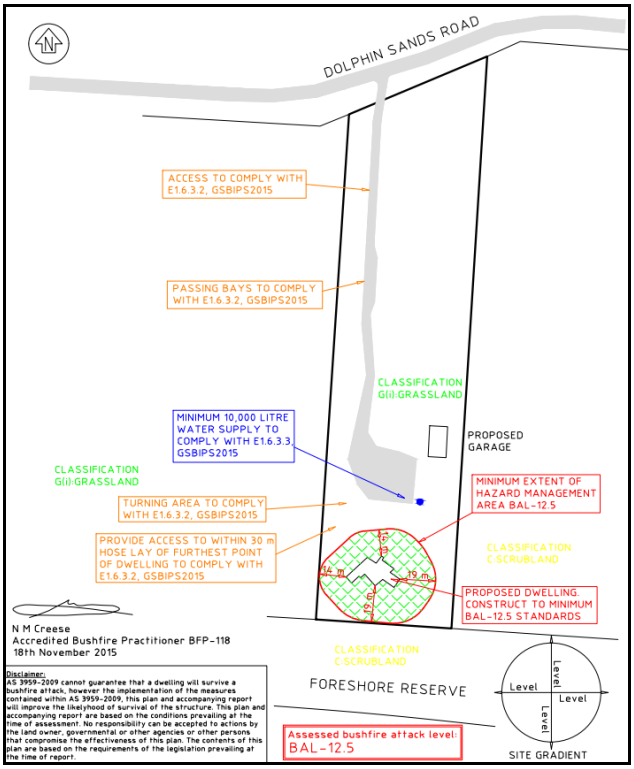

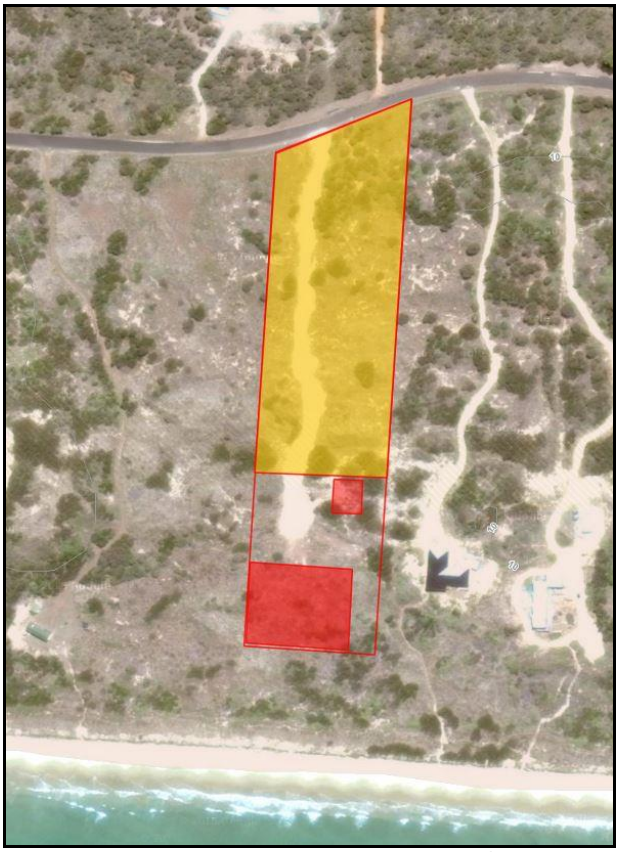

Figure 12 – LH image showing the approximate development site and extent of 3000m^2 BAL-12.5 BHMA. RH image shows proposed location for the Part 5 Agreement as an in-situ, 1:4 biodiversity offset in the form of a vegetation covenant (in yellow approx. 12000m^2).

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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

Executive Summary **4**

List of Abbreviations **5**

1 Introduction **6**

2 Objectives **6**

3 Site Details **7**

3.1 Project Area Land Title *7*

3.2 Project Area Regional Coastal Setting *7*

3.3 Project Area Local Setting *8*

4 Planning **9**

4.1 State Coastal Policy *9*

4.2 Interim Planning Scheme Overlays *9*

4.2.1 Waterways & Coastal Protection Areas (WCPA) Overlay 9

4.2.2 Inundation Prone Areas Code (IPAC) Overlay 10

4.2.3 Coastal Erosion Hazards Code (CEHC) Overlay 11

4.3 Proposed Development *11*

4.4 Development Standard Criteria *12*

4.4.1 Waterways & Coastal Protection Code (WCPC) 12

4.4.2 Inundation Prone Areas Code (IPAC) 13

4.4.3 Coastal Erosion Hazards Code (CEHC) 13

5 First Pass Assessment **14**

5.1 Natural Resource Management (NRM) Mapping *14*

5.2 Smartline Directory *14*

5.3 Sharples Definition *14*

5.4 Summary *14*

6 Second Pass Assessment **15**

6.1 Definitions *15*

6.2 Previous Studies *15*

6.3 Scope of Works *15*

6.4 Site Physical Setting *15*

6.4.1 Site Geology 15

6.4.2 Site Geomorphology 15

6.5 Site Baseline Seawater Levels *17*

6.5.1 Storm Tide 17

6.5.2 Sea Level Rise 17

6.5.3 Stillwater Levels 17

6.6 Site Hydrodynamics *17*

6.6.1 Methods 18

6.6.2 Site Wave Conditions 19

6.6.3 Dominant Wave Characteristics 20

6.6.4 Nearshore Hydrodynamics 20

6.7 Site Inundation Levels *20*

6.8 Summary *23*

7 Third Pass Assessment 24
7.1 Definitions 24
7.2 Previous Studies 24
7.3 Scope of Works 24
7.4 Aerial Imagery 25
7.5 Shoreline Recession 26
3.1.1 Closure Depths 26
3.1.2 Bruun Rule Beach Recession Model 26
7.6 Stable Foundation Zone 27
7.7 Summary 30
8 Risk Assessment 31
9 Recommendations 31
10 Limitations 32
11 References 33
Appendix 1 LIDAR Metadata Report 36
Appendix 2 Development Standards Acceptable Solutions 37
Appendix 3 The LIST NRM Data 38
Appendix 4 Smartlines Directory 40
Appendix 5 Hydrodynamic& Inundation Model 41
Appendix 6 Quantitative Risk Assessment Tables 47
Appendix 7 Quantitative Risk Assessment 49

Tables

Table 1 Summary of Site Areas Falling Within Potential Coastal Vulnerability Zones 11
Table 2 Summary of Natural Resource Management (NRM) Mapping (The LIST) 14
Table 3 Present Day & Projected Inundation Levels for 2100 based on DPAC (2012) estimates. 17
Table 4 Summary of Site Stillwater Levels for Present Day & Projected 2100 Inundation Levels based on DPAC (2012) estimates..... 17
Table 5 Summary of Dominant Waves Intercepting the Site..... 19
Table 6 Details of the Dominant Wave Intercepting the Site 20
Table 7 Details of the Dominant..... 20
Table 8 Summary of Site Inundation Levels..... 20
Table 9 Summary of Assessment Approaches for Identify Site Erosion Hazards 24
Table 10 Variables Selected for Determining Closure Depths at the Site..... 26
Table 11 Summary Bruun Rule Variables Utilised in the Site Recession Model..... 27
Table 12 Calculated Bruun Rule Recession Rate at the Site 27
Table 13 Calculated Recession Rate at the Site based on the Short Google Imagery Time Series..... 27

Figures

Figure 1. Regional Location of Project Area - The Land and Information System, Tasmania (LIST)..... 7
Figure 2 Site Local Setting (The LIST) 8
Figure 3 WCPA Overlay near the Site (The LIST)..... 9
Figure 4 IPAC Overlay near the Site (The LIST) 10
Figure 5 CEHC Overlay near the Site (The LIST) 11
Figure 6 Proposed Development – Site Plan..... 12
Figure 7 Site Geomorphology..... 16
Figure 8 Hydrodynamic Parameters Associated with Storm Surge Events..... 18
Figure 9 Site Inundation Given a 1% AEP Storm Event for 2065 combined with Wind Setup Conditions..... 21
Figure 10 Site Inundation Given a 1% AEP Storm Event for 2100 combined with Wind Setup Conditions..... 22
Figure 11 Distance to Frontal Dune Vegetation Line Relative to 988 Dolphin Sands Road Residence 25
Figure 12 Summary of standard Bruun Rule for Calculating Beach Recession 26
Figure 13 Site cross section delineated by the yellow line..... 28
Figure 14 Site Cross Sections Demonstrating 2065 Recession, 60 m3/m Storm Erosion Demand, and Inferred Inundation Levels & Wave Runup Extent..... 29

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).

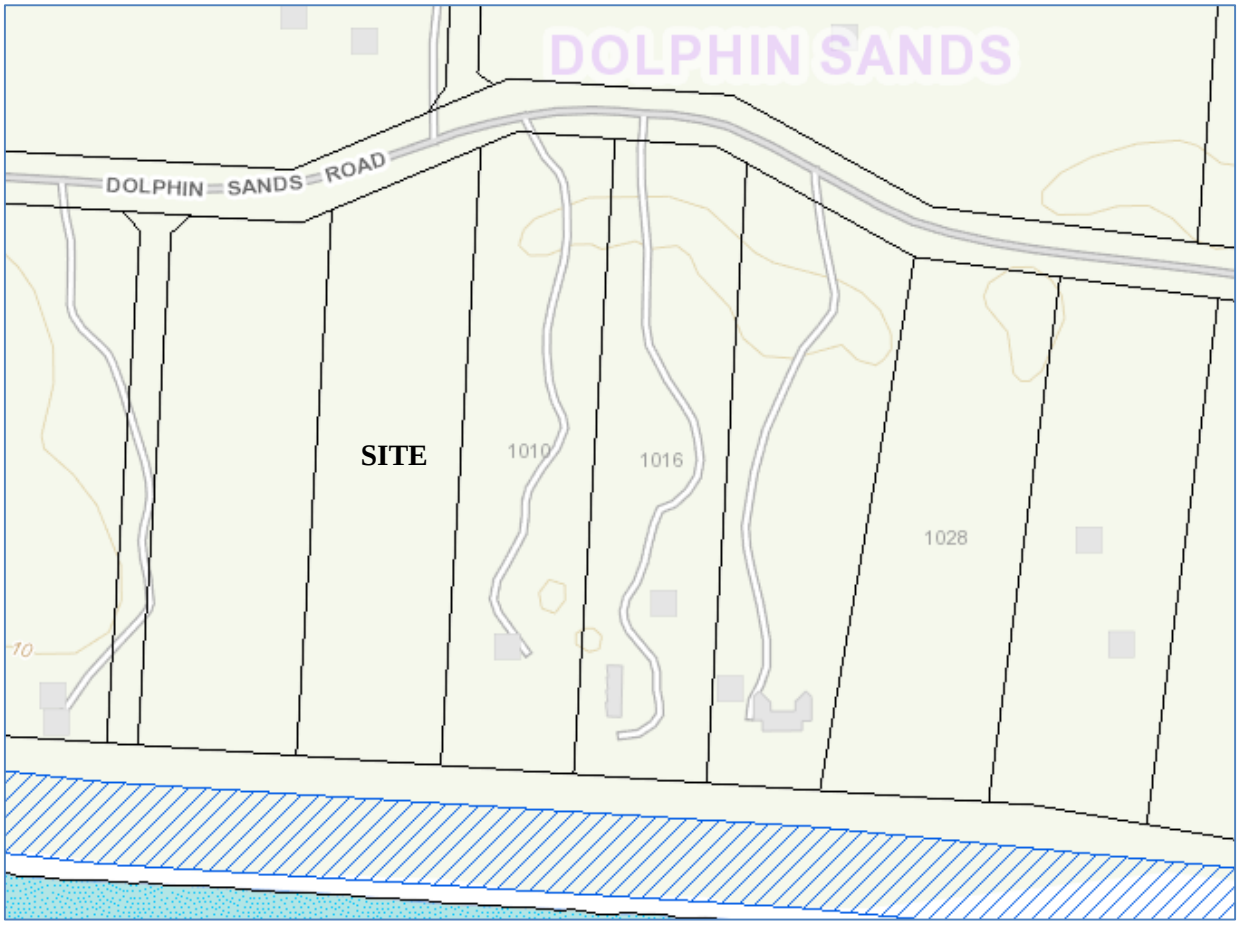

Figure 3 WCPA Overlay near the Site (The LIST)

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*'.

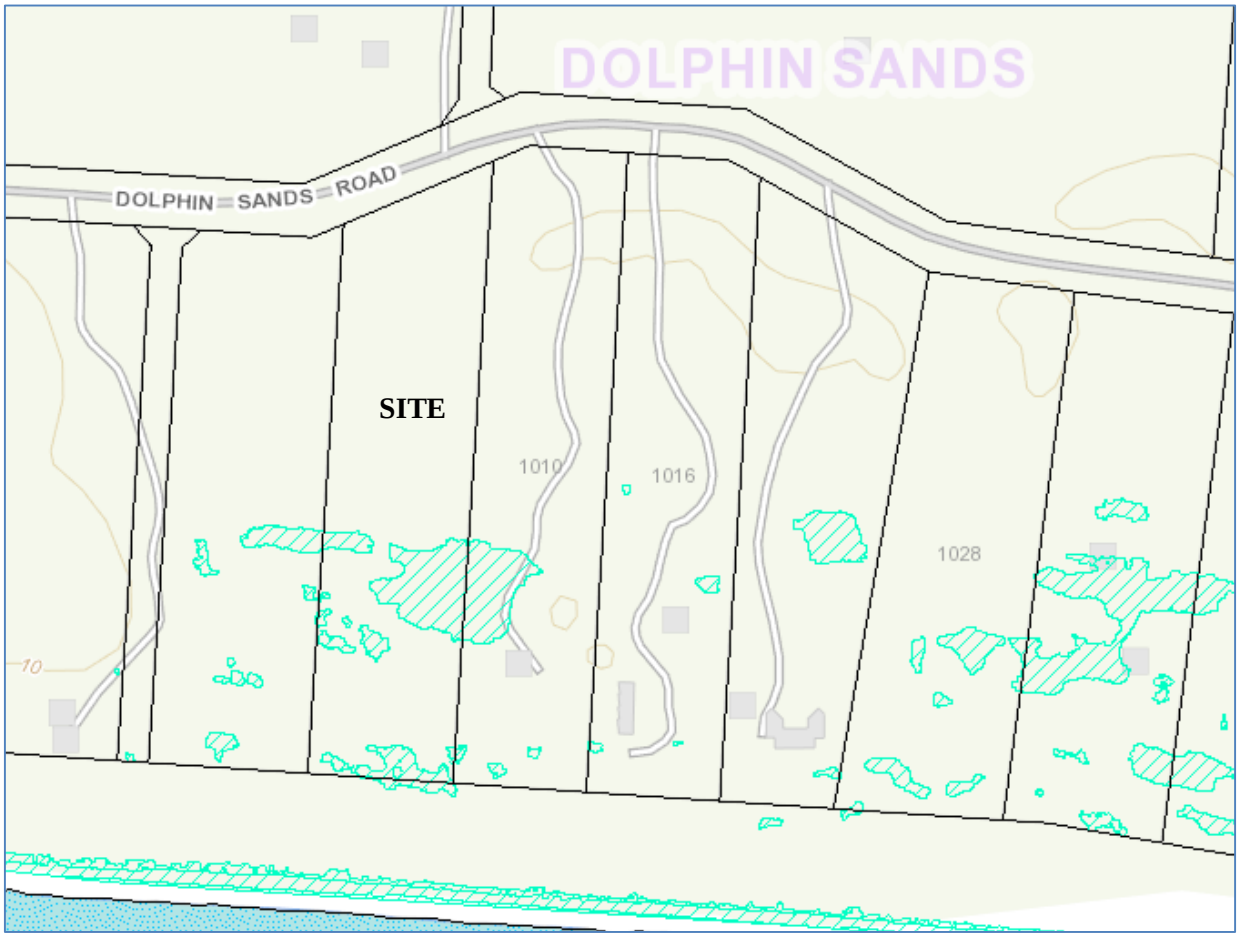

Figure 4 IPAC Overlay near the Site (The LIST)

4.2.3 Coastal Erosion Hazards Code (CEHC) Overlay

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

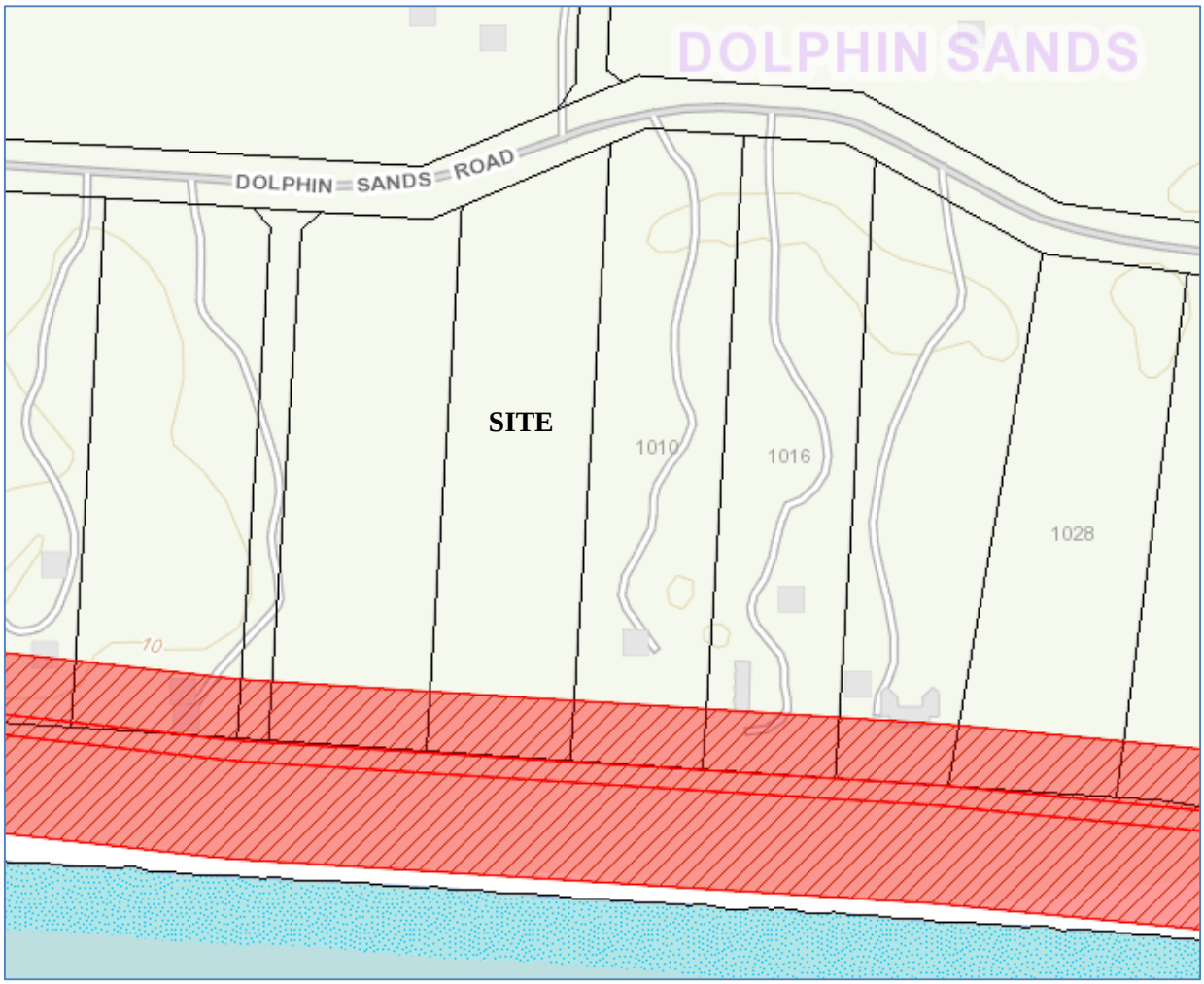

Figure 5 CEHC Overlay near the Site (The LIST)

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

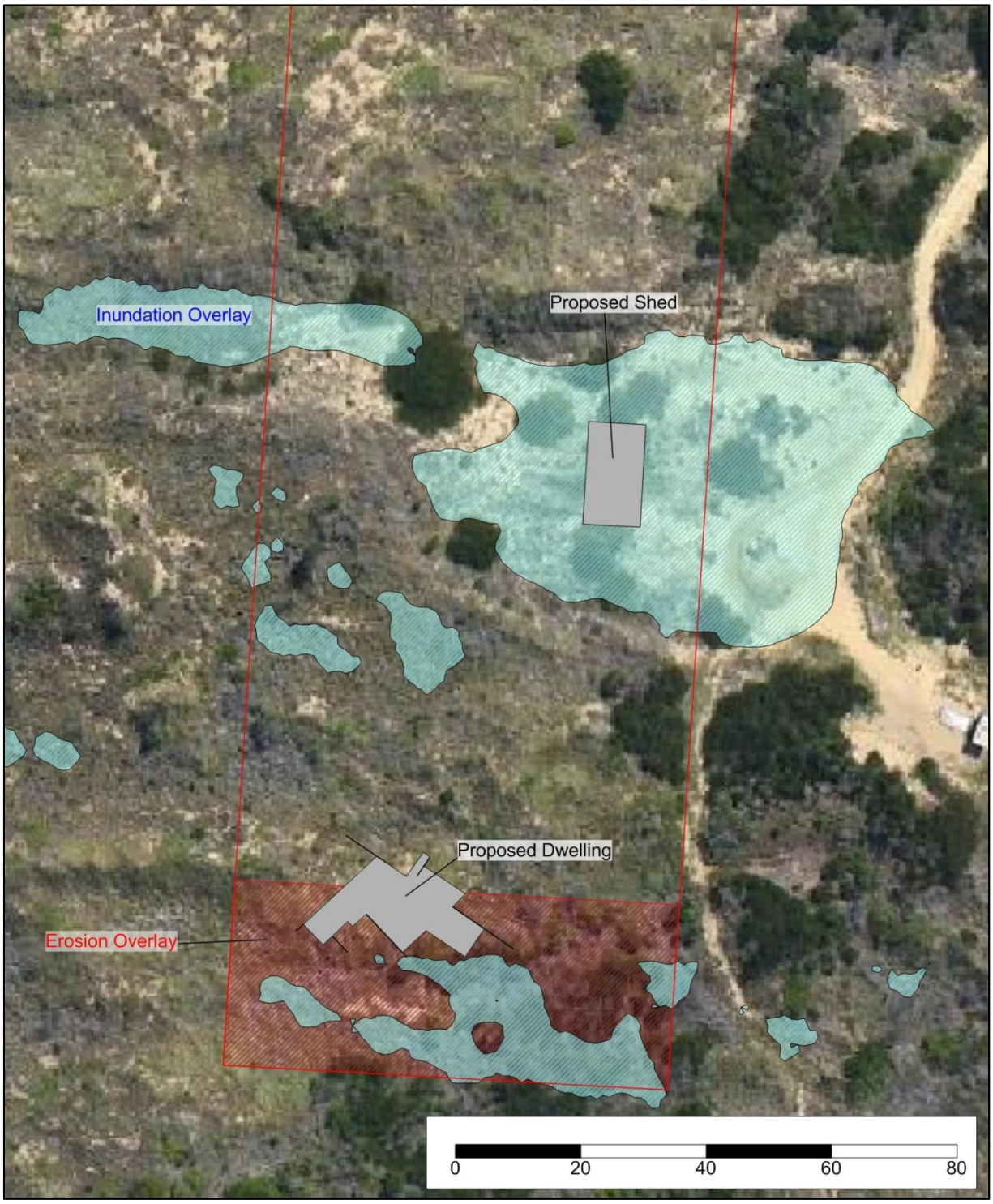

Figure 6 Proposed Development – Site Plan

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.

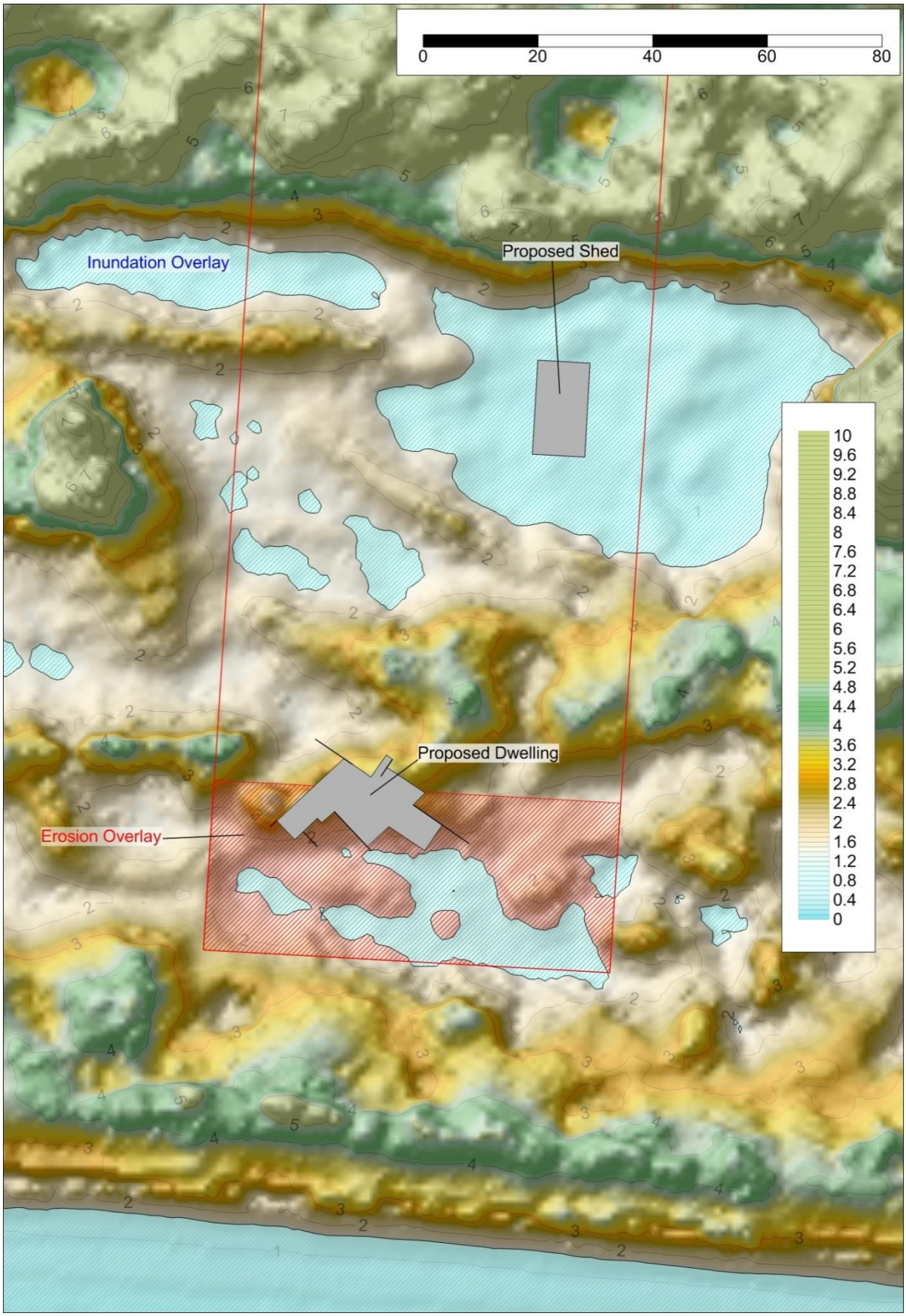

Figure 7 Site Geomorphology

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).

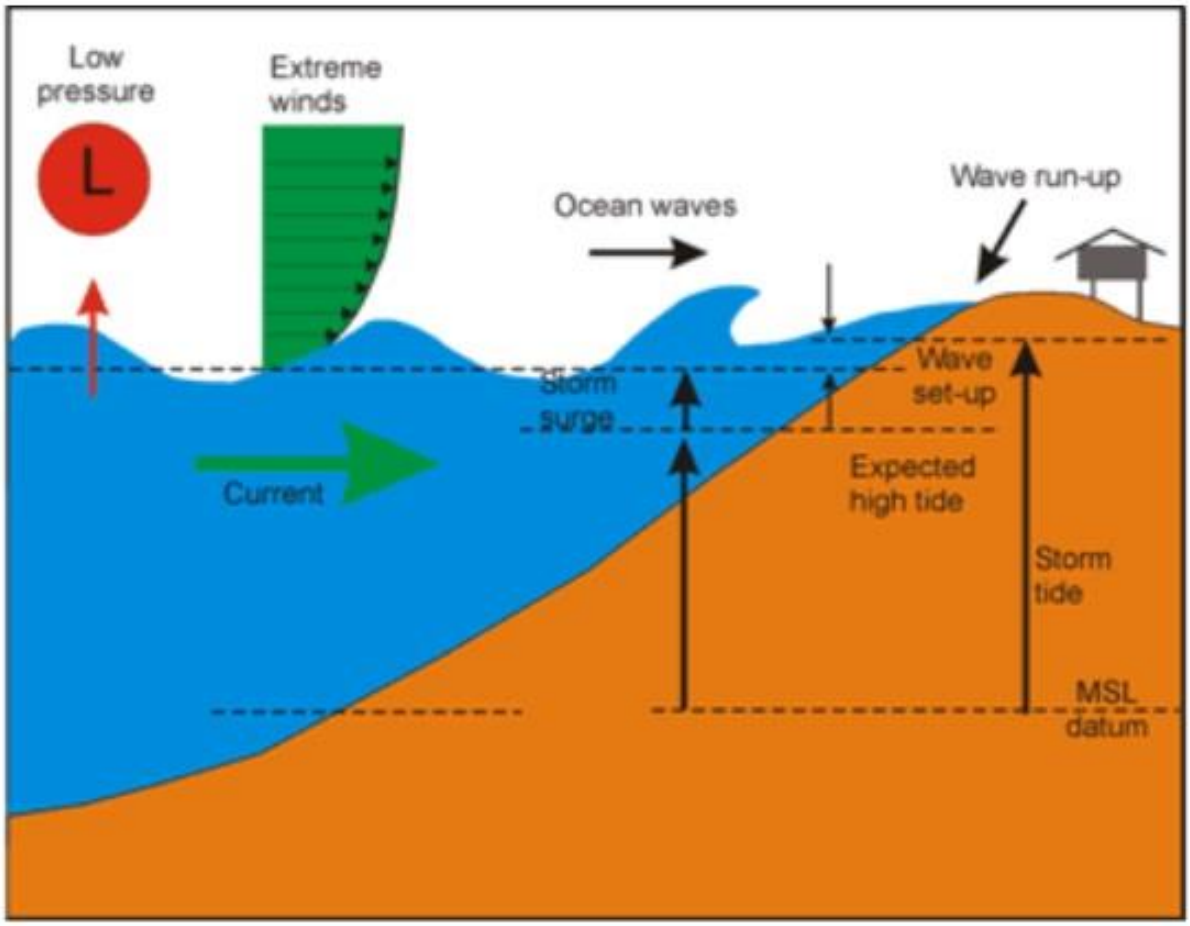

Figure 8 Hydrodynamic Parameters Associated with Storm Surge Events

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.

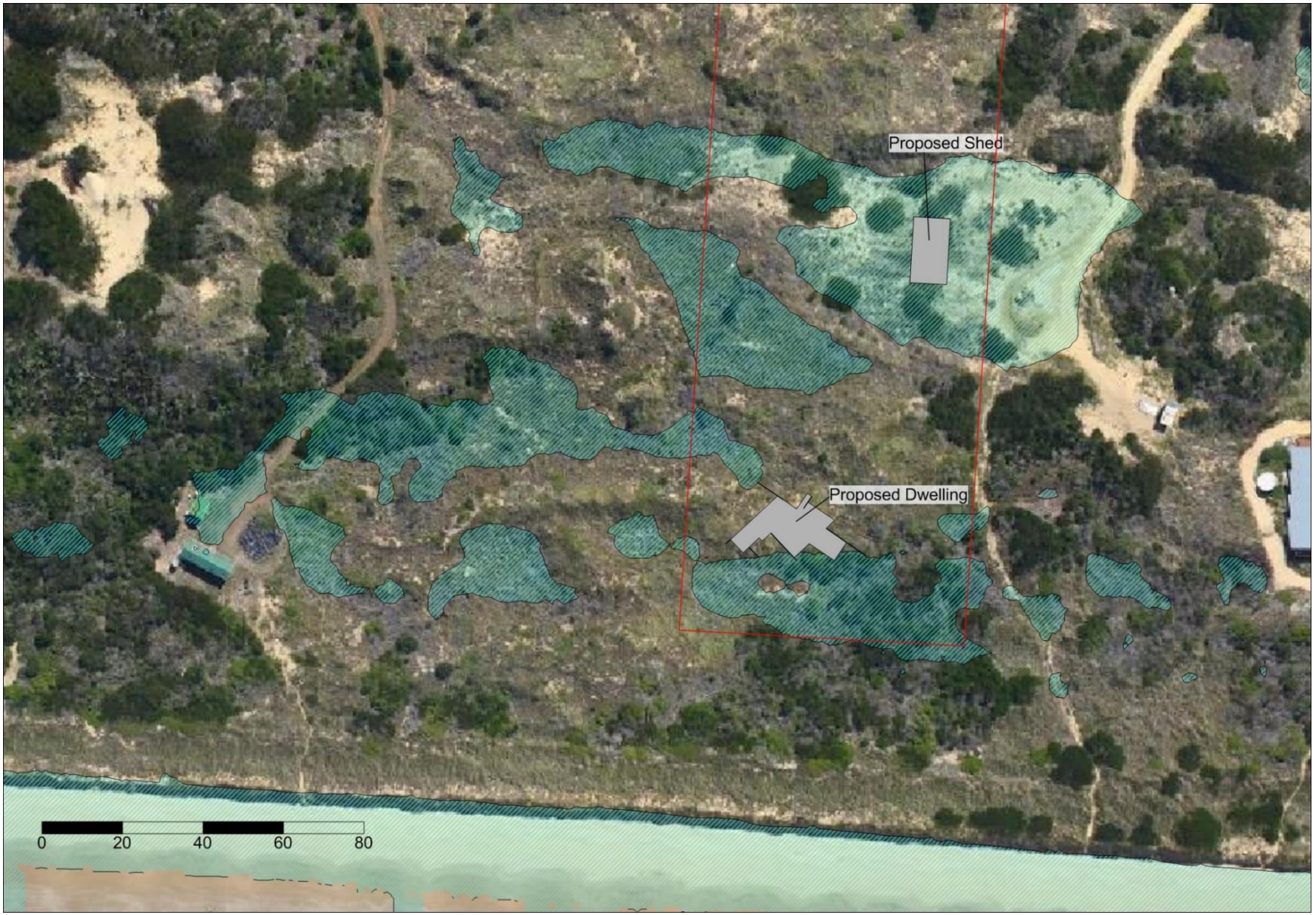

Figure 9 Site Inundation Given a 1% AEP Storm Event for 2065 combined with Wind Setup Conditions

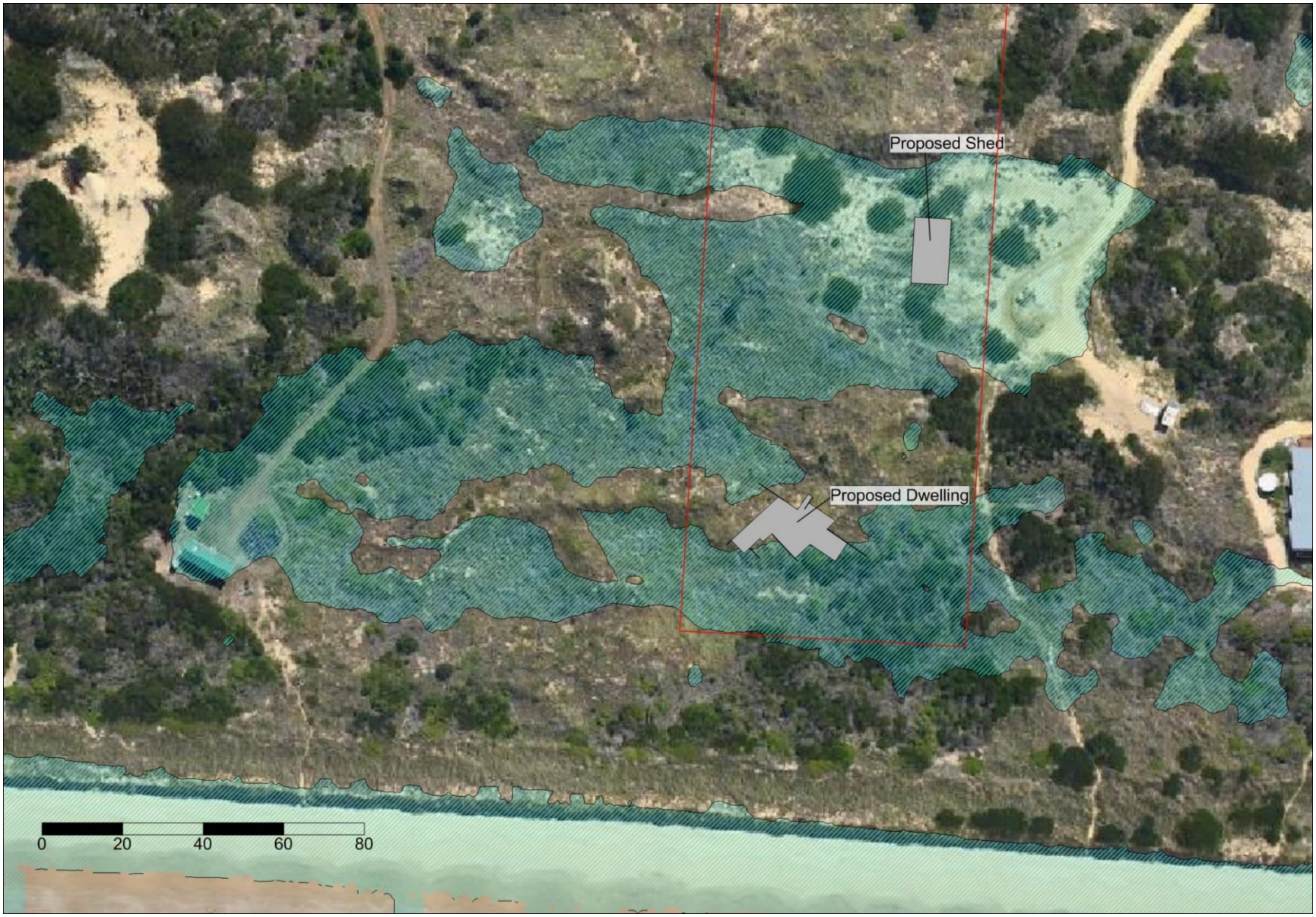

Figure 10 Site Inundation Given a 1% AEP Storm Event for 2100 combined with Wind Setup Conditions

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.

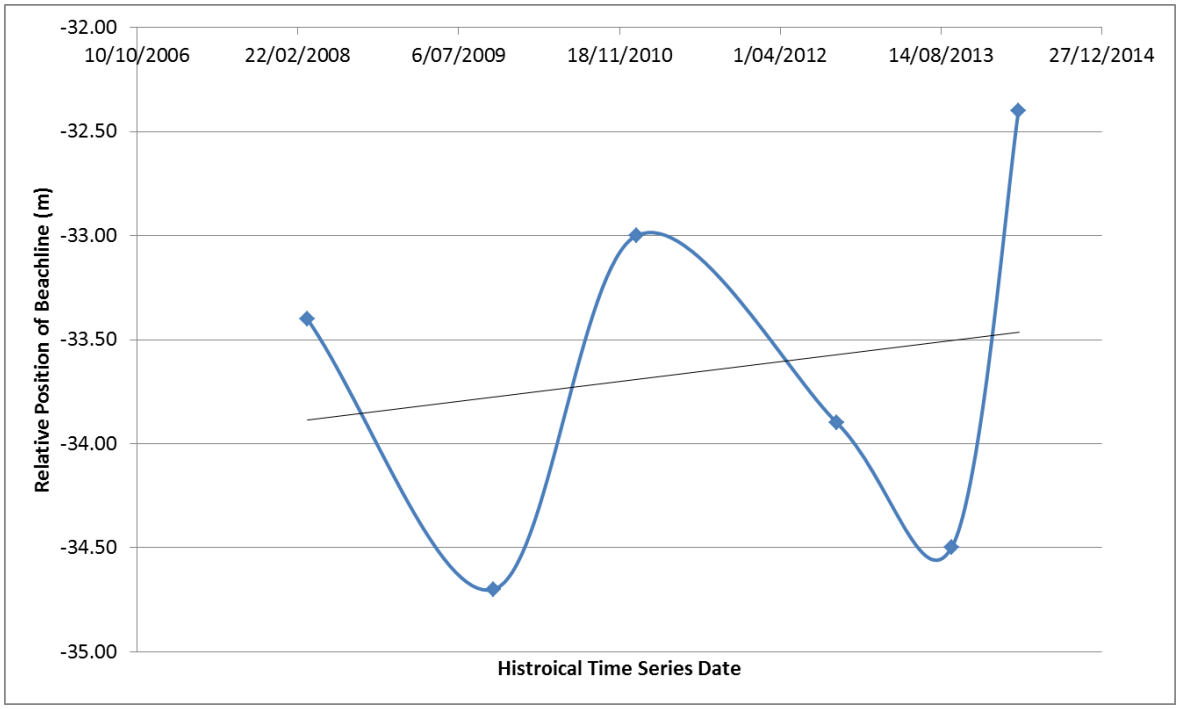

Figure 11 Distance to Frontal Dune Vegetation Line Relative to 988 Dolphin Sands Road Residence

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

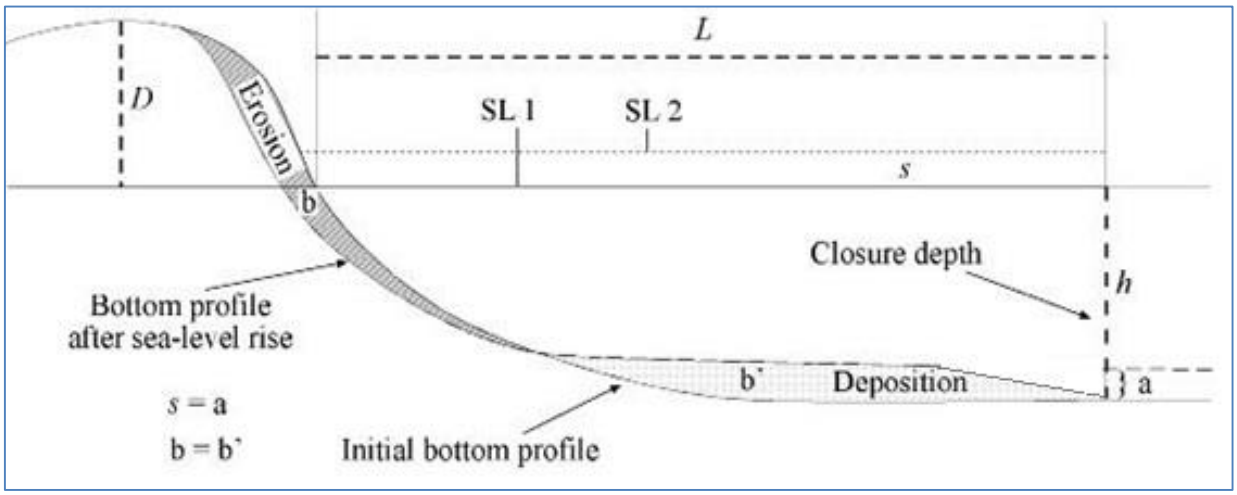

Figure 12 Summary of standard Bruun Rule for Calculating Beach Recession

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.

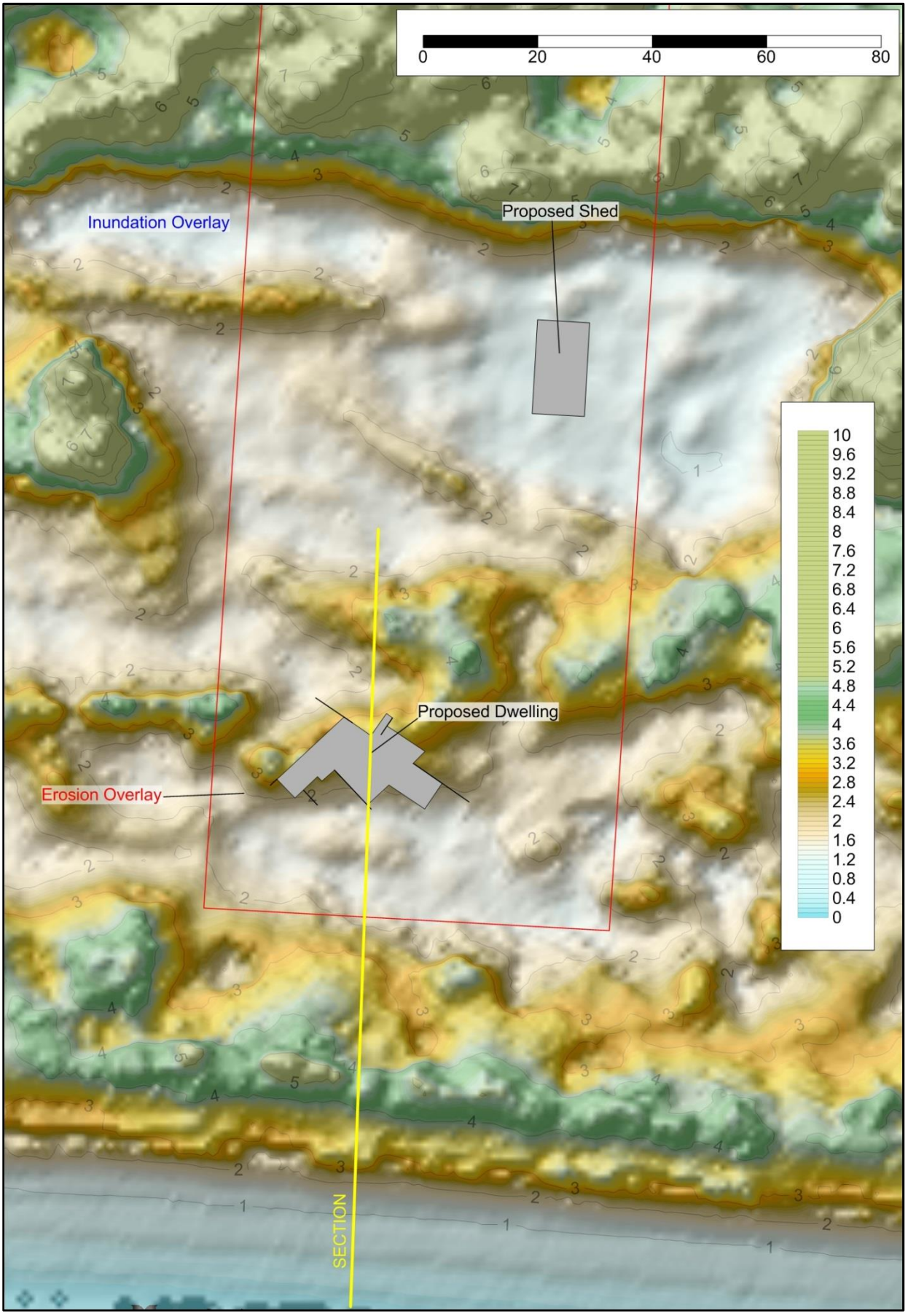

Figure 13 Site cross section delineated by the yellow line

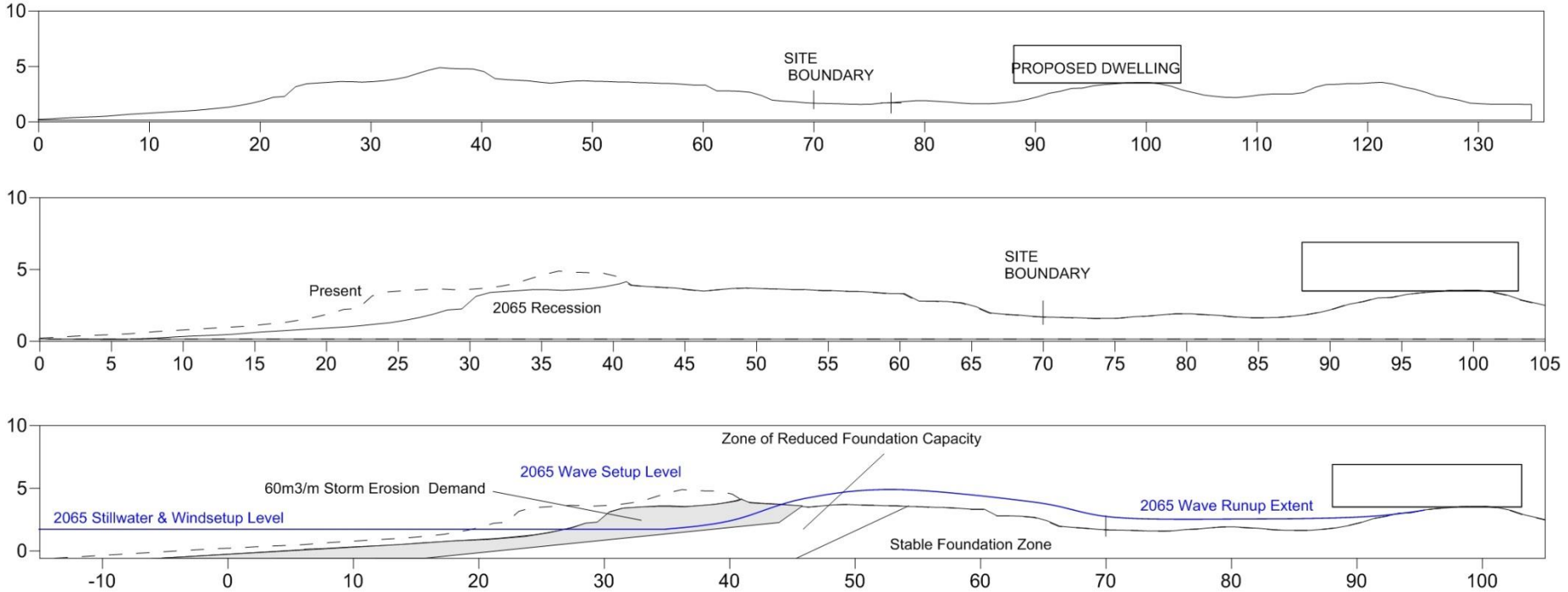

Figure 14 Site Cross Sections Demonstrating 2065 Recession, 60 m3/m Storm Erosion Demand, and Inferred Inundation Levels & Wave Runup Extent

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.

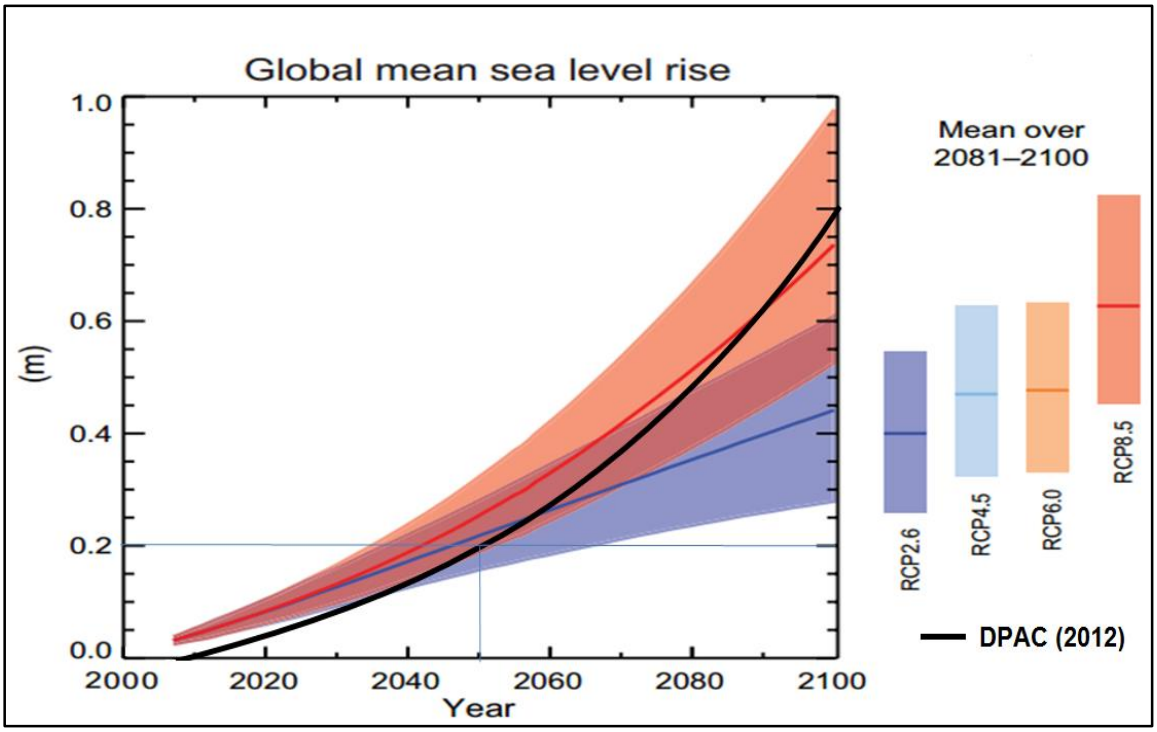

Figure 1 Projected Sea Level Changes based on the AR5 assessment (IPCC 2013) & DPAC Projected Sea Levels (2012).

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**

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

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

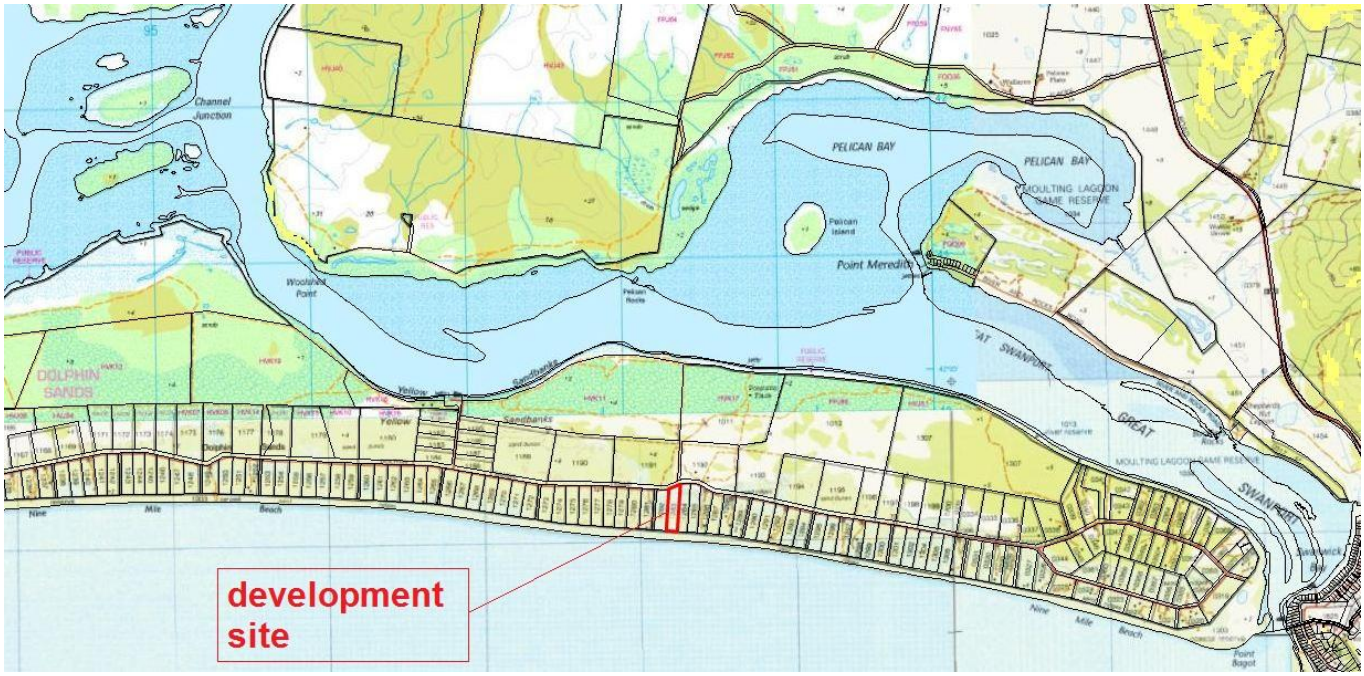
SIGNED:

DATED: 26th February 2015

APPENDICES

Appendix	Page
1 – Site Location	10
2 – Site Photo	11
3 – Septic tank system plan	12
4 – AES bed construction details	13
5 – AES bed design/installation specifications	15
6 – AES Design Calculation	20
7 – Advice to Project manager and installer	21
8 –Owner and Loading Certificate	23
9 – AES Designer Certification	24
10 – Form 35B	25

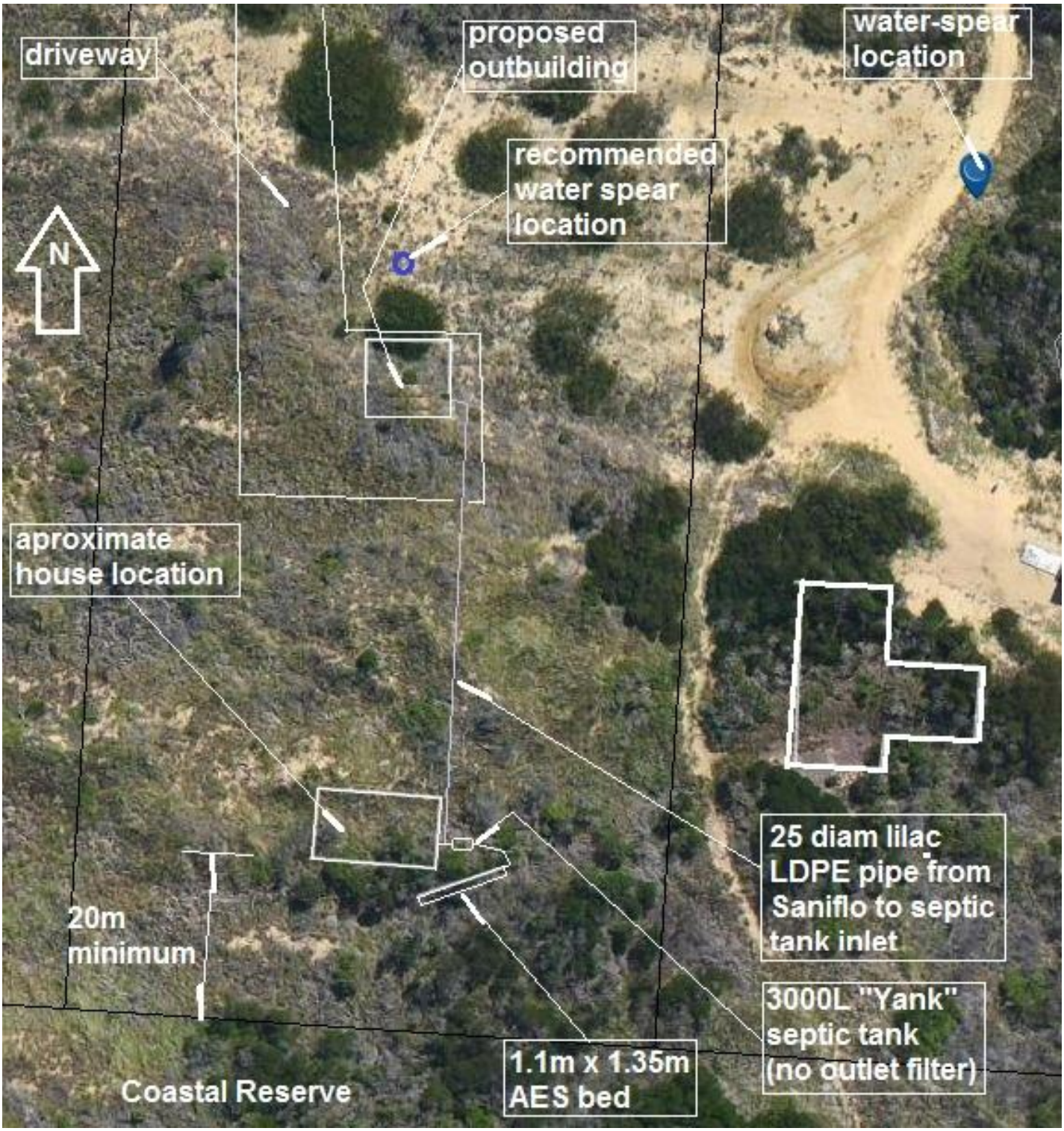
Appendix 1 – Site Location



Appendix 2 – Site Photo

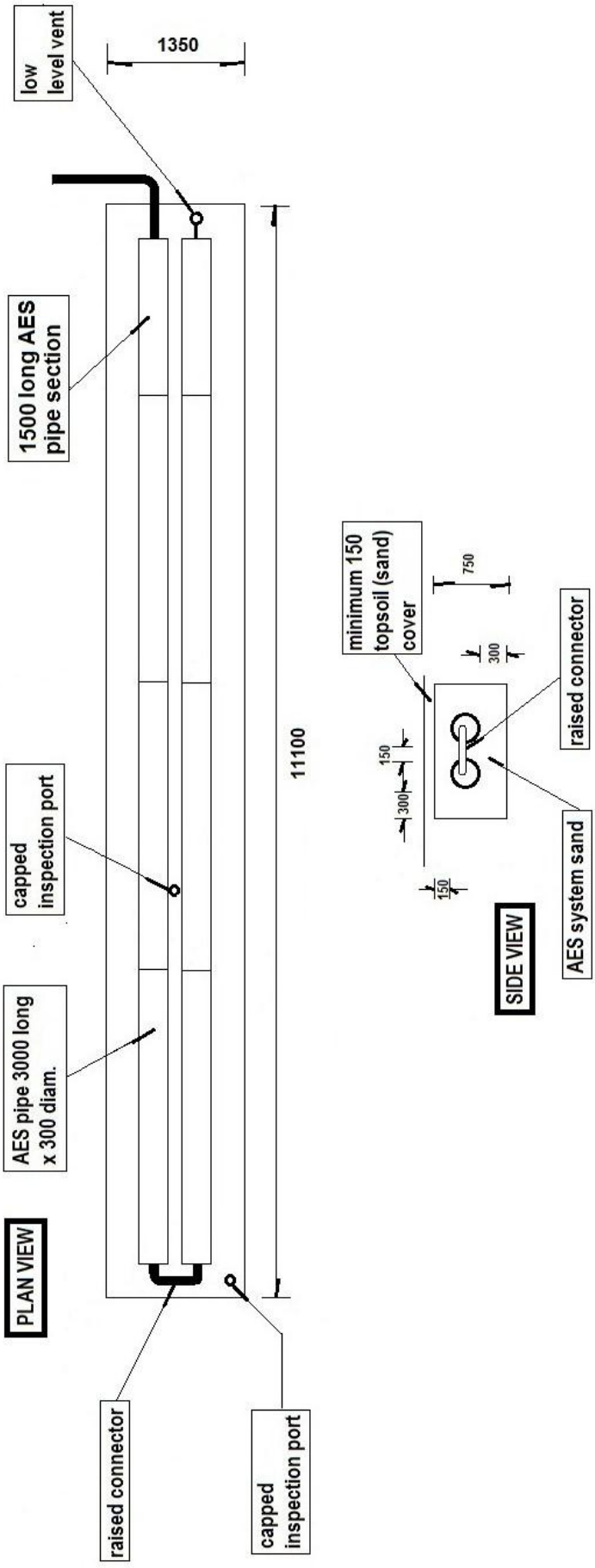
Panoramic view of development site taken from tall sand dune close to western boundary:

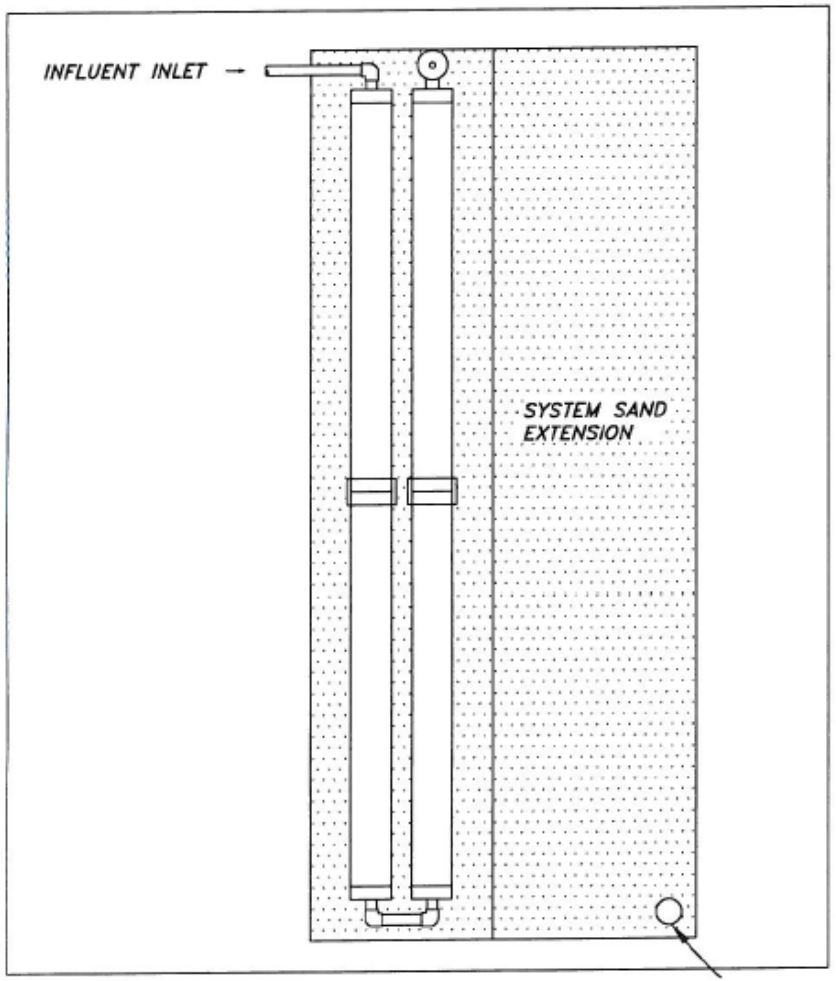
Appendix 3 – Septic tank system plan

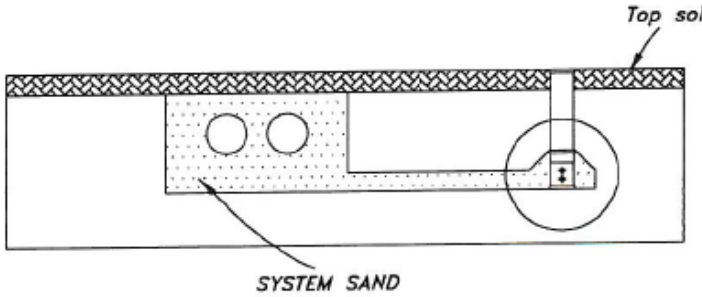


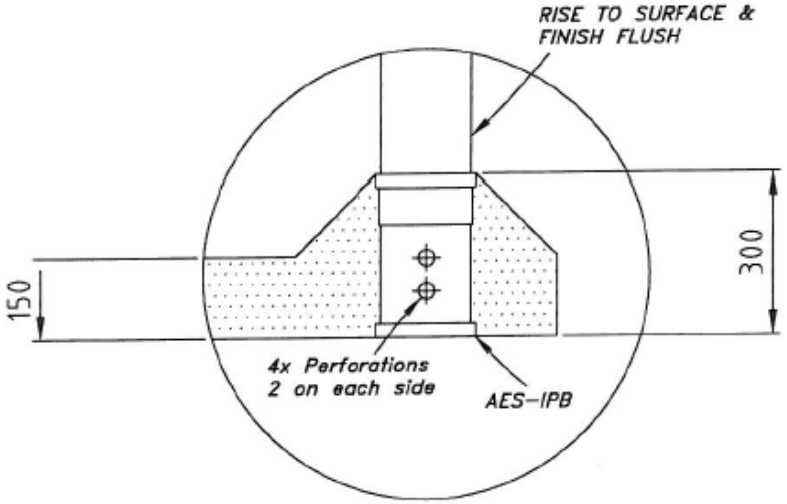
Please note: This site plan is notional and based on verbal advice provided by the developer; at the time of writing, detailed, surveyed site development plans were not available. It is anticipated that the building designer will incorporate the onsite wastewater management system design criteria recommendations into the final overall building design/site development plan.

Appendix 4 – AES bed construction details.









NOTE 1: DIMENSIONS ARE IN MILLIMETRES.
NOTE 2: DRAWING IS FOR ILLUSTRATION ONLY.

ADVANCED ENVIRO-SEPTIC™
"Always The First Option"
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FAX (+61) 7 5335 1691
EMAIL:DESIGNREVIEW@ENVIRO-SEPTIC.COM.AU

DRAWN BY	AMH	PROJECT TITLE: AES CHECK PORT CONFIGURATION	
DATE	08.11.13		
CHECKED BY	JMM	DWG NO. CHECK_PORT	REV NO. A0
DATE	08.11.13		
APPROVED BY	RC	SIZE A4	PAGE NO. 1 OUT OF 1
DATE	08.11.13		

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.

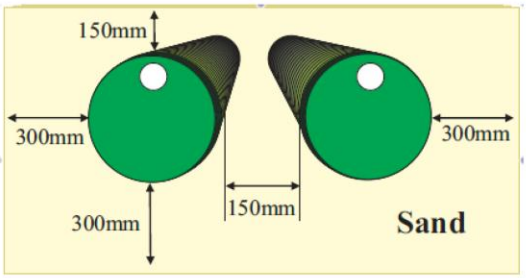
1. SET OUT

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.

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

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"		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

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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.

Training Certificate

This is to certify that

Richard Mason

has successfully completed the Advanced Enviro-Septic (AES)™
Basic Design & Installation Certification Course

Jerry Myo-Min
Operations Manager
Chankar Environmental Pty Ltd

Date of Issue: 2-Jul-2013
Certificate No.: QLD0000481

(Licenced by Presby Environmental Inc.)

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

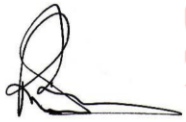
Site & soil evaluation and design report - Proposed on-site wastewater management system at 1000 Dolphin Sands Rd, Swansea, dated 26.02.2015, by Richard Mason, Onsite Assessments Tas

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'

26.02.2015

Designer Signed — Date

Director of Building Control - date approved 1 April 2014: — *Building Act 2000* - Approved Form No 35B

S.

S. Group
Suite 31 City Mill, 11 Morrison Street
Hobart Tasmania 7000

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

Chase. Wonder.

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.

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.

S. Group
Suite 31 City Mill, 11 Morrison Street
Hobart Tasmania 7000

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

.....

Designer 31/07/2017

Chase. Wonder.

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

ADJOINING PROPERTY
No. 1010 Dolphin Sands Road

ex. dwelling

184°29'56" PROPERTY BOUNDARY 303.38m

67°57'08" PROPERTY BOUNDARY 79.34m

ex. shed

ex. site access

PROPOSED DRIVEWAY

234245

PROPOSED DWELLING

37280

26580

274°42'32" PROPERTY BOUNDARY 70.89m

4°28'40" PROPERTY BOUNDARY 267.70m

ADJOINING PROPERTY

DOLPHIN SANDS ROAD

BEACH

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%

N

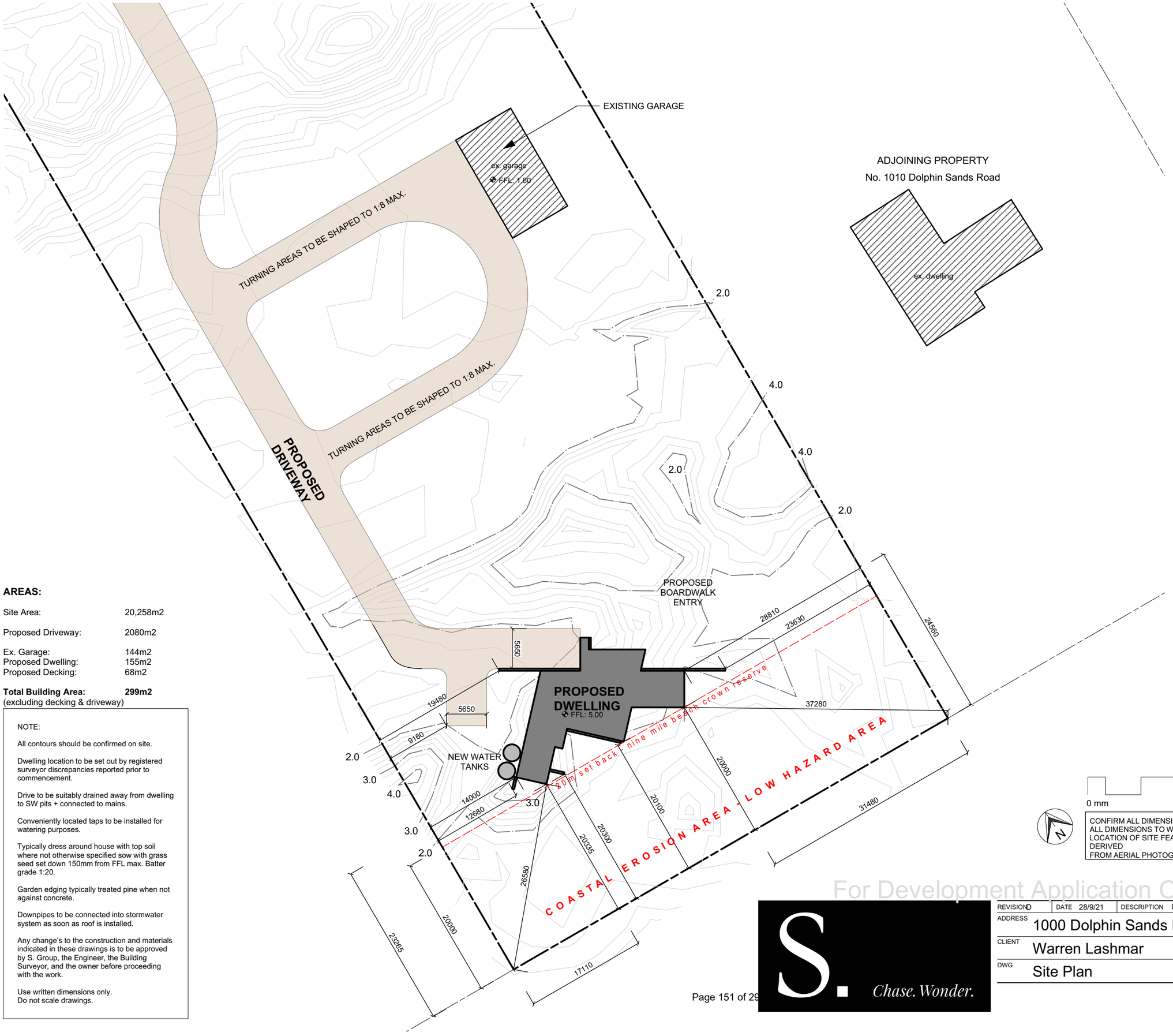
0 mm 70,000mm

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

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

S. Chase. Wonder.

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.

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

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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:

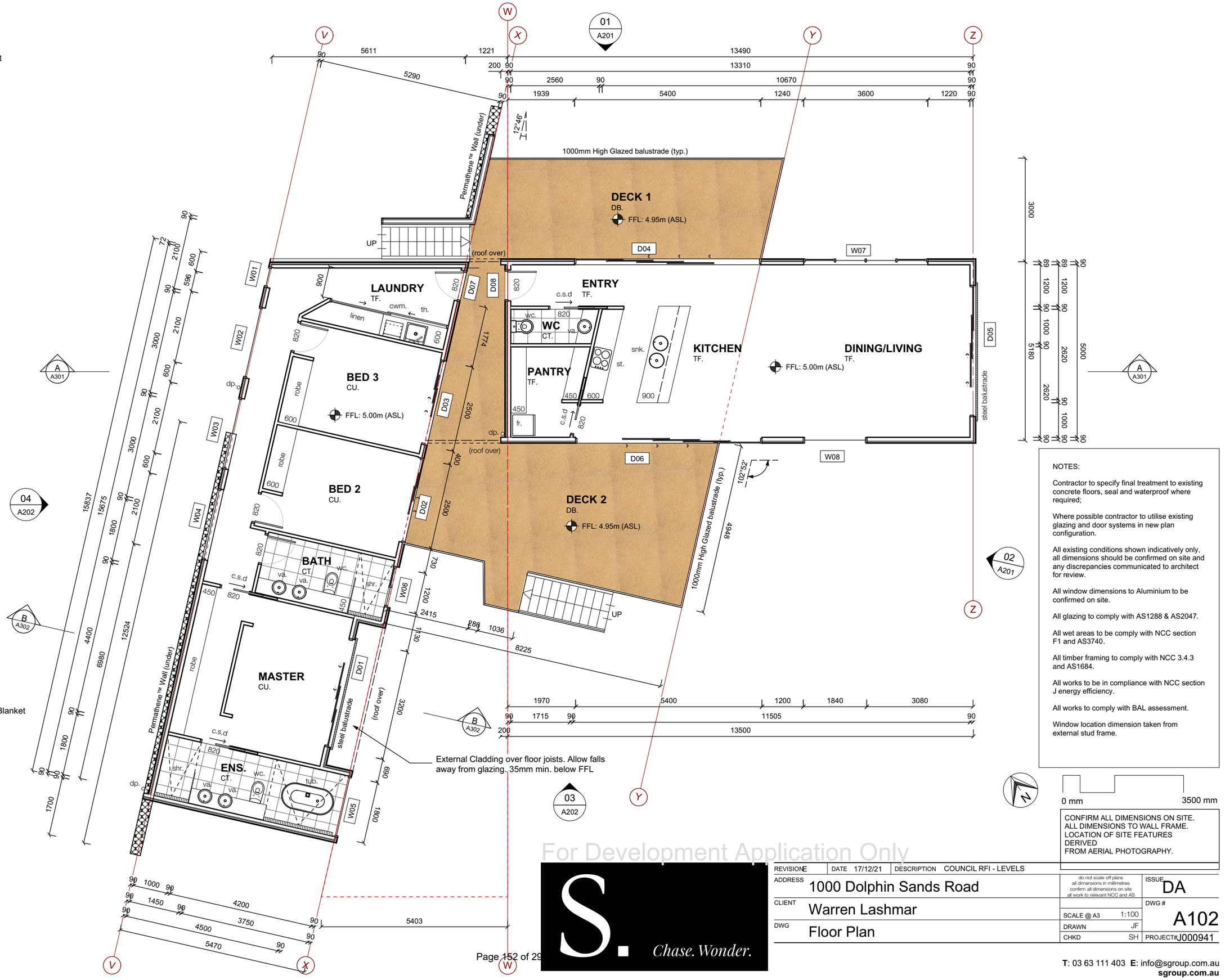
CU	Carpet Underlay. To be selected.
CT	Ceramic Tiles (300x300). Colour to be selected.
TF	Timber Floorboard Overlay.
SC	Sealed Concrete.
DB	Timber Decking Boards. Merbau or simliar approved boards.

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

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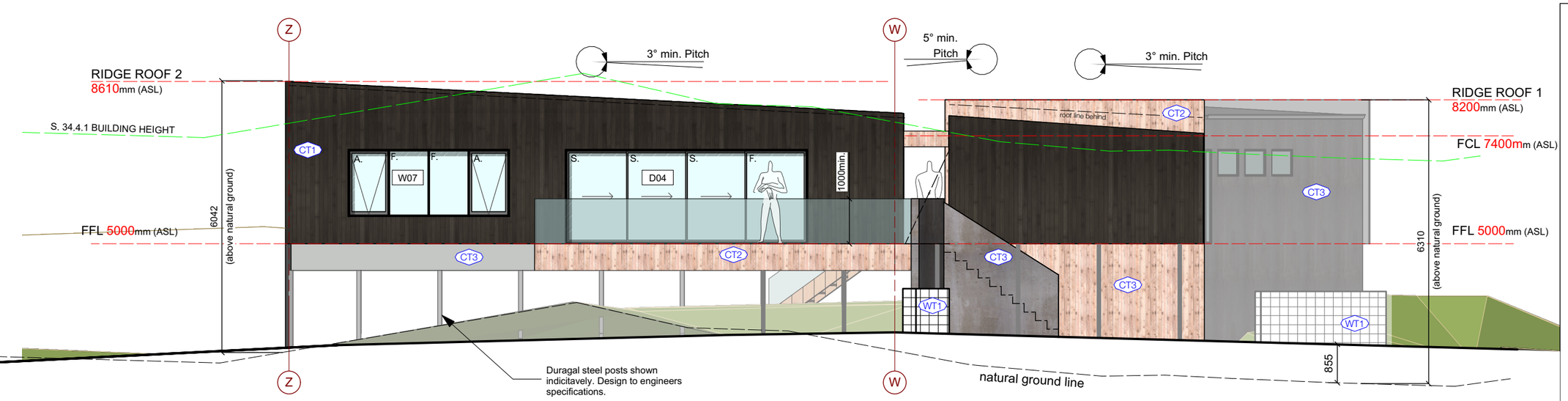


CLADDING TYPES

- 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

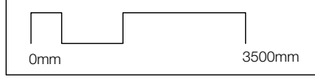
GROUND LEVELS SHOWN INDICATIVELY, ENSURE FINISH SURFACE FALLS AWAY FROM STRUCTURE.

GLASS BALUSTRADE TO COMPLY WITH AS1288

COLOUR SCHEDULE
(or similar approved)

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

white - C4 | black - C5



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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

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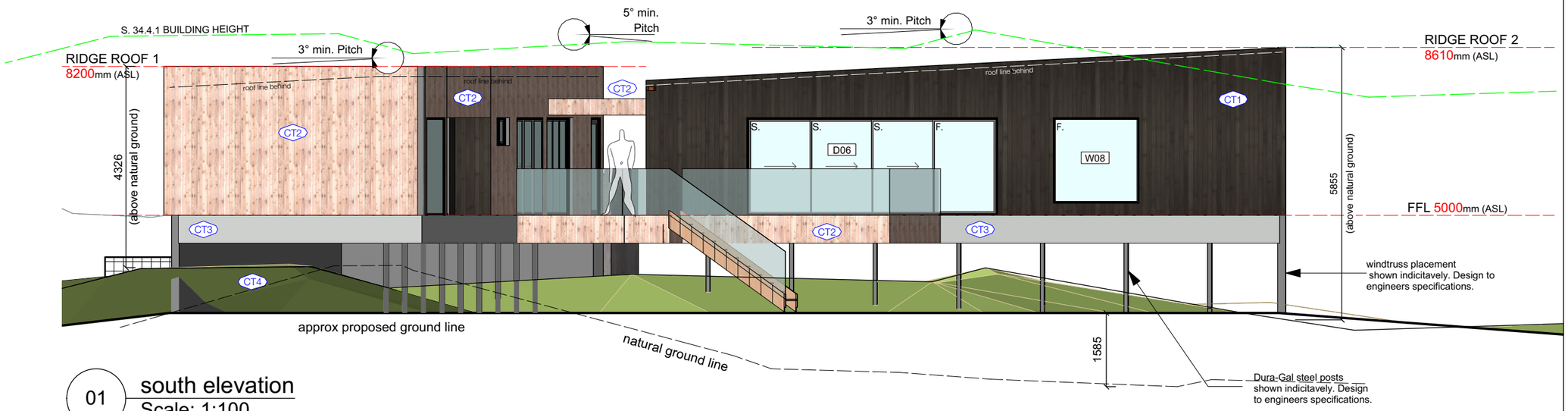
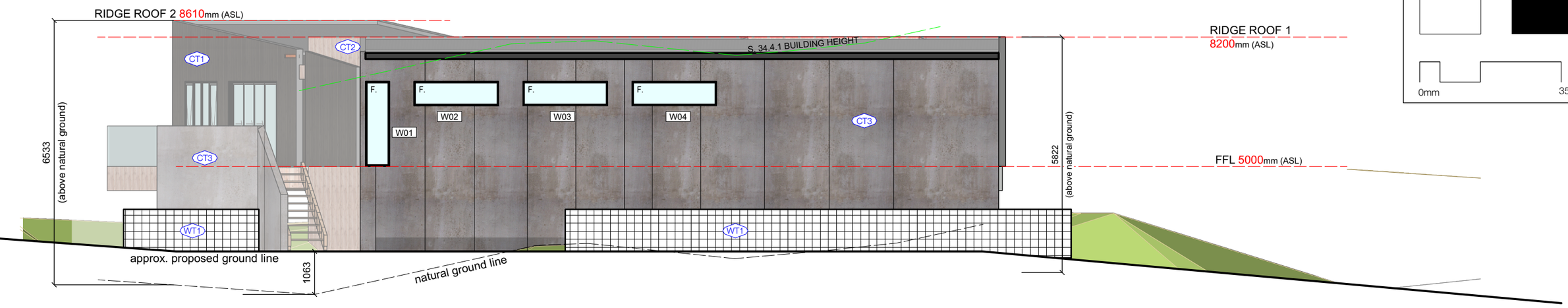


01 south elevation
Scale: 1:100



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

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

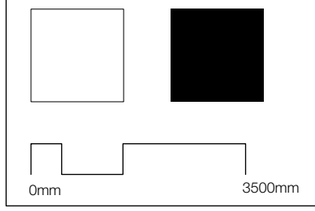
GROUND LEVELS SHOWN INDICATIVELY, ENSURE FINISH SURFACE FALLS AWAY FROM STRUCTURE.

GLASS BALUSTRADE TO COMPLY WITH AS1288

COLOUR SCHEDULE
(or similar approved)

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

white - C4 | black - C5



For Development Application Only

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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 5020mm (ASL)
		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.

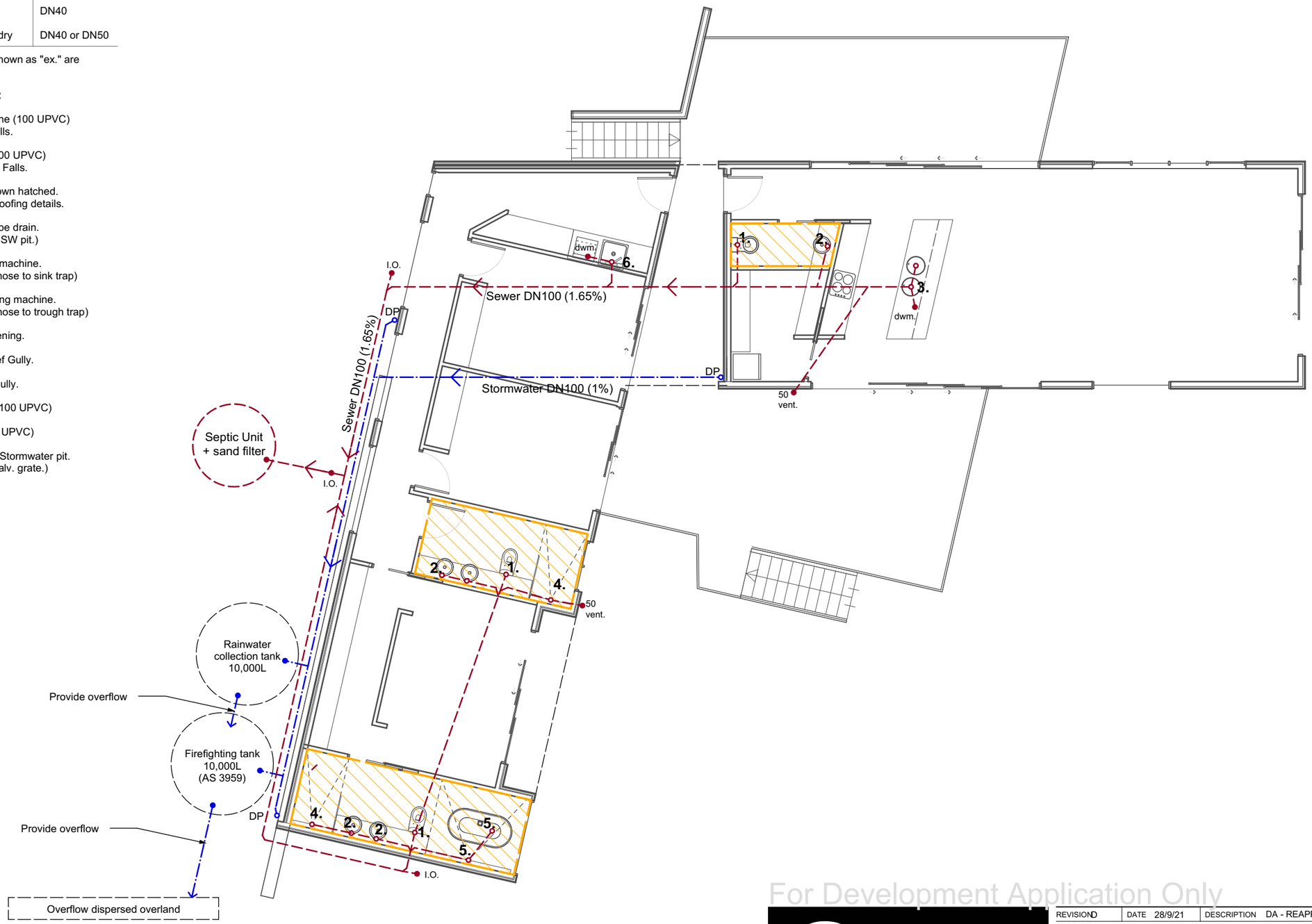
ORG. Overflow Relief Gully.

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.

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 #	A800
DWG	Plumbing & Drainage Plan				SCALE @ A3 1:100		
					DRAWN JF		
					CHKD SH	PROJECT#	J000941

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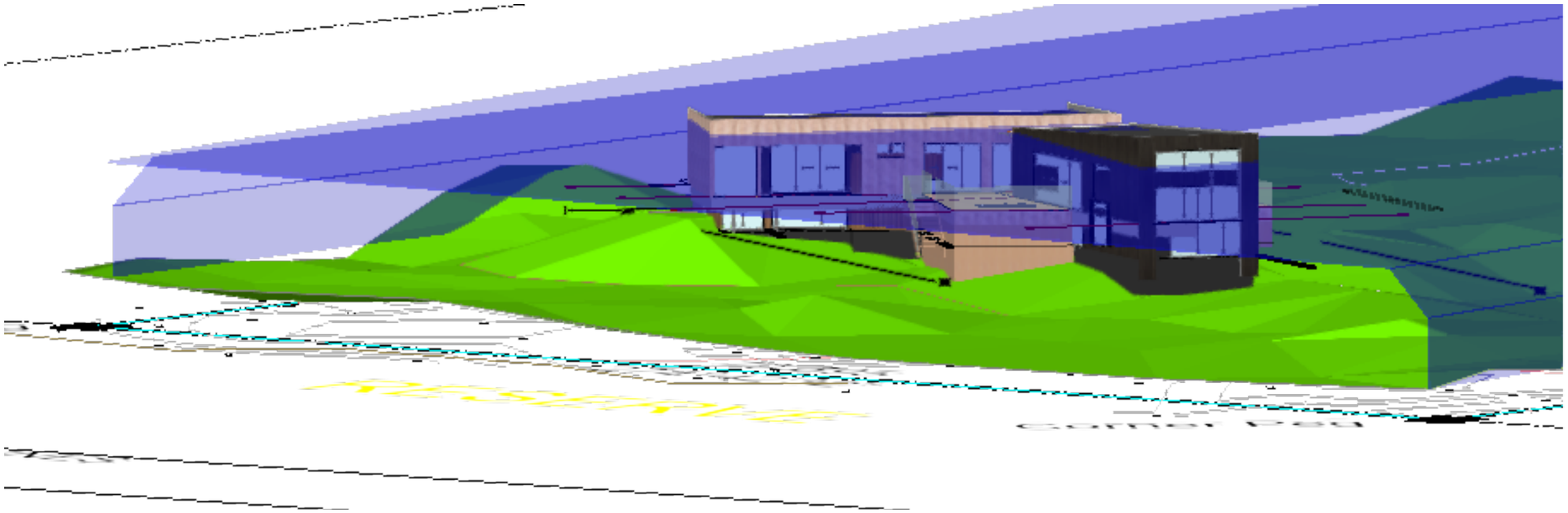
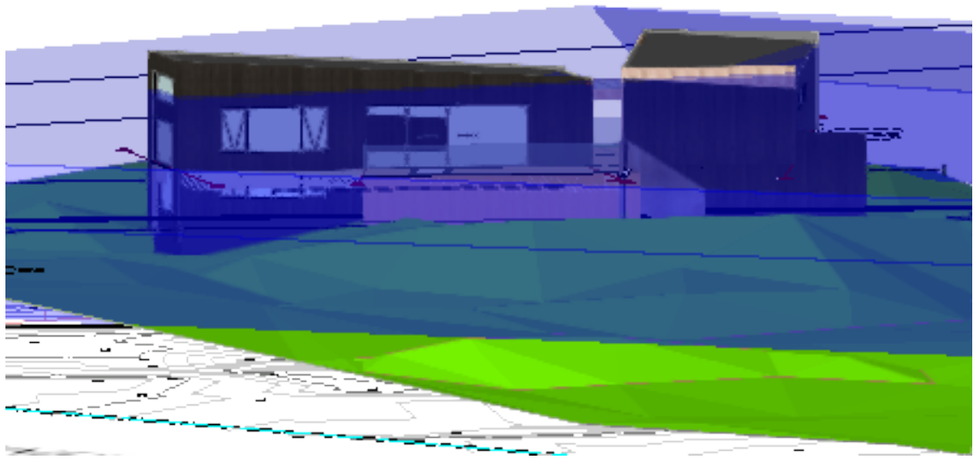
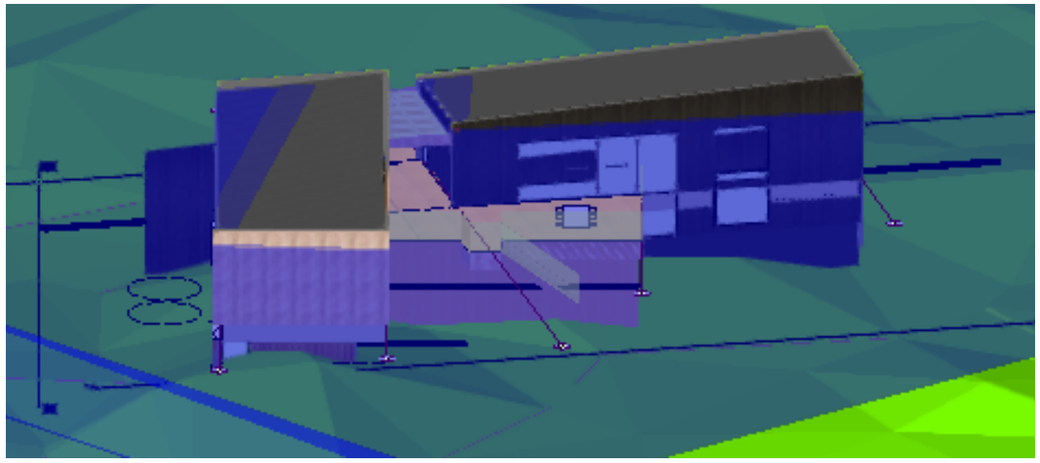


1 BUILDING ENVELOPE VIEW 1



2 BUILDING ENVELOPE VIEW 2



3 BUILDING ENVELOPE VIEW 3

FOR BUILDING APPROVAL

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

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Profit and Loss

Glamorgan Spring Bay Council

For the 6 months ended 31 December 2021

Account	YTD Actual	YTD Budget	Budget Var	Var %	2021/22 Budget	Notes
Trading Income						
Rate Revenue	9,834,941	9,829,318	5,623	0%	9,867,631	
Statutory Charges	429,445	362,004	67,441	19%	724,013	1
User Charges	528,856	328,086	200,770	61%	656,156	2
Grants	594,109	489,196	104,913	21%	1,465,416	3
Interest & Investment Revenue	218,259	11,216	207,043	1846%	229,641	4
Contributions	70,370	70,000	370	1%	140,000	
Other Revenue	1,019,949	1,180,705	(160,756)	-14%	2,275,056	5
Total Trading Income	**12,695,927**	**12,270,525**	**425,402**	**3%**	**15,357,913**	
Gross Profit	**12,695,927**	**12,270,525**	**425,402**	**3%**	**15,357,913**	
Capital Grants						
Grants Commonwealth Capital - Other	371,428	2,462,080	(2,090,652)	-85%	5,462,080	
Grants Commonwealth Capital - Roads to Recovery	262,978	126,522	136,456	108%	506,087	
Grants State Capital - Other	124,123	675,000	(550,877)	-82%	775,000	
Total Capital Grants	**758,529**	**3,263,602**	**(2,505,073)**	**-77%**	**6,743,167**	6
Other Income						
Net Gain (Loss) on Disposal of Assets	45,492	0	45,492	0%	0	
Other Income - PPRWS Reimbursement of Principal Loan	0	0	0	0%	102,609	
Total Other Income	**45,492**	**0**	**45,492**	**0%**	**102,609**	
Operating Expenses						
Employee Costs	2,374,848	2,487,912	(113,064)	-5%	4,975,840	
Materials & Services	4,141,919	4,168,358	(26,439)	-1%	7,952,266	
Depreciation	1,382,346	1,382,346	0	0%	2,764,692	
Interest	68,629	113,550	(44,921)	-40%	227,106	7
Other Expenses	106,486	112,746	(6,260)	-6%	225,505	
Total Operating Expenses	**8,074,228**	**8,264,912**	**(190,684)**	**-2%**	**16,145,409**	
Net Profit	**4,621,700**	**4,005,613**	**616,087**	**15%**	**(787,496)**	
Total Comprehensive Result (incl Capital Income)	**5,425,721**	**7,269,215**	**(1,843,494)**	**-25%**	**6,058,280**	
Capital Works Program (Current Year WIP)						
Work in Progress Capital Works - Plant Internal	52,475	0	52,475	0%	0	
Work In Progress Payroll - Salaries and Wages	60,220	0	60,220	0%	0	
Work in Progress Capital Works - On Costs	28,604	0	28,604	0%	0	
Work in Progress Capital Works - Contractor Costs	1,128,342	0	1,128,342	0%	0	
Work in Progress Capital Works - Other Costs	69,707	0	69,707	0%	0	
Work in Progress Capital Works - Materials	400,923	0	400,923	0%	0	
Work in Progress Capital Works - Consultancy	63,504	0	63,504	0%	0	
Work in Progress Capital Works - Plant Hire External	7,176	0	7,176	0%	0	
Total Capital Works Program (Current Year WIP)	**1,810,951**	**0**	**1,810,951**	**0%**	**0**	

Notes:

1. Statutory charges are above forecast due to higher level of development and plumbing applications and food/health permit renewals.
2. User charges are up on budget mainly due early collection of marina fees, paid upfront instead of quarterly, hight variable water charges and misc private works.
3. Grant revenue is up on forecast is due to bringing forward of unspent State funding from last financial year.
4. Interest & Investment revenue is up forecast due to early payment of TasWater interim dividend payment.
5. Other Revenue is down on forecast due to lower than forecast medical centre income.
6. Total Capital Grants are down on forecast due to timing of Commonwealth grant payments in line with project milestones.
7. Interest expenses are down by 18% due to timing issues with the reversal of interest accrued into last financial year.

Statement of Financial Position

Glamorgan Spring Bay Council

As at 31 December 2021

Account	31 Dec 2021	30 Jun 2021	Notes
Assets			
Current Assets			
Cash & Cash Equivalents	3,850,578	3,018,850	
Trade & Other Receivables	3,772,701	926,374	
Other Assets	40,800	273,191	
Total Current Assets	**7,664,080**	**4,218,415**	1
Non-current Assets			
Trade & Other Receivables	0	3,243	
Investment in Water Corporation	30,419,394	30,419,394	
Property, Infrastructure, Plant & Equipment	144,007,406	144,779,771	
Total Non-current Assets	**174,426,800**	**175,202,408**	2
Total Assets	**182,090,879**	**179,420,823**	
Liabilities			
Current Liabilities			
Trade & Other Payables	898,372	1,189,660	
Trust Funds & Deposits	285,836	361,562	
Provisions	664,932	664,932	
Contract Liabilities	0	949,850	
Interest bearing Loans & Borrowings	218,816	458,263	
Trade & Other Payables - Debtor Suspense Account	250	0	
Total Current Liabilities	**2,068,206**	**3,624,268**	3
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**	4
Total Liabilities	**9,976,265**	**11,537,922**	
Net Assets	**172,114,614**	**167,882,901**	
Equity			
Current Year Earnings	4,220,456	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	**172,114,614**	**167,882,901**	5

Notes:

1. Current Assets tracking positively, with rate debtors indicating current quarter collectables.
2. Non Current Assets stable showing forecast variance for depreciation.
3. Current Liabilities showing a pleasing reduction in short term debt.
4. Non Current Liabilities stable.
5. Equity balances showing a positive increase.

Statement of Cash Flows

Glamorgan Spring Bay Council

For the 6 months ended 31 December 2021

Account	YTD Actual	2020/2021 Actual
Operating Activities		
Receipts from customers	8,822,100	11,963,619
Payments to suppliers and employees	(7,209,204)	(13,745,304)
Receipts from operating grants	594,109	1,343,056
Dividends received	207,000	207,000
Interest received	11,259	20,989
Cash receipts from other operating activities	418,087	1,149,744
Net Cash Flows from Operating Activities	**2,843,350**	**939,104**
Investing Activities		
Proceeds from sale of property, plant and equipment	48,072	217,237
Payment for property, plant and equipment	(1,878,656)	(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	**(599,321)**	**(3,928,594)**
Financing Activities		
Trust funds & deposits	(76,676)	(172,910)
Net Proceeds/(Repayment) of Loans	(245,043)	1,066,733
Other cash items from financing activities	(1,090,582)	3,422,376
Net Cash Flows from Financing Activities	**(1,412,301)**	**4,316,199**
Net Cash Flows	**831,728**	**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	3,783,533	2,951,806
Net change in cash for period	**831,728**	**1,326,709**

Capital Works Detail

Glamorgan Spring Bay Council

For the period 1 July 2021 to 31 December 2021

New Capital	Actual YTD	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	30,000	30,000		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Strip Rd Little Swanport - concrete overlay to hardstand floodway	-	30,000	30,000		Design progressing	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
R2R - Nugent Rd Seal - Carry forward from 2019/20 + EMF	-	50,000	40,775	9,225	Complete		
Bicheno walkway	285,262	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	9,553	115,000	115,000		Out to Tender	Carried Forward from 2020/21	Drought Relief
Swansea Main Street Paving	51,229	1,000,000	1,000,000		Design progressing		Fed Grant Funding
Total Roads, Footpaths, Kerbs	**378,739**	**1,628,000**	**1,618,775**	**9,225**			
Parks, Reserves, Walking Tracks, Cemeteries							
Swansea Cricket Practice Nets	-						Community Infrastructure Fund - Round 2
Swansea Boat Trailer Parking	168,292	450,000	500,000		Complete	Carried Forward from 2020/21	DPIPWE Funds
Bicheno Triangle	28,962	580,000	600,000		Design continuing		Fed Grant Fund
Bicheno Gulch	58,355	1,490,000	1,500,000		Design continuing		Fed Grant Fund
Coles Bay Foreshore	47,115	950,000	1,000,000		Design continuing		Fed Grant Fund
Jetty Rd Bicheno - Beach Access, timber walkway installation	13,771	10,500	10,500		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Buckland Walk - rehabilitation	-	60,000	-	60,000		Carried Forward from 2020/21	
Total Parks, Reserves, Walking Tracks, Cemeteries	**316,495**	**3,540,500**	**3,610,500**	**60,000**			
Stormwater & Drainage							
Holkham Crt Flood Mitigation	27,860				land owners consulted on draft	Carried Forward from 2020/21	
Freycinet Drive CB Rock Line drain and culvert	18,728				complete	Carried Forward from 2020/21	
Triabunna Yacht club main install	24,521				Complete	Carried Forward from 2020/21	
Bicheno Esplanade install new mains to 3 houses	-					Carried Forward from 2020/21	
49 Rheban Rd to West Shelley Beach instal	-					Carried Forward from 2020/21	
Holkham Court	-	265,000	-	265,000			
Total Stormwater & Drainage	**71,108**	**265,000**	**-**	**265,000**			
Plant & Equipment							
Crane Gantry Swansea - safe water tank removal	6,723	20,000	-	20,000	complete		
Total Plant & Equipment	**6,723**	**20,000**	**-**	**20,000**			
Total New Capital	**773,065**	**5,453,500**	**5,229,275**	**354,225**			
		152,000					

Renewal of Assets	Actual YTD	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	50,000	50,000	programming	Carried Forward from 2020/21	RTR
Resheet - Old Coach Rd 3km	58,311	50,000		50,000	complete		
Resheet - Sally Peak Rd 1km	16,053	17,000		17,000	Complete		
Resheet - Sand River Rd 1km	15,000	17,000		17,000	Complete		
Resheet - Seaford Rd 1km	17,450	34,000		34,000	complete		
Resheet - Strip Rd 2km	-	34,000		34,000			
Resheet - Bresnehans Rd 0.5km	642	8,500		8,500	commenced		
Resheet - Medora St Pontypool 1km	-	17,000		17,000			
Resheet Nugent Rd	17,216	16,000		16,000	Complete		
Reseal	5,066	443,300		443,300	Tender awarded		
Resheet - Mt Murray Rd	29,775	-		-	complete		
Emergency repairs Wielangta Rd	-				barrier hire		
Community Infrastructure Fund - Round 3	-	221,174	301,174		awaiting confirmation of projects		Community Infrastructure Fund - Round 3
Redesign and relocation of the Triabunna School crossing	4,880	31,000	31,000		consulting school on design		Community Infrastructure Fund - Round 3
Design	-	29,200		29,200			
Contingency	-	40,000		40,000	council contribution west shelly		
Total Roads, Footpaths, Kerbs	**164,392**	**1,058,174**	**382,174**	**756,000**			
Parks, Reserves, Walking Tracks, Cemeteries							
Bicheno BMX track refurbishment	18,080	20,000	20,000		complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Total Parks, Reserves, Walking Tracks, Cemeteries	**18,080**	**20,000**	**20,000**	**-**			
Stormwater, Drainage							
Alma Rd and Fieldwick Lane - Rockline drain and culvert improvements	74,273	125,000	125,000		90% complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Stormwater management planning, investigation & design	38,601	100,000		100,000	continued	Carried Forward from 2020/21	
39 West Shelley Beach Orford Main Upgrade	64,469				Materials procured	Carried Forward from 2020/21	
Stormwater and drainage to be allocated	-	77,000		-		Carried Forward from 2020/21	
Total Stormwater, Drainage	**177,343**	**302,000**	**125,000**	**100,000**			
Buildings & Facilities							
Triabunna Marina Area Shelter	-				Complete		Community Infrastructure Fund - Round 2
Swansea Child Care Fencing	220				Complete		Community Infrastructure Fund - Round 2
RSL Cenotapth - new memorial c/fw project	-	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		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Bicheno Medical Centre - Car Park reseal and line mark	25,596	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		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Coles Bay Tennis Courts - Basketball hoop installation	1,365	3,000	3,000		Complete	Carried Forward from 2020/21	Community Infrastructure Fund - Round 2
Buckland Community Hall - ramp access	3,770	45,000	45,000		In progress	Carried Forward from 2020/21	Community Infrastructure Fund
Buckland Community Hall - stairs	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		In progress	Carried Forward from 2020/21	Community Infrastructure Fund
Swansea SES CCTV	1,163	3,000			Complete		Community Infrastructure Fund - Round 2
Swansea Courthouse Drainage Works	-	10,000	25,000		Complete	Carried Forward from 2020/21	Community Infrastructure Fund
Swansea Courthouse - refurbish toilet and install disabled/unisex toilet	-	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		Design progressing		Community Infrastructure Fund - Round 3
Swansea Community Hall - Toilet Refurbishment	53,705	40,000			Complete	Carried Forward from 2020/21	Community Infrastructure Fund
Spring Beach Toilet Refurbishment	-	65,000	65,000		Sched 2022		Community Infrastructure Fund - Round 3
Total Buildings & Facilities	**229,172**	**636,863**	**598,863**	**10,000**			

Marine Infrastructure	Actual YTD	2021/22 Budget	Government Funding	Council Funding	Project Progress	Details	Government Funding
Pylon Replacement - Marina	49,875	100,000		100,000	In progress		
Saltworks Toilet	-	245,000	245,000		Design progressing		Community Infrastructure Fund - Round 3
Saltworks Jetty Upgrade	-	100,000	100,000		Design progressing	Carried Forward from 2020/21	State Grant
Total Marine Infrastructure	**49,875**	**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	-	50,000	56,087		Draft Design received	Carried Forward from 2020/21	Community Infrastructure Fund
RTR - EMF Rheban Rd Griffith River Bridge	295,370	280,000	300,000		bridge 90%	Carried Forward from 2020/21	RTR 25% EMF75%
Total Bridges, Culverts	**295,370**	**330,000**	**356,087**	**-**			
Plant & Equipment							
IT Computer Equipment	15,411	30,000		30,000			
Medical Equipment	-	20,000		20,000			
Replace Ute x 2 (2007/2008)	55,365	57,000		57,000	complete		
Replace Mayor Vehicle (2016)	-	37,000		37,000	Complete		
Replace Tipper Truck (2014)	-	80,000		80,000	Procurement commenced		
Replace Medium Truck (2014)	-	80,000		80,000	Procurement commenced		
Replace Toro Groundmaster (2014)	27,995	40,000		40,000	complete		
Replace Tandem Trailer	4,883	6,000		6,000	complete		
Total Plant & Equipment	**103,654**	**350,000**	**-**	**350,000**			
Total Renewal Capital	**1,037,886**	**3,142,037**	**1,827,124**	**1,316,000**			
Total Capital Works	**1,810,951**	**8,595,537**	**7,056,399**	**1,670,225**			

1,810,951 Xero balance

- 0 check

Note: carried forward amounts for existing projects from previous financial year will be updated in future reports

GLAMORGAN SPRING BAY COUNCIL

Glamorgan Spring Bay Council

Council Advertising

Version 4

Adopted:
Minute No.:

Document Control

Policy Name	
First issued/approved	
Source of approval/authority	Council
Last reviewed	25/06/2019
Next review date	January 2026
Version number	4
Responsible Officer	General Manager
Department responsible for policy development	Governance
Publication of policy	Website

Contents

1 Introduction 4
1.1 Purpose 4
1.2 Scope 4
1.3 Related Policies and Legislation 4
1.4 Policy Review and Update Cycle 4
2 Policy 4
3 Delegation 5
4 Reporting 5
5 Implementation 5
6 Attachments 5

1 Introduction

1.1 Purpose

To establish a standard for all Council advertising including Development Applications.

1.2 Scope

All newspaper advertising including but not limited to Development Applications, events and information advertisements.

1.3 Related Policies and Legislation

This policy relates to and depends on other Council policies, as well as legislation, including:

- Local Government Act 1993
- The Land Use Planning and Approvals Act 1993
- The Glamorgan Spring Bay Interim Planning Scheme 2015

1.4 Policy Review and Update Cycle

This policy is to be reviewed every four years.

2 Policy

In the Glamorgan Spring Bay municipal area there are two major newspapers circulating i.e. The Mercury newspaper published in the south of the State and The Examiner newspaper published in the north. To advertise in both papers is a very expensive exercise. Legislation only requires that the advertisements must be placed in one major newspaper circulating in the area.

In addition to advertising in The Mercury and The Examiner daily newspapers, Council may also advertise on Council's Website, Council's Facebook Page, local media, and community notice boards.

This policy determines that:

a) Planning Applications and Planning Scheme Amendment advertising for the Coles Bay and Bicheno areas will be placed in The Examiner newspaper only;
b) Planning Applications and Planning Scheme Amendment advertising for Swansea and all other areas south of Swansea will be placed in The Mercury newspaper only;
c) Other advertising and Council notices will be placed in both The Mercury and The Examiner newspapers.
d) Planning Applications in Bicheno, Apslawn, Douglas River & Douglas-Apsley are placed in the Bicheno Post Office.
e) Planning Applications in Coles Bay, Friendly Beaches and Freycinet are placed in the Coles Bay Post Office.
f) All applications are exhibited in the Council office.
g) All advertising will appear on Council's website www.gsbc.tas.gov.au for the entire period submissions can be lodged.

3 Delegation

The General Manager has the authority to determine the circumstances where it may become necessary for duplicating advertisements in both The Mercury and The Examiner newspapers.

4 Reporting

The General Manager will ensure regular reporting in the monthly Council agenda in relation to Development Applications. Councillors will be provided with a copy of the public notice for their information.

5 Implementation

Implementation of this Policy rests with the General Manager.

6 Attachments

Nil.

GLAMORGAN SPRING BAY COUNCIL

Glamorgan Spring Bay Council

Council Workshop Policy

Version [1.0]

Adopted:
Minute No.:

Document Control

Policy Name	
First issued/approved	
Source of approval/authority	Council
Last reviewed	N/A
Next review date	January 2023
Version number	01
Responsible Officer	General Manager
Department responsible for policy development	General Manager
Related policies	• Code of Conduct
Publication of policy	Website

Contents

1 Introduction 4
1.1 Purpose 4
1.2 Scope 4
1.3 Definitions 4
1.4 Related Policies and Legislation 4
1.5 Policy Review and Update Cycle 4
2. Principles 5
3. Schedule 6
4. Participants 6
5. Facilitator 6
6. Administration 6
7. Implementation 7
8. Attachments 7

1 Introduction

1.1 Purpose

The purpose of this policy is to establish guidelines for the conduct of Council Workshop forums, which creates an opportunity for:

1. Councillors and officers to discuss matters, obtain and exchange information; and

2. Councillors to otherwise better inform themselves about:

    a) the implementation of decisions of Council;
    b) the ongoing operations of Council;
    c) matters raised which may be the subject of consideration at a Council meeting
    d) Upcoming Planning Authority reports

1.2 Scope

The Council Workshop Policy applies to all Councillors and employees of Council and is to be applied during Workshops.

Workshops are intended to provide a valuable opportunity to enhance the decision-making process by providing an opportunity for Councillors to ask questions and seek clarification of information prior to formal meetings.

This policy provides guidance to Councillors and Council officers on the conduct and value of Council Workshops.

1.3 Definitions

Council Workshops are a non-decision making forum convened by the General Manager or Mayor that creates an opportunity for Councillors and officers to be informed about, and canvass, matters of proposed policy or other strategic issues, as well as providing a forum for Councillors to be made aware of, and informed about, issues of significance. Each Workshop must be used solely for the purpose of information sharing, building consensus positions or otherwise discharging Council's deliberative and decision-making functions.

1.4 Related Policies and Legislation

This policy relates to and depends on other Council policies, as well as legislation, including:

- *Local Government Act 1993*
- *Local Government (meeting Procedures) Regulations 2015*
- Code of Conduct

1.5 Policy Review and Update Cycle

This policy is to be reviewed initially in January 2023 and thereafter, every four years.

2. Principles

2.1 The principle functions of Workshops are to:

2.1.1 Share information (rather than for the purpose of debating issues or otherwise discharging Council's deliberative and decision-making functions);
2.1.2 Provide officers with the opportunity to advise Councillors of their professional opinion on matters, including available options and recommendations;
2.1.3 Provide Councillors with the opportunity to seek clarification on matters;
2.1.4 Provide updates prior to a formal Council meeting;
2.1.5 Provide an opportunity for the General Manager and Council officers to address any Councillor questions and provide additional background;
2.1.6 Receive deputations from members of the community if the deputation is for an information session or to brief Councillors on a matter that does not require a decision to be made; and
2.1.7 Receive presentations from external parties assisting Council.

2.2 A formal decision, or implied decision, must not be made at a Workshop.

2.3 Debate or discussion between Councillors which, directly or indirectly, results in consensus building must not to be conducted at a Workshop.

2.4 Councillors need to be aware of their responsibilities with regard to the *Local Government Act 1993* and its associated regulations and must refrain from consensus building or participating in the formation of decisions at Workshops.

2.5 Workshops are not formal meetings of Council and are not open to the public unless otherwise invited.

2.6 Paragraph 2.7 applies if:

2.6.1 a matter is to be considered or discussed at a Workshop; and
2.6.2 the matter is not an ordinary business matter; and
2.6.3 a Councillor at the Workshop:
a) has a conflict of interest in the matter; or
b) has a material personal interest in the matter.

2.7 The Councillor must inform the Workshop:

2.7.1 if the Councillor has a conflict of interest in the matter—about the Councillor's conflict of interest in the matter; and
2.7.2. if the Councillor has a material personal interest in the matter—about the Councillor's material personal interest in the matter.

2.8 Paragraphs 2.8.1 and 2.8.2 apply to a Councillor who has a material personal interest, real conflict of interest or perceived conflict of interest in a matter, other than an ordinary business matter.

2.8.1 the Councillor must not influence, or attempt to influence, another Councillor to vote on the matter in a particular way at a meeting of Council or any of its committees.

2.8.2 the Councillor must not influence, or attempt to influence, a Council employee or a contractor of Council who is authorised to decide or otherwise deal with the matter to do so in a particular way.

3. Schedule

3.1 Workshops will usually be held on the second Tuesday of each month in the Council Chamber, 9 Melbourne Street, Triabunna.

3.2 In the event of there being no business formally listed, the Workshop will not convene, and the Office of the General Manager shall advise Councillors of the cancellation as soon as practicable.

3.3 The Mayor or General Manager may call Workshops as necessary so that Councillors may be informed about emergent matters.

3.4 If a General Manager believes it is necessary to schedule a Workshop with Councillors outside of the scheduled Workshops, the General Manager shall inform the Mayor, to establish whether to call a Workshop.

4. Participants

4.1 Workshops are generally attended by all Councillors, the General Manager (or a delegate), the Executive Leadership Team, any managers or other officers who have an interest in an item on the agenda.

4.2 While no quorum is required for a Workshop, consideration should be given to the usefulness of holding the Workshop given the matters to be canvassed at the Workshop.

4.3 External persons may attend Workshops upon invitation from the Mayor or General Manager. If an external person (for example a consultant, contractor or guest) is to be present at the Workshop, the person's name, title and company shall be included on the agenda.

4.4 An external person who will be attending a Workshop shall only be present at the Workshop during discussion of the agenda item for which their name appears.

5. Facilitator

5.1 The General Manager shall facilitate the Workshop. In the event that the General Manager is not present, one of the Directors shall facilitate the Workshop.

5.2 The Facilitator shall assume responsibility for the good governance and order of the meeting. The General Manager is responsible for determining the order of business of the agenda in consultation with the Mayor.

6. Administration

6.1 A Councillor wishing to place an item on the agenda for a future Workshop may do so through;

6.1.1 raising a matter at a Workshop for a future Workshop, or

6.1.2 applying in writing to the General Manager outside the Workshop forum

6.2 Any reports relating to the requested agenda item (if determined to be included), will include the following:

6.2.1 The Councillor who has requested the report;
6.2.2 Request from Councillor;
6.2.3 Recommendation from Officer (if applicable);
6.2.4 Supporting documentation for recommendations (if applicable);

6.3 The General Manager will ensure that all Councillor requests to place an item on the agenda for a Workshop are noted at an ordinary Council meeting, regardless of whether a Council resolution is required about the item or not. The report will note the Councillor who raised the matter, and the manner in which the request is being managed. This will be a standalone report that will identify, since the last meeting, matters Councillors have raised for inclusion in upcoming agendas and for each matter it will state whether it is on the current agenda, will come to a future agenda, has already been actioned or is being dealt with operationally.

6.4 For each Workshop agenda item, the agenda shall state the title of the item, the name of the officer who will lead the discussion, the time allotted to each agenda item and whether a presentation is attached, as per the Workshop Brief template.

6.5 Generally the agenda for a Workshops will be distributed at least two (2) days prior to the Workshop.

6.6 Workshop reports or papers must have a clear statement identifying the aims of the briefing. Such as:

- *This report is for the briefing of Councillors on an operational matter.*
- *This report is for the briefing of Councillors prior to consideration of the matter at a future Council meeting.*
- *This report is seeking to identify any further clarification Council may require with regard to [_____] agenda item.*

6.7 Other matters raised during Workshops may be appropriately identified as confidential, however it is unnecessary and not best practice to have a 'blanket' policy which identifies all canvassed issues as confidential.

7. Implementation

Implementation of this Policy rests with the General Manager.

8. Attachments

Council Workshop Protocols

COUNCIL WORKSHOP PROTOCOL

Approved By:	Council	Responsible Officer:	General Manager
Approved Date:		Next Review Date:	

The protocols are a set of guiding principles that aim to achieving enhanced, meaningful engagement of members and to facilitate an equal and equitable participation of all members.

The individual Members commitment to active listening and disciplined talking, displaying both courtesy and respect to other members is paramount.

1. The Facilitator ensures that every Councillors' input is heard and not overlooked or lost, and will enforce a limit on speakers' time when it is best required.
2. No rank and/or officer position of administrative or governance authority is recognised within the Workshop (except for the Facilitator) and protocols are enforced when deemed necessary.
3. Councillors and staff are to be addressed by their given name and not by their title of office they hold.
4. Discussion must be focussed on the issues and matters being the subject of discussion.
5. One Councillor speaking at a time is a right, and must be enjoyed by all Councillors.
6. Interrupting another Councillor speaking is not desired and Councillors are encouraged to exercise restraint for the benefit of all concerned. Equally, there should be no dialogue between Councillors and staff that interrupts the Workshop discussion.
7. No ridicule, blame or shame to be expressed and/or exchanged during the Workshop and care should always be taken with the words used in debate.
8. Problems and solution expressed by Councillors are a healthy part of the discussion and may lead to positive outcomes and should not be frowned upon but rather encouraged.
9. Although Workshops are not a decision-making forum, they are an important part of ensuring a well-informed and enhanced decision-making process for Council.
10. The imperatives for a successful conduct of these Workshops are that all Councillors need to work together, displaying courtesy and respect to each other.
11. Councillors must not disseminate materials or information obtained in relation to a confidential Workshop item. To do so may result in a breach of the Local Government Act 1993 and Code of Conduct.

It is important that all Councillors recognise the above list of protocols is not about rules; protocols are a set of guiding principles that are agreed on and committed to by all participating Councillors.

REVISION HISTORY:

Revision	Date	Changes	Approved By

AUSTRALIAN
LOCAL GOVERNMENT
ASSOCIATION

PARTNERS IN PROGRESS

2022 NATIONAL GENERAL ASSEMBLY

19 - 22 JUNE 2022

CALL FOR **MOTIONS**

DISCUSSION PAPER

SUBMITTING MOTIONS

This discussion paper is a call for councils to submit motions for debate at the 2022 National General Assembly (NGA) to be held in Canberra 19 – 22 June 2022.

It has been prepared to assist you and your council in developing your motions. You are encouraged to read all the sections of the paper but are not expected to respond to every issue or question. Your council's motion/s can address one or more of the issues identified in the discussion paper.

Motions should be lodged electronically using the online form available on the NGA website at: www.alga.asn.au and received no later than 11:59pm AEST on Friday 25 March 2022.

The theme of the 2022 NGA is – Partners in Progress.

The NGA aims to focus on how partnerships, particularly between the Australian Government and Local Governments, can tackle immediate challenges facing communities as well as confidently facing the future.

In submitting your council's motion/s you are encouraged to focus on how partnership can address national issues at the local level, and new ways the Australia Government could partner to strengthen the local government sector to advance community well-being, local economic development, create jobs, address environmental challenges, climate change and complex social issues such as housing affordability.

The National General Assembly of Local Government (NGA) is an important opportunity for you and your council to influence the national policy agenda and promote new ways of strengthening the local government sector and our communities.

Note: If your council does submit a motion there is an expectation that a council representative will be present at the National General Assembly to move and speak to that motion if required.

We look forward to hearing from you and seeing you at the 2022 NGA.

1 DECEMBER 2021
Opening of Call for Motions

25 MARCH 2022
Acceptance of motions close

19 JUNE 2022
Regional Cooperation& Development Forum

20 - 22 JUNE 2022
National General Assembly

NGA22.COM.AU

To submit your motion go to:
alga.asn.au/

KEY DATES
CRITERIA FOR MOTIONS

To be eligible for inclusion in the NGA Business Papers, and subsequent debate on the floor of the NGA, motions must meet the following criteria:

1. be relevant to the work of local government nationally
2. not be focussed on a specific location or region – unless the project has national implications. You will be asked to justify why your motion has strategic importance and should be discussed at a national conference
3. be consistent with the themes of the NGA
4. complement or build on the policy objectives of your state and territory local government association
5. be submitted by a council which is a financial member of their state or territory local government association
6. propose a clear action and outcome i.e. call on the Australian Government to do something; and
7. not be advanced on behalf of external third parties that may seek to use the NGA to apply pressure to Board members, or to gain national political exposure for positions that are not directly relevant to the work of, or in the national interests of, local government.

Motions should generally be in a form that seeks the NGA's support for a particular action or policy change at the Federal level which will assist local governments to meet local community needs.

Motions should commence as follows - *This National General Assembly calls on the Australian Government to .....*

Example

This National General Assembly calls on the Australian Government to restore Local Government Financial Assistance Grants to a level equal to at least 1% of Commonwealth taxation revenue.

OTHER THINGS TO CONSIDER

Please note that it is important to complete the background section on the form. Submitters of motions should not assume that NGA delegates will have background knowledge of the issue. The background section helps all delegates, including those with no previous knowledge of the issue, in their consideration of the motion. Please note that motions should not be prescriptive in directing how the matter should be pursued.

Try to keep motions practical, focussed and relatively simple. Complex motions with multiple dot point can be difficult to implement and to advance.

All motions submitted will be reviewed by the ALGA Board's NGA Sub-Committee, in consultation with state and territory local government associations, to determine their eligibility for inclusion in the NGA Business Papers. When reviewing motions, the Sub-Committee considers the criteria, clarity of the motion and the importance and relevance of the issue to local government. If there are any questions about the substance or intent of a motion, ALGA will raise these with the nominated contact officer. With the agreement of the submitting council, these motions may be edited before inclusion in the NGA Business Papers.

To ensure an efficient and effective debate where there are numerous motions on a similar issue, the ALGA Board NGA Subcommittee will group the motions together under an overarching strategic motion. The strategic motions have either been drafted by ALGA or are based on a motion submitted by a council which best summarises the subject matter. Debate will focus on the strategic motions. Associated sub-motions will be debated by exception only or in accordance with the debating rules.

Any motion deemed to be primarily concerned with local or state issues will be referred to the relevant state or territory local government association and will not be included in the NGA Business Papers.

Motions should be lodged electronically using the online form available on the NGA website at: www.alga.asn.au. All motions require, among other things, a contact officer, a clear national objective, a summary of the key arguments in support of the motion, and endorsement of your council. Motions should be received no later than 11:59pm AEST on Friday 25 March 2022.

Introduction

As Australia emerges from the crisis management phase of the COVID-19 global pandemic, attention now turns to rebuilding and to the future.

By the time of the NGA in June 2022, the next federal government and 47th Parliament of Australia, will almost certainly have been elected.

Prior to the election the major political parties will have campaigned on priorities and made numerous policy and programs commitments that will help shape our nation's future.

Invariably, in government, these policies and programs will need to be refined, developed and implemented. Almost certainly they will need to be adapted to meet changing circumstances, emerging issues and local and regional needs.

We know from previous elections that governments will not be able to achieve their policy agenda alone. They need reliable partners committed to playing their part in taking the nation forward, working together on mutual goals and advancing national prosperity for all.

During the election campaign, ALGA will be working extensively with state and territory local government association members, and many of you, to advance the national priorities highlighted in the Federal Election manifesto 'Don't' Leave Local Communities Behind'.

These priorities were significantly influenced by many of the resolutions of past NGAs.

Whether the Coalition Government is returned or a new Government formed, the 2022 NGA provides the first major opportunity to engage with relevant portfolio Ministers and key members of the new Government.

Most importantly, it provides you - the elected representatives of Australia's local councils and communities - with the opportunity to reaffirm our national priorities and to place new ideas on the national policy agenda.

The Immediate Recovery Challenges

Government at all levels have collaborated to avert the worst possible health and economic outcomes of the COVID-19 pandemic across Australia.

By November 2021 most states had reached or made significant progress in reaching the 80% or more vaccination threshold.

Every community was affected, some more than others, and local government has been at the forefront of developing local solutions to local challenges.

Given the economic and social impacts of the COVID pandemic on communities over the past 2 years, are there issues that need to be addressed by a new partnership between the Commonwealth Government and local governments?

Given the impacts of the COVID pandemic on your council and other councils around the country, are their issues that a partnership between the Commonwealth Government and local government should address?

Jobs

In September 2021 the national, seasonally adjusted unemployment rate, was 5.2% (ABS). The underemployment rate was 9.5% with monthly hours worked decreasing by 1 million hours. Roy Morgan's survey work suggests Australian unemployment (unadjusted) was 9.2% in October with underemployment at 8.6%.

National statistics however mask variations at the state, regional and local level. State and Territory unemployment ranged from 3.9% in Western Australia and the Northern Territory, 5.1% in Queensland and Tasmania, 5.3% in South Australia, NSW 5.4%, Victoria 5.6% and the Australian Capital Territory 6.6%. Similarly, regional and local community unemployment vary from the national average reflecting local circumstances and the different impact of the COVID-19 pandemic, lockdowns and their flow-on effects have on the local economy. Youth unemployment and Aboriginal and Torres Strait Islander unemployment is also consistently higher.

As an employer of staff and of contractors, as well as a facilitator of local economic development, local government can play a key role in addressing unemployment and underemployment.

In keeping with the ALGA Federal election manifesto, 'Don't' Leave Local Communities Behind' local solutions are required for local circumstances.

What new partnership program could the Australian Government develop to take advantage of local government's knowledge of the local economy, geographic spread across the country and its ability to create jobs?

As an employer, what are the pre-requisites for councils to create more good quality, secure local jobs that build community capacity and address local workforce skills shortages?

Building Back Better Businesses

The economic shock of the past 2 years has cause unprecedented disruption to local businesses and communities. While many businesses have adapted to difficult circumstances, some have not survived. The current vacant shops fronts and offices of the streetscapes in our cities and towns is evidence of the challenges that our local businesses, local industry and communities have faced.

The capacity of the private sector, and small business in particular, to bounce back is untested.

What new partnership programs could the Australian Government introduce to take advantage of local government's role in economic development, including to support local businesses?

Opening Australia's Borders

As previously mentioned, by November 2021 most states had reached or made significant progress in reaching the 80% or more vaccination threshold. At this point, under the National Plan to Transition Australian National COVID-19 Response, governments were committed to introducing new measures such as opening international borders, minimising cases in the community without ongoing restrictions or lockdowns, Covid vaccination boosters encouraged and provided as necessary, and allowing uncapped inbound arrivals for all vaccinated persons, without quarantine.

As Australia opens-up its international borders economic recovery is expected to accelerate. The return of expats, international students, overseas migration and international tourism will increase population, supply of labour and demand for goods and services including for accommodation.

In the first instance, economic activity can be expected to return to pre-Covid levels. Over time, with appropriate support, it will grow.

The closure of borders and particularly international borders affected many parts of the tourism industry and the economies of many local communities. While domestic visitors helped fill a gap, recovery of many parts of the industry and the economy of communities that depend heavily on tourisms will depend on the return of international travel.

To do this Australia must position itself to compete in international markets. This comes through offering high quality destinations, services and experiences that highlight the quality and value available in Australia. In addition to delivering a better visitor experience, this should also increase productivity, efficiency and innovation.

In the short term, what new partnership programs could the Australian Government introduce to assist local government meet the return of international students and stronger migration now and into the future?

What new programs could the Australian Government develop to partner with local government to facilitate tourism and the traveller economy?

Workforce Shortages and Re-engineering Work

In November 2021 business representatives report significant labour shortages particularly in the agriculture and hospitality sectors. The lack of backpackers, overseas students and migrant workers, combined with people not wanting to return to the workforce, are just some of the reasons attributed to these shortages.

While opening borders may increase the supply of labour, some argue that there is a more fundamental change in Australia's workforce and workplaces.

Although not reported in Australia yet, in the United States the post Covid workforce has been associated with what some have called the 'Great Resignation' as employees have adjusted their expectations, work life balance and priorities and simply not returned to their old jobs.

Many workers have been required to work from home for extended periods during the pandemic, including working remotely and now look for greater flexibility in their work. Technology and automation are transforming work and the workplace.

Many are prepared to change jobs to maximise this flexibility and the benefits derived from it. Traditionally this has led to wage pressure but coupled with demand for greater workplace flexibility employers need to be innovative to attract and retain employees. As an employer, councils are not immune and will also need to develop these strategies.

What new programs could the Australian Government develop to partner with local government to help support an influx of skilled migrants?

What new programs could the Australian Government develop to partner with local government to help councils attract and retain appropriately trained workers and employees?

Climate change

The United Nations Conference (COP) of Parties 26 held in Glasgow 2021 focused global attention on climate change and global and national efforts to achieve net zero emissions by 2050 and limit global warming to 1.5 degrees.

For decades local governments have played an important leadership role in addressing climate change. Councils have supported the adoption of a wide range of community-based programs and initiatives to lower the carbon footprint of local communities. As a sector, local government has led the debate for lowering carbon emissions, sourcing renewable energy, responded creatively to reduce greenhouse gas emissions from landfills, facilitated the construction of green buildings and water sensitive design of cities and towns.

Pragmatically, local government has been at the forefront to address the impacts of climate change and adaptation to climate change. These impacts include an increased number of days with high temperatures, less rainfall and more droughts in southern Australia, less snow, more intense rainfall and fire weather, stronger cyclones, and sea level rise. These changes will increase stress on Australia's infrastructure and physical assets and natural ecosystems that are already threatened, and significantly affect agriculture, forestry, fisheries, transport, health, tourism, finance and disaster risk management.

How do we work together to ensure that there is local adaptation to climate change and climate extremes? What partnerships are available to achieve climate neutrality?

Natural Disasters

With the high-risk weather season commencing, many councils will be engaging with their communities about disaster preparedness, resilience and recovery. Not only have we experienced one of Australia's worst bushfire seasons in 2019-20, but some councils also had to deal with multiple disaster events within a 12 month period. Some councils have had to deal with bushfires, followed by storms, flooding, hailstorms, more flooding and COVID-19. These multiple disasters have had a devastating effect on many councils' financial sustainability and their ability to fund mitigation measures for the upcoming high risk weather season. Smaller rural and regional councils are further financially challenged and require help with preparedness and mitigation, as they currently have zero capacity to fund major mitigation projects.

The Royal Commission into National Natural Disaster Arrangements recognised that councils need help. It concluded that without assistance many local governments cannot undertake the roles and responsibilities allocated to them by their State/ Territory Governments.

What new programs could the Australian Government develop to partner with local government to help to address natural disasters to assist in recovery and build resilience?

Environment

Local government plays a critical role in environmental management including environment protection.

“Australia’s Strategy for Nature 2019 – 2030” recognises that we all have a role in securing nature as the foundation of our existence. It is an overarching framework for all national, state and territory and local strategies, legislation, policies and actions that target nature. It has 3 goals:

1. Connecting all Australians with nature:
2. Care for nature in all its diversity, and
3. Share and Build knowledge.

To achieve these goals there are a variety of options for joint action to reduce threats and their impacts include ensuring the design and management of the protected area network considers and accommodates future threat scenarios and establishes robust mechanisms to respond effectively to new and emerging threats. The strategy suggests there are opportunities to ‘… improve planning, regulation, environmental impact assessment and approvals processes. In addition, threat abatement activities could include targeted pest management, ecosystem restoration (integrated fire management, revegetation), pollution control, greenhouse gas emissions management and climate change adaptation’.

How could the Australian Government partner with local government to help support the implementation of the Australian Strategy for Nature 2019 – 2030 and take advantage of local knowledge?

What new programs could the Australian Government develop to partner with local government to help to reduce threats and risks to nature and build resilience?

The Circular Economy

The 2019 National Waste Policy Action Plan applies principles of a circular economy to waste management to support better and repeated use of our resources. The circular economy principles for waste are:

1. Avoid waste
2. Improve resource recovery
3. Increase use of recycled material and build demand and markets for recycled products
4. Better manage material flows to benefit human health, the environment and the economy
5. Improve information to support innovation, guide investment and enable informed consumer decisions.

Councils play a major role in the management of household and domestic waste. Therefore, local government has a critical role to play in further developing the circular economy.

How could the Australian Government partner with local government to advance the circular economy?

What new programs could the Australian Government partner with local government to progress these objectives?

Affordable Housing

The shortage and costs of rental properties and affordable home ownership is causing significant social and economic impacts in cities and towns across Australia, including rural and regional communities. This is due to a range of factors such as changes in recent migration patterns, cheap finance and labour and material shortages in the construction sector.

The impacts on local governments and communities includes housing stress for individuals and families, difficulty in attracting and housing key workers and an increase in homelessness.

The House of Representatives Standing Committee on Tax and Revenue 2021 is leading an inquiry into the contribution of tax and regulation on housing affordability and supply in Australia. Whilst the provision of affordable housing is not a local government responsibility, local governments often facilitate affordable housing within their communities, operating within state/territory planning, financial and other legislation requirements. The housing challenge is different in each community and the council response is dependent on its financial resources and priorities.

How could the Australian Government partner with local government address housing affordability?

What new programs could the Australian Government partner with local government to progress this objective?

Conclusion

Thank you for taking the time to read this discussion paper and support for the 2022 National General Assembly of Local Government.

A reminder:

- Motions should be lodged electronically using the online form available on the NGA website at: www.alga.asn.au and received no later than 11:59pm AEST on Friday 25 March 2022.
- It is important to complete the background section on the form.
- Motions should not be prescriptive in directing how the matter should be pursued.
- Motions should be practical, focussed and relatively simple.
- Motions must meet the criteria published at the front of this paper.
- When your council submits a motion there is an expectation that a council representative will be present at the National General Assembly to move and speak to that motion if required.

We look forward to hearing from you and seeing you at the 2022 NGA.


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DON'T LEAVE LOCAL COMMUNITIES BEHIND!

Federal Election Priorities

Successfully delivering for Greater Sydney communities

Rouse Road footbridge ($22 million), Blacktown City Council, NSW

Blacktown City Council Mayor Tony Bleasdale said the opening of the Rouse Road Bridge in 2019 - partially funded through the Commonwealth's Bridges Renewal Programme - solved a number of significant problems and that the bridge was a major access point fo the Tallawong Metro station and Rouse Hill Anglican College.

"This area is experiencing rapid growth and the old causeway was an enormous traffic bottleneck and a serious safety concern for pedestrians and motorists alike during times of heavy rain," Cr Bleasdale said.

"Blacktown City Council had the bridge planned for some time, but needed to wait for available funding. The Australian Government grant enabled the work to be fast-tracked."

Authorised by Matt Pinnegar Chief Executive Officer of ALGA.

Table of contents

Page

4 Introduction

7 Economic Recovery

9 Transport and Community Infrastructure

11 Building Resilience

13 Circular Economy

15 Intergovernmental Relations

Introduction: Linda Scott, ALGA President

As our nation faces social and economic challenges unseen in peace-time Australia, Australians need their decision-makers working together.

They want, expect, and need pragmatic policy making that delivers a locally led recovery from COVID-19, and a focus on opportunity rather than austerity from this economic crisis.

In total (including direct and flow-on impacts), the funding priorities we've proposed in this document are estimated to contribute at least $6.39 billion per annum on average to Australia's Gross Domestic Product (GDP), as well as support an average of 42,975 full time equivalent (FTE) jobs per annum across Australia over a four-year period.

By working with Australian councils – the level of government closest to its community – a future Federal Government can put steps in place to guarantee no local community is left behind as we recover from COVID-19.

DON'T LEAVE LOCAL COMMUNITIES BEHIND!

Councillor Linda Scott
President of the Australian Local Government Association

The COVID-19 pandemic that shook Australia in March 2020 has imposed new physical, social, and economic realities in Australia.

Occurring almost simultaneously with the Black Summer fires, floods, and drought, the pandemic helped trigger Australia's first recession in nearly 30 years.

It has led to unprecedented Commonwealth, state and local government economic support for those most affected by the economic and social impacts, but the cumulative shocks to our system – exacerbated by the Delta variant and a mammoth vaccination task – have presented all governments with significant financial challenges, which local governments are unable to face without the support of the Commonwealth.

Businesses closed their doors and laid off staff, families lost income, and individuals were left isolated from friends and loved ones.

Unwelcome as the pandemic was, it has also revealed the adaptability, innovation, and resilience of our nation and its citizens.

Through stay-at-home orders in place, our homes became our offices, schools, and lecture halls, and many have faced unemployment or uncertainty about how to pay the rent or support our families.

Within days of the announcement of lockdowns and health restrictions, we took difficult but necessary steps to protect our communities from the risks of infection – educating people about the need for social distancing and providing masks and food for communities.

We used our own limited funding to provide financial support to local small businesses directed to close because of COVID-19 restrictions, and organised vouchers for aged and other vulnerable locals to redeem at participating local cafes and restaurants struggling to stay in business.

We supported our communities to innovate, quickly adapting in a way only local governments can.

As communities and businesses "pivoted", we saw the adaptability that characterises local government.

Recognising that broad economic stimulus and job-creation programs were the keys to community recovery, local governments accelerated local employment-generating programs.

We partnered with other governments to roll out targeted capital works to improve road safety, rejuvenate or upgrade local community assets, and enhance our local parks, footpaths and community open spaces.

Forced to contemplate what the future might look like post-COVID, many Australians believe our communities should be restored not to what they were, but to what they could be.

A successful national recovery is a recovery that will be made up of thousands of smaller locally driven recoveries led by local governments in partnership with funding partners: private, philanthropic, state, territory and federal.

To sustain such a recovery and ensure it is felt across all communities regardless of size or location, we need a stronger, more equal partnership between governments. Our local communities need more investment, and they need to have a greater say in decision-making about their futures.

All spheres of government, elected and administrative, must work together to ensure that economic recovery post-COVID does not falter.

We have a once-in-a-lifetime opportunity to build a better future: one that bolsters community connection, wellbeing and resilience.

This document lays out a series of offers to the next incoming government, alongside a set of asks.

They build upon local government's strengths and its proven track record of working in partnership to deliver for Australian communities and national productivity.

The policies contained in these election priorities have been assessed by independent economists, who were engaged to model the contribution to the Australian economy from each priority investment as well as articulate the socio-economic benefits these programs can be expected to deliver.

They are exactly what is needed to ensure local communities of all sizes are in a strong position to drive the inclusive recovery all Australians want and that leaves no community behind.

Local government can lead and deliver the strong community-focused recovery from COVID-19 by:

- leading local economic growth;
- delivering stimulus projects that generate local jobs, support local businesses and boost productivity;
- enabling economic growth through the development of a circular economy;
- building community resilience to disasters and climate change; and
- facilitating community wellbeing.

	Local Government Offer to the Australian Government	Local Government Ask of the Australian Government
Economic Recovery	To partner with the Federal Government to create more jobs, while addressing the nation's skills shortage through training and upskilling Australian workers.	To commit to a progressive increase in Financial Assistance Grants to at least one percent of Commonwealth taxation revenue (at least $4.5 billion per year), and an initial injection of additional Financial Assistance Grants funding.
Transport and Community Infrastructure	To partner with the Federal Government to create infrastructure that will improve the safety, liveability and productivity of our communities, while contributing to Australia's economic recovery.	To invest $500 million per year for four years extending the Local Roads and Community Infrastructure Program, while increasing roads funding and improving digital connectivity in our regions. To invest in an innovative housing partnerships of $200m over four years to support affordable housing in communities.
Building Resilience	To partner with the Federal Government to grow the resilience in our communities, mitigate against the impacts of future disaster events, while focussing on local opportunities to reduce our carbon emissions and to Close the Gap between Indigenous Australians and the nation.	To provide $200 million per year for four years for a targeted disaster mitigation program, while establishing a $200 million Local Government Climate Partnership Program and supporting all councils to implement Closing the Gap targets with $100 million per annum over four years.
Circular Economy	To identify and implement opportunities to reduce waste sent to landfill and support the development of a circular economy that will deliver environmental and economic benefits for all our communities.	To provide $100 million per year for four years to fund local government circular innovation projects, and support our communities to reuse wherever possible.
Inter-governmental Relations	To provide a local, place based community perspective to intergovernmental deliberations to ensure that decisions are responsive to local needs and have regard to the great diversity between communities.	To reinstate local government representation to the primary intergovernmental forum in Australia, the National Cabinet, and ensure local government's ongoing voting membership of other Ministerial forums.

Economic Recovery

Government responses to COVID-19 over the past two years have been overwhelmingly concentrated on averting a health and economic crisis. 2022 and the years beyond are set to be dominated by discussions and decisions around economic recovery.

New policies and strategies will be required to ensure all Australians can be employed in secure, meaningful, and sustainable jobs.

With our footprint across the nation and a workforce that encompasses 394 occupations, local governments provide an ideal catalyst for growing jobs.

We are also the ideal vehicle for co-investment in new job-creation initiatives.

Increased federal funding and investment will help councils roll out new local economic stimulus projects and give us the ability to cut the red tape that might potentially be slowing or blocking other investments planned for communities across Australia.

We would be able to create more jobs, including traineeships and apprenticeships, to address an emerging skills gaps in local government that threatens to slow decentralisation efforts aimed at rejuvenating regional and rural Australia.

Longer term certainty with Federal funding will enable Council's to invest in workforce planning and training.

In many communities, we are proud to be a major employer of Aboriginal and Torres Strait Islander peoples. Local governments are willing to support opportunities for skill training, new jobs, and business opportunities for indigenous people and their communities to help close the gap on indigenous disadvantage.

An added benefit of increased federal funding to local government is that it will help achieve equitable levels of services across all parts of Australia, build community resilience and wellbeing, and improve productivity-generating infrastructure.

Don't leave our regional communities behind

Commonwealth Financial Assistance Grants support equitable service levels for all Australians and ensure that no community is left behind.

These grants are particularly vital in many regional communities, but over the past twenty years they have significantly declined as a share of total Commonwealth taxation revenue.

North Burnett Regional Council Mayor Rachel Chambers, pictured, said a number of factors including amalgamation, changes to Financial Assistance Grants, and increasing depreciation expenses placed the region in a predicament, and could cost local jobs in her community.

"Our back is against the wall. We're running out of money, we're running out of options to save jobs, and we're running out of time," she said. "We have to use depreciation as an expense so our expenses have increased and that has been an issue. Then we have had budget cutbacks by the state and federal governments over the years."

Economic Recovery

Failure to secure future federal funding creates the real risk of communities being disproportionately impacted in this period of economic recovery.

Councils are also grappling with the budget repair challenges that are facing state and federal treasuries.

Funding certainty is critical to the short and long-term planning of councils, particularly in rural and regional areas where there is a greater reliance on external funding.

We are seeking:

1: An initial injection of Financial Assistance Grants to local government worth $1.3 billion to support communities and jobs and also resolve the current practice of bringing forward two quarterly Financial Assistance Grant payments each year.

If funded:

Jobs created: 13,213
Contribution to annual Gross Domestic Product ($b): $1.928

2: A commitment to return Financial Assistance Grants to at least one percent of Commonwealth taxation revenue - an additional ($b) 1.598 per year - via a phased approach to be agreed with the Government.

If funded:

Jobs created: 16,242
Contribution to annual Gross Domestic Product ($b): $2.370

Local Government Offer to the Australian Government	Local Government Ask of the Australian Government
To partner with the Federal Government to create more jobs, while addressing the nation's skills shortage through training and upskilling Australian workers.	To commit to a progressive increase in Financial Assistance Grants to at least one percent of Commonwealth taxation revenue (at least $4.5 billion per year), and an initial injection of additional Financial Assistance Grants funding.

Better Transport and Community Infrastructure

Well-targeted infrastructure investment generates lasting economic, social and environmental benefits.

It lowers costs for business and government and better connects workers to their jobs. It increases community resilience and ensures we as a nation are protected against the extreme weather events associated with global warming.

We are responsible for 33 percent of Australia's public infrastructure, including 75 percent of the country's roads by length. Much of this infrastructure is ageing and needs renewing or replacing so it meets community and industry needs.

Roads represent 39 percent of the total local government infrastructure with a total replacement cost of $204 billion. Bridges represent four percent of the total infrastructure with a replacement cost of $26 billion. Park and Recreation assets represent $16 billion or 3 percent of the total infrastructure replacement cost.

However, we collect only 3.5 percent of all taxes raised in Australia, while faced with the mammoth task of maintaining a third of the nation's infrastructure.

Councils are committed to providing quality infrastructure and creating sustainable jobs.

We need additional funds to achieve this commitment and a longer-term funding assurance that allows councils to recruit trainees and apprentices, upskill workers, and attract skilled workers into rural, regional and remote areas.

Access to affordable housing underpins the economic and social fabric of local communities. We are calling for a national housing summit that can develop a national housing strategy to address the current housing challenges in our communities. Local governments must be involved with national housing governance arrangements.

Successfully delivering for Perth suburban communities

Thornlie Community and Sports Hub ($5.6 million, partially funded through Community Development Grants Programme) City of Gosnells, WA

"It's been very exciting to watch this building rise from the ground, " Gosnells Mayor David Goode says.

"The hub will provide important facilities to keep local residents active, provide a welcoming meeting place, and support local community groups. I look forward to the day when we can welcome the whole community to enjoy it."

Better Transport and Community Infrastructure

We are seeking:

3: A $500m per annum four year continuation of the Local Roads and Community Infrastructure program which allows councils to deliver projects that respond to local needs.

If funded:

Jobs created: 3,974
Contribution to annual Gross Domestic Product ($m): $604

4: A strategic local roads investment program of $300m per annum over four years to address road transport first and last mile issues and congestion on local roads.

If funded:

Jobs created: 2,332
Contribution to annual Gross Domestic Product ($m): $366

5: An increase in Roads to Recovery to $800m per annum (an additional $300m per annum) and the Black Spot Program to $200m per annum over four years, while addressing the South Australian road funding anomaly by making the additional $20m per annum to SA in 2021-22 and 2022-23 permanent, to more sustainably manage local government's 75% share of the national road network and boost productivity and road safety.

If funded:

Jobs created: 3,214
Contribution to annual Gross Domestic Product ($m): $502

6: Continuation of the Stronger Regional Digital Connectivity Package at $55m over four years to improve community resilience and local economic recovery.

If funded:

Jobs created: 99
Contribution to annual Gross Domestic Product ($m): $18

7: $200m over four years to assist councils to develop and implement innovative housing partnerships.

Local Government Offer to the Australian Government	Local Government Ask of the Australian Government
To partner with the Federal Government to create infrastructure that will improve the safety, liveability and productivity of our communities, while contributing to Australia's economic recovery.	To invest $500 million per year for four years extending the Local Roads and Community Infrastructure Program, while increasing roads funding and improving digital connectivity in our regions. To invest in an innovative housing partnerships of $200m over four years to support affordable housing in communities.

Resilient Communities Building Back Better

Communities across Australia are doing it tough – their physical, financial and mental reserves depleted by years of drought swiftly followed by the Black Summer bushfires, the coronavirus pandemic and severe storms and flooding.

All levels of government have worked hard to address the challenges thrown up by these rolling disasters.

They have supported businesses, communities, and individuals –and they are now focused on engineering a national economic recovery.

Although mass vaccinations diminish the health threats posed by COVID-19, the swift succession of natural disasters has demonstrated that communities need to be better prepared.

The likelihood of more frequent severe weather events in future underlines this need.

Investing in programs to mitigate natural disasters is critical to building community resilience.

Communities derive substantial co-benefits from investments in mitigation and adaptation – including new employment opportunities, regional growth, lower insurance premiums, and faster reductions in greenhouse gas emissions.

Working in partnership with the Australian Government, we can deliver highly effective projects that greatly assist communities to be better prepared and better able to adapt to future climatic conditions.

Successfully delivering for communities in rural Victoria

Rokewood Bridge upgrade ($541,000) Golden Plains Shire, Victoria.

"It's terrific to see that works have now been completed to replace the old, single lane bridge over the Kuruc A Ruc Creek with a double lane and unrestricted structure, that is safer for all bridge-users", Golden Plains Shire Mayor Cr Helena Kirby, pictured, said.

"Golden Plains Shire is home to many older bridges, and thanks to the Australian Government's Local Roads and Community Infrastructure program, we've been able to get on and upgrade the Reserve Road Bridge for the benefit of the surrounding community.

"Reserve Road Bridge is the first of four bridge upgrade projects that Council will complete in 2021, with works underway or soon to begin on bridges in Meredith, Rokewood and Rokewood Junction."

Resilient Communities Building Back Better

We are seeking:

8: A targeted disaster mitigation program of $200m per annum for four years which will reduce the costs of response and recovery and is a sound investment in strengthening community resilience.

If funded:

Jobs created: 1,833
Contribution to annual Gross Domestic Product ($m): $280

9: A commitment to ensuring betterment funding as a core element of disaster recovery funding arrangements.

10: A commitment to include community infrastructure that is publicly accessible and owned, and local government waste, water and wastewater assets under the Disaster Recovery Funding Arrangements.

11: A Local Government Climate Response Partnership Fund of $200m over four years to enable planning and preparation to minimise the impacts of climate change in local communities and enable councils to achieve climate neutrality as soon as practicable.

If funded:

Jobs created: 467
Contribution to annual Gross Domestic Product ($m): $73

12: $100 million per annum over four years provided directly to local governments to support the capabilities of indigenous councils and implementation of the Closing the Gap local/regional voice.

If funded:

Jobs created: 804
Contribution to annual Gross Domestic Product ($m): $117

Local Government Offer to the Australian Government	Local Government Ask of the Australian Government
To partner with the Federal Government to grow the resilience in our communities, mitigate against the impacts of future disaster events, while focussing on local opportunities to reduce our carbon emissions and to Close the Gap between Indigenous Australians and the nation.	To provide $200 million per year for four years for a targeted disaster mitigation program, while establishing a $200 million Local Government Climate Partnership Program and supporting all councils to implement Closing the Gap targets with $100 million per annum over four years.

Creating a Circular Economy

Guided by the 2018 National Waste Strategy and the 2019 National Waste Policy Action Plan, building Australia's transition from a linear economy to a circular economy is gaining traction.

By embracing the principals of circularity – retaining the value of materials for as long as possible, designing out waste and pollution, and regenerating natural systems – Australia will develop new industries and jobs, reduce greenhouse gas emissions, and make more efficient use of our natural resources.

As modelled by the Centre for International Economics in 2017, a five percent improvement in the effectiveness of recycling and resource recovery could benefit Australia's GDP by as much as $24 billion.

In addition, for every 10,000 tonnes of waste recycled, 9.2 jobs would be created, compared with only 2.8 jobs when the same amount of waste is sent to landfill.

As an example, the South Australian Government has estimated that 25,700 new full-time equivalent jobs could be created in South Australia by 2030 by adopting a more circular economy.

Councils are major players in the management of household and domestic waste.

Local governments co-invest in new materials recycling facilities, lead community education and awareness campaigns, and help to create a sustainable market for recycled materials through procurement policies.

Australia can realise the full potential of a circular economy sooner if local government's engagement and capabilities are effectively harnessed.

Local Government Offer to the Australian Government	Local Government Ask of the Australian Government
To identify and implement opportunities to reduce waste sent to landfill and support the development of a circular economy that will deliver environmental and economic benefits for all our communities.	To provide $100 million per year for four years to fund local government circular innovation projects, and support our communities to reuse wherever possible.

Creating a Circular Economy

We are seeking:

13: Support to provide guidance and advice to councils on how to unlock the circular economy locally, particularly in rural, regional, and remote areas.

14: Support to investigate and, if feasible, implement a national bin harmonisation program that will improve kerbside recycling, reduce contamination, and maximise opportunities for reuse.

15: Funding of $100 million per annum over four years to fund local government circular waste innovation projects.

If funded:

Jobs created: 2,332
Contribution to annual GDP ($m): $366

What sustainably funded councils could deliver for communities

Upgraded municipal resource recovery infrastructure for South Australia's Limestone Coast.

Naracoorte Lucindale Council Mayor Erika Vickery OAM (pictured centre) says additional financial support from the Federal Government is a catalyst for state and local government and commercial investment in waste management infrastructure.

"By working together, we can all participate in and promote the use of materials that circulate through our economy again and again, providing ongoing value, efficient use of resources and knowledge-based jobs for the future."

Intergovernmental Relations

The Australian Local Government Association was a foundation member of the Council of Australian Governments (COAG), and over 28 years made a substantial contribution to our federation.

When COAG was scrapped and replaced by the National Cabinet in mid-2020, local government was effectively sidelined from membership.

The result is that Australia's pre-eminent intergovernmental forum lacks a strong and effective advocate for local communities.

As the level of government closest to the community, we have a unique insight into how to create new jobs, drive economic growth, and build better lives for Australians.

Properly heard, our viewpoints would ensure that decisions are responsive to local needs and contribute to achieving the best outcomes at a local level and cumulatively at the national level.

Australians expect their governments to make decisions that reflect their unique circumstances and requirements.

At the same time, they want all three spheres of government to work together to achieve shared national objectives.

This can only be achieved through ALGA's participation in the National Cabinet or any subsequent structure.

Our place-based, community perspective should not be overlooked – nor our role as a voice for the concerns and aspirations of local communities.

ALGA's input would balance and complement the broader view of the First Ministers, helping to ensure that National Cabinet deliberations result in stronger and more resilient communities.

We are seeking:

16: Full membership of the National Cabinet.

17: A guaranteed seat at relevant Ministerial forums.

Local Government Offer to the Australian Government	Local Government Ask of the Australian Government
To provide a local, place based community perspective to intergovernmental deliberations to ensure that decisions are responsive to local needs and have regard to the great diversity between communities.	To reinstate local government representation to the primary intergovernmental forum in Australia, the National Cabinet, and ensure local government's ongoing voting membership of other Ministerial forums.

AUSTRALIAN
LOCAL GOVERNMENT
ASSOCIATION

DON'T LEAVE LOCAL COMMUNITIES BEHIND!

Federal Election Priorities

The Australian Local Government Association (ALGA) is the national voice of local government, representing 537 councils across the country. In structure, we are a federation of state and territory local government associations.

ALGA's members include:

LOCAL GOVERNMENT NSW

MAV MUNICIPAL ASSOCIATION OF VICTORIA

LGAQ

LGANT Local Government Association of the Northern Territory

WALGA

LGAT Local Government Association Tasmania

lgsa Local Government Association of South Australia

Local government key facts and figures

There are 537 councils Australia-wide. Of these, around 55 percent are regional, rural, or remote councils.

Local government employs 194,000 people.

The first local government established in Australia was in Adelaide in 1840.

Australia's largest council by population is Brisbane City Council, servicing a population of 1.25 million.

Australia's largest council by area is East Pilbara in Western Australia. It covers an area of 379,571 square km (larger than Victoria), has a population of 11,005 and 3,237km of roads.

Authorised by Matt Pinnegar Chief Executive Officer of ALGA.

Swansea Courthouse and Council Chambers Draft Business Plan

1 Executive Summary

The primary objective of the Swansea Courthouse Management Committee is to seek an agreement from Council to retain the building in public ownership. This agreement will be based on the following assumptions:

- Commitment of the Swansea community to support the on-going use of an upgraded building for community activities and events;
- Council working in partnership with a newly formed management committee to obtain funds for building restoration and manage restoration works.

2 Purpose

The Save Our Courthouse Steering Committee was elected at a public meeting held in the Swansea Town Hall on 3 July 2016. Council resolved at the 23 August 2016 Council Meeting to transfer the management of the old building to the "Courthouse Steering Committee and East Coast Community Arts Initiative" until 30th June 2017. The Steering Committee received Council's letter of advice on 7th December 2017. This draft Business Plan is to assist Council in deciding the future of the building and as a guide to a new management committee to be established following a Council decision to retain the building in public ownership.

2.1 Management Committee

Voting unanimously that the building should be retained as a public asset, the attendees of the Public Meeting voted "That a steering committee be formed to prepare a project brief for the work [to preserve and enhance heritage values], advise the heritage consultant and to work with all interested parties to attract on-going funds for conservation works." Seven members were elected to the Committee to represent the broad interests of the community.

A **new management committee** of ten persons with the following areas of expertise would be established following Council's decision to retain the building in public ownership:

- Heritage and Local History
- Finance and Funding Bids
- Restoration Project Management
- Tourism Opportunities
- Wine Growers
- Community Arts
- Business Enterprise
- Community Services
- Publicity and Communications
- Local Councillor

2.2 Mission Statement

The Mission is to manage the Swansea Courthouse and Council Chambers as a valuable and valued community asset.

2.3 Vision

The Vision is that the Swansea Courthouse and Council Chambers will be retained as a community asset through its use.

- The Swansea Courthouse and Council Chambers will be maintained and preserved for future generations by restoring its heritage value.
- The users of the Swansea Courthouse and Council Chambers will support local business and employment through integration of events and activities with local service providers.

2 Products and Services

In achieving its Vision, the objective of the Management Committee is to enable and manage a variety of services and activities to best meet the needs of:

1. Maintaining and restoring the building to best preserve its historical significance for future generations.
2. Providing income to support 1 above and contribute to Council revenue to offset the operational costs of the building.
3. Providing a venue for community based activities consistent with other uses of the building.
4. Adding to the culture of the local area through tourism, arts events and other activities.
5. Supporting local business and employment through integration of events and activities with local service providers.

Two commercial opportunities that match the above criteria are:

1. Meeting Venue and Conference Facilities, and
2. Wedding Venue.

2.1 Meeting Venue and Conference Facilities

The Old Swansea Courthouse and Council Chambers will require more work before it can offer full Conference Facilities. However, as a Meeting Venue it can continue to be prepared and presented in stages, which will allow progressive restoration and refurbishment.

This will also support "soft" marketing as meeting attendees will gain first hand experience of the advantages that Swansea and this venue has to offer. Any distance to travel will be positively balanced against the pleasure of the Great Eastern Drive and the proven popularity of Swansea. It is expected that interest in our building will continue to grow through promoting the venue to conference/events organisers and by "word of mouth."

2.1.1 Meeting Venue

Offering the Old Swansea Courthouse and Council Chambers as a Meeting Venue is already occurring as basic amenities are available.

Works that will need to be done to enhance the building as a Meeting Venue include:

- Repairs to heating,
- Tables,
- Curtains,
- Painting,
- Lighting,
- Disabled access,
- Disabled toilet.

Local businesses will be engaged to provide catering, either off-site or on-site as required. Similarly accommodation can be provided by local businesses if required.

2.1.2 Conference Facilities

Conference Facilities will require significant improvements to the building, including:

- Removal of partitioning in the second major room,
- Repairs to eliminate damp,
- Heating throughout,
- Furnishings for ancillary rooms,
- Enhanced AV facilities,
- Whiteboards throughout.

2.2 Wedding Venue

The age and quality of the building lends itself well to use as a wedding venue. Already it is a choice for photographs with the bridal party assembled on the verandah and steps at the front of the building.

To enable the use of the building for the full wedding ceremony, the following will be required:

- Removal of partitioning and carpet in the second major room and restoration of skirting boards, architraves, etc.,
- Removal of suspended ceiling to restore ambience of the Courthouse room,
- Re-establish access door to main Courtroom.

2.3 Community uses

As a community asset, it is a primary objective that the local community sees the Swansea Courthouse and Council Chambers as a first choice venue for local events and activities. A booking system is in place operated through Council's Information Kiosk based at the entrance to the East Coast Heritage Museum. Twelve events have taken place up to 30th June 2017.

The building's facilities do not duplicate those of Swansea Town Hall but rather provide facilities that compliment and could be used in conjunction with the Town Hall for large events.

For community based activities, the Management Committee will be engaged at whatever level is appropriate for each event.

2.3.1 Exhibitions

- Historical Exhibitions and Talks
- Exhibitions of local artists
- Craft Shows
- Festival Venue (e.g.Ten Days on the Island)

2.3.2 Music

- Small concerts
- Music workshops

2.3.3 Other

- Central meeting point for local tours (e.g. vineyards & farmgate tours)
- Community committee meetings
- Workshops & Information Sessions
- School holiday activities
- Christmas functions
- Conversations with invited guests (e.g. private meetings with politicians/ministers)

3 Market Analysis

Industry, target market, pricing & selling, product or service. This will be further researched by the new Management Committee.

4 Market Strategy

For all commercial activity, the Management Committee will market the Old Swansea Courthouse and Council Chambers to event managers and wedding facilitators.
The Management Committee will direct the event organisers to local businesses (caterers, accommodation, etc.) Research indicates that people book 12 to 18 months out from an event, Especially in the case of weddings.

4.1 Community Based Activities

The new Management Committee will continue to consult with community organisations to:

a. Understand their needs,
b. Advise the level of service we can currently provide, and
c. Discuss how we can work together to close any gap.

The new Management Committee will seek promotion through Local Council newsletters and websites to improve general awareness of the facility.

5 Financial Analysis

Fixed expenditure is assumed to be around $10,000 per annum with additional expenditure required to prepare a Conservation and Upgrade Plan (similar to that prepared for Glamorgan Heritage Centre) in 2017/18 and carry out building restoration and improvement works in 2018/19. Funding Grants will be sought to assist with these works.

The appended **Projected Income to December 2021** for the Swansea Courthouse is based on the known income for the first 6 months of 2017 and conservative estimates of the projected income over the next four and a half years from:

- venue hire,
- ECCAI event income,
- volunteer labour value,
- conferences and weddings income.

The figures provided are subject to Council continuing to maintain the tenure of the building within the Community.

6 Supporting Information

1. Activity Report for Swansea Courthouse since 1/1/17
- Income and expenditure
- Usage (12 events over 6 month period)

2. Swansea Courthouse Projected Income to December 2021

ACTIVITY REPORT FOR SWANSEA COURTHOUSE SINCE 1/1/17

INCOME

Courthouse Fund

From France to Freycinet	$2700.00
Swansea Revue Committee	$1000.00
Eccai Donation	$1700.00
Eccai presented and hosted events	$ 488.80
(Col Campbell's Antique show, Romaine Basser's talk, Maureen MF's Antiques & Collectables)	$5,888.80
Courthouse Hiring Income (Vineyard Association, Break O'Day Council, East Coast Tourism, Virtuosi Tasmania, Swansea Pharmacy, Carers Tasmania)	$ 475.00

In kind voluntary labour

45 hours cleaning @$25/hr	$1125.00
5 hours setup @ $25/hr	$ 125.00
TOTAL	**$7613.80**

In addition we have been donated a large plasma TV for AV presentations by Jackie Hartnett valued c@ $1000 and a small refrigerator and microwave by Maureen Martin Ferris.

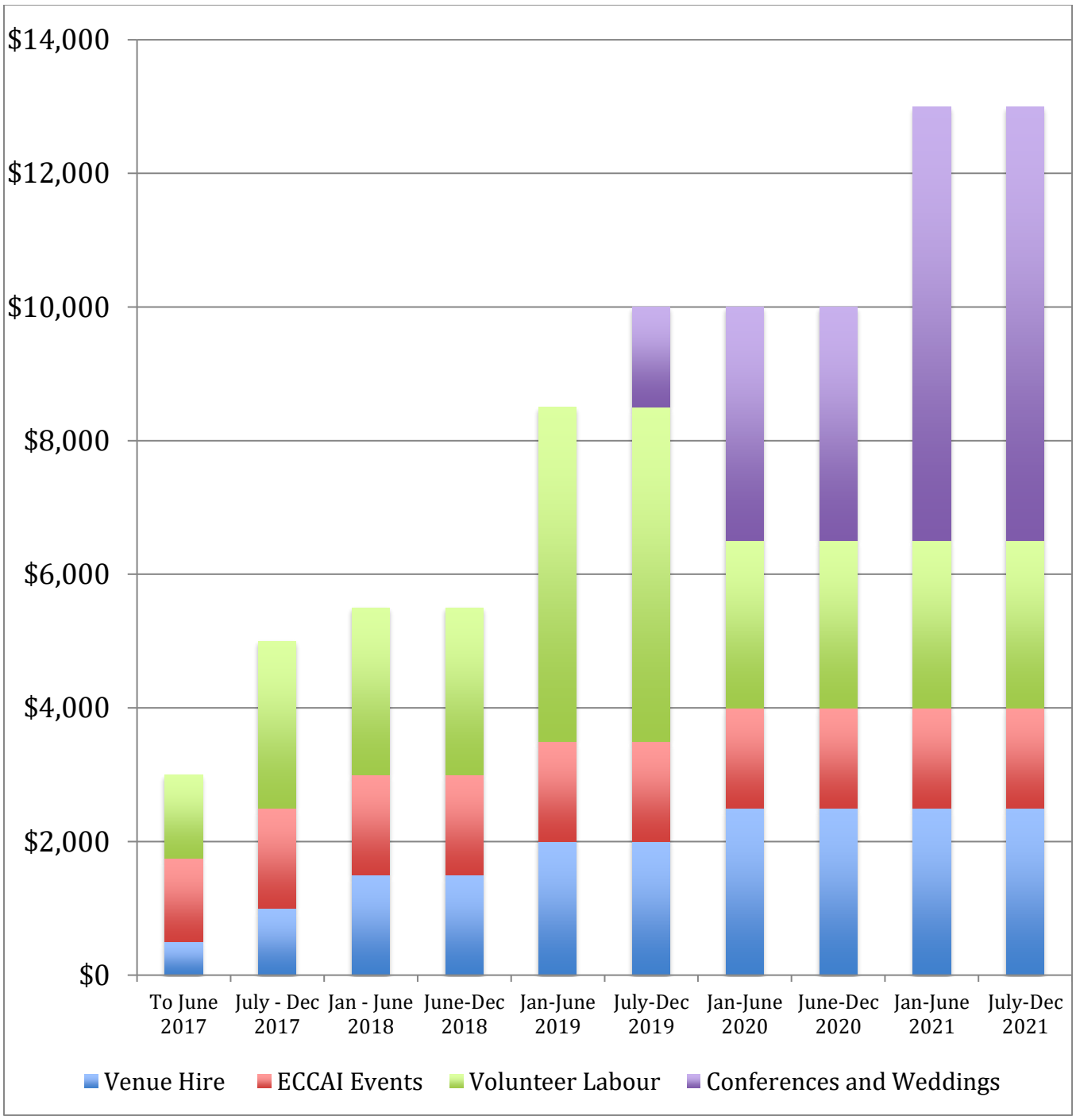
EXPENDITURE

60 Comfortable arm chairs	$5400.00
Chair delivery charge	$ 60.00
Inventory (Filtered water, light bulbs, hand cleaners)	$ 35.50

Date	Morning	Afternoon	Evening	Hirer
16/1/17		1.30-3.30		Vineyard Ass'n
26/1/17		2-4		Eccai
14/3/17		10.30-2.30		Tourism Destinations
15/3/17		1 - 2.30		Anglicare
28/3/17		12.00-5.30		Break O'Day Council
11/4/17	POSTPONED	10.30-2.30		Tourism Destinations
15/4/17		3-4.30		Eccai - Romaine Basser
22/4/17		2.30-4.30		Eccai - Guitar and Flute
27/4/17		1.30-	5.30	Swansea Pharmacy
6/5/17	Xx	xx		Maureen MF Heritage display
26/5/17	8am	5.00pm 2.30-4pm		Carers Tasmania (Second room)
27/6/17	9am-11am			Tourism Destinations

Swansea Courthouse

PROJECTED INCOME to December 2021



Note: Conferences and Weddings can only occur after disabled access and toilet facilities are installed. This is proposed in mid 2019.

APPENDIX "C"

Swansea Courthouse Management Committee Terms of Reference

Background

Glamorgan Spring Bay Council resolved at their meeting of 26th September 2017 that:

1. The current Swansea Courthouse Management Committee (SCMC) form a new Management Committee with ten members selected for their skills and representative of local and wider community and business interests no later than 30th November 2017;

2. Terms of Reference for the committee should be established and submitted to Council within three months of the formation of the committee;

3. That Council retain the Swansea Courthouse and Council Office in public ownership until 30 December 2021 to allow the new committee time to prove their business plan; and

4. That SCMC presents an Annual Report to Council that includes their current financial position, future intentions and alignment to their business plan to the year 2021.

Mission

The mission of the SCMC is to manage the Swansea Courthouse and Council Chambers as a valuable and valued community asset.

Vision

The vision of the SCMC is that the Swansea Courthouse and Council Chambers will:

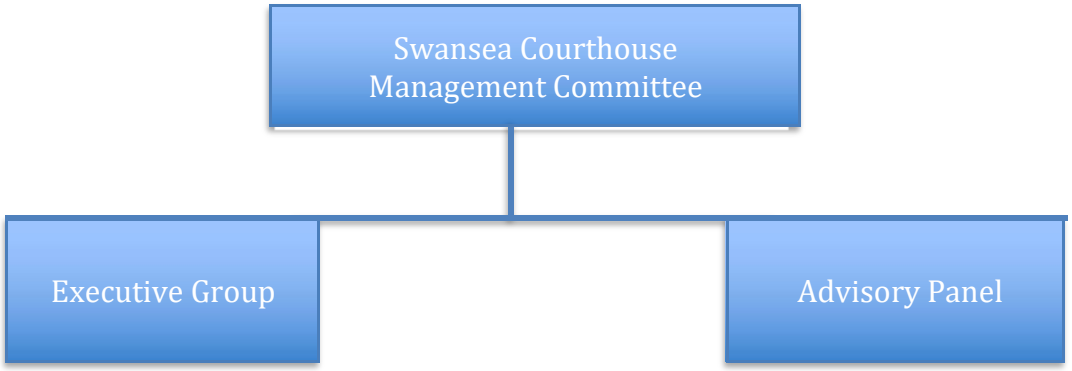
- be retained as a community asset through its use;
- will be maintained and preserved for future generations by restoring its heritage values;
- will support local business and employment through integration of events and activities with local service providers.

Functions of the SCMC

The functions of the SCMC are to work in partnership with Council to obtain funds for building works and take responsibility for the day to day management of the Courthouse and management of building works. The SCMC will restore community optimism for the on-going use of an upgraded building for community activities and events. The SCMC will regularly review and amend their business plan

and present an annual report to Council that includes their current financial position, future intentions and alignment of outcomes to their business plan.

Structure of the SCMC



The Swansea Courthouse Management Committee (SCMC) is comprised of sixteen persons nominated and elected at the 27-11-17 public meeting due to their skills and interest in the project. The SCMC is made up of an Executive Group and Advisory Panel. The purpose of this structure is to ensure an effective and efficient use of committee members voluntary time and resources. There may also be working groups of volunteers formed to undertake specific tasks.

Role of the SCMC

The role of the SCMC is as follows.

- take on the responsibility for: the regular review of the business plan; hiring out of the Courthouse facilities; supervising the preparation of a Heritage Conservation Plan; applying for building permits; applying for funding assistance; overseeing conservation and improvement works; and providing an Annual Report to Council on the SCMC activities.

- ensure community commitment to support the on-going use of an upgraded building for community activities and events.

- work in partnership with Council to obtain funds for the Heritage Conservation Plan and for building works.

- apply for incorporation and to that end vote on and accept a constitution.

Role of individual SCMC members

The role of individual SCMC members includes:

- appreciating the significance of the project for some or all stakeholders and representing their interests

- be genuinely interested in the initiative and the outcomes being pursued in the project
- be an advocate for the project's outcomes
- have a broad understanding of project management issues and the approach being adopted
- be committed to, and actively involved in pursuing the project's outcomes

In practice, this means they:

- ensure the requirements of all stakeholders are met by the project's outcomes
- liase with relevant associated organisations and stakeholders
- help balance conflicting priorities and resources
- provide guidance to the Executive Group
- consider ideas and issues raised
- review the progress of the project
- check adherence of project activities to standards of best practice

SCMC Membership

The membership of the SCMC includes members (listed in alphabetical order) with expertise and knowledge in:

1. Architectural Design
2. Business Enterprise
3. Chair/Convenor
4. Community Services
5. Community Arts
6. Finance and Funding Bids
7. Heritage and Local History
8. Local Government Advisor
9. Publicity and Communications
10. Restoration Project Management
11. Tourism Opportunities
12. Secretary
13. Treasurer
14. Wine Grower

The Executive Group will include the Chair, Secretary, Treasurer, and two other members, and will invite members of the Advisory Panel to attend meetings when their specialist knowledge is required.

All SCMC Meetings are however open to any committee member to attend.

Chair

The Chair shall convene the SCMC meetings. If the designated Chair is unavailable then an Acting Chair will be responsible for convening and conducting that meeting.

Agenda Items, Minutes & Meeting Papers

The SCMC agenda will be prepared by the Secretary and issued a week before the meeting date. Any business papers shall also be circulated with the agenda. Any additional matter can be raised as a part of General Business.

Minutes of each meeting will be circulated to all committee members within a week of the date of the meeting held.

Frequency of Meetings

The SCMC shall meet monthly at a time suitable for all members to attend.

Proxies to Meetings

Members shall not nominate a proxy to attend a meeting if the member is unable to attend.

Quorum Requirements

A minimum of four SCMC members is required for the meeting to be recognised as an authorised meeting for the recommendations or resolutions to be valid.

Replacing SCMC members

The SCMC is to be advised in writing by the member resigning from the committee.

Any such resignation is to be formally accepted by the SCMC.

Any nomination for SCMC replacements is to be discussed by the committee before a potential replacement person is invited by the Chair to serve on the SCMC.

Term of SCMC membership

All members elected at the Public Meeting held in the Swansea Courthouse on 12th November 2017 are expected to serve for one year. Following this one year period all members shall stand down and may stand for re-election at the Annual General Meeting to be held in September 2018.

Adoption of the Terms of Reference

These Terms of Reference were adopted by the SCMC at the committee meeting of 27th November 2017.

Swansea Courthouse Management Committee Inc.'s 2021 Annual Report to Glamorgan Spring Bay Council

Background

The Glamorgan Spring Bay Council resolved at their meeting on 26 September 2017:

that Council retain the Swansea Courthouse and Council Office in public ownership until 30 December 2021 to allow the new committee time to prove their business plan; and

that the SCMC present an Annual Report to Council that includes their current financial position, future intentions and alignment to their business plan to the year 2021.

This annual report describes the achievements, current financial position, alignment to the business plan and a recommendation that Council agree to a four year extension of the existing management arrangements until 31 December 2025.

Achievements

1. The Swansea Courthouse Management Committee (SCMC) met on nine occasions in 2021 including for the AGM held on 22 October 2021. All seven Executive members stood for re-election plus an additional three Executive members were nominated and duly elected. With the subsequent resignation of one newly elected member there are now eight Executive members and a total of fifteen committee members. The increased membership indicates a growing community interest in the future of the historic building.

2. In 2020 the voluntary labour contribution of Executive committee members and others totalled 320 hours @ $30 per hour worth an estimated $9,600. This was comprised of: working bees at the Courthouse (32 hours); attendance at 9 meetings (126 hours); grant applications (3 hours) and administration. Other donations included a cash donation of $599.25 and conservation and maintenance works managed by Council.

3.Conservation works completed in 2021 included: installation of perimeter stormwater drains and underfloor ventilation (contractor Rob Whitney); replacement of the electricity distribution box (Todd Clark); new above ground electricity supply (Aurora Energy); installation of four 2,400 watt radiant heaters in the former Courtroom (Todd Clark); and repair of veranda columns and rafters (Rick Dance). All of these works were supervised by Council and paid from either grants to Council or from Council's maintenance budget.

5.The Covid-19 pandemic continues to impact on the use of the Courthouse, reducing income from hire due to the cancellation of events.

Current Financial Position
In 2021 the SCMC Inc.'s total income was $1,879.25. The total liabilities and equity were $5,457.87 as at 31st December 2021. The total combined income from Courthouse hire, gifts and donations, and rental during the past four years was $10,837.82. The 2021 **Profit and Loss Statement, Balance Sheet** and **List of Courthouse Bookings** are appended.

Future income is limited by the non-availability of Wi-Fi, the internal and external appearance of the building complex, and the lack of disabled access facilities. The cost of maintenance works and the upgrading of the facility to provide a facility suitable for conferences and weddings is an impediment to realizing the full potential and reuse of the facility.

Alignment to Business Plan
The Swansea Courthouse is building a reputation as a venue for meetings and concerts as evidenced by the 78 occasions the Courthouse was used in 2021. Acknowledged by the SCMC is the high priority for the provision of Wi-Fi and disabled access, including a disabled toilet facility, that are required for a conference centre and wedding venue. This is also essential to enable the leasing of a portion of the building as office space. East Coast Tasmanian Tourism have commented that there is a need for a well-resourced conference facility on the East Coast.

The committee is currently preparing a brief for the development of a website to publicise the facilities and provide an automated booking service.

Recommendation
The Committee recommends that:

- Council receive and note this 2022 Annual Report; and that

- Council appoint the Swansea Courthouse Management Committee Inc. to manage the building for a further 4 years until 31 December 2025.

Prepared by R. Bartlett
SCMC Secretary
12.1.2022

Swansea Courthouse Management Committee Inc
IA12171

Profit and Loss
January through December 2021

	Jan - Dec '...
Ordinary Income/Expense	
Income	
Courthouse Hire	1,270.00
Gifts and Donations	599.25
Rental	10.00
Total Income	1,879.25
Expense	
Annual Return for Incorporat...	66.00
Cleaning Equipment	46.68
Lighting	247.00
Printing and Reproduction	249.25
Refreshment Costs	120.29
Total Expense	729.22
Net Ordinary Income	1,150.03
Other Income/Expense	
Other Income	
Interest Income	0.49
Total Other Income	0.49
Net Other Income	0.49
Net Income	**1,150.52**

Swansea Courthouse Management Committee Inc
IA12171

Balance Sheet
As of December 31, 2021

	Dec 31, '21
ASSETS	
Current Assets	
Current/Savings	
Working Account	5,457.87
Total Current/Savings	5,457.87
Total Current Assets	5,457.87
TOTAL ASSETS	**5,457.87**
LIABILITIES & EQUITY	
Equity	
Opening Bal Equity	983.80
Retained Earnings	3,538.81
Net Income	935.26
Total Equity	5,457.87
TOTAL LIABILITIES & EQUI...	**5,457.87**

BOOKINGS,EVENTS AND TIMES FOR SWANSEA COURTHOUSE

DATE	HIRER	TIME	PAID
8/1/21	STUFIT	7pm to 9pm	Yes
15/1/21	STUFIT	7pm to 9pm	Yes
29/1/21	STUFIT	7pm to 9pm	Yes
12/2/21	STUFIT	7pm to 9pm	Yes
26/2/21	STUFIT	7pm to 9pm	Yes
23/4/21	STUFIT	7pm to 9pm	Yes
2/5/21	ECCAI	1.30pm to 4pm	Yes
7/5/21	STUFIT	7pm to 9pm	Yes
16/5/21	ECCAI	2pm to 4,30pm	Yes
22/5/21	DSRA	10am to 12pm	Yes
22/5/21	Dance Class	4pm to 7pm	Yes
24/5/21	Revue Group	4pm to 9pm	Yes
25/5/21	NRRA	10am to 5pm	Yes
26/5/21	Bluecoast Yoga	4pm to 7pm	Yes
27/5/21	Dementia Australia	12noon to 4pm	Yes
2/6/21	Bluecoast Yoga	4pm to 7pm	Yes
5/6/21	Dance Class	4pm to 7pm	Yes
7/6/21	Revue Group	5pm to 9pm	Yes
09/6/21	GSBC	9am to 12.30pm	NA
09/6/21	Bluecoast Yoga	4pm to 7pm	Yes
12/6/21	Dance Class	2pm to 6pm	Yes
14/6/21	Revue Group	5pm to 9pm	Yes
16/6/21	Bluecoast Yoga	4pm to 7pm	Yes
21/6/21	Revue Group	5pm to 9pm	Yes
23/6/21	Bluecoast Yoga	4pm to 7pm	Yes
25/6/21	SCMC Midwinter	3pm to 5pm	NA
26/6/21	Dance Class	2pm to 6pm	Yes
28/6/21	Revue Group	5pm to 9pm	Yes
29/6/21	Bluecoast Yoga	4pm to 7pm	Yes

BOOKINGS, EVENTS AND TIMES FOR SWANSEA COURTHOUSE

DATE	HIRER	TIME	PAID
3/7/21	Dance Class	4pm to 7pm	Yes
5/7/21	Revue Group	5pm to 9pm	Yes
6/7/21	Bluecoast Yoga	4pm to 7pm	Yes
10/7/21	Dance Class	4pm to 7pm	Yes
12/7/21	Revue Group	5pm to 9pm	Yes
13/7/21	Bluecoast Yoga	4pm to 7pm	Yes
16/7/21	STUFIT	4pm to 9pm	Yes
17/7/21	Dance Class	4pm to 7pm	Yes
19/7/21	Revue Group	5pm to 9pm	Yes
20/7/21	Bluecoast Yoga	4pm to 7pm	Yes
24/7/21	Dance Class	4pm to 7pm	Yes
26/7/21	Revue Group	5pm to 9pm	Yes
27/7/21	Bluecoast Yoga	4pm to 7pm	Yes
2/8/21	Revue Group	5pm to 9pm	Yes
3/8/21	Bluecoast Yoga	4pm to 7pm	Yes
9/8/21	Revue Group	3pm to 9pm	Yes
11/8/21	GSBC	9am to 5pm	NA
12/8/21	Bluecoast Yoga	4pm to 7pm	Yes
13/8/21	STUFIT	4pm to 9pm	Yes
16/8/21	Revue Group	3pm to 9pm	Yes
17/8/21	Bluecoast Yoga	4pm to 7pm	Yes
24/8/21	Bluecoast Yoga	4pm to 7pm	Yes
27/8/21	STUFIT	7pm to 10pm	Yes
6/9/21	Revue Group	3pm to 9pm	Yes
7/9/21	Bluecoast Yoga	4pm to 7pm	Yes
4/9/21	RDA Tasmania	9.30 to 1.30	Yes
10/9/21	STUFIT	6pm to 9pm	Yes
13/9/21	Revue Group	3pm to 9pm	Yes
14/9/21	NRRA	2pm to 8pm	Yes
19/9/21	ECA	12pm to 5pm	Yes
24/9/21	STUFIT	6pm to 9pm	Yes
9/10/21	Pet Project	9am to 5pm	NA
17/10/21	Eccai (Chrysan)	2pm to 6pm	LOCKDOWN
19/10/21	Bluecoast Yoga	4pm to 7pm	Yes
21/10/21	Get into it	1pm to 6pm	Yes
26/10/21	Bluecoast Yoga	4pm to 7pm	Yes
28/10/21	Get into it	1pm to 6pm	Yes
4/11/21	STUFIT	4pm to 9pm	Yes
6/11/21	Heritage Festival	8am to 5pm	NA
7/11/21	Heritage Festival	2.30 to 4.30pm	NA
11/11/21	GSBC	7am to 4pm	NA

BOOKINGS, EVENTS AND TIMES FOR SWANSEA COURTHOUSE

DATE	HIRER	TIME	PAID
12/11/21	ECCAI	4pm to 5.30pm	Yes
19/11/21	SCMC	3pm to 4.30pm	NA
25/11/21	Get into it	1pm to 6pm	Yes
26/11/21	STUFIT	4pm to 9pm	Yes
27/11/21	DSRA	10am-11.30am	Yes
3/12/21`	East Coast Tourism	11am to 1pm	Yes
7/12/21	Bluecoast Yoga	4pm to 7pm	Yes
10/12/21	STUFIT	6pm to 8pm	Yes
15/12/21	Worksafe	1pm to 3pm	NA
16/12/21	SCMC	4pm to 6pm	NA

GLAMORGAN SPRING BAY COUNCIL

GLAMORGAN SPRING BAY COUNCIL STORMWATER SYSTEM MANAGEMENT PLAN

December 2021

Title: Glamorgan Spring Bay Council Stormwater System Management Plan

Author: Cameron Oakley
Consulting Engineer
BEng (Hons), BTech (Env.), MBA

DATE	NATURE OF REVISION	REVISION NUMBER	Author	Reviewed	Approved
09/12/2021	Draft	0	CO	PP	PP

CONTENTS

1. EXECUTIVE SUMMARY 1
2. LEGISLATION & CONTEXT 3
3. CORE PRINCIPLES 4
4. OVERVIEW OF PLAN CONTEXT 5
5. URBAN AREAS 6
6. URBAN STORMWATER SYSTEMS 6
7. STORMWATER MANAGEMENT 7
8. IDENTIFICATION OF RISKS, ISSUES AND OPPORTUNITIES 7
9. REVIEW 9

APPENDIX A – URBAN STORMWATER CATCHMENT MAPS A1
APPENDIX B – MUNICIPALITY-WIDE STORMWATER SYSTEM ACTION PLAN B1
APPENDIX C – SPECIFIC URBAN STORMWATER SYSTEM ACTION PLAN C1
APPENDIX D – INTERIM URBAN STORMWATER SYSTEM ACTION PLAN D1

1. EXECUTIVE SUMMARY

The *Urban Drainage Act 2013* requires Glamorgan Spring Bay Council (GSBC) to provide and manage appropriate stormwater systems within its municipality. This requires GSBC to identify and manage potential risks associated with stormwater conveyance in its urban areas.

Council will manage its stormwater systems risks through the following means:

- Strategically managing stormwater impacts in Urban Areas
- Implementation of this Stormwater Management Plan;
- Adoption of Stormwater Policy
- Development and adoption of Storm Water Policy including Water Sensitive Urban Design measures;
- Stormwater Asset Management Plans
- Ongoing assessment of stormwater impacts within catchments and resulting from proposed subdivision and development;
- Implementation of stormwater system improvements through developer contributions where required to manage additional stormwater volumes generated;
- Identification of flooding hazard, attributing risk, and prioritising responses based on risk ratings;
- Considering and integrating Climate Change Adaptation plans for stormwater management where these risks are identified.

The municipality of GSBC contains urban areas within the following townships:

- Bicheno
- Coles Bay
- Louisville
- Orford, including West Shelly Beach and East Shelly Beach
- Spring Beach
- Swansea
- Swanwick
- Triabunna

To comply with the *Act* GSBC must provide adequate public stormwater systems that are necessary to effectively drain its urban areas which comprise multiple catchments. This requires GSBC to understand its stormwater systems, identify the risks associated with them, and plan for the provision and maintenance of such services.

The potential risks impacting on these urban areas may affect the people and infrastructure within them in different ways. In general, these risks can be categorised as coming from the following sources:

1. Localised flooding directly from public stormwater networks, including pipes, pits, and roadways;
2. Overland flows resulting from stormwater runoff; and
3. Riverine flooding
4. Inundation of coastal areas resulting from storm surge and climate change

Stormwater system catchment studies are being undertaken for each of the urban areas to determine the performance of the urban public stormwater networks. Prioritisation for the respective catchment plans is driven by flooding risk in the first instance with council progressively working through the catchments. The secondary driver is private subdivision development. As a result, the modelling of catchment flow information required for development of subdivisions may not be available. This will be required of the developer to provide where this is the case.

These studies will be based on detailed flood modelling and result in the identification of risks to people, vehicles and property from localised flooding and runoff. The stormwater plan will incorporate the following studies, which were carried out prior or adjacent to the development of this plan.

- Saltwater Creek Flood Study (Burbury Consulting, 2018)
- Orford Rivulet Flood Study (Pitt & Sherry, 2021)
- South Orford Stormwater System Study (AD Design & Consulting, 2021)

Appendix A provides a brief description of the urban catchments identified as having the highest priorities and provides a summary of studies and rectification works that have been undertaken to December 2021.

When complete, all studies will present action plans for each urban area which will be collated into the Urban Stormwater Action Plan (Appendix D of this document). The Action Plans recommend and prioritises capital works and maintenance programs according to the assessed level or risk and hazard, as well as consider municipality wide stormwater issues.

This initial draft of the Stormwater System Management Plan (SSMP) includes an interim action plan (Appendix E). This is based on reports of private property flooding received during and in the months after the April and August 2020 flood events. This

potentially allows the specific concerns of customers to be addressed prior to the SSMP being completed.

This stormwater system management plan (SSMP) is a living document that is to be updated as new studies are undertaken, as knowledge of the system improves, and as risks are identified and mitigated. It provides an overview of issues identified at the time of writing.

2. LEGISLATION & CONTEXT

The current legislative framework for urban stormwater management is the *Urban Drainage* Act 2013. Under the Act GSBC is a stormwater service provider who operates and maintains the urban public stormwater system in the municipal area.

The objectives of the Act are as follows:

a) to protect people and property by ensuring that stormwater services, infrastructure and planning are provided to minimise the risk of urban flooding due to stormwater flows; and

b) to provide for the safe, environmentally responsible, efficient, and sustainable provision of stormwater services in accordance with the objectives of the resource management and planning system of Tasmania, as set out in Schedule 1 of the Act.

The following legislation, policies, guidelines, and plans are also relevant to stormwater system management in Tasmania (this is not an exhaustive list):

- *Urban Drainage Act 2013*
- *Glamorgan Spring Bay Interim Planning Scheme 2015*
- *Local Government By-Laws*
- *Local Government Act 1993*
- *Land Use Planning and Approvals Act 1993*
- *Southern Tasmania Regional Land Use Strategy 2020*
- *Local Government (Building and Miscellaneous Provisions) Act 1993*
- *Environmental Management & Pollution Control Act 1994*
- *Plumbing Regulations 2014*
- *Weed Management Act 1999*
- *Building Act 2016*
- *Building Regulations 2016*
- *State Policy on Water Quality Management 1997*
- Tasmanian Subdivision Guidelines (LGAT, 2013)

- State Stormwater Strategy (DPIPWE, 2010)
- Stormwater System Management Planning; A Guide for Local Government in Tasmania (IPWEA, 2016)
- Australian Rainfall and Runoff Guidelines 2019
- Waterways and Wetlands Works Manual (DPIWE, 2003)
- Weed Action Plan (NRM, 2006)
- Australian Disaster Resilience Handbook Collection Handbook 7, Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia (AIDR, 2017)
- Australian Building Codes Board Standard: Construction of buildings in flood hazard areas (ABCB, 2019)
- Climate Action 21: Tasmania's Climate Change Action Plan 2017 - 2021 (State of Tasmania, 2017)
- Glamorgan Spring Bay Council Corporate Adaptation Plan 2012

3. CORE PRINCIPLES

The primary aim of an urban stormwater management system is to minimise economic, environmental, and social impacts of flooding and water quality degradation caused by stormwater runoff in our communities (IPWEA, 2016). *Stormwater System Management Planning; A Guide for Local Government in Tasmania* (IPWEA, 2016) provides a template for developing SSMPs with consideration given to following core principles:

1. Understand the level of risk in its public stormwater system within the urban area
2. Apply a risk management framework for flood mitigation and stormwater renewal works based on analysis of defined flood events
3. Ensure stormwater systems are planned, designed, and built with appropriate consideration of stormwater management principles by making better use of the statutory development and planning system
4. Build resilience and consider climate change impacts to address future demands on the urban stormwater system
5. Integrate stormwater management into the urban water cycle to achieve the goals of social, environmental, and economic sustainability
6. Enhance community awareness of, and participation in, the appropriate management of stormwater.

The approach taken by GSBC in creating this first iteration of the SSMP generally follows that suggested in the IPWEA framework for the first two principles listed above. Stormwater system catchment studies for each urban area are actively being undertaken to understand the public stormwater system in each of those areas, and the level of risk associated with them. A risk management framework was applied to determine an action plan which feeds into (CAPEX) renewals and replacements, and maintenance (OPEX) plans and budgets to address the risks identified in the studies.

Water quality, environmental and sustainability issues are touched upon in this plan, however the current understanding of these issues within the urban catchments remains limited. Work needs to be undertaken to understand how GSBC's stormwater system impacts upon water quality within the municipality's natural systems in order to identify risks and future actions.

4. OVERVIEW OF PLAN CONTEXT

Stormwater System Management Plans are to contain the following (IPWEA, 2016):

- An identification of objectives and outcomes for management of stormwater in the designated urban area/s;
- A description of the catchment to which the plan applies, including a definition of the urban area;
- A description of the existing public stormwater system, including identification of current condition and ownership of assets where known;
- An identification of stormwater management problems and opportunities for achieving outcomes for public and environmental benefit in the urban areas/s;
- An identification of strategies to meet specified management objectives for the urban area/s;
- Determination of capital and maintenance (including recurring) costs associated with identified management strategies;
- An assessment of the benefits to be derived by implementation of proposed management strategies;
- Prioritisation of the strategies and a timeframe for implementation;
- Assignment of responsibilities for implementing the strategies and meeting any costs; and
- A communication / consultation strategy for the Plan.

While this current document addresses the key essentials, it is acknowledged in some areas that ongoing progress is needed to build upon the foundations that this existing plan has laid.

5. URBAN AREAS

The *Urban Drainage Act 2013* specifies that each Council must develop a SSMP for the urban areas within the municipality, however no definition of 'urban' is specified within the Act. The areas nominated by GSBC as urban are the following townships which generally predominately contain land zoned 'general residential' and 'low-density residential'. These areas also contain the overwhelming majority GSBC's stormwater infrastructure:

- Bicheno
- Coles Bay
- Louisville
- Orford, including East Shelly Beach and West Shelly Beach
- Spring Beach
- Swansea
- Swanwick
- Triabunna

The areas immediately surrounding these townships are often zoned 'rural use' and will need to be included in the stormwater system catchment studies as they form part of the overall catchment and contribute stormwater to the public stormwater system.

6. URBAN STORMWATER SYSTEMS

An audit of GSBC's stormwater assets is currently being undertaken. This will provide an understanding of the type and distribution of assets which Council must maintain, as well to enable the stormwater system catchment studies to be completed accurately and in a timely manner. A summary of the stormwater system's assets contained in the 8 urban areas are as follows:

Asset Category	Records as per Asset Management System 15/10/2020	Records as per GIS 20/11/2021
Pipelines	32.1 km	37.76 km
Stormwater nodes (manholes, side-entry pits, gully pits etc)	774	1809
Stormwater Detention Basins	0	2
Maintained drains and urban waterways	0 km	3.26 km
Gross-pollutant traps (GPT)	0	1
Pump Station		1

Less advanced developments include Detention Basins and GPT's in plans for adoption by council.

Draft urban stormwater system and area maps have been produced, refer to Appendix B. These will be revised as additional asset surveys locate more unmapped infrastructure and stormwater modelling is undertaken.

7. STORMWATER MANAGEMENT

GSBC will manage stormwater assets through the Stormwater Asset Management Plan. Its procedures will integrate proactive operational maintenance, renewals, and capital upgrades, as well as reactive responses to customer enquiries and unforeseen issues. Risks and opportunities identified in the stormwater system catchment studies will be incorporated into these programs.

The maintenance programs incorporate the following activities:

- Stormwater side-entry pit and gully pit cleaning
- Gross Pollutant Trap (GPT) cleaning and maintenance
- Stormwater detention basin inspections and maintenance
- Waterway and open drain clearing and maintenance
- Reactive investigations and maintenance resulting from issues identified by Council staff or reported by customers

Levels of services are incorporated in the Stormwater Asset Management Plan.

Capital works are either asset renewals/replacements, upgrades, or new projects. The Stormwater Asset Management Plan will determine whether stormwater asset renewal rates are currently appropriate and sustainable.

8. IDENTIFICATION OF RISKS, ISSUES AND OPPORTUNITIES

Stormwater system catchment studies are to be undertaken in order to identify and document the risks, issues, and opportunities within GSBC's urban areas.

The *GSBC Interim Planning Scheme 2015* Stormwater Management Code (E7.7 A3) requires minor stormwater drainage systems (i.e., the pit and pipe network) to be designed to accommodate the 10% Annual Exceedance Probability (AEP), for non-industrial zoned land. Section E7.7 A4 of the code requires major stormwater drainage systems (i.e., overland flow paths) to be designed to accommodate the 100-year ARI (1% AEP).

Council's *Draft Stormwater Policy for New Developments* requires the following:

- The major stormwater drainage system in new developments shall be designed for the safe conveyance of overland flow during the 1% AEP storm event.

- As a minimum the minor stormwater drainage system for new developments shall be designed to convey stormwater resulting from the 10% AEP storm event

These service levels are inclusive or RCP8.5 loadings for projected rainfall intensity increases due to climate change to the year 2070. With Australian Rainfall and Runoff Interim Climate Change Factors applied, the climate, the 10% AEP rainfall intensities are very similar to the 5% AEP intensities without climate change loading.

Sea level rise for RCP8.5 to 2070 will be incorporated as a boundary tide level where urban catchments and outlets are influenced by tide levels.

Flood hazards will be assessed in accordance with Australian Rainfall and Runoff 2019 Chapter 7 Safety Design Criteria.

There are a variety of risks, issues and opportunities that are common across all the stormwater system catchment areas, relate to preliminary facilitating actions, and/or relate to other responsibilities of GSBC associated with the management of stormwater (e.g., Planning). These are described in Appendix C.

The actions derived from the stormwater system catchment studies will be incorporated into Appendix D.

Until such time as the stormwater system studies are completed and catchment-specific actions are determined, an interim action plan has been produced: refer to Appendix E. This is primarily based on reports of private property flooding received during and in the months since the April 2020 flood event. Each action in the interim action plan has been given an order of priority rating based on the severity of the flooding experienced by the property owner. The rating is usually based on photos or anecdotal evidence given by the property owner, or by GSBC Works Department observations.

9. REVIEW

This SSMP is the first iteration of the document. It has been prepared based on the relevant available documentation at the time of writing.

The planned review cycle for the Stormwater System Management Plan is four years after the completion of Appendix B of this document is completed.

APPENDIX A – PRIORITY CATCHMENTS

The number and seriousness of properties affected by the 2020 flooding events in Orford identified it as containing the highest priority urban catchments for which complete stormwater system catchment studies, and to formulation of works to remediate flood risks.

A brief description of the catchments and status of the investigations as of December 2021 is as follows:

1. Holkham Court (Urban catchment Orford 1): IN PROGRESS

Studies/works undertaken:

- Holkham Court Stormwater Assessment (Brighton Council, 2019)
- Upper Holkham Court Catchment Hydrology Review (GSBC, 2020)
- Detailed survey of stormwater assets and open drains

This catchment encompasses the steep bush catchment above Alma Road, the overland flow path leading to and from Holkham Court, and the flood prone area encompassing the caravan and golf course. The Tasman Highway acts as a dam preventing flows upstream from being released to Raspins Beach.

Following the hydrological and hydraulic modelling work undertake by Brighton Council on behalf of GSBC, Council was successful in receiving a Natural Disaster Resilience Program funding to develop an overall flood mitigation strategy for the catchment. This work is currently being undertaken by an external consultant, who will provide detailed design of the proposed works contained in the strategy.

Figure A1. Holkham Court (Orford 1) catchment

2. Tasman Highway (Urban catchment Orford 2): In Progress

Studies/works undertaken:

- Minor drainage works completed by the river on the north-eastern side of the bridge
- Survey of stormwater system assets (ongoing)

This catchment encompasses the steep bush catchment which drains to the Tasman Highway, north of the Prosser Bridge. While the highway is owned by the Department of State Growth (DSG) it discharges to Council's stormwater system downstream. Riverside Drive acts as a barrier to runoff discharging to the Prosser River.

GSBC agreed to a 50/50 funding of this assessment with DSG which is underway.

Engineers Gandy and Roberts have been engaged to complete the study, subject to funding of Council's share of the project in the 2021/2022 budget.

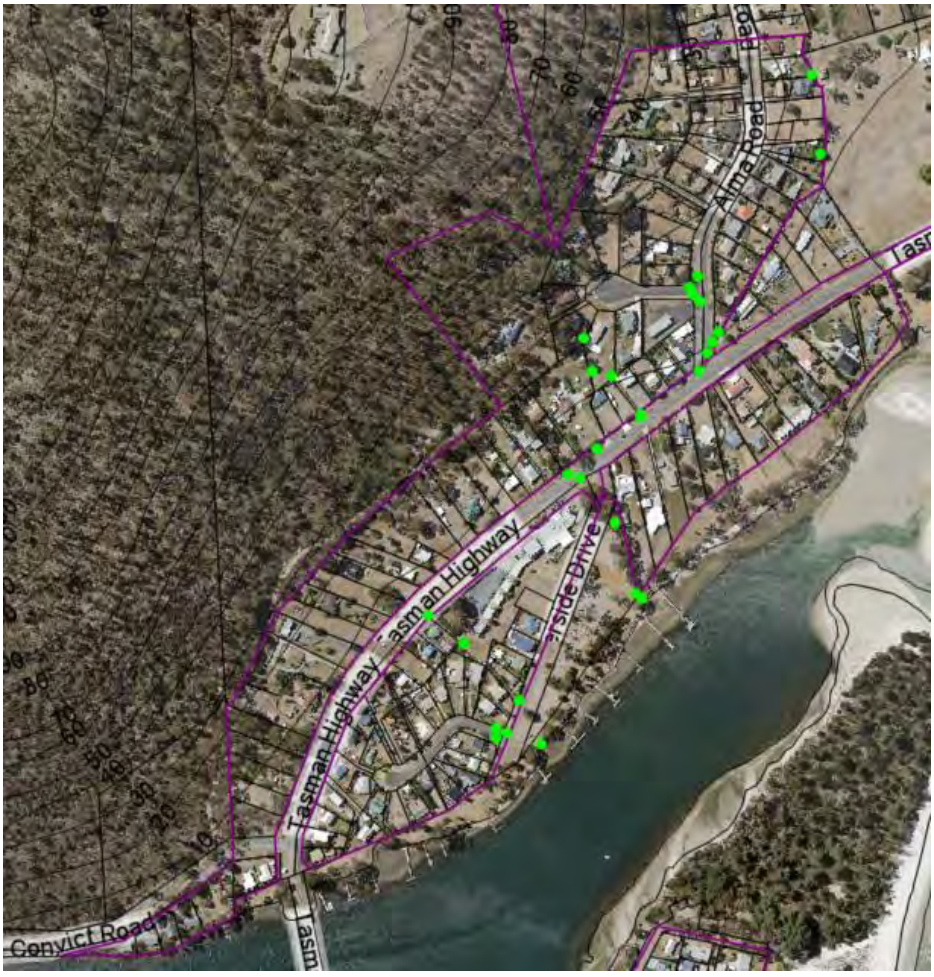


Figure A2. Tasman Highway (Orford 2) catchment

3. Walpole Street (Urban catchments Orford 5, 6, 7 & 8): IN PROGRESS

Studies/works undertaken:

- Minor kerb and crossover work near Orford Villas
- Survey of Council's stormwater assets
- Murphy Street stormwater pump station investigations

In large rainfall events a significant amount of runoff from the south Orford catchment ends up passing overland down either Charles Street or Walpole Street. Like other Orford catchments, this overland flooding is unable to pass to the river due to the roads bordering the river being higher than the land upstream. Outflow from the stormwater network can also be limited due to tide levels and storm surge.

Figure A3. Walpole Street (Urban catchments Orford 5, 6, 7 & 8)

4. Orford Rivulet (Urban catchments Orford 9, 10 & 11): IN PROGRESS

Studies/works undertaken:

- 46 Charles Street Stormwater Investigation and Review of Drainage Infrastructure (AD Design & Consulting, 2018)
- Rheban Road Bridge Hydraulic Study Report (Pitt & Sherry, 2020)
- Orford Rivulet Flood Study (Pitt & Sherry, 2021)
- South Orford Stormwater System Study (AD Design & Consulting, 2021)
- Mount Street kerb and channel construction
- Rheban Road Bridge replacement

This area is impacted both by flooding from the Orford Rivulet, and from flooding due to runoff within and above the urban area.

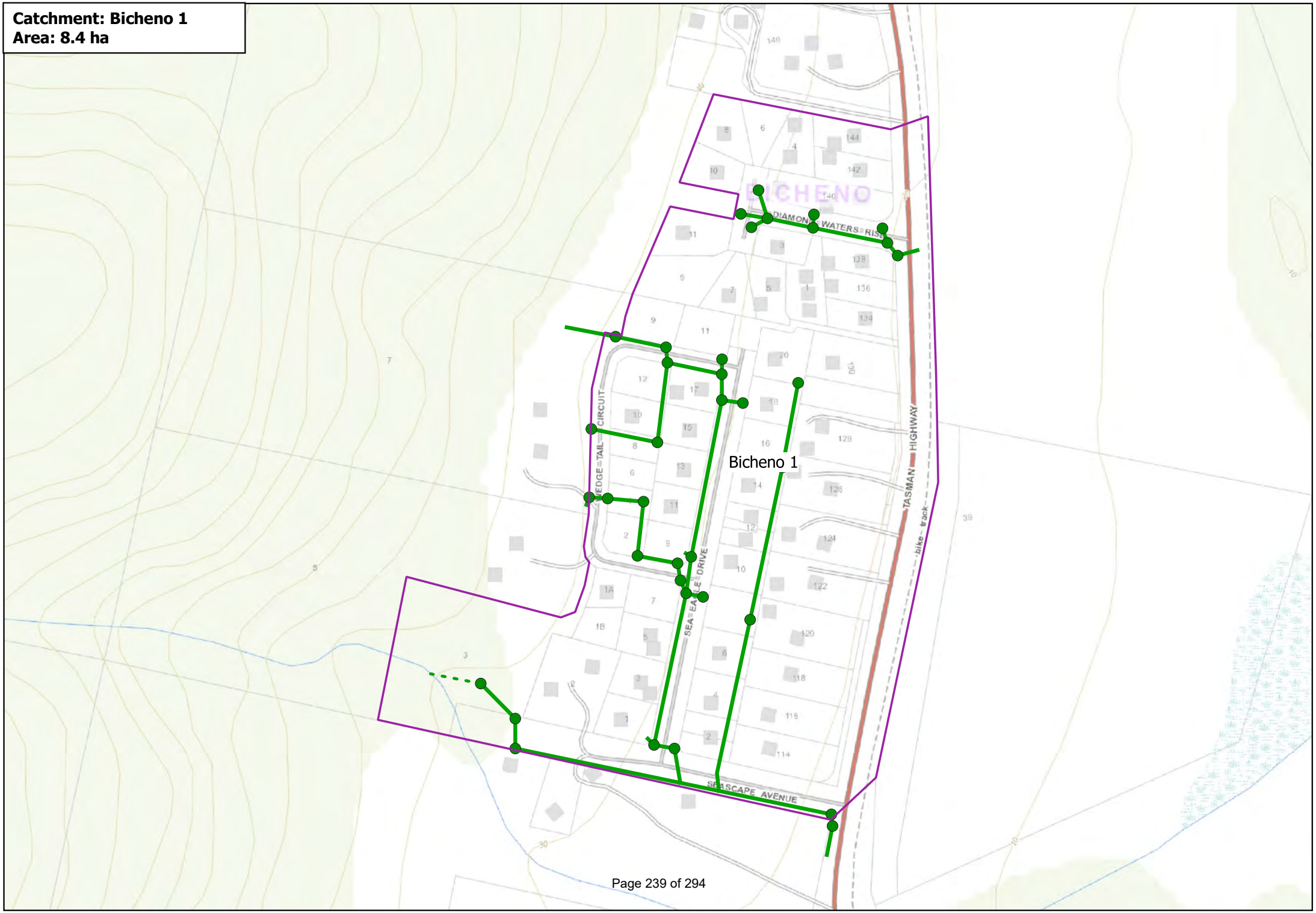
In October 2020 GSBC received funding from the Natural Disaster Resilience Program to undertake a flood study of the Orford Rivulet. The study was completed in February 2021. Results of the study suggested that a levee, installed on the northern side of the rivulet adjacent to Strawberry Hills Court, could protect a significant number of properties from periodic flooding.

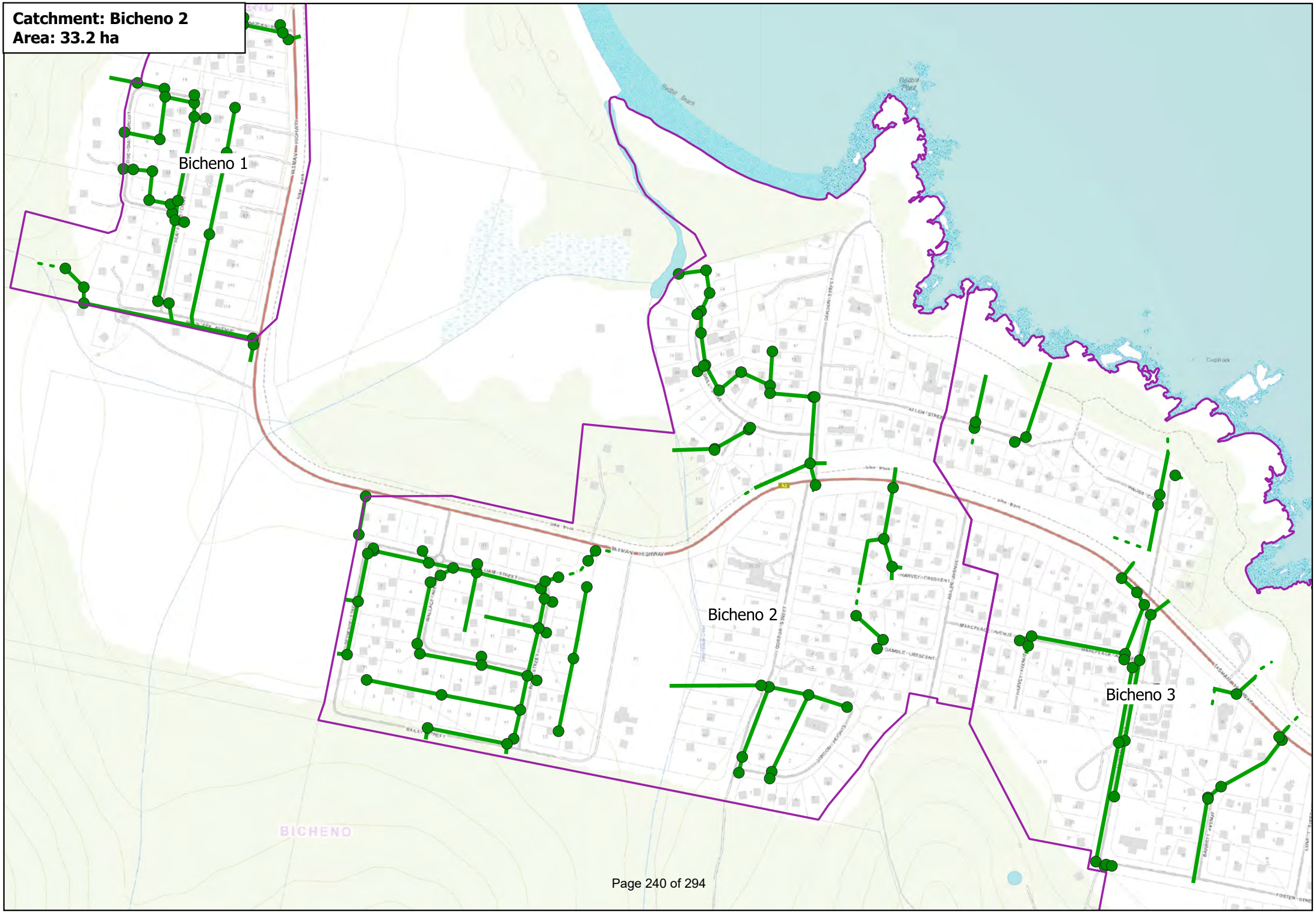
AD Design and Consulting have since provided a stormwater system assessment of the adjacent urban catchment and have provided concept designs and a staging plan which will perform alongside the proposed levee.

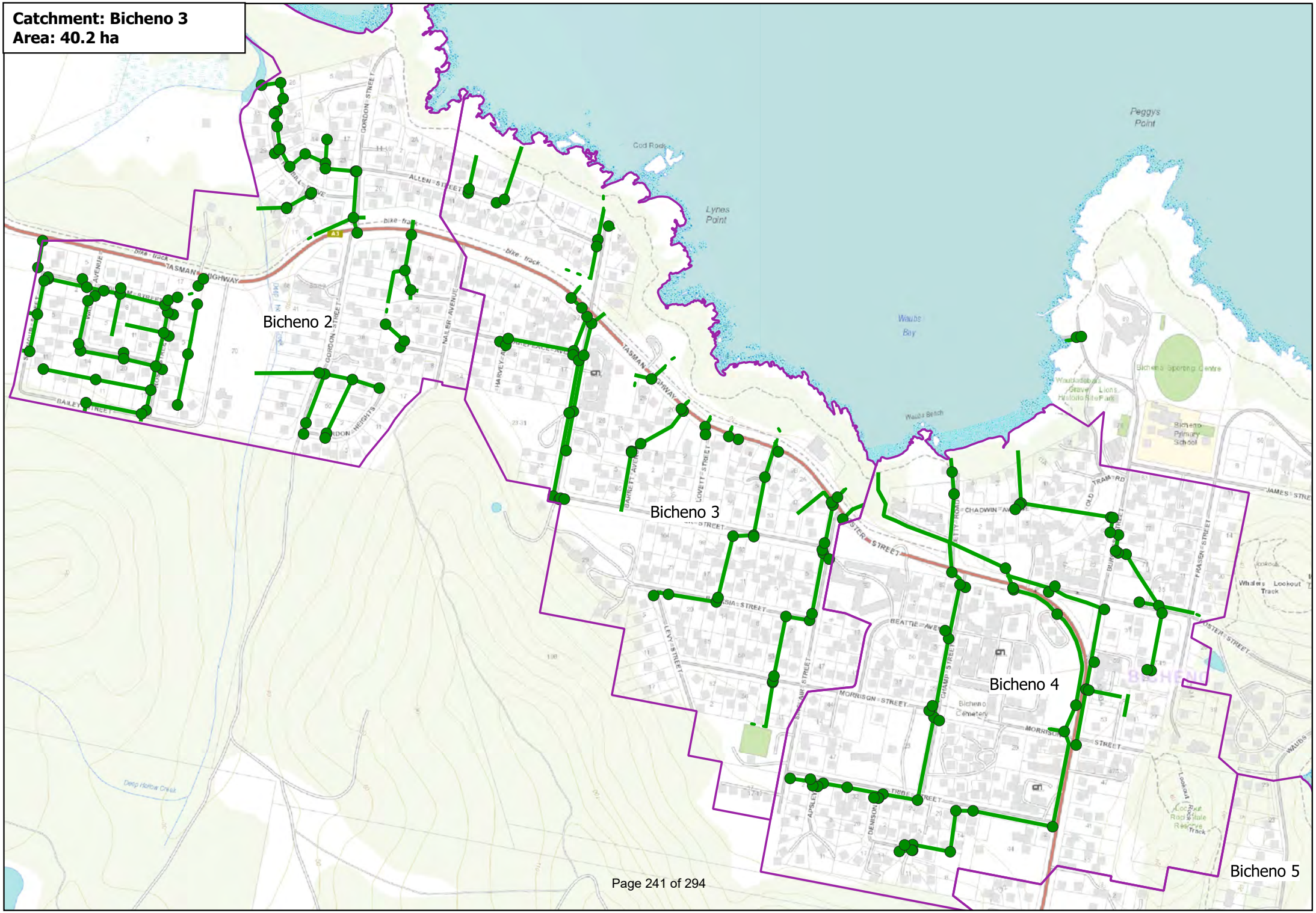
Figure A4. Walpole Street Orford Rivulet (Urban catchments Orford 9, 10 & 11)

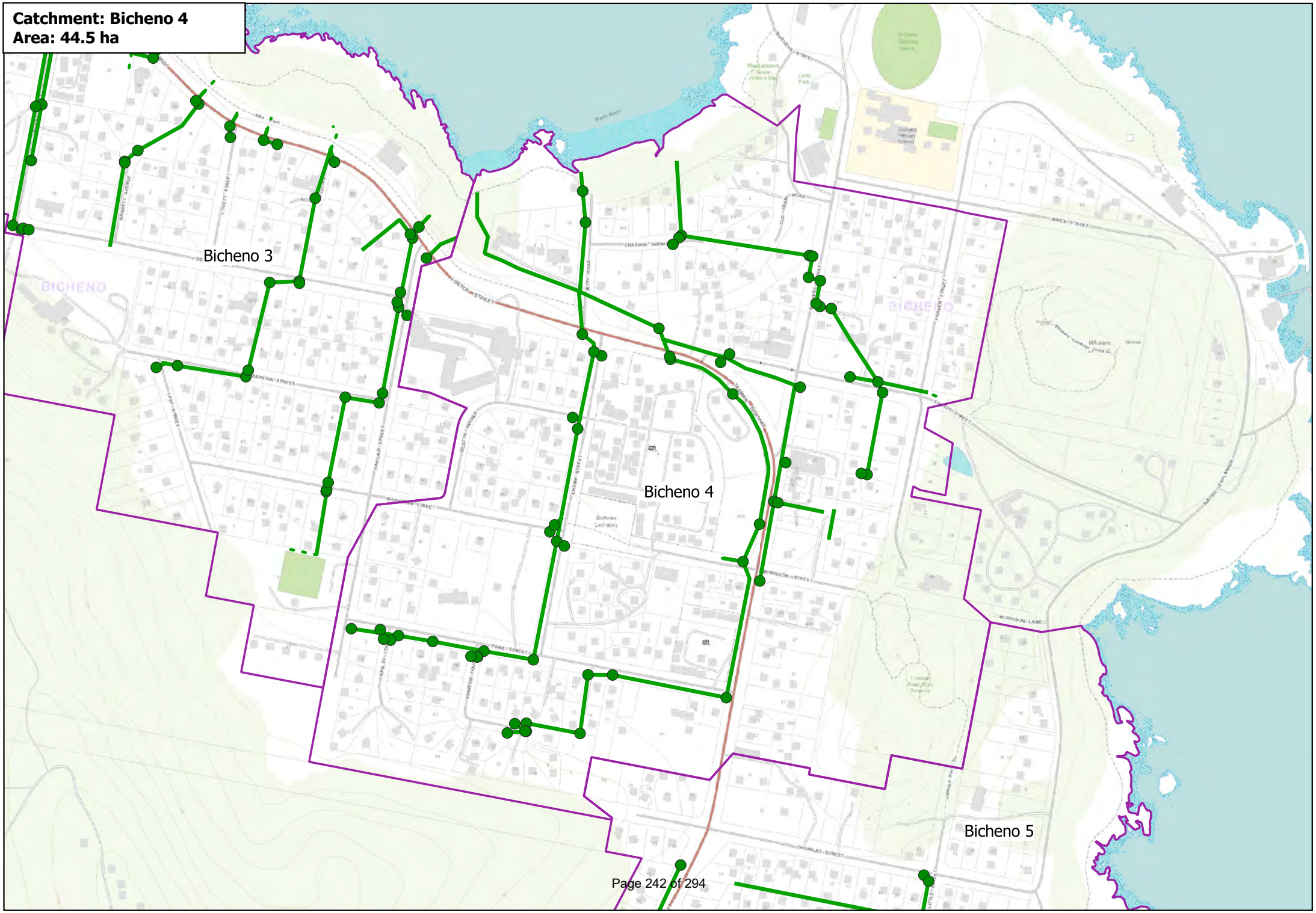
APPENDIX B – URBAN STORMWATER SYSTEM AND AREA MAPS

Catchment: Bicheno 1
Area: 8.4 ha

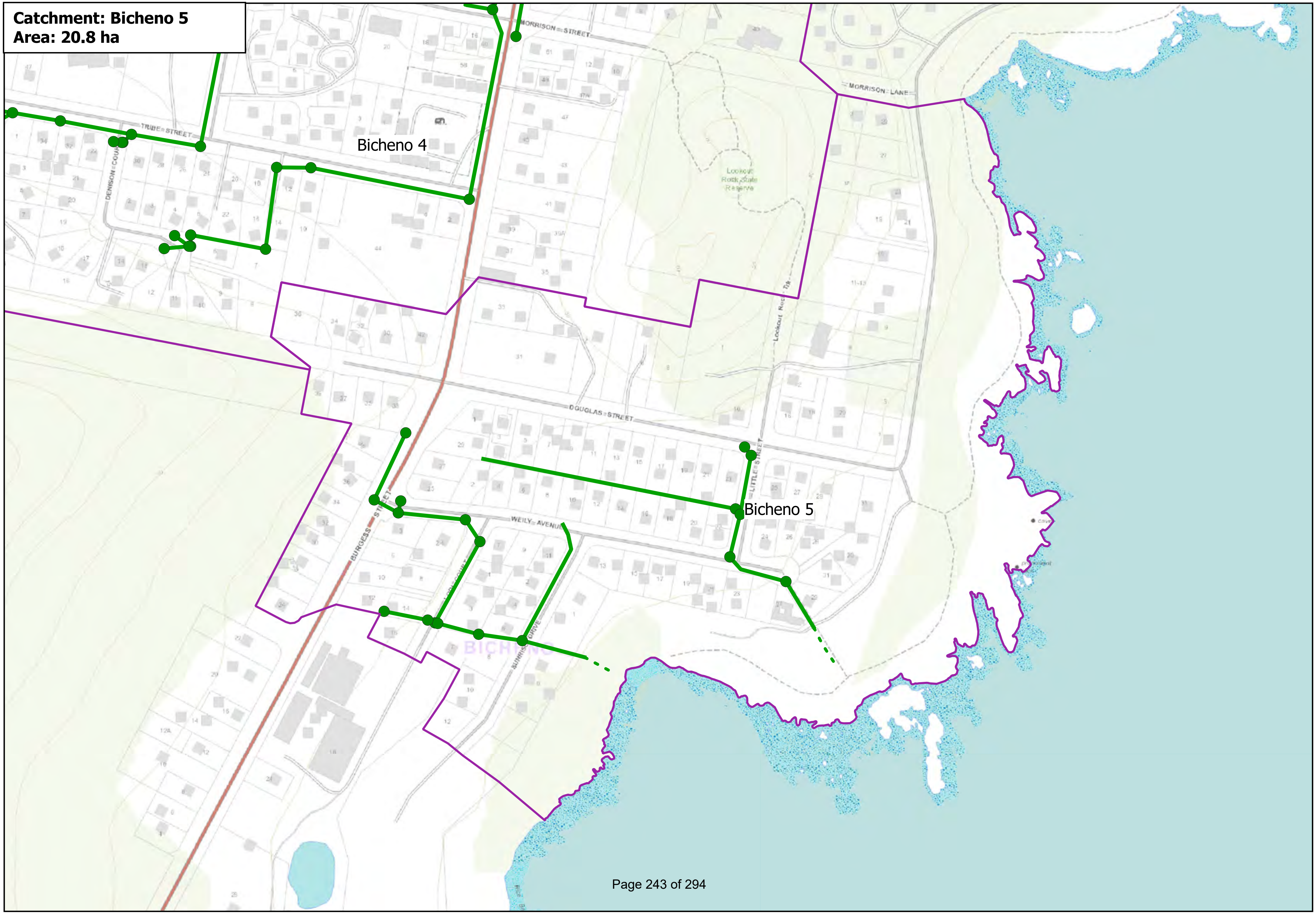


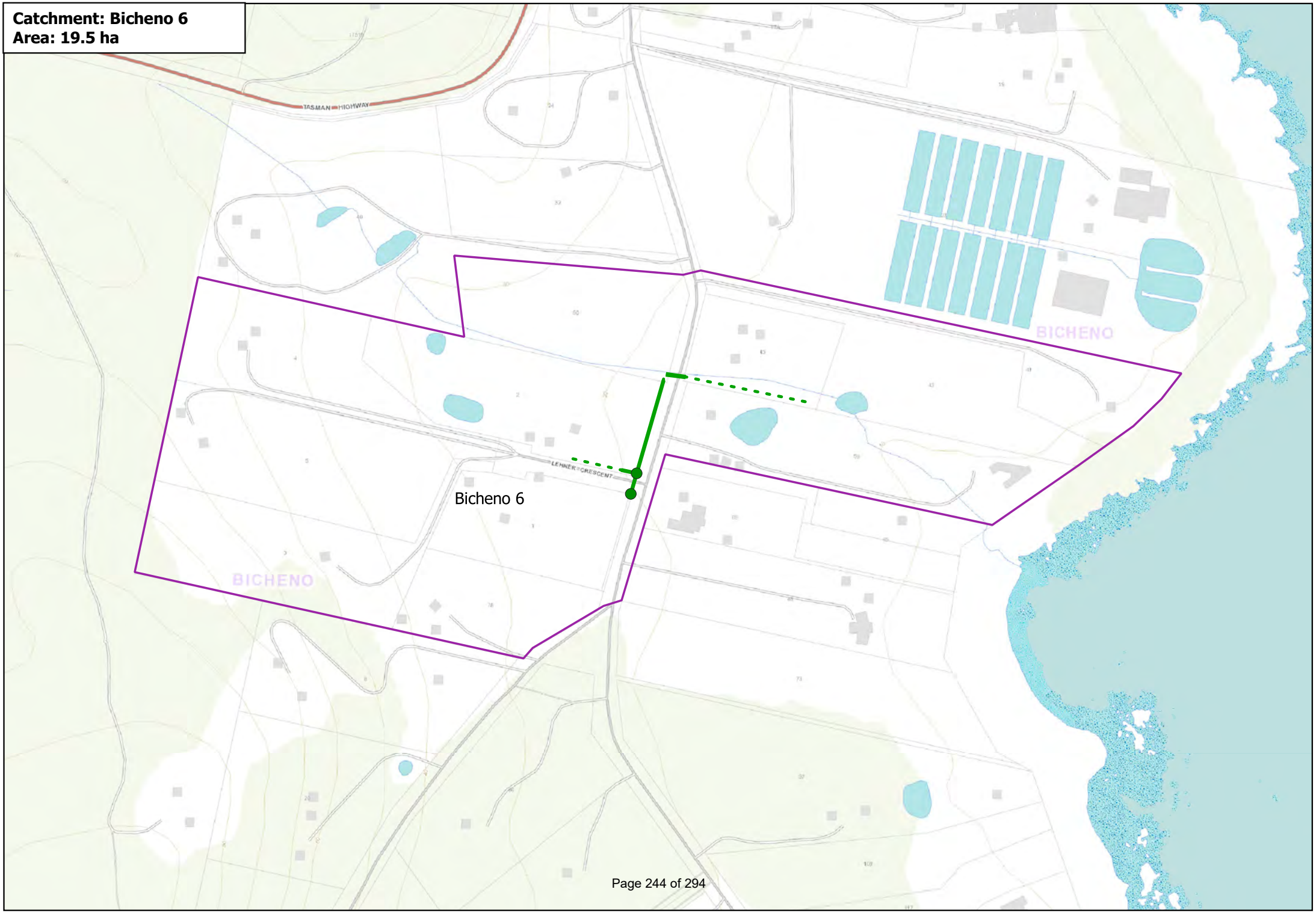

Catchment: Bicheno 2
Area: 33.2 ha
Bicheno 1
Bicheno 2
Bicheno 3
BICHENO

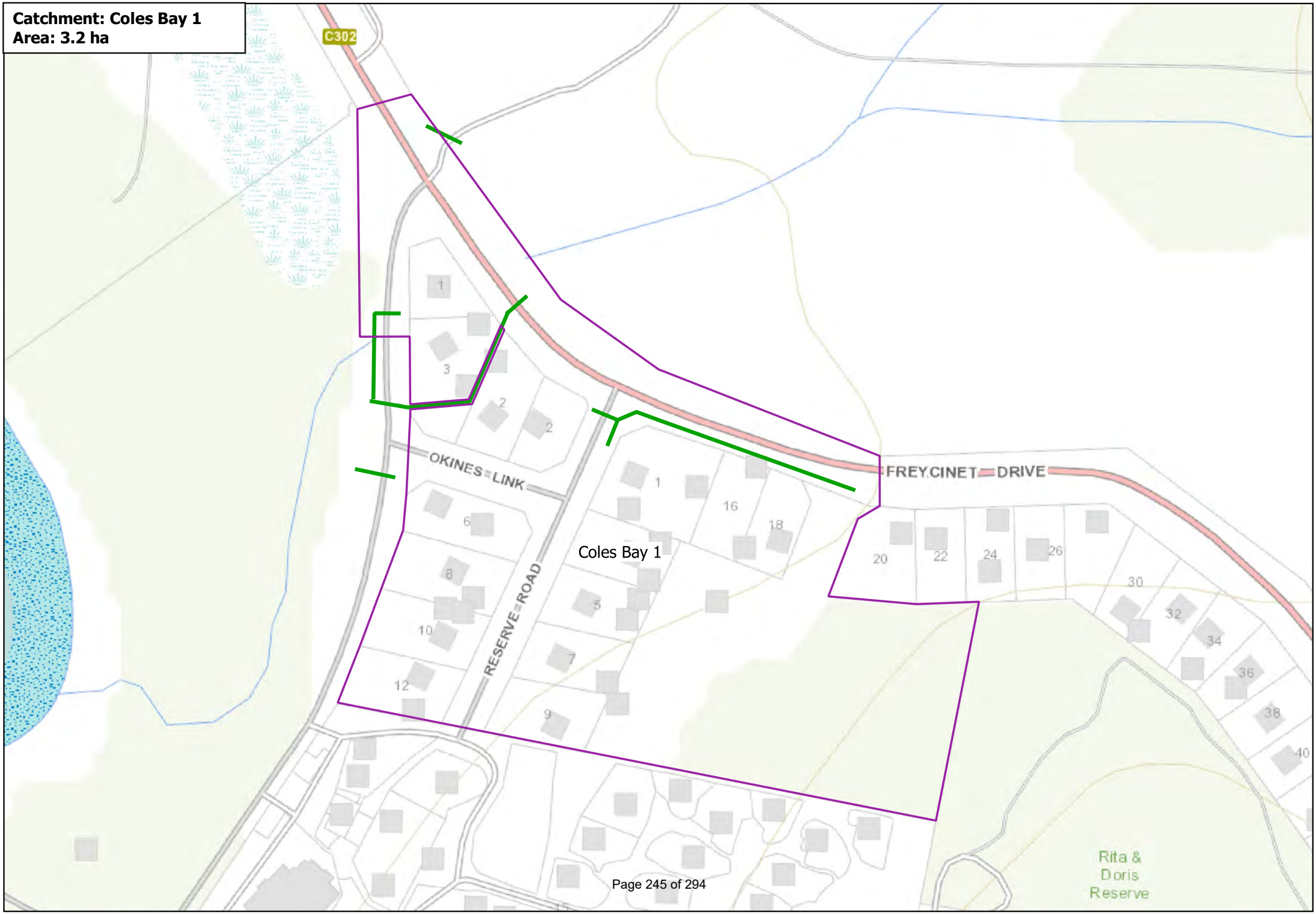

Catchment: Bicheno 3
Area: 40.2 ha
Bicheno 2
Bicheno 3
Bicheno 4
Bicheno 5
TASMAN HIGHWAY
ALLEN STREET
GORDON STREET
NAYLER AVENUE
BAILEY STREET
LOVETT STREET
BARRETT AVENUE
HARVEY AVENUE
FOSTER STREET
CHADWIN AVENUE
OLD TRAM RD
FRASER STREET
JAMES STREET
BEATTIE AVENUE
CHAMP STREET
MORRISON STREET
TRIBE STREET
APSLEY STREET
DENISON STREET
LEVY STREET
Peggys Point
Cod Rocks
Lynes Point
Waubs Bay
Waubs Beach
Bicheno Sporting Centre
Bicheno Primary School
Bicheno Cemetery
Whalers Lookout Track
Deep Hollow Creek


Catchment: Bicheno 4
Area: 44.5 ha
Bicheno 3
Bicheno 4
Bicheno 5

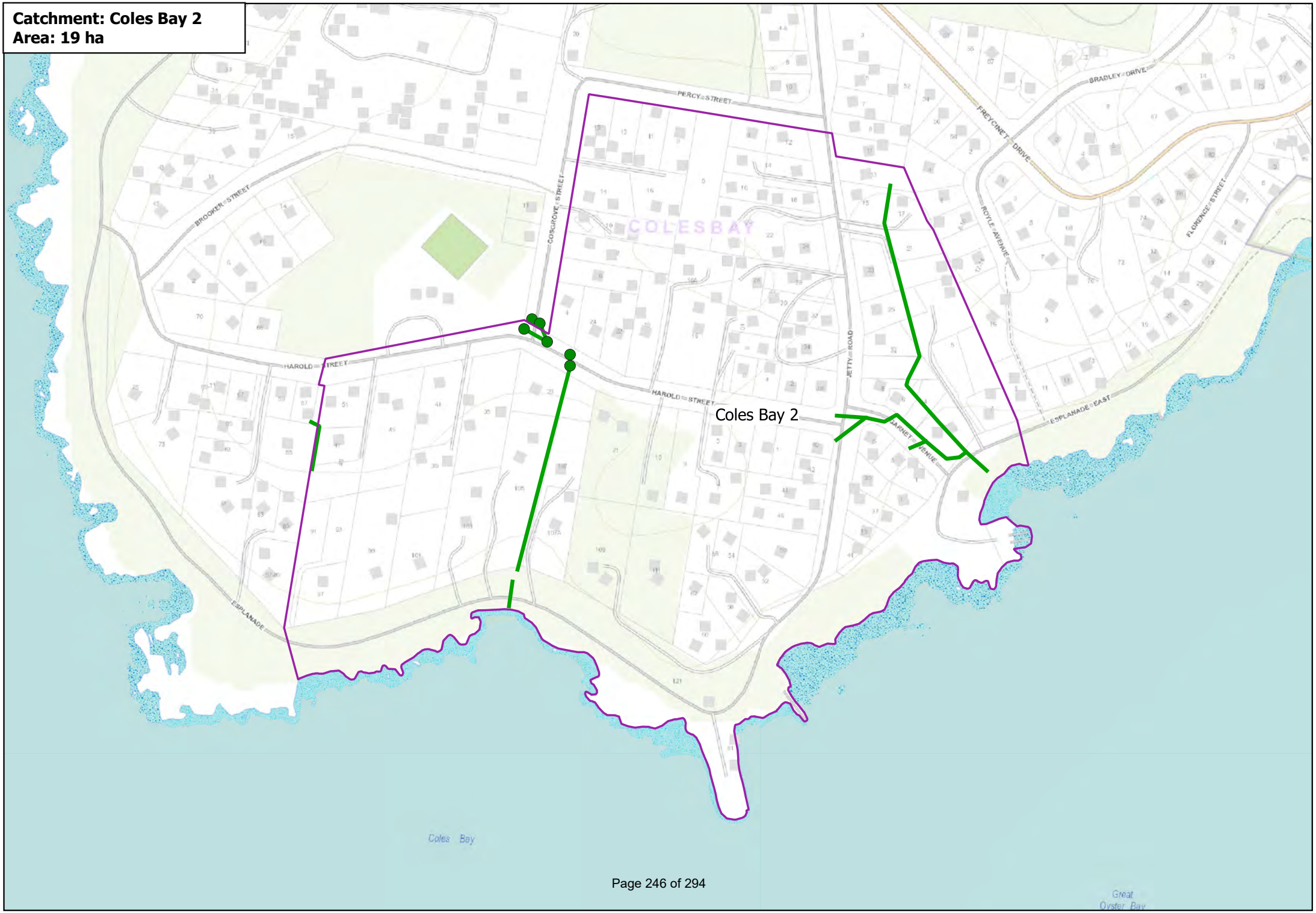
Catchment: Bicheno 5
Area: 20.8 ha

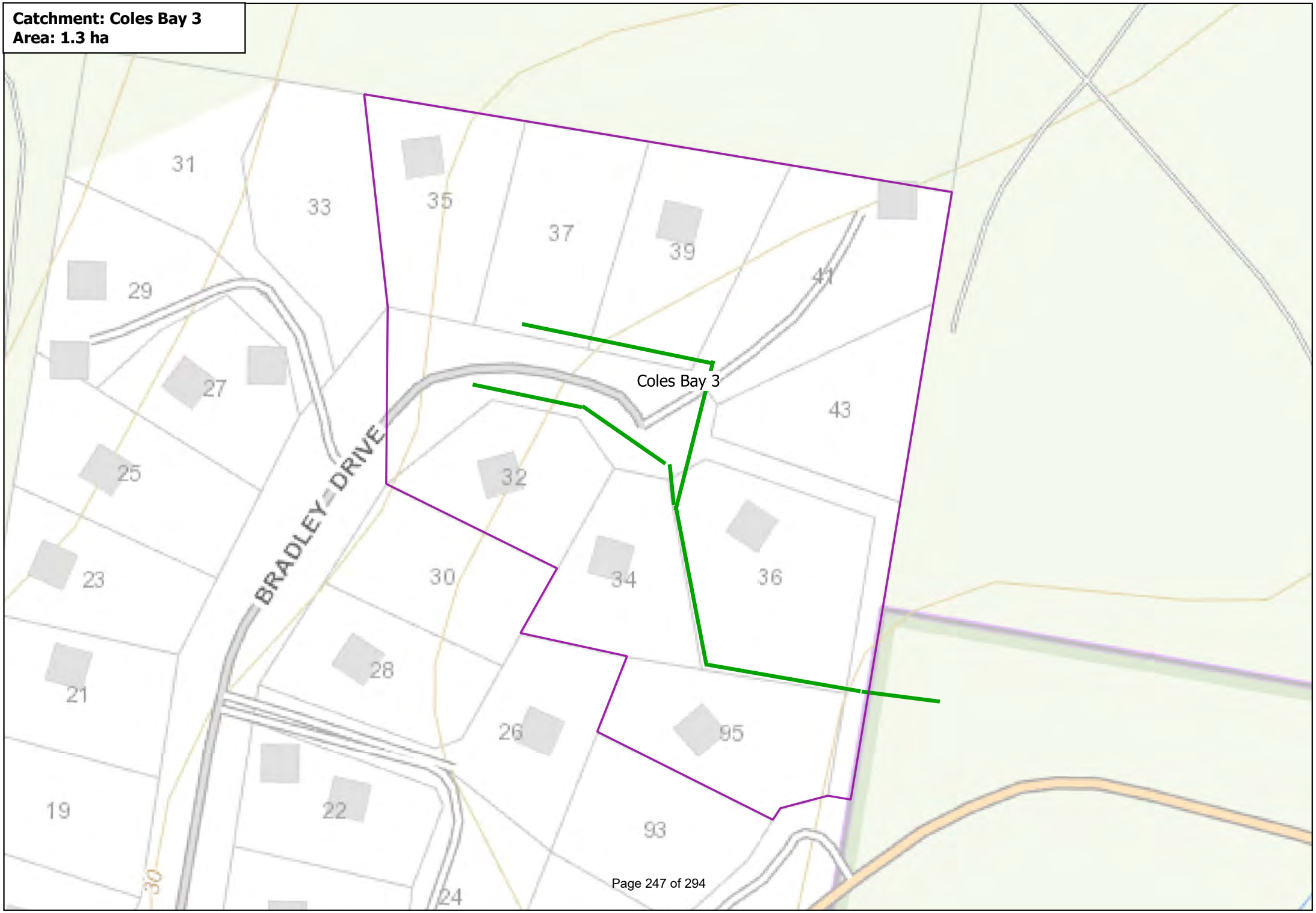


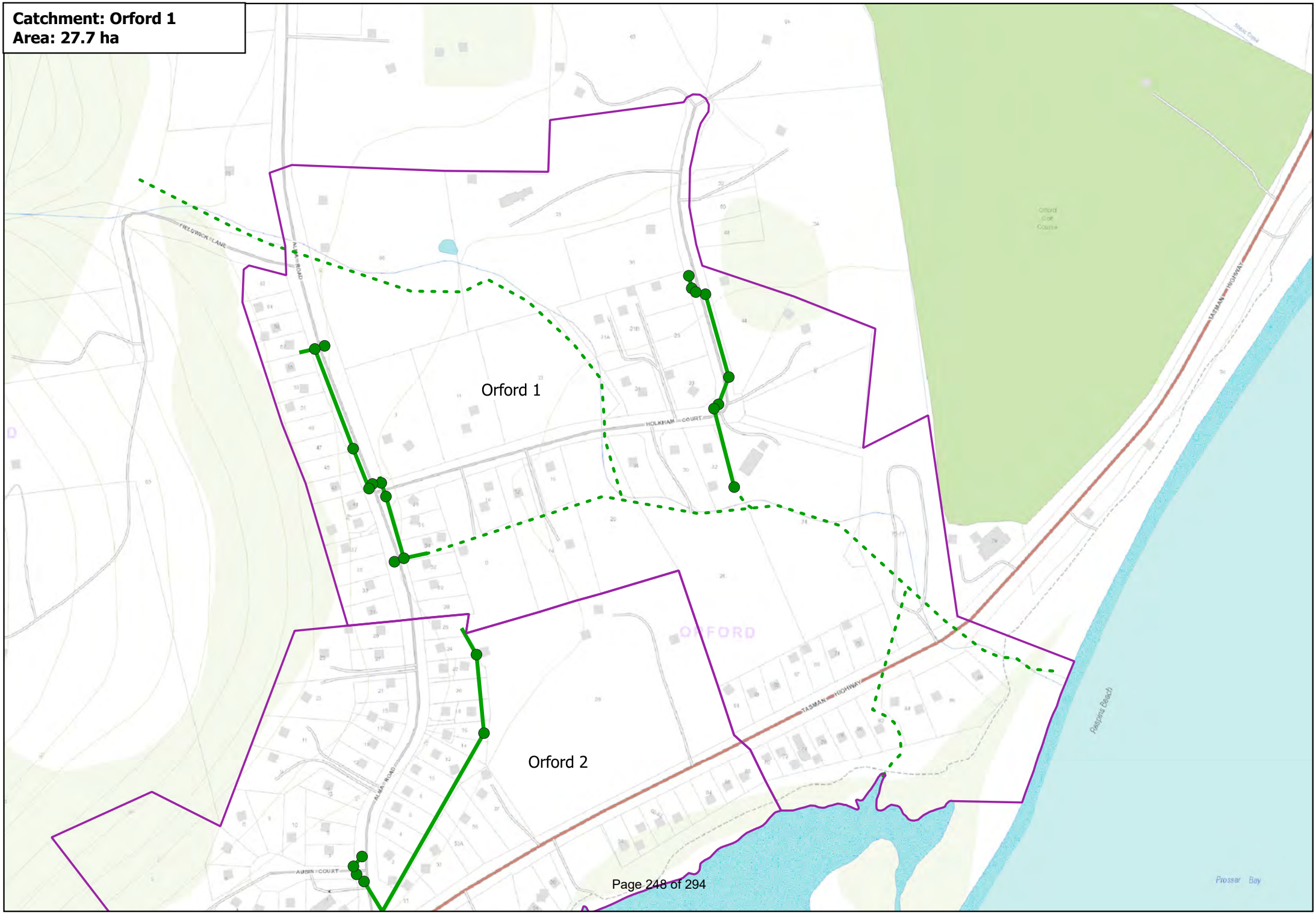

Catchment: Bicheno 6
Area: 19.5 ha
TASMAN HIGHWAY
LEHNER CRESCENT
BICHENO
BICHENO
Bicheno 6

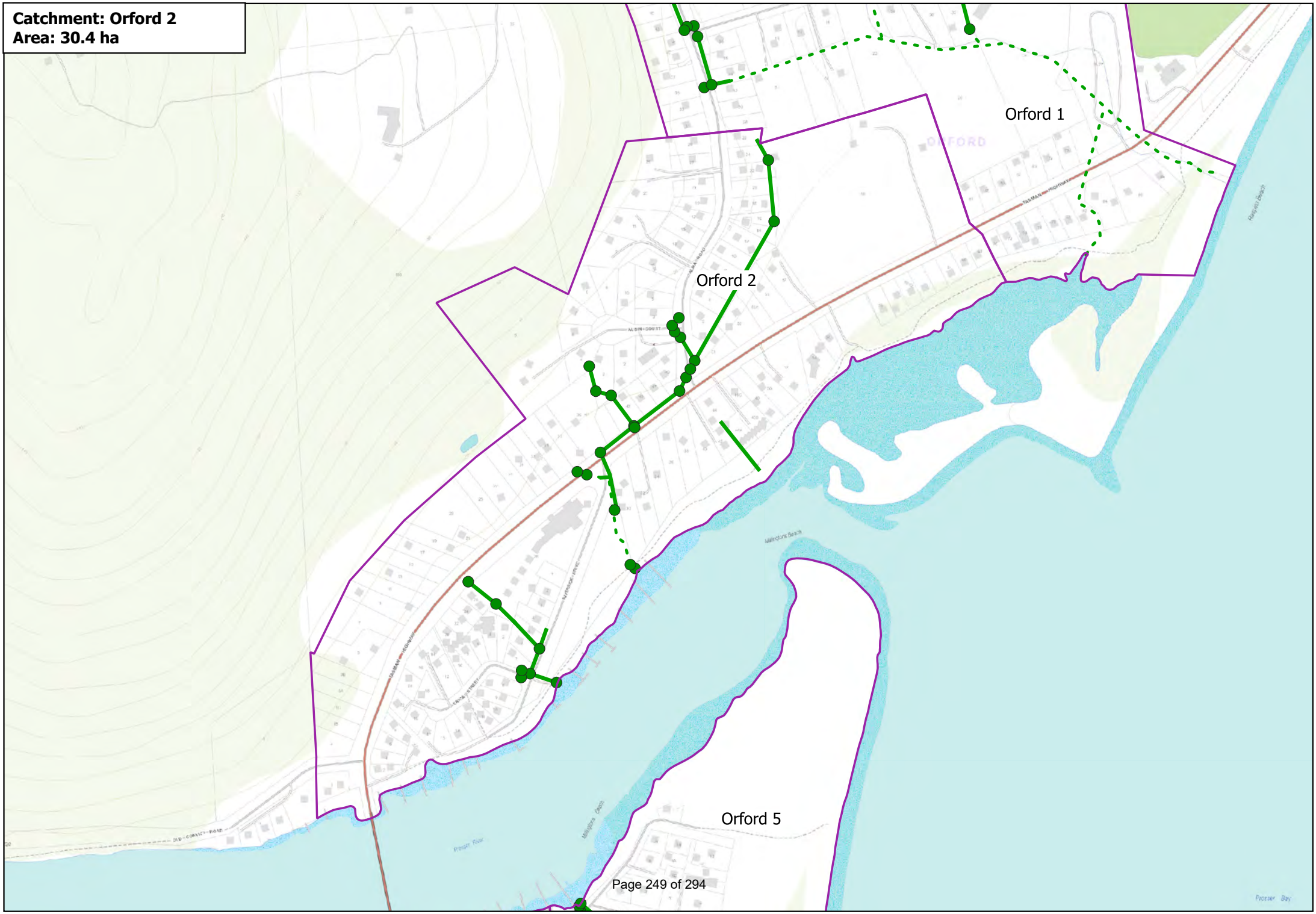

Catchment: Coles Bay 1
Area: 3.2 ha
C302
OKINES LINK
RESERVE ROAD
FREYCINET DRIVE
Coles Bay 1
Rita &
Doris
Reserve

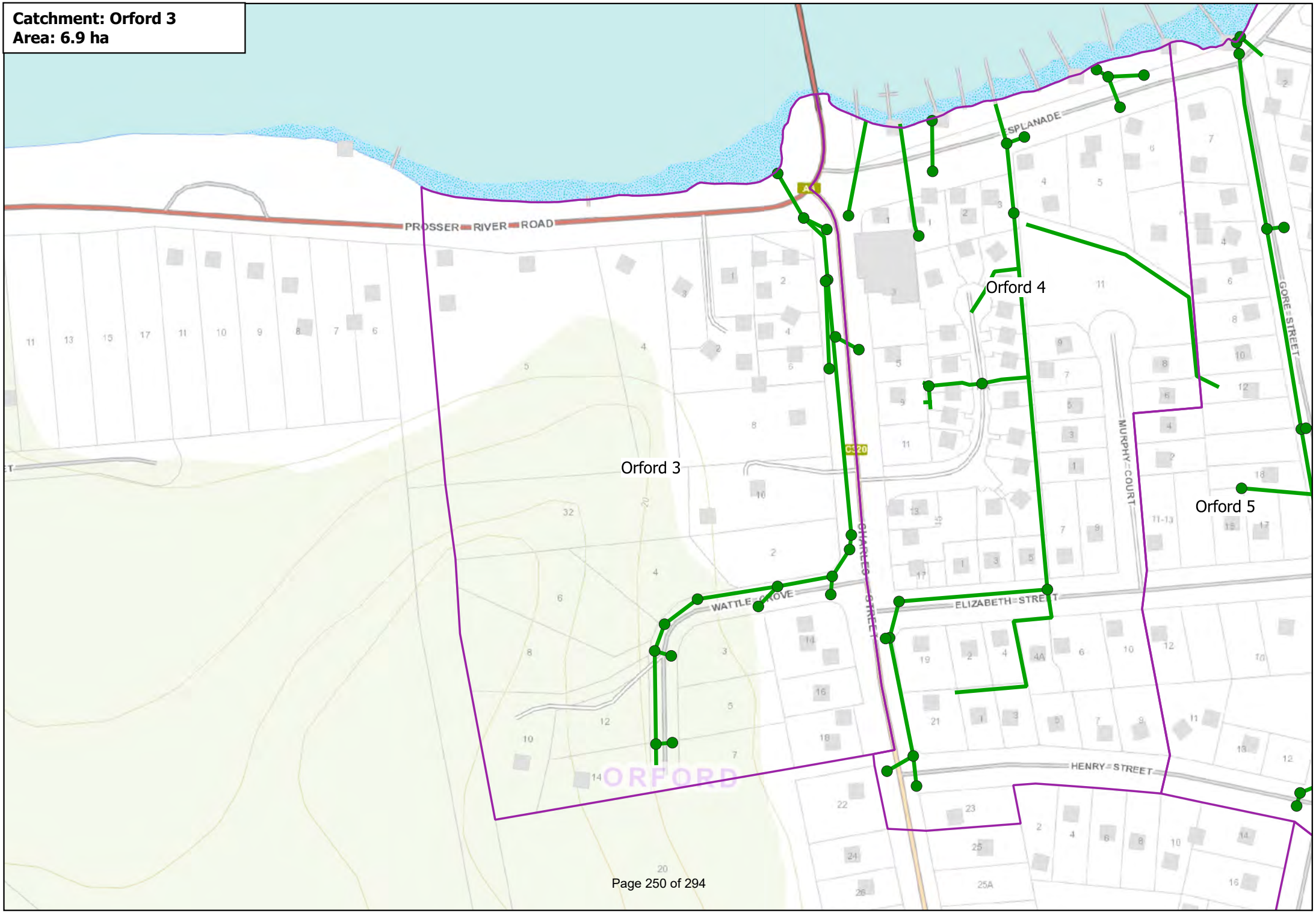
Catchment: Coles Bay 2
Area: 19 ha

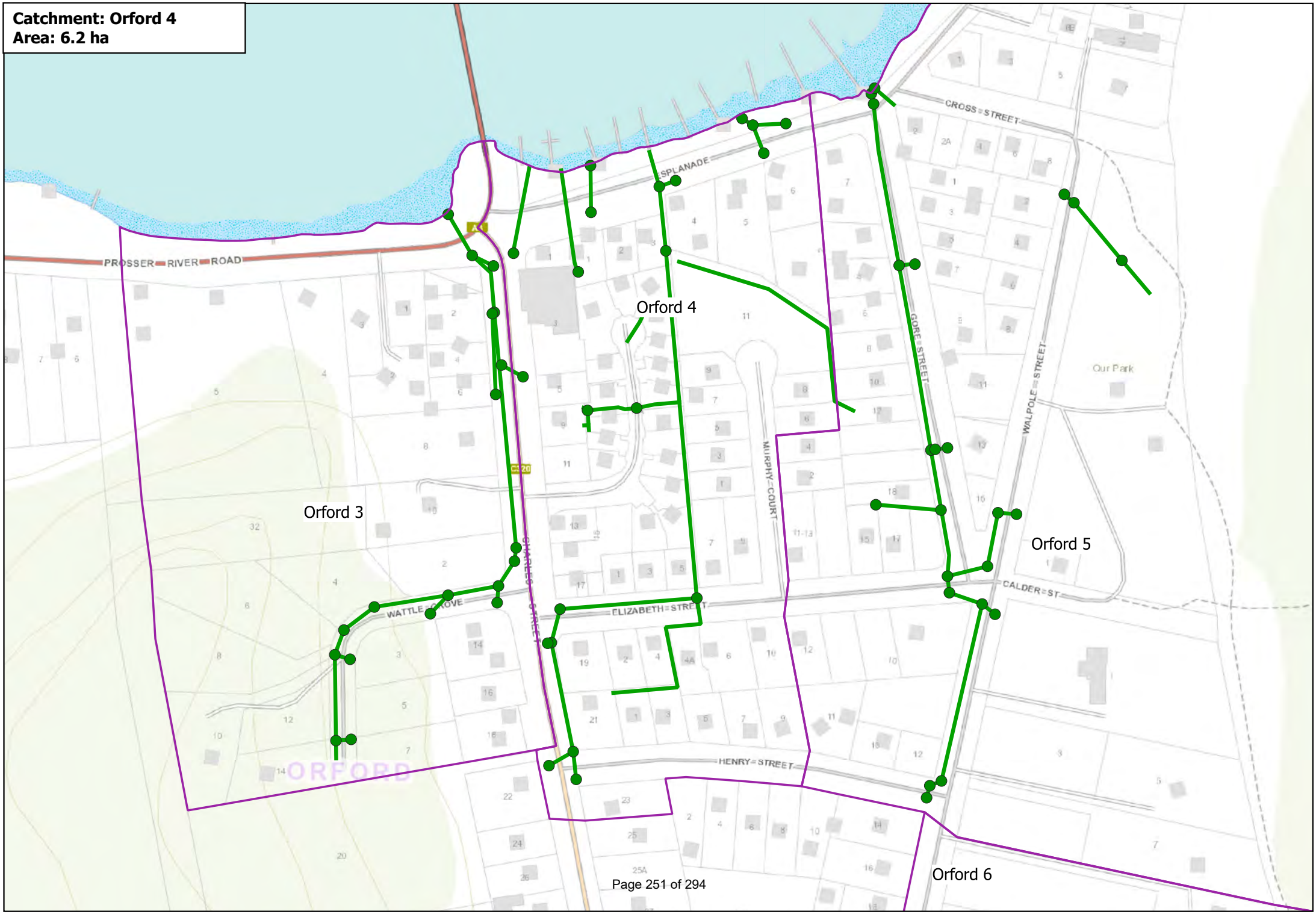


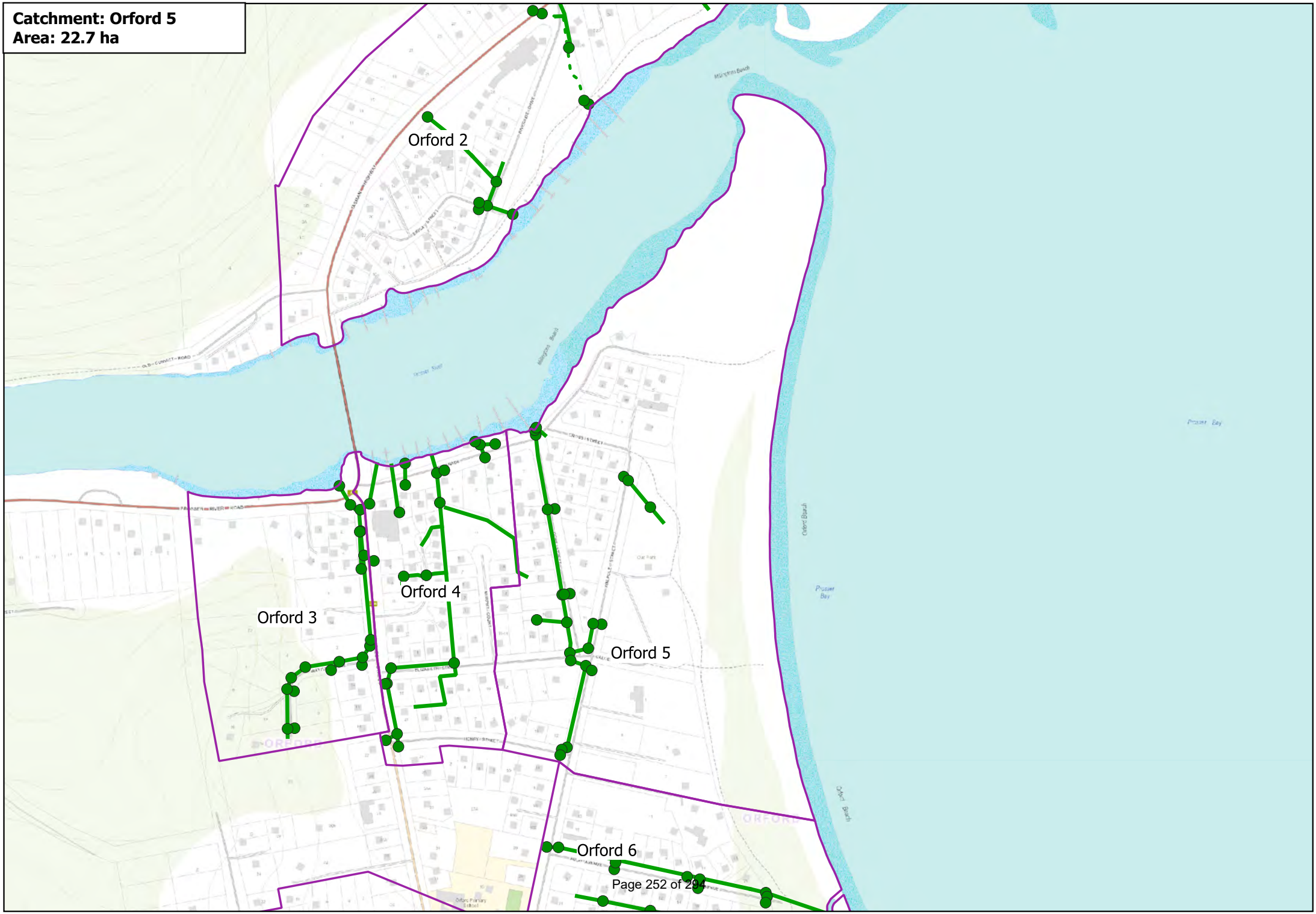

Catchment: Coles Bay 3
Area: 1.3 ha
Coles Bay 3
BRADLEY DRIVE
31
33
35
37
39
41
43
29
27
25
23
21
19
32
30
34
36
28
26
95
22
93
24


Catchment: Orford 1
Area: 27.7 ha
Orford 1
Orford 2
FIELDWICK LANE
ALMA ROAD
HOLKHAM COURT
TASMAN HIGHWAY
AUBIN COURT
ORFORD
Raspins Beach
Prosser Bay

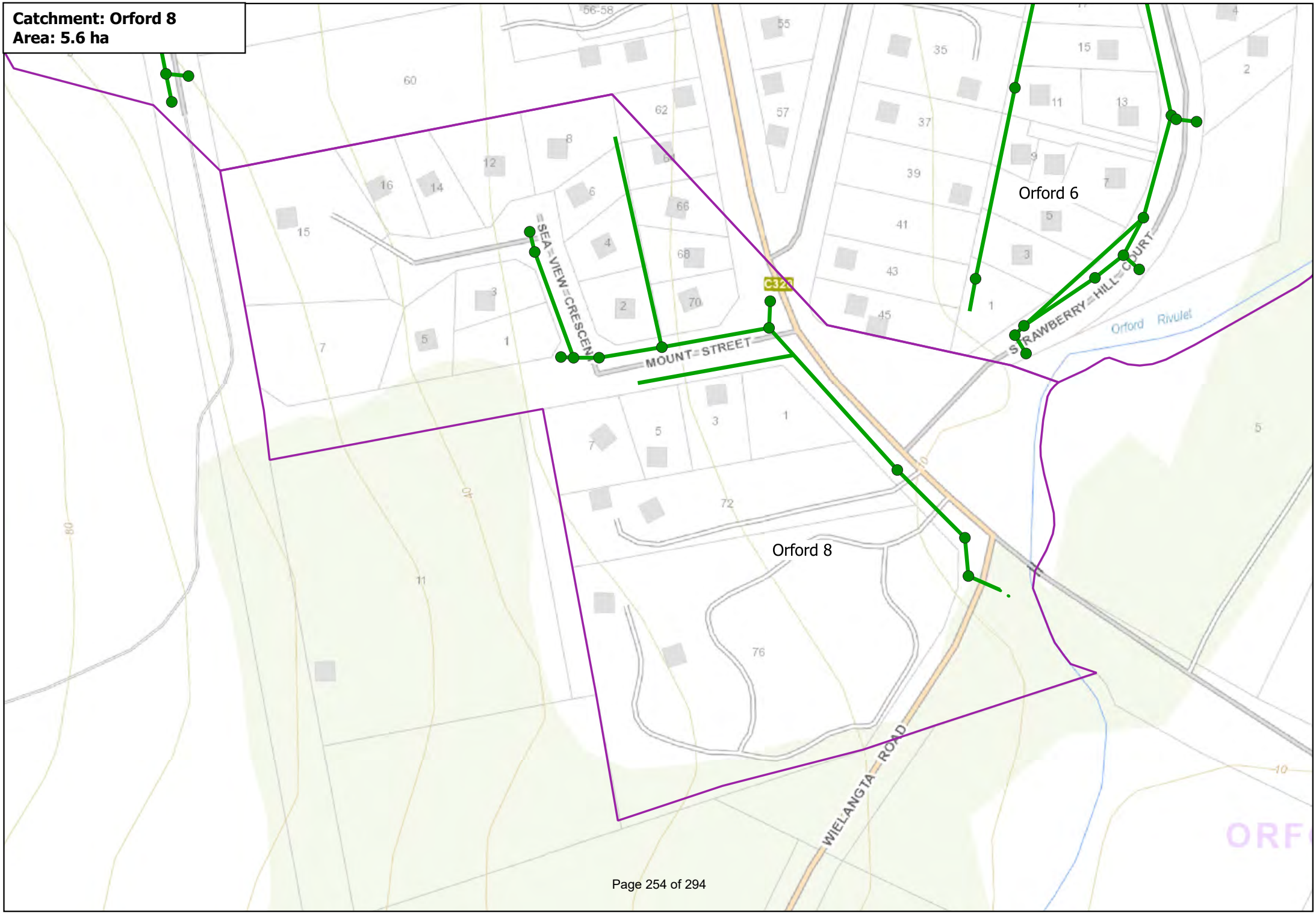

Catchment: Orford 2
Area: 30.4 ha
Orford 1
Orford 2
Orford 5

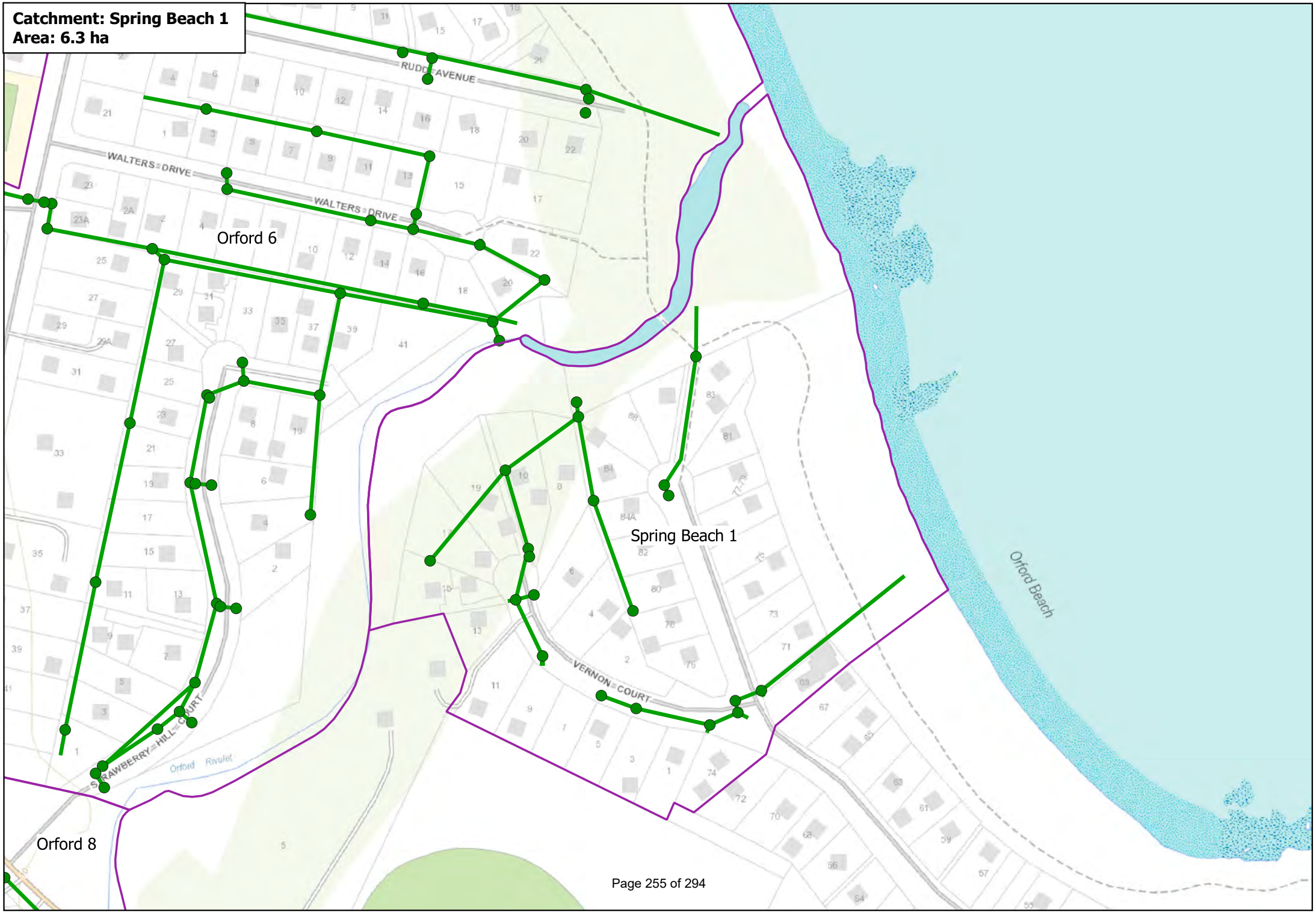

Catchment: Orford 3
Area: 6.9 ha
PROSSER RIVER ROAD
ESPLANADE
Orford 4
Orford 3
Orford 5
GORE STREET
MURPHY COURT
CHARLES STREET
WATTLE GROVE
ELIZABETH STREET
HENRY STREET
ORFORD


Catchment: Orford 4
Area: 6.2 ha
PROSSER RIVER ROAD
ESPLANADE
CROSS STREET
GORE STREET
WALPOLE STREET
Our Park
MURPHY COURT
CHARLES STREET
WATTLE GROVE
ELIZABETH STREET
CALDER ST
HENRY STREET
ORFORD
Orford 3
Orford 4
Orford 5
Orford 6

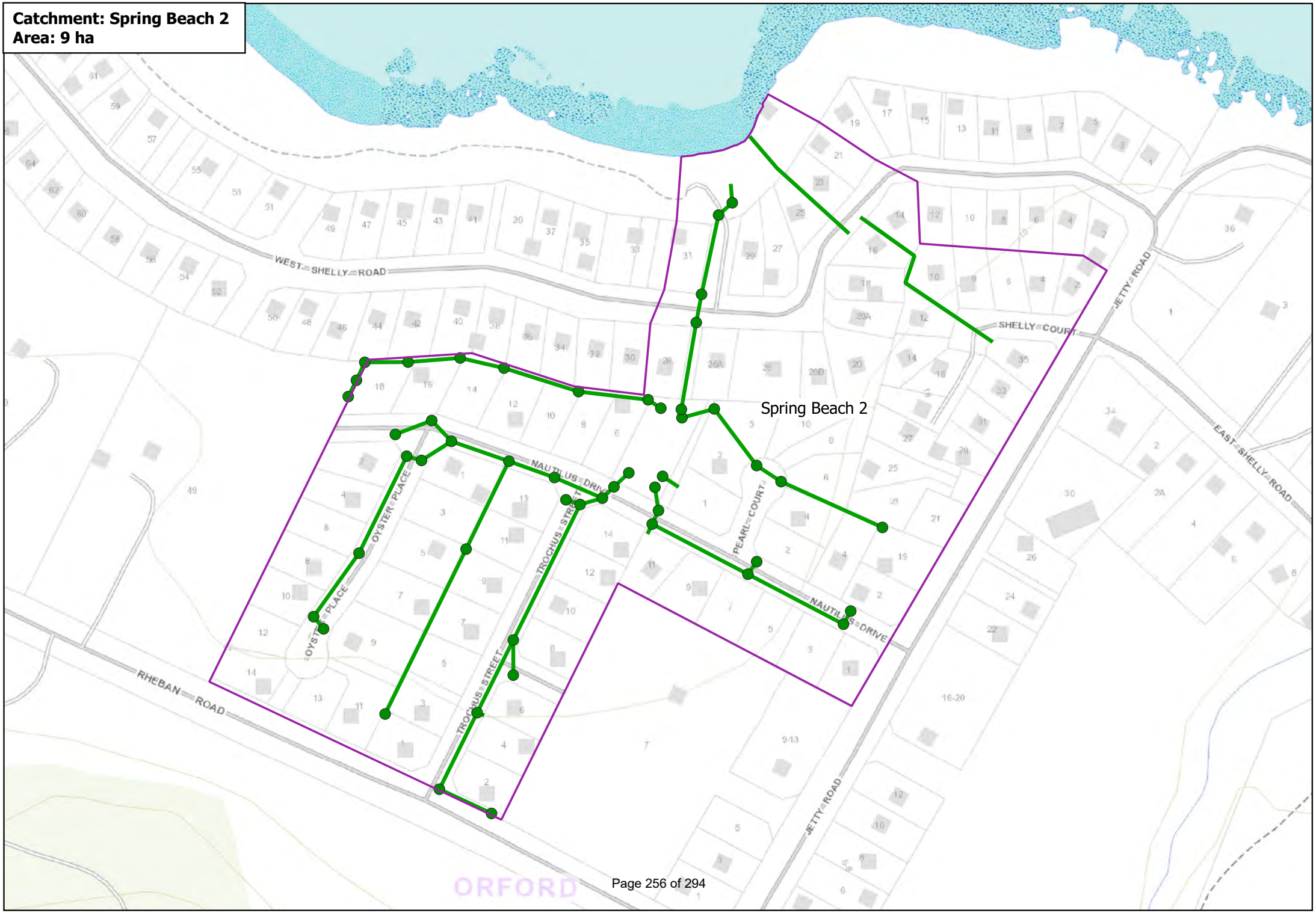

Catchment: Orford 5
Area: 22.7 ha
Orford 2
Orford 3
Orford 4
Orford 5
Orford 6


Catchment: Orford 6
Area: 25 ha
Orford 3
Orford 4
Orford 5
Orford 6
Orford 8
Spring Beach 1
HENRY STREET
RUDD AVENUE
WALTERS DRIVE
ROSSEK STREET
CHARLES STREET
WALPOLE STREET
MOUNT STREET
VERNON COURT
Orford Primary School
Orford Beach
ORFORD

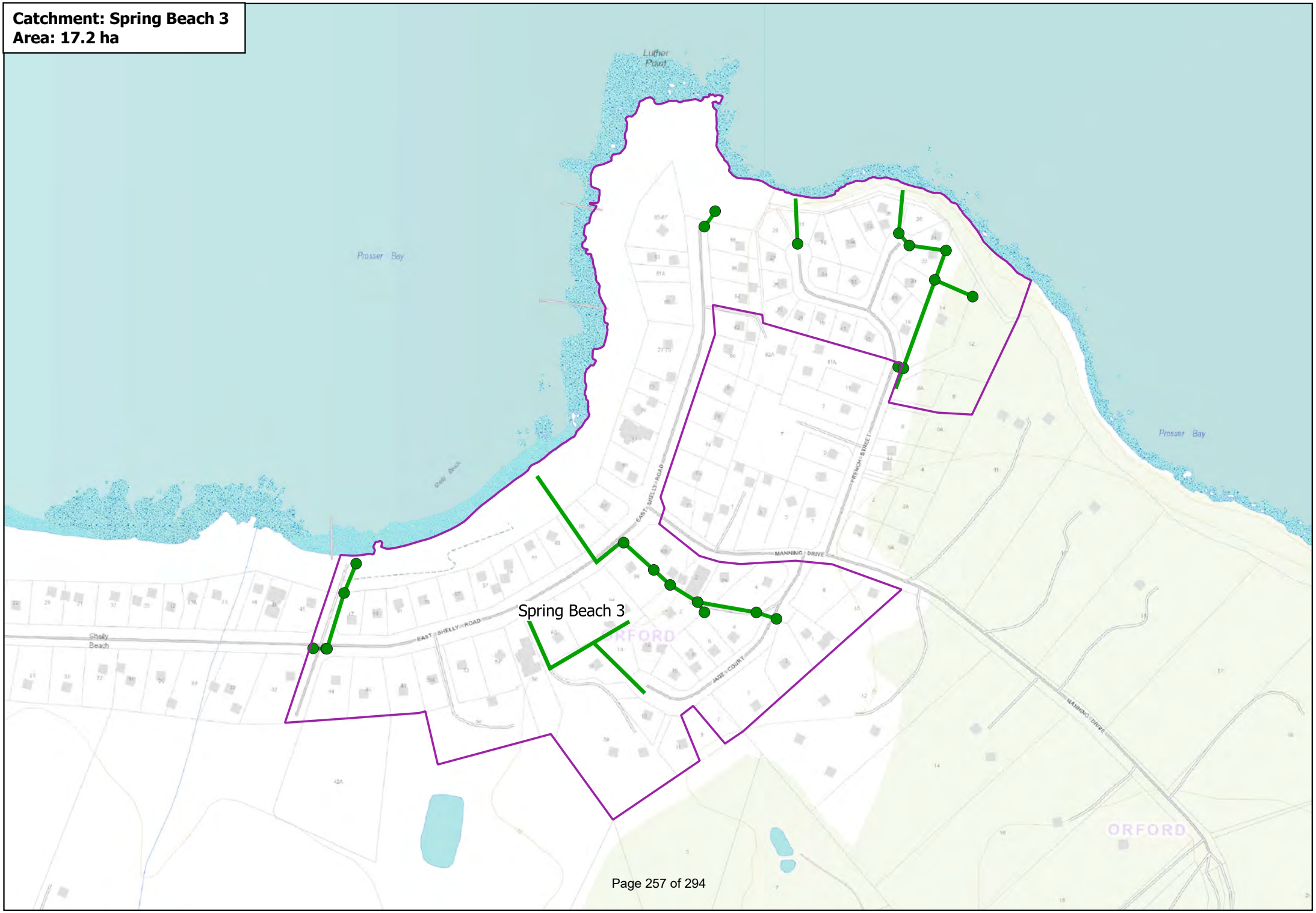

Catchment: Orford 8
Area: 5.6 ha
Orford 6
Orford 8
SEA VIEW CRESCENT
MOUNT STREET
STRAWBERRY HILL COURT
WIELANGTA ROAD
C322
Orford Rivulet


Catchment: Spring Beach 1
Area: 6.3 ha
RUDD AVENUE
WALTERS DRIVE
WALTERS DRIVE
Orford 6
Spring Beach 1
VERNON COURT
STRAWBERRY HILL COURT
Orford Rivulet
Orford 8
Orford Beach

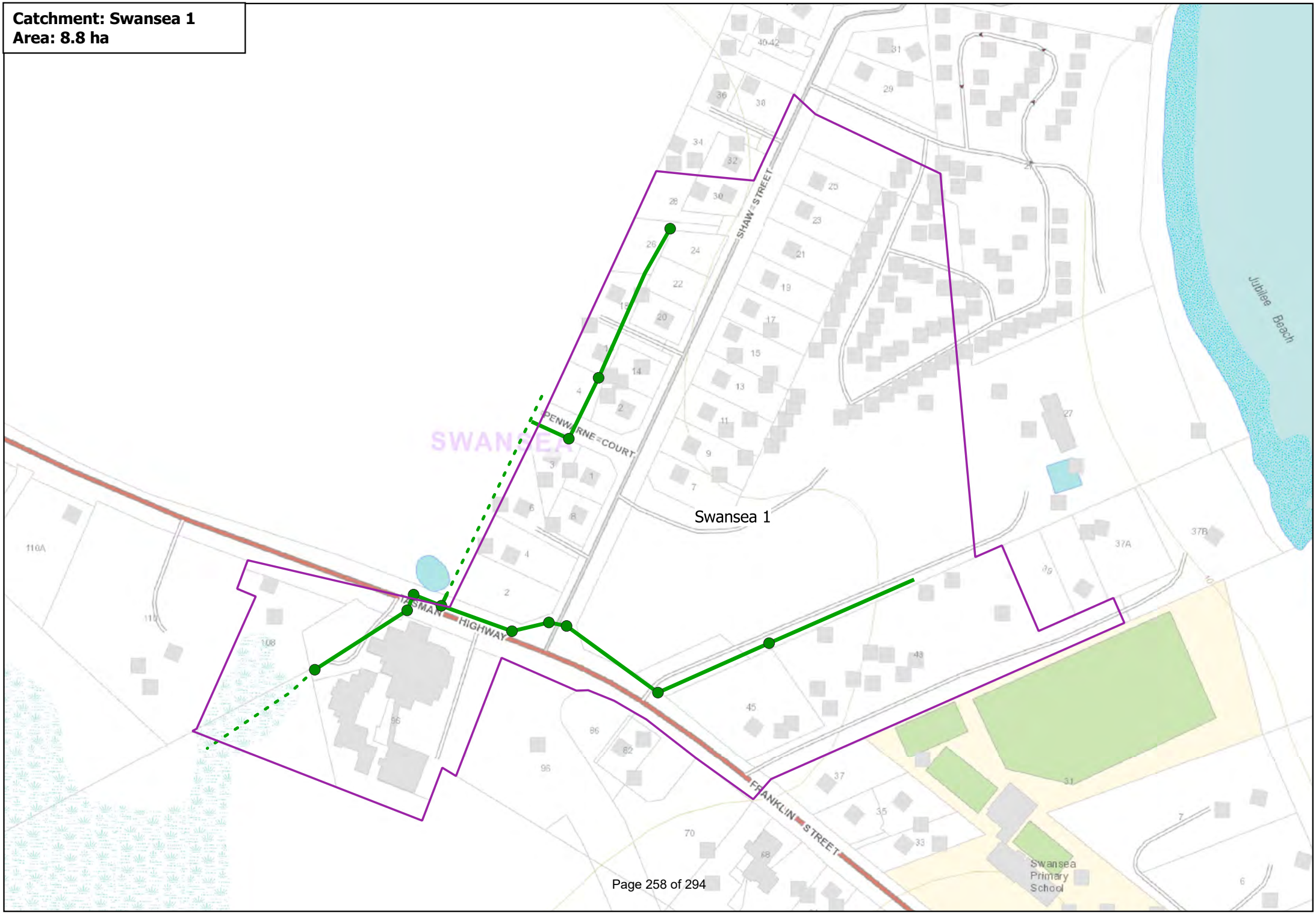
Catchment: Spring Beach 2
Area: 9 ha

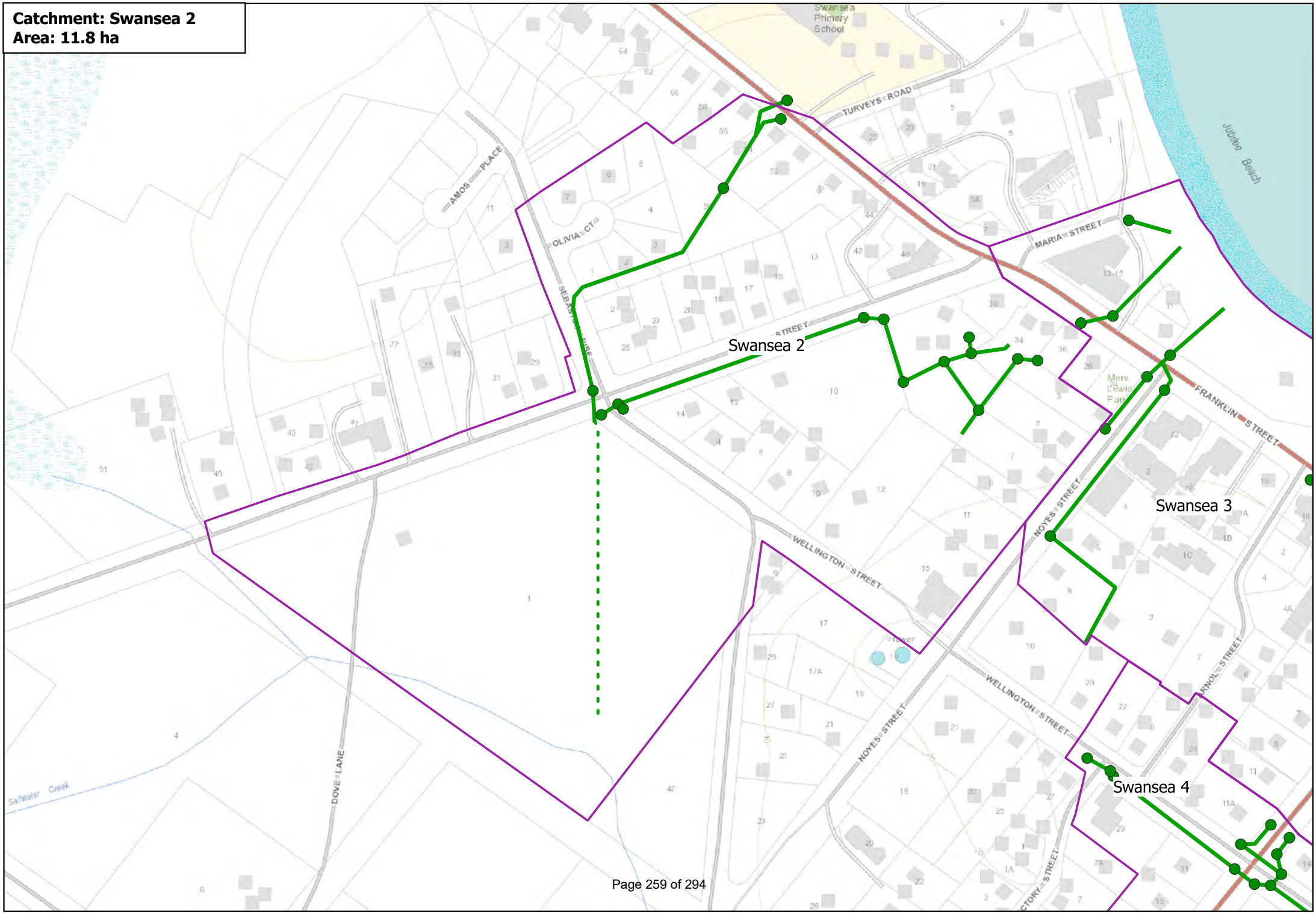


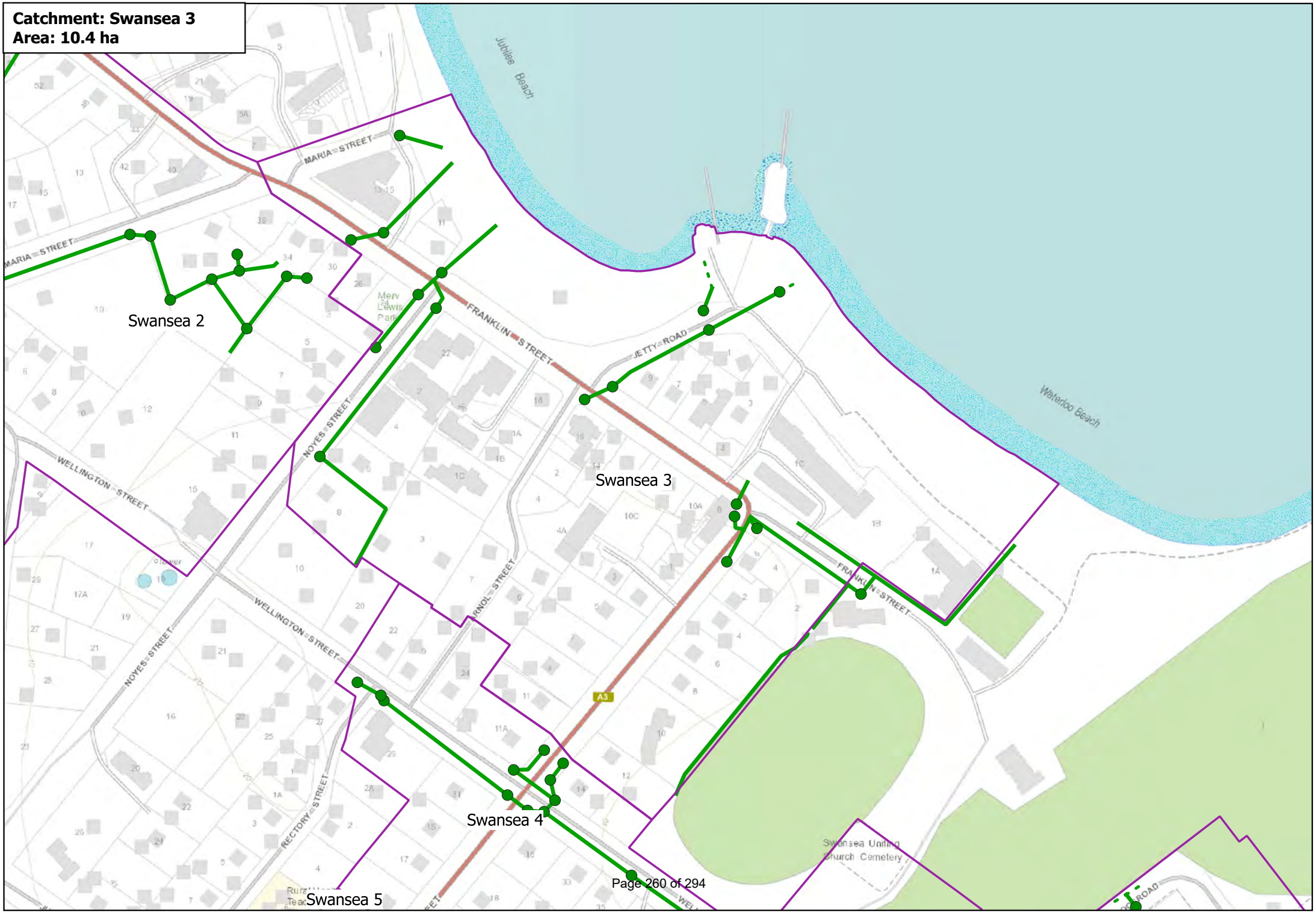
Catchment: Spring Beach 3
Area: 17.2 ha

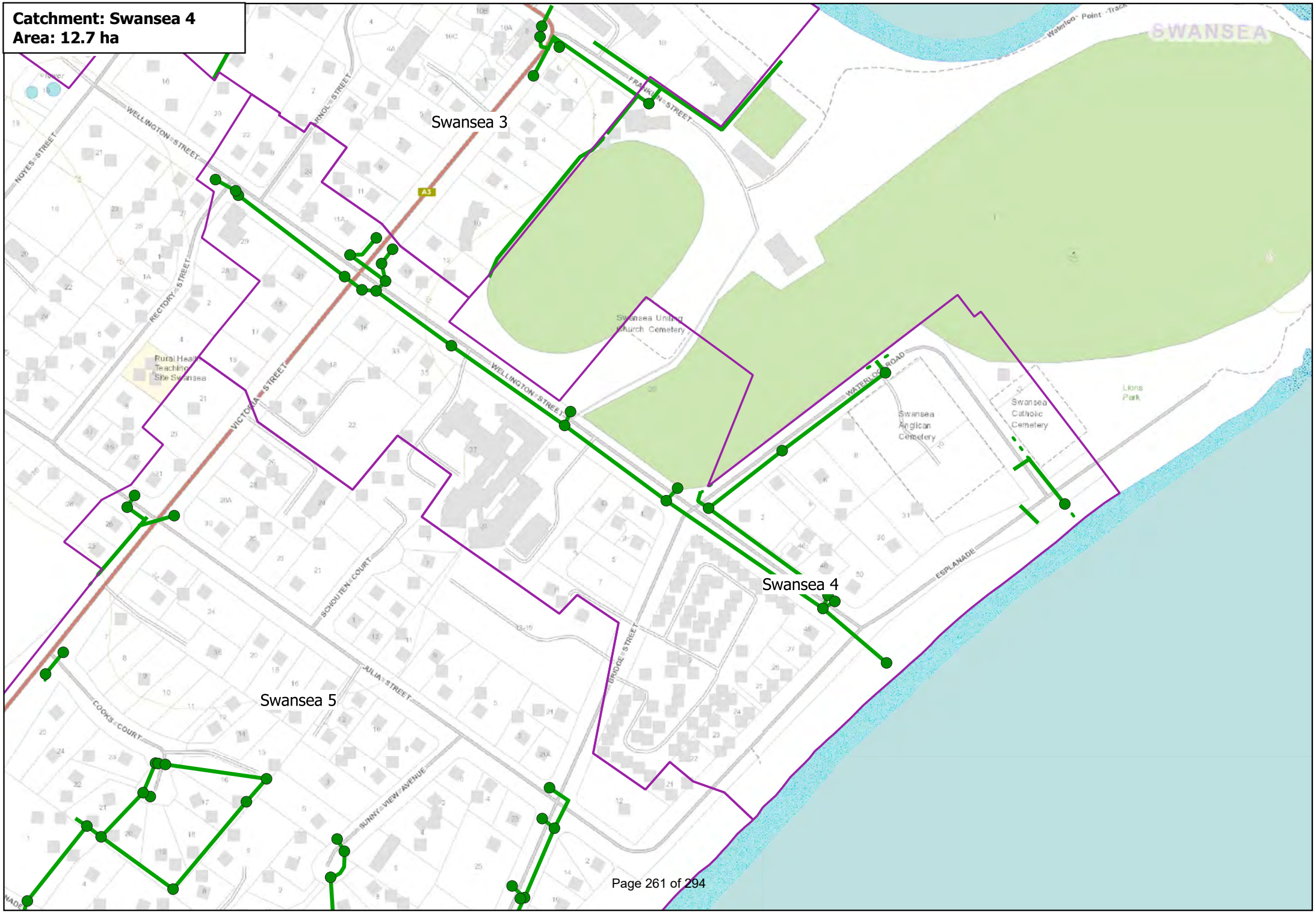


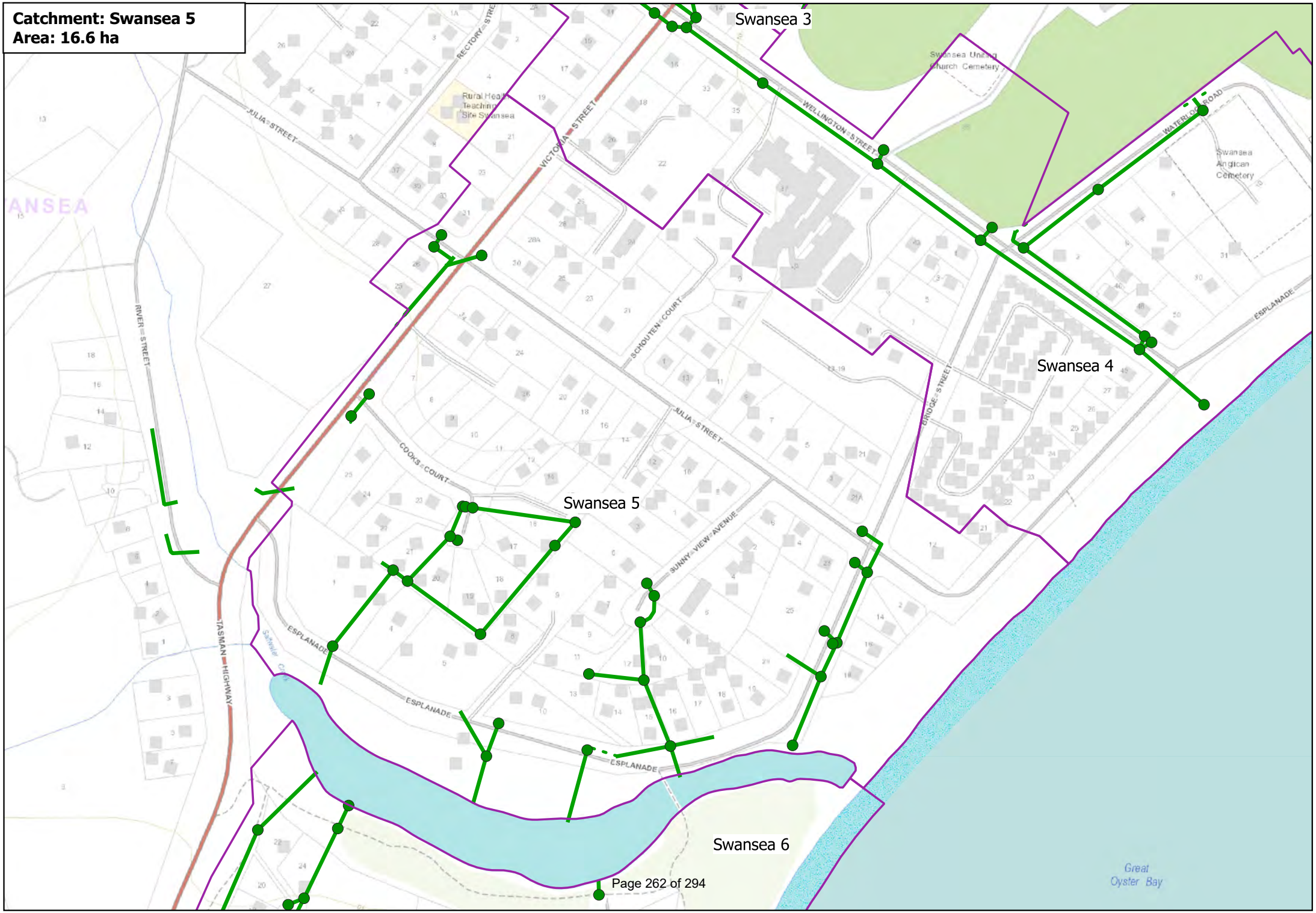
Catchment: Swansea 1
Area: 8.8 ha




Catchment: Swansea 2
Area: 11.8 ha
Swansea 2
Swansea 3
Swansea 4
TURVEYS ROAD
AMOS PLACE
OLIVIA CT
MARIA STREET
FRANKLIN STREET
NOYES STREET
WELLINGTON STREET
DOVE LANE
Jubilee Beach
Swansea Primary School


Catchment: Swansea 3
Area: 10.4 ha
Jubilee Beach
Waterloo Beach
MARIA STREET
FRANKLIN STREET
JETTY ROAD
NOYES STREET
WELLINGTON STREET
ARNOL STREET
RECTORY STREET
A3
Swansea 2
Swansea 3
Swansea 4
Swansea 5


Catchment: Swansea 4
Area: 12.7 ha
Swansea 3
Swansea 4
Swansea 5
WELLINGTON STREET
VICTORIA STREET
RECTORY STREET
NOYES STREET
FRANKLIN STREET
WATERLOO ROAD
ESPLANADE
SCHOUTEN COURT
JULIA STREET
BRIDGE STREET
COOKS COURT
SUNNY VIEW AVENUE
Swansea Anglican Cemetery
Swansea Catholic Cemetery
Lions Park
SWANSEA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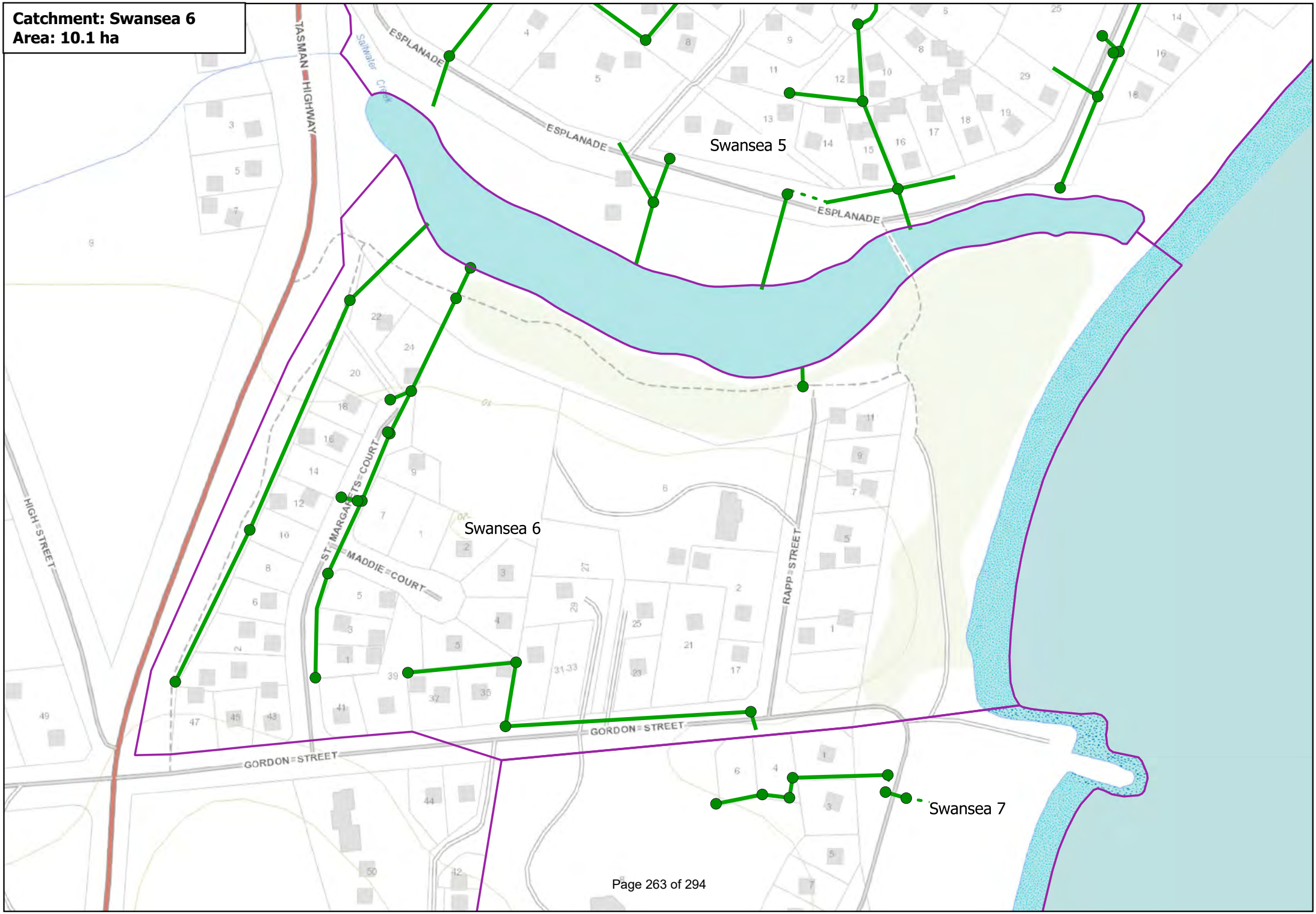
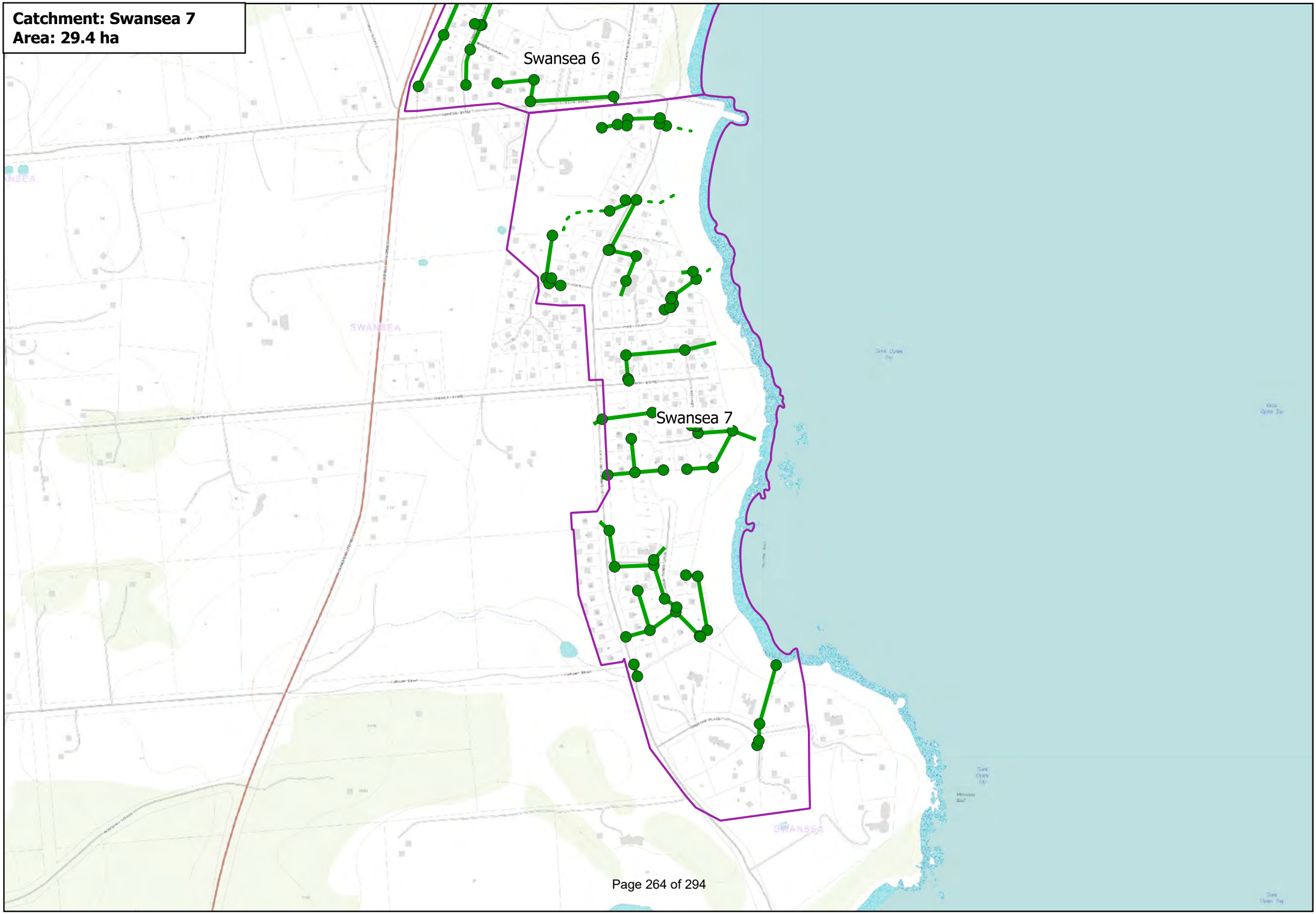
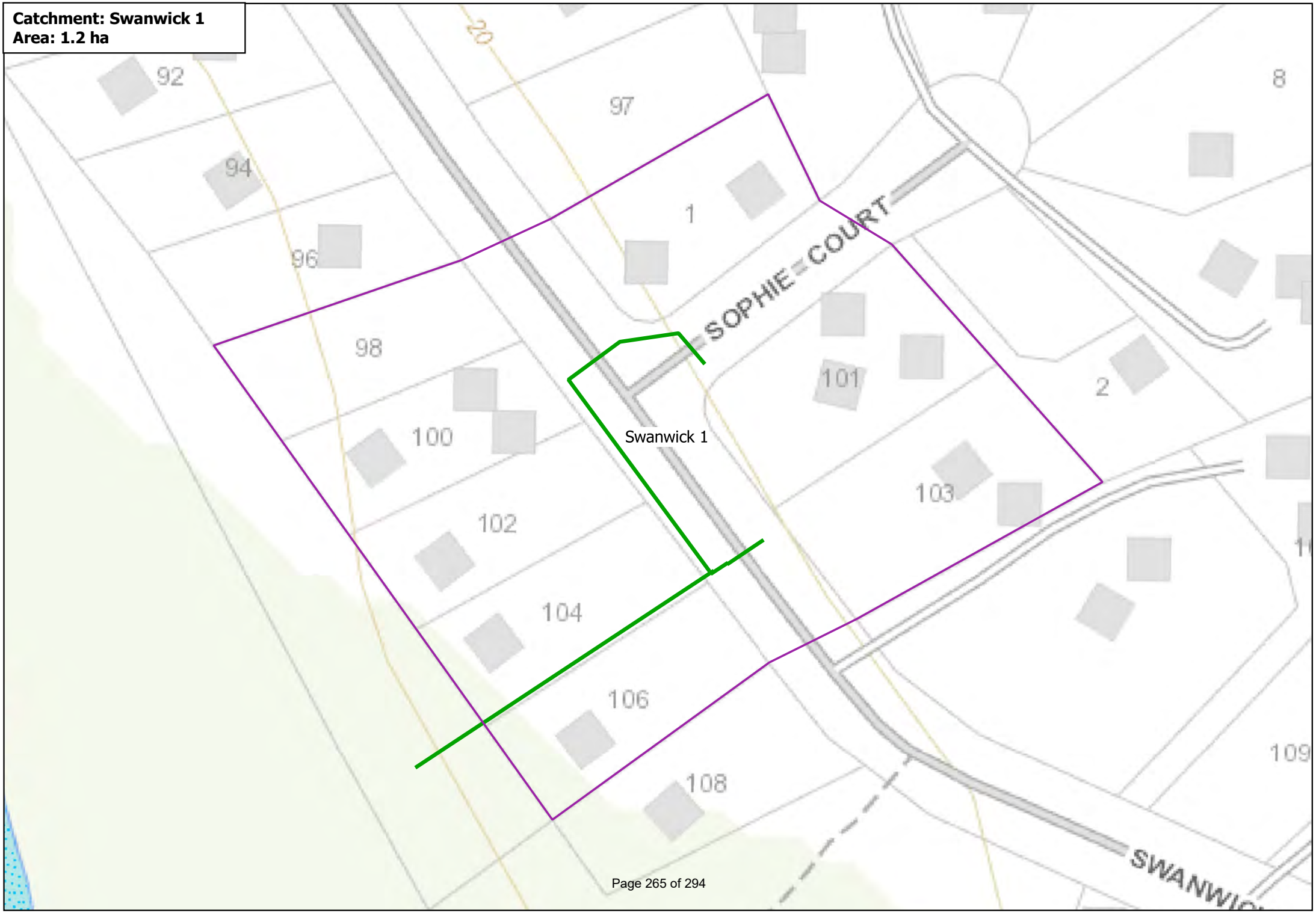
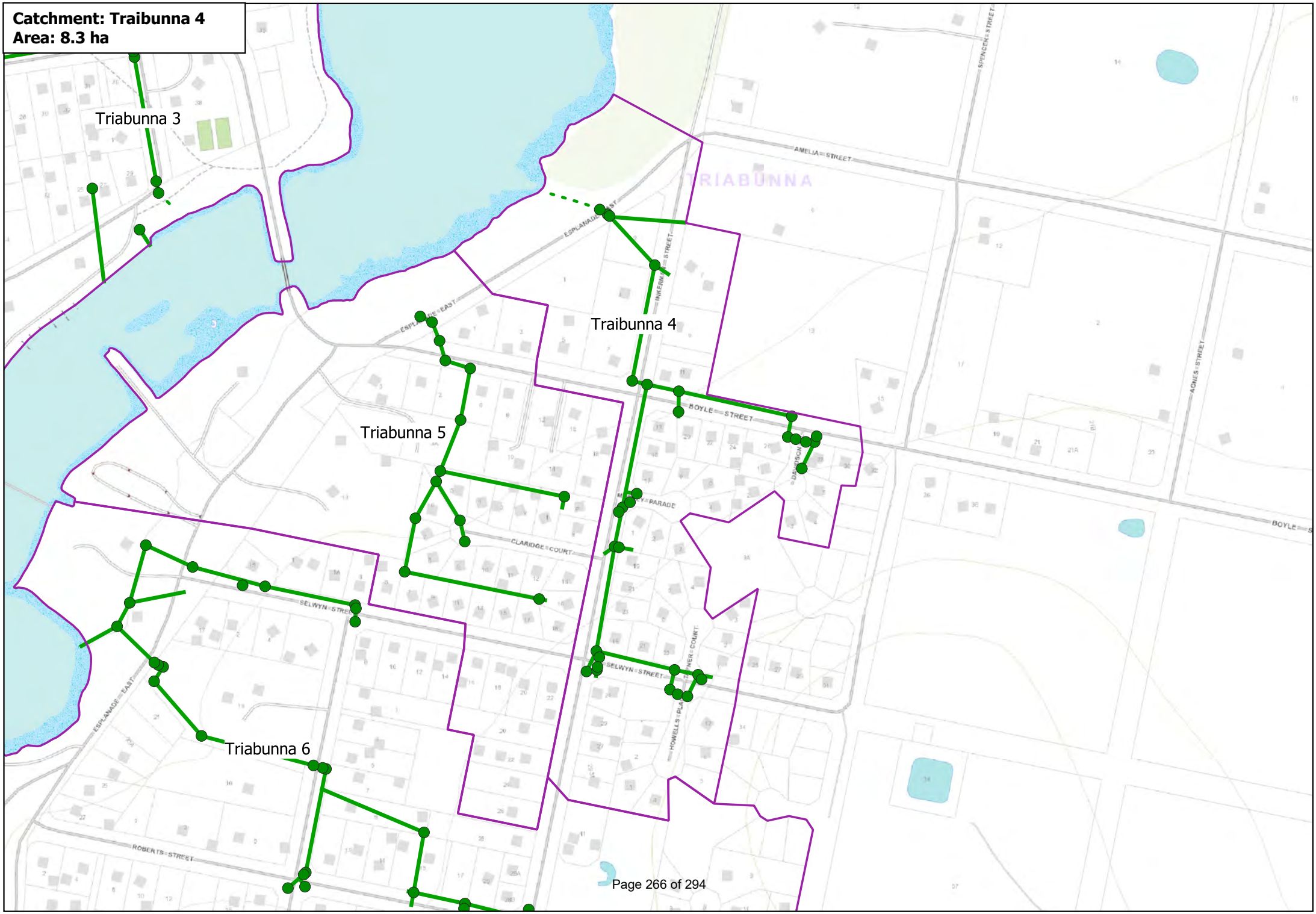
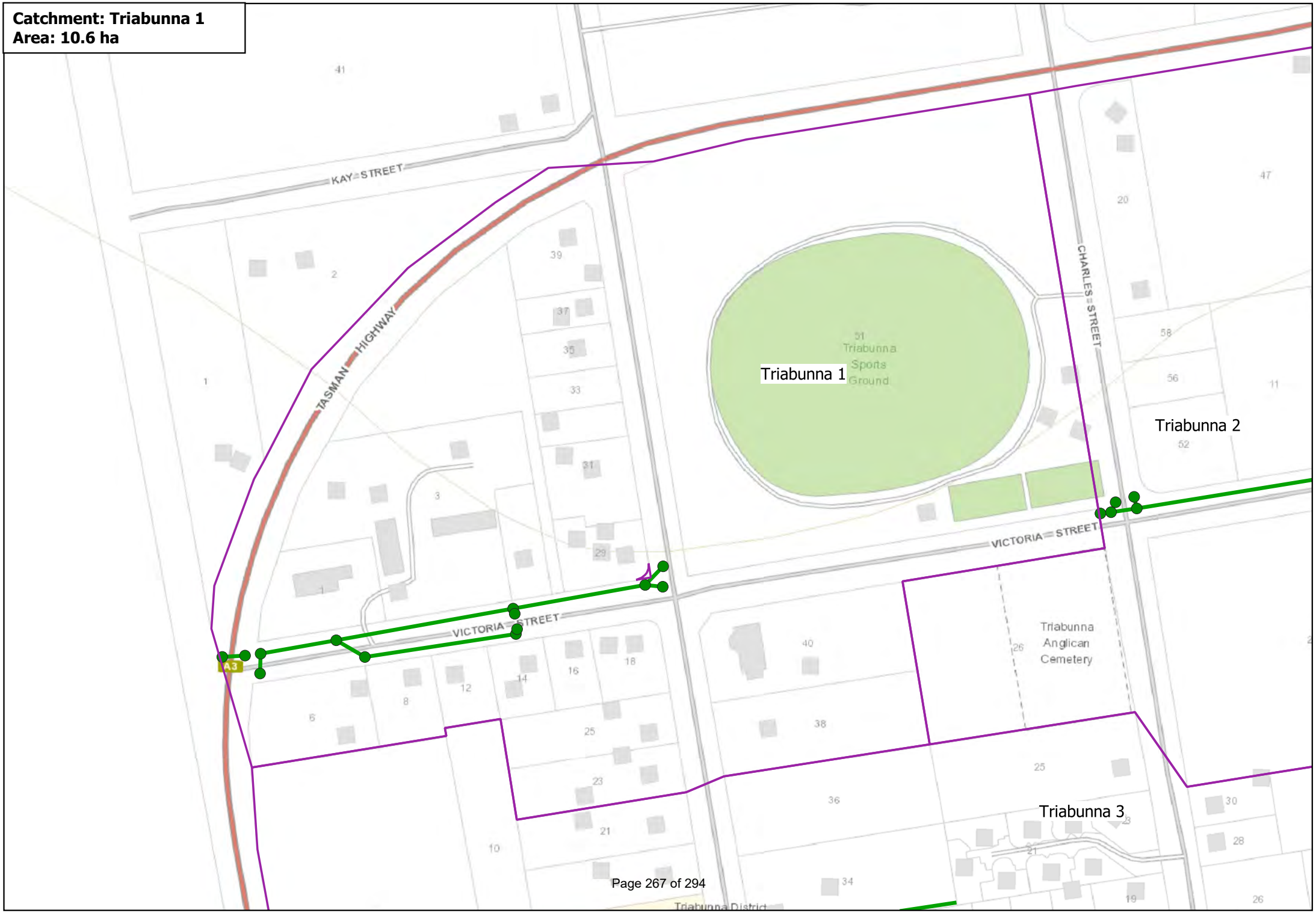
Area: 16.6 ha
Swansea 3
Swansea 4
Swansea 5
Swansea 6
JULIA STREET
VICTORIA STREET
WELLINGTON STREET
SCHOUTEN COURT
COOKS COURT
SUNNY VIEW AVENUE
BRIDGE STREET
ESPLANADE
RIVER STREET
TASMAN HIGHWAY
Great Oyster Bay

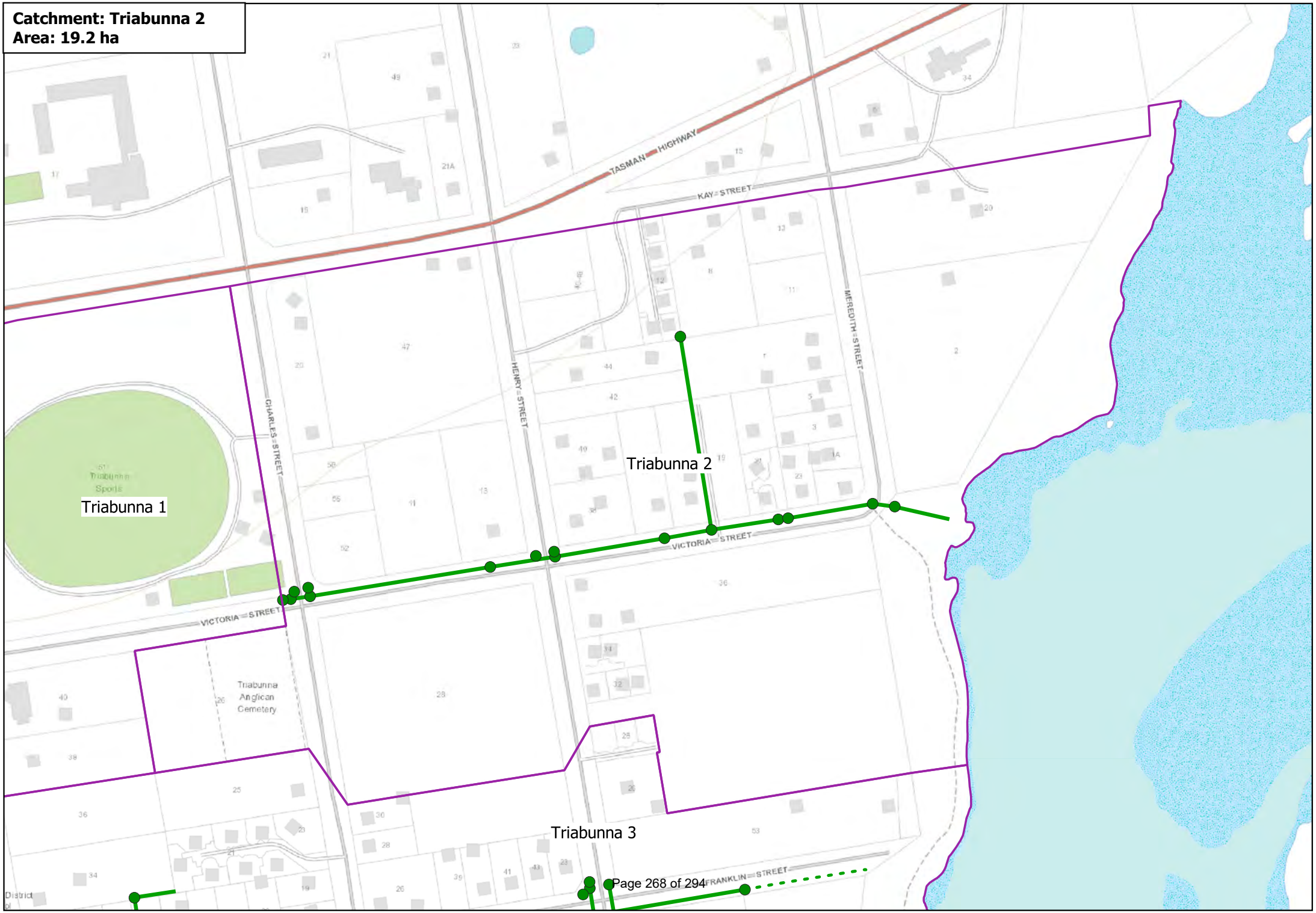

Catchment: Swansea 6
Area: 10.1 ha
TASMAN HIGHWAY
ESPLANADE
ESPLANADE
ESPLANADE
Swansea 5
Swansea 6
Swansea 7
ST MARGARETS COURT
MADDIE COURT
RAPP STREET
HIGH STREET
GORDON STREET
GORDON STREET

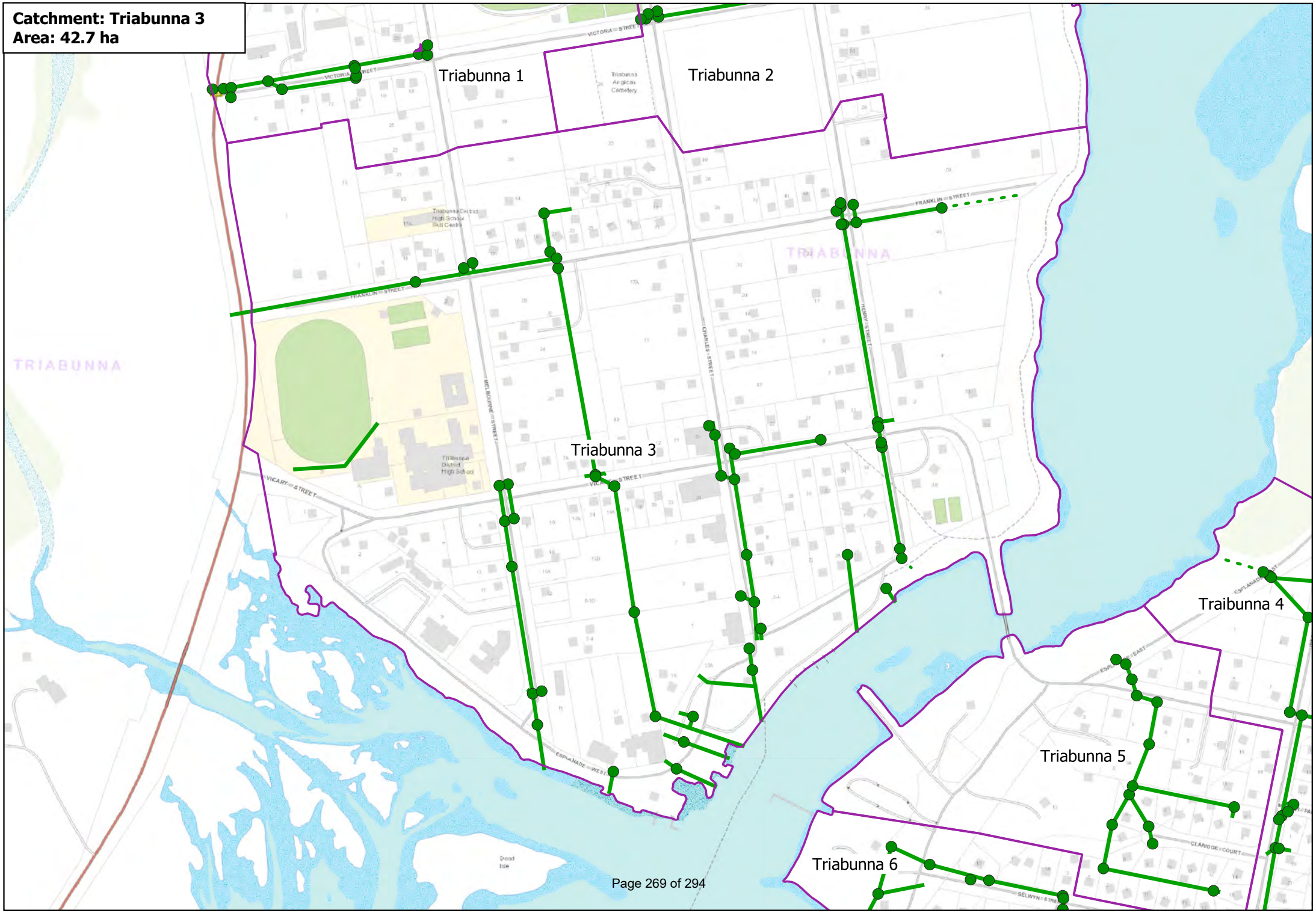

Catchment: Swansea 7
Area: 29.4 ha
Swansea 6
Swansea 7
SWANSEA
SWANSEA

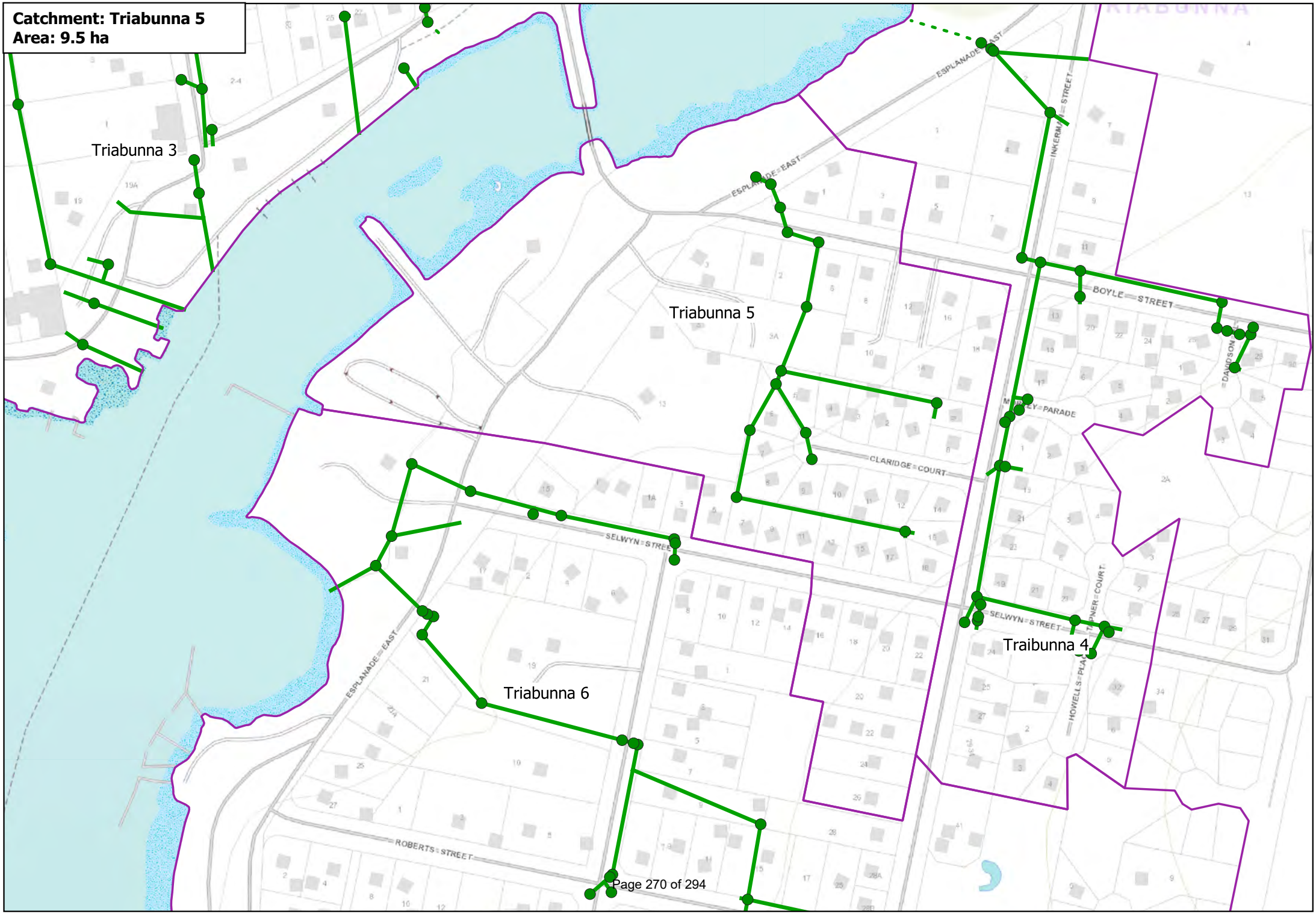

Catchment: Swanwick 1
Area: 1.2 ha
92
94
96
98
100
102
104
106
108
97
1
SOPHIE COURT
101
2
103
8
109
Swanwick 1

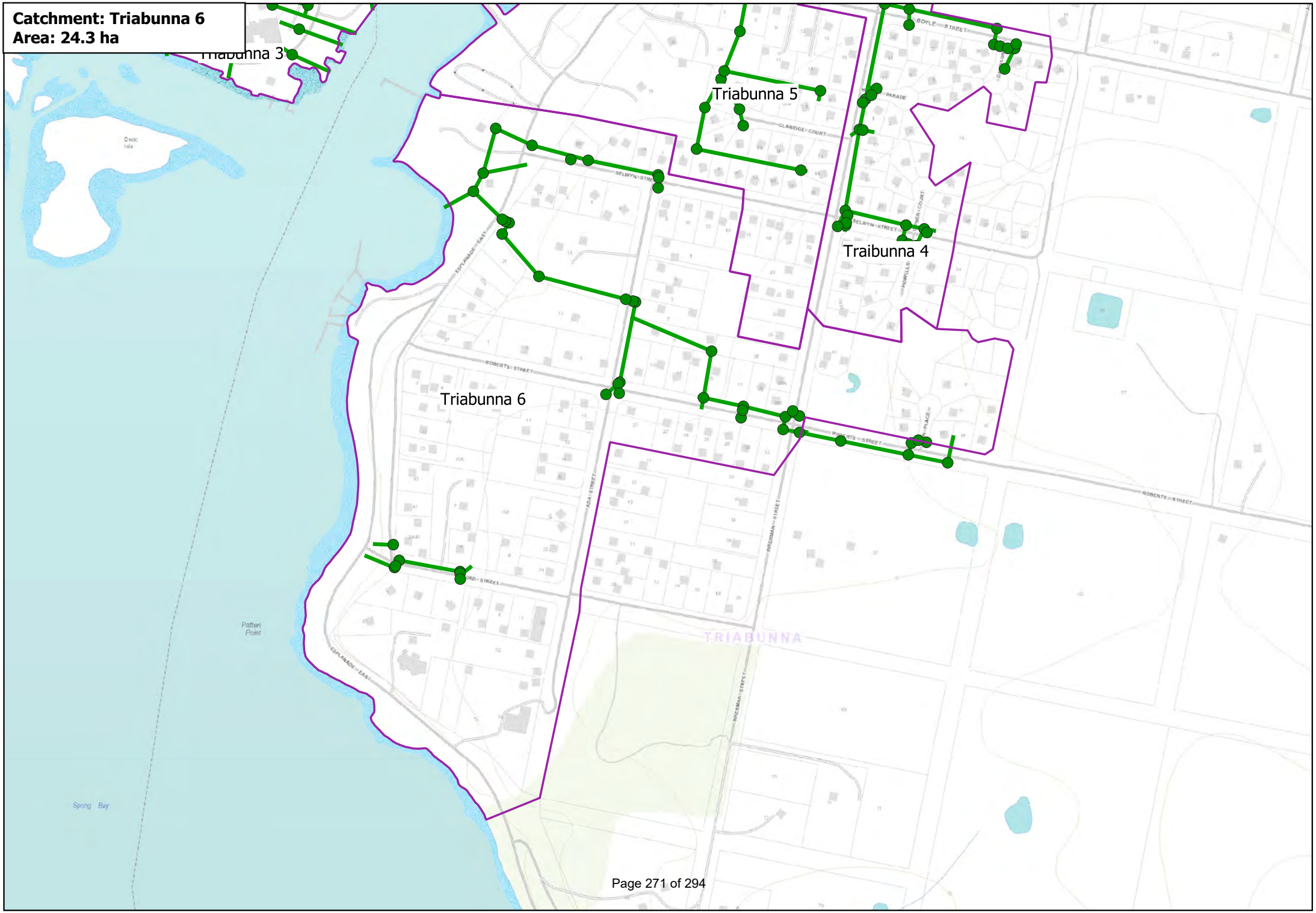

Catchment: Traibunna 4
Area: 8.3 ha
Triabunna 3
Traibunna 4
Triabunna 5
Triabunna 6
AMELIA STREET
BOYLE STREET
CLARIDGE COURT
SELWYN STREET
ESPLANADE EAST
ROBERTS STREET
TRIABUNNA


Catchment: Triabunna 1
Area: 10.6 ha
KAY STREET
TASMAN HIGHWAY
CHARLES STREET
VICTORIA STREET
VICTORIA STREET
A3
Triabunna 1
Triabunna Sports Ground
Triabunna 2
Triabunna Anglican Cemetery
Triabunna 3
Triabunna District


Catchment: Triabunna 2
Area: 19.2 ha
TASMAN HIGHWAY
KAY STREET
MEREDITH STREET
HENRY STREET
CHARLES STREET
VICTORIA STREET
VICTORIA STREET
Triabunna Sports
Triabunna 1
Triabunna 2
Triabunna Anglican Cemetery
Triabunna 3
FRANKLIN STREET


Catchment: Triabunna 3
Area: 42.7 ha
Triabunna 1
Triabunna 2
Triabunna 3
Traibunna 4
Triabunna 5
Triabunna 6
TRIABUNNA
TRIABUNNA
VICTORIA STREET
FRANKLIN STREET
MELBOURNE STREET
CHARLES STREET
HENRY STREET
VICARY STREET
ESPLANADE WEST
ESPLANADE EAST
CLARIDGE COURT
SELWYN STREET
Triabunna Anglican Cemetery
Triabunna District High School Skill Centre
Triabunna District High School
Dead Isle


Catchment: Triabunna 5
Area: 9.5 ha
Triabunna 3
Triabunna 5
Triabunna 6
Traibunna 4
ESPLANADE EAST
ESPLANADE EAST
INKERMAN STREET
BOYLE STREET
DAVIDSON
CLARIDGE COURT
SELWYN STREET
SELWYN STREET
ESPLANADE EAST
ROBERTS STREET
HOWELL'S PLAIN


Catchment: Triabunna 6
Area: 24.3 ha
Triabunna 3
Triabunna 5
Traibunna 4
Triabunna 6
TRIABUNNA
Patten Point
Spring Bay

APPENDIX C – MUNICIPALITY-WIDE STORMWATER SYSTEM ACTION PLAN

Risk / Issue / Opportunity	Discussion	Risk	Responsibility	Mitigation	Priority High – within 1 year Medium – 1 to 4 years Low – 4+ years
Stormwater system flood risks					
Climate change	Increase in rainfall intensity and frequency of severe flood events	Existing infrastructure was not designed to accommodate these changes	GSBC Works/Infrastructure & Planning	Review potential climate change in stormwater system catchment studies Consider impacts of climate change against current and proposed infrastructure, development, and zoning/rezoning	High Medium
Stormwater Assets	Stormwater asset databases/GIS is not current and does not capture all assets. Where assets have been captured information is often missing (e.g., manhole invert levels) Condition of assets unknown	A low quality of information upon which to undertake stormwater system catchment studies, base decisions and provide advice Creates uncertainty about extent and GSBC's responsibility and	GSBC Works/Infrastructure	Update stormwater asset plans/GIS with most recent and complete data. Consider undertaking rolling asset survey/data collection program Ensure accurate As Built information is received for GSBC capital and operational works as well as external developments (subdivisions etc.) and promptly added to the asset plans/GIS Undertake audit of open drains and waterways to determine extent of assets and GSBC responsibility. Add these to the asset plans/GIS, Stormwater Asset Management Plan, and maintenance programs	High Medium Medium

		current/future maintenance requirements Assets not contained in Stormwater Asset Management Plan and future liabilities not considered	GSBC Works/Infrastructure	Consider undertaking rolling CCTV program to assess condition and projected life of assets if cost/ benefit is demonstrable Upgrade DBYD registration and link to GIS system	Low Medium
Development within existing urban areas or expansion of urban areas	Additional and infill development increases runoff and impacts the stormwater system Expansion of urban areas may require stormwater system connectivity through the older areas	Systems designed based on less density or lower levels of service are impacted Development may occur in areas subject to stream flooding or in overland flow paths Overland flow paths not allowed for within new development	GSBC Works/Infrastructure & Planning - Developer	Ensure the impacts of proposed developments on the stormwater system are considered Consider potential development and infill development when undertaking Stormwater system catchment studies, or undertake new studies by developer to understand the impacts of proposed development Review proposed designs and design criteria (e.g., detention requirements) and input into the development approvals process Developers to provide adequate modelling to inform downstream impacts for their design solutions Develop flood prone area/inundation maps	High High High High

		Piping of overland flow paths		Develop policies	High
Riverine flooding	Council has no direct control or responsibility for river management although flooding from them can impact on urban areas In particular the Orford Rivulet has historically flooded urban areas	River flooding has the potential to flood properties, roads, and loss of life Development may occur in areas subject to riverine flooding	State Government, GSBC, SES, Police	Identify riverine catchments for which flood studies are needed Review emergency management procedures and work with the State authorities to help develop and maintain flood protection Develop flood awareness, education, and community resilience Consider providing prospective property owners with information on flood risk areas in the 337-certificate process	High High Medium High
Creek/Stream flooding and management	Open waterways form the majority of the major flow paths through the urban areas Often these waterways were once natural and have been gradually degraded, altered, and encroached upon as adjacent development has increased	These areas are prone to flooding Challenges exist in balancing reduced flooding through improved hydraulics against improving their natural values	GSBC Works/Infrastructure	Management regimes in place to inspect the operation and function of waterways Planning scheme and the *Drainage Act* protects waterways and requires permits for works (other than maintenance) in waterways For locations that are frequently affected by flood water, and flood water poses a risk to pedestrians or vehicles consider the installation of flood warning signs. These locations could include overland flow paths, roadways, and detention basins	Medium Medium

	Bridges, roads, and culverts provide barriers to flows and some of these waterways have been piped to allow development in close proximity to the historical flow path	and water sensitivity of the waterways Waterways are degraded in many locations and prone to weeds			
Infrastructure gaps	Infrastructure gaps exist within the stormwater system, particularly in rural townships which are becoming urbanised E.g., West Shelly Rd is highly urbanised but is reliant of shallow roadside drains to carry stormwater	Limited ability of properties zoned residential to connect to the system. This results stormwater which discharges to ground or to streets which have limited connectivity to the piped network This results in concentrated flow being	GSBC Works/ Infrastructure, Plumbing	Audit of urban areas to document where infrastructure gaps exist. Cross reference against System Flood and Risk Studies once undertaken to determine projects for inclusion in future works programs identifies locations where infrastructure gaps exist Plumbing permits provide controls for new works	Medium

		passed to neighbouring properties, or roads becoming the primary drainage asset Potential flooding of properties and roads			
Cross-connections	Interconnections between the sewer and stormwater systems These may have occurred through illegal plumbing works, lack of stormwater or sewer services, and from emergency overflows from the sewage network (e.g., pump stations)	Inflow of sewage into the stormwater network creates health and environmental risks	GSBC Works/Infrastructure Plumbing	Consider undertaking an investigation program to identify illegal connections Plumbing regulations provide legislative framework to address no compliances	Low
Flood maps	Flood maps have/will be generated through modelling undertaken in the assessment of	Flood maps/layers not transferred to GSBC GIS or	GSBC Works/Infrastructure, Planning	Consolidate flooding mapping into to a GIS flood prone/inundation area layer	Medium

	stormwater systems and through other flood studies	planning systems/layers, meaning knowledge transfer has not occurred between departments Developments may be allowed to occur without consideration to flooding or the appropriate controls having been implemented		Information can be used for assessment of developments in accordance with the Planning Scheme Inundation Prone Areas Code	
Water quality management	Waterways for a major part of the stormwater system. Natural waterways have been modified and degraded Waterways may have inputs resulting from insufficiently treated onsite wastewater disposal and from illegal sewer connections, due to	Poor water quality impacts the health of natural systems Loss of flora and fauna Potential impacts on human health and potential uses of the systems (e.g.,	GSBC Works/ Infrastructure, Planning	Develop work procedures and training to minimise impact on waterways by GSBC staff Ensure permit conditions state soil and water management requirements and ensure compliance Implement appropriate strategies to address water quality improvement Audit of the natural system to understand the existing state of these waterways	Medium Medium Medium Medium

	poor soil and water management practices at developments The quality of the water in the systems remains unknown	irrigation, recreation etc.) Bulk unsightly litter and contaminants entering the systems from commercial area, developing areas a		including a review of the natural values atlas (https://www.naturalvaluesatlas.tas.gov.au/) to identify areas of important natural values that require protection Develop a program to improve water quality in the natural systems where necessary	
Communication/community education	The community may not understand Councils rights, limits of responsibilities, and obligations specified in the *Urban Drainage Act*. Landowners/residents do not understand their own responsibilities and obligations	Complaints and customer service requests are received for issues outside Council's responsibilities or power to control. E.g., natural runoff, infiltration, private nuisance, and Department of State Growth (Highway) issues	GSBC Works/ Infrastructure	Develop a communication/consultation strategy	Medium

APPENDIX D – SPECIFIC URBAN STORMWATER SYSTEM ACTION PLAN

APPENDIX E – INTERIM URBAN STORMWATER SYSTEM ACTION PLAN

Stormwater System Management Plan Identified Works					
Project Type	**Project Name**	**Description**	**Township**	**Budget**	**Priority**
Construction	Holkham Court Stormwater System Upgrade Stage 1	Upgrade of Alma Rd and Holkham Court culverts. Upgrade of central drainage channel between 66 Alma Rd and Tasman Highway	Orford	$ 100,000	1
Construction	Holkham Court Stormwater System Upgrade Stage 2	Upgrade of Alma Rd and Holkham Court culverts. Upgrade of central drainage channel between 66 Alma Rd and Tasman Highway	Orford	$ 100,000	1
Construction	Holkham Court Stormwater System Upgrade Stage 3	Upgrade of Alma Rd and Holkham Court culverts. Upgrade of central drainage channel between 66 Alma Rd and Tasman Highway	Orford	$ 100,000	1
Construction	West Shelly Beach Road concrete drain extension	Extend concrete swale drain from SW pit at front of No. 16 to driveway of No. 12 West Shelly Beach Road	West Shelly	$ 10,000	4
Design	West Shelly Beach Road stormwater upgrade (No. 49 Rheban Rd))	Assess and design upgrade of stormwater system from No.49 Rheban Road to West Shelly Beach. This considers new pipe/overland flow linkages and expansion of the Nautilus Drive detention basin. Ref West Shelly Road stormwater investigation (ADD, March 2018)	West Shelly	$ 20,000	1
Construction	West Shelly Beach Road stormwater upgrade (No. 49 Rheban Rd))	Construction of stormwater system from No.49 Rheban Road to West Shelly Beach. New pipe/overland flow linkages and expansion of the Nautilus Drove detention basin. Ref West Shelly Road stormwater investigation (ADD, March 2018)	West Shelly	$ 50,000	1
Design	South Orford stormwater upgrade	Assess and design upgrade of stormwater system of south Orford. This will assess solutions to flooding of properties south of Esplanade. Solutions will be required to rectify: Capacity in pipeline between Mary Stet and No. 18 Walters Drive including inefficient hydraulics at Walpole Street (Ref. 46 Charles St Orford Stormwater Report (ADD, June 2018) , flooding adjacent to Esplanade which seems to be a trapped low point, the pump station in No. 11 Murphy Court, ponding in Walpole Street, near the Taswater sewage pump station, upgrade and stabilisation of outfalls to Orford Rivulet and Prosser River, consideration of overland flow path through No. 7 Prosser Street	Orford	$ 20,000	1
Design	Orford Rivulet improvements	Undertake detail design of solutions arising from the Orford Rivulet Flood Study (Pitt & Sherry)	Orford	$ 20,000	1
construction	Orford Rivulet levy and swale	construct levy with walking track and swale on north east with creek stabilisation and infill works	Orford	$ 500,000	1
Design	East Shelly Road assessment & design of open drain and culvert (No. 38)	Undertake assessment and design of solutions to control flooding at East Shelly Road in vicinity of Nos. 38 and 39. This may include roadworks/floodway to ensure flooding is retaining in formal overland flow path. Also consider road safety/rails as there is a reasonable drop-off	East Shelly	$ 10,000	3
Design	North Orford (Prosser River to Alma Rd)	Flood mapping and concept design of solutions to flooding between Prosser River and Alma Street, including Convict Rd, Riverside Drive, Tasman Highway etc.	Orford	$ 50,000	1
Design	North Orford (Prosser River to Alma Rd) Stage 1	Detailed design of solutions derived from the joint DSG/GSBC stormwater assessment	Orford	$ 25,000	1
Construction	North Orford (Prosser River to Alma Rd) Stage 1	Construction of solutions derived from the joint DSG/GSBC stormwater assessment	Orford	$ 100,000	1
Construction	Bluff Road drainage works	Upgrade open drain and driveway culverts at the end of the Bluff Road cul-de-sac	Spring Beach	$ 5,000	4

Design	Russell Street open drain	Assess repair and requirements for large open/cut-off drain above Russell Street in Orford	Orford	$ 2,500	1
Construction	Russell Street open drain	Undertake upgrades, stabilisation of upper Russell Street catchment open drain	Orford	$ 15,000	1
Construction	CNR Maria Street and Wellington Street	Upgrade pit on eastern corner to LGAT standard and remove lid and install raised grate to create field pit	Swansea	$ 2,500	4
Design	Harveys Farm Rd assessment	Assess catchment and overland flow path through properties, considering culvert sizes, new development etc	Bicheno	$ 2,500	2
Design & Construct	Gamble Crescent stormwater system upgrade/repairs	Upgrade/repair of stormwater network from Gamble Crescent down	Bicheno	$ 40,000	?
Design & Construct	James Street to Esplanade pipeline	Install new pipeline to service No. 16 James Street	Bicheno	$ 20,000	?
Design	Freycinet Drive	Undertake assessment of catchment and provide recommendations for road and stormwater improvements/repairs/upgrades in Freycinet Drive, particular near the end of the drive	Coles Bay	$ 40,000	3
Design	West Shelly Beach Road stormwater upgrade (No. 39)	Assess and design upgrade of stormwater system from No.39 Rheban Road to West Shelly Beach. This considers new pipe/overland flow linkages, kerb and channel, connectivity of West Shelly Beach properties, and subdivision of No. 39)	West Shelly	$ 20,000	1
Design	Eastcoaster Resort catchment	Considers subdivision of Lot 1 Tasman Highway through to East Coaster. Assessment to address flooding from Bernacchi Drive through East Coaster	Louisville	$ 5,000	1
Construction	Holkham Court - End of cul-de-sac kerb and channel	Installation of approx. 45m of kerb and channel at end of cul-de-sac. To control and direct stormwater to SEP	Orford	$ 7,500	4
Design & Construct	Hoods Road stormwater	Investigate diversion of Hoods Rd stormwater into open drain in No. 6 Hoods Road. If possible remove diversion.	Spring Beach	$ 2,000	3
Construction	Alice Street rock lined drain stabilisation	Rock in drain on western side of Alice Street is too small. Needs concrete stabilisation and/or replacement with larger rock	Orford	$ 10,000	3
Construction	Paradise Court roadside drain	Upgrade/repairs of open drain upstream of No. 11 to prevent direction of overflows across roadway and down driveway of No. 10	Orford	$ 5,000	3
Design	8 Ryans Road stomwater main extension/diversion	Extend or divert stormwater main which currently ends in a soakage pit at 8 Ryans Rd Spring Beach. Extension of the main through the easement in No. 8 is problematic due to terrain and would discharge to the beach. Alternative is to divert SW from the pit in Ryans Road to the open drain on the south-western side of Rheban Road. Assessment of the capacity of this open drain is required as is a catchment assessment to determine the required pipe size	Spring Beach	$ 75,000	4
Construction	Parsons Lane Freycinet	Rock lining to drains and reform road surface to falls - clear existing culverts	Freycinet	$ 30,000	1
Construction	Bicheno Esplanade 150mm main	150mm main to connect three properties and exit to existing system	Bicheno	$ 20,000	1
Construction	Orford Fieldwick lane	Rock line drains	Orford	$ 15,000	2
Construction	Orford Alma Road	Construct rock lined drains and 8 culverts nominally 1200m	Orford	$ 110,000	2

Construction	Coles Bay kerb	Install new kerb and pit to link existing kerbs across the front of the Kayak hire shop	Freycinet	$ 30,000	2
Construction	Swanport floodway upgrade	Strip Road floodway concrete upgrade	Swanport	$ 30,000	2
design	Happy Valley Lane	Stormwater coming to the end of Happy Valley Lane has no exit but overland at No.2. Easement required and drain to connect at the bottom of that block in No.3	Spring Beach		2
Construction	Happy Valley Lane	Pit and main to connect at bottom of No.3 Happy Valley Lane	Spring Beach	$ 15,000	3

GLAMORGAN SPRING BAY COUNCIL

AUDIT PANEL CHARTER

1. **Objective**
2. **Principal purpose**
3. **Membership**
4. **Chairperson**
5. **Remuneration**
6. **Annual Work Plan**
7. **Meetings**
8. **Reporting**
9. **Review**

Annexure A: Work Plan

Annexure B: Meeting Procedures

Date Adopted by Council: 28.04.2020 (Previous version Feb 2016
Due for Review June 2024

GLAMORGAN SPRING BAY COUNCIL

AUDIT PANEL

CHARTER

1. Objective

The Audit Panel is established under Section 85(1) of the *Local Government Act 1993* and as directed under the *Local Government (Audit Panels) Order 2014* and the *Local Government (Audit Panels) Amendment Order 2015.*

The primary functions of the Audit Panel (the Panel) is to assist Elected Members (Councillors) of the Glamorgan Spring Bay Council (the Council) in fulfilling Council responsibilities relating to the review of the Council's performance and effectiveness as well as safeguarding its long-term financial position.

2. Principal Purpose

To assist the Council in fulfilling its responsibilities relating to the review of the Council's performance and compliance in the following areas:-

- The Annual Financial Statements of the Council accurately represent the state of affairs of the Council.
- That the Strategic Plan; Annual Plan; Long-Term Financial Management and Strategic Plans; Long-Term Strategic Asset Management Plan; Asset Management Strategic Plan; and Asset Management Policy are integrated and the processes and assumptions under which those plans were prepared are documented.
- Reviewing accounting procedures, internal controls, anti-fraud, anticorruption and risk management systems, controls and policies that are in place which safeguards the Council's long-term financial position.
- Compliance with all provisions of the *Local Government Act 1993* and any other relevant legislation.
- Reviewing the effectiveness of previous recommendations made by the Panel.

The Panel is to serve as an independent and objective party to review all financial information presented to their local community (as outlined above).

3. Membership

The membership of the Panel will comprise of **4 members**, whereby 2 members must be independent persons (including the independent chairperson).

An 'Independent Person' is a person who is not a Councillor, employee of Glamorgan Spring Bay Council or an employee of another Council.

The following persons are eligible to be members of the Audit Panel:-

(a) A Councillor, other than the Mayor, of Glamorgan Spring Bay Council;
(b) An independent member of another Council's audit panel;
(c) An independent member appointed by Council with relevant knowledge and expertise.

The Glamorgan Spring Bay Council is to appoint all members to its Audit Panel with all independent persons having the relevant knowledge and experience.

A member of the Audit Panel will be appointed for a period not less than one year and not more than four (4) years. A Councillor representative must stand down at the next election following the appointment of the Audit Panel but shall be eligible for re-appointment if re-elected to Council.

4. Chairperson

The Chairperson must be an Independent Person.

If the Panel includes more than one Independent Person, then the Glamorgan Spring Bay Council is to directly appoint the Chairperson

5. Remuneration

Remuneration for independent members of the panel will be reviewed annually and set at agreed rates, subject to Council approval.

6. Annual Work Plan

The Panel is to develop an Annual Work Plan that includes, but is not limited to, a schedule of meetings and the known objectives for each meeting scheduled (see Annexure A).

7. Meetings

The Panel will meet not less than four (4) times a year. The Panel may hold additional meetings as and when required in order to fulfil its functions. Any two (2) members of the Panel or the General Manager may request a meeting at any time.

The General Manager (or Delegate) and Finance Manager (or Delegate) with secretariat support must attend all meetings.

Reasonable notice will be given of the meetings to all members of the Panel and an agenda is to be provided with any relevant attachments.

Meeting procedures have been developed to inform all members and Council on how the Panel will perform their functions (see Annexure B).

8. Reporting

The Panel will provide a written report (minutes) to the next Ordinary Council Meeting or as soon as practical following a meeting, concerning the outcomes and/or recommendations made by the Panel which will then be noted and/or accepted by Council.

All agendas and Panel papers will be circulated to Panel members only and are to be kept confidential at all times.

8. Review

This Charter will be reviewed at least every 4 years.

Approved:-

Mayor Debbie Wisby

Dated:

GLAMORGAN SPRING BAY COUNCIL

AUDIT PANEL

ANNEXURE A - ANNUAL WORK PLAN

The Audit Panel for "Glamorgan Spring Bay Council" is established under Section 85(1) of the *Local Government Act 1993* and as directed under Item 10 of the *Local Government (Audit Panels) Order 2014* and the *Local Government (Audit Panels) Amendment Order 2015.*

The Panel must develop an Annual Work Plan that includes, but is not limited to, a schedule of meetings and the known objectives for each meeting so scheduled. The Panel must meet not less than four (4) times a year and the purposed schedule of compulsory meetings for the Panel and items for discussion (but not limited to) as follows:-

Quarter	Scheduled Meeting Date	Scheduled Objective
January – March	March	Review of Long-Term Financial Strategic and Management Plans; Asset Strategic and Management Plans and Policies; Strategic Plan (if necessary) before Annual Budget process begins.
April – June	June	Review Annual Plan prior to adoption; compliance check against all relevant legislation; previous motions and recommendations made by Council to be in place prior to EOFY (if applicable).

July – September	September	Review of all financial system controls - both externally and internally, policies and practices safeguarding Council's long-term financial position including Risk Management and Anti-Fraud measures.
October - December	November	Review of Annual Financial Statements for accurate representation of the affairs of Council; and the Auditor-General's Report with suggested actions and recommendations to be implemented.

The Panel may hold additional meetings as and when required in order to fulfil its functions with any two (2) members of the Panel or the General Manager may request additional meetings.

GLAMORGAN SPRING BAY COUNCIL

AUDIT PANEL

Annexure B - Meeting Procedures

The Audit Panel for "Glamorgan Spring Bay Council" is established under Section 85(1) of the *Local Government Act 1993* and as directed under Item 9 of the *Local Government (Audit Panels) Order 2014* states:-

The Council may provide to its Audit Panel a charter relating to:–

(a) the manner in which the Audit Panel is to perform its functions; and
(b) the procedure of the Audit Panel in respect of its meetings.

The following conditions and guidelines apply to all meetings held by the Audit Panel:-

1. An Audit Panel is to hold not less than four (4) meeting in each financial year. Additional meetings can be held as and when required in order to fulfil its functions. Any two (2) members of the Audit Panel or the General Manager may request additional meetings.
2. A quorum is constituted by a majority of the total number of Panel Members appointed.
3. At least one Panel Member who is an Independent Person is to be present, otherwise there is no quorum present at the meeting.
4. The General Manager (or delegate) is to attend all meetings.
5. The Finance Manager (or delegate) is to attend all meetings.
6. The Audit Panel may invite or allow any Councillor or employee of "Glamorgan Spring Bay Council" to attend one or more meetings.
7. Items 5 and 6 above **do not** apply if the Audit Panel determines that the meeting is to be held in private.
8. The Audit Panel may regulate its own proceedings.
9. All minutes, recommendations and conclusions of Audit Panel meetings are to be provided within a written report and submitted to the next Ordinary Council Meeting or as soon as reasonably practicable.
10. Council is to provide secretariat support to, and all necessary funding required by, the Audit Panel to perform its functions.

MINUTES OF MEETING

Committee: Glamorgan Spring Bay Council Audit Panel
Chairperson: Mike Derbyshire
Executive Officer: Greg Ingham
Meeting Date: Wednesday 30th Nov 2021 10am
Location: Council office Triabunna

Invitees:

Mike Derbyshire	Director Bentleys Tasmania Audit Pty Ltd	Present
Heather Salisbury	Independent panel member	Present
Greg Ingham	GSBC General Manager	Present
Marissa Walters	GSBC Consultant Accountant	Present online
Elysse Blain	GSBC Director Corporate & Community	Present
Clr Rob Churchill	GSBC Councilor	Present
Clr Cheryl Arnol	GSBC Councilor	Present

1. **Preliminaries**
   a) **Apologies** Nil.
   b) **Conflict of interest declaration**
      i. Nil.
      ii. Chair no longer an Auditor at Midlands Council.
2. **Confirmation of previous minutes 22 Sept 2021**
      i. Adopted.
3. **Outstanding items from Previous meeting**

	Item	Who	Status
a	Arrange risk assessment with Wise Lord Ferguson	Greg	Underway
b	Outstanding items from last year TAO audit follow up and assist with handover	Mike	Underway
g	Request for PPRWS information to be included on P&L for 2021-22 accounts	Elysse	Underway
m	Debtors review	Greg	Underway

4. **Financial Reports YTD October 2021**
   a) Balance sheet is looking stronger at each iteration. Debt is down $150k. Interest bearing loans are slowly reducing. Cashflow is net positive and expected to remain stable.
   b) Most evident P&L variances between actual and budget are due to timing, as the budget profile doesn't breakdown cost consumption by month.
   c) No issues noted
   d) There is interest in obtaining information on the timing of rate collection vs previous year. Analysis requested following next installment cycle. Action Elysse
   e) Request to share information on the capital program progress for the next Panel meeting. Action Elysse.

5. **Memorandum of Audit Findings – 2021 Audit**
   a) The TAO 2021 annual financial audit signed report has been received.
   b) The report shows a very welcome good result of which the Panel is very pleased. It is significant that no new findings were reported. 7 have been carried forward from the prior year (2020) only to remind what they were and not continuing issues. These will drop off next year.

c) The main amendments were due to revaluations. Most were assets build by the community. Over time these have been treated differently, and changes were to bring these back in line.
d) Noted that the TAO letter omitted the quantum of items adjusted, however this is indicative that there weren't many changes made.
e) Issue a copy of the letter from TAO out of session to the committee. Action Elysse
f) Recommended that the Audit report go to Council. Recommendation that minutes of the November Panel meeting go to Jan Council meeting. Action Elysse

6. Audit panel Performance Evaluation

a) Whilst the Panel Charter doesn't require a performance evaluation, it is considered good practice, particularly as a self-assessment. Will provide Council with more awareness of financial checks and balances underway.
b) Needs to be simple and should be performed every 3 years or so. It is quite an exercise to implement. Will investigate templates and various vehicles and content to enable a rollout.
c) Aim to have done prior to end of financial year. Action Elysse

7. General Managers Update – General, legal, risk

a) Commercial business discussion, medical, marina. Require strategic attention on ensuring sustainability, with a balance of value-add outcome requirements and risk mitigation.
b) Locum participation considerable impacted bottom line. Require strategy on ensure ability to raise income to cover costs. Value added by availability of locums has been recognized by the community.
c) Marina income is too low and requires strategies in place to assist to future proof income streams and ability to manage cost shocks. Risk lies beyond the 12-month time horizon.
d) Noted no other significant risks or legal issues.
e) Post PID action list to issue to Panel members prior to next Panel meeting. Action Elysse

8. Administration and support for audit panel / annual work plan

a) Current Panel Chair had been in place for 6 years. Propose to hand over Chair position to Independent Panel member. Will require ratification by Council. Propose to raise at January Council meeting. Action Elysse
b) Current Chair can remain as independent Panel member until Sept 2022, then will seek a new independent member at that time.
c) Audit Work Plan can be reviewed following changes to Chair. Propose to review agenda contents, minutes process, timing of meetings, and what other items can be added/removed.

9. Items referred to audit panel (if any)

a) Nil

10. Other business

a) Debtors – at the next meeting provide a copy of the rates debtors ageing and general debtors ageing for visibility on process and status.
b) Feedback provided from Councillor Breheny following the sign-off the audit items over the year advised was pleased that items are getting ticked off, also thankful of the Panel Chair summary report being most useful and it is important to let council and the community know the progress of the Panel activities.
c) Cyber awareness paper issued for Council information. Tightening up of security processes underway, including training for staff issued.

11. Next meeting – 10am Tue 15 Feb 2022

12. Close - 11.45am

Actions Summary:

Mike:	2b	Greg	2a, 2m	Elysse	2g, 4d&e, 5f&g, 6c, 7e, 8a