Hi [redacted],

JMG will provide a full package of docs for this alternate driveway, they are just waiting for a few minor details to be resolved. I was wondering if you could have a quick look at the attached and advise of issues or items that need discussion. I have also just received the planning permit and a threatened species permit that I will send through. This package of work would be delivered as part of our tender so could you please confirm what documents/info is required from JMG to meet the RFT/P&S requirements.

Thanks,

[redacted]
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: [redacted]@stategrowth.tas.gov.au / MB: [redacted]
www.stategrowth.tas.gov.au

Courage to make a difference through

TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

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From: Out of scope @pittsh.com.au>
Sent: Thursday, 8 August 2024 4:10 PM
To: Out of scope
Subject: FW: Airport Interchange As builts
Attachments: Out of scope

Hi Out of scope

Refer below from our designer, advising that we will need a ground survey of the tie-in. On this basis can you confirm that the Department will pay the additional cost. You will note a level difference of approximately 150 mm between the Pitt & Sherry Design and the Hazell Bros/Cardno Design. This can be accommodated but does not appear to be in accordance with the requirements of the attached Design Brief issued to Hazells (Item 3 iii)

Regards

Out of scope

Mobile Out of scope | Out of scope @pittsh.com.au | Connect on LinkedIn
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

From: Out of scope @pittsh.com.au>
Sent: Monday, August 5, 2024 12:32 PM
To: Out of scope @pittsh.com.au>
Subject: RE: Airport Interchange As builts

Out of scope,
I've spent some time looking through the suppled as built information. There are PDF's and 2D CAD files, so no 3D information.

Therefore I had compare the design information between our previously documented design and the Interchange design via PDF. The only compatible/similar information between the two documented sets was the design profiles and from what I can tell there seems to be a difference between the design levels for the carriageway surface.

The below are some screen shots detailing an example of the differences at approximately the airport runway lights – Airport to Causeway CH.1010 – Interchange CH.4540

I assume there to be approx. 150mm difference between designs, the Airport-Causeway project design at the higher level. The obvious difference at the below is that at the compared location the Airport Interchange design has a vertical curve, where the Airport to Causeway does not.

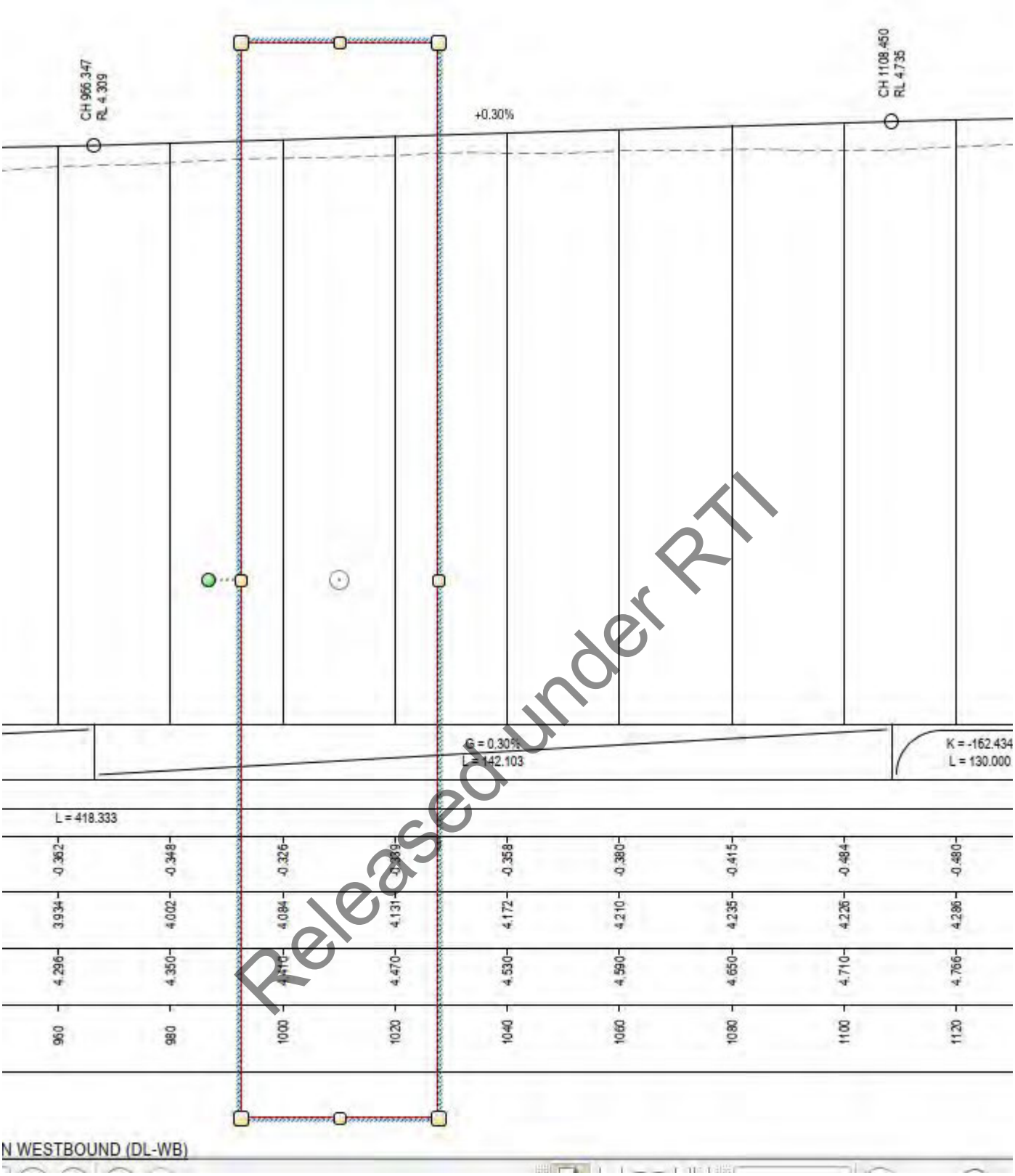
Therefore I suggest that we need a survey of the finished surface.

Interestingly the pavement design varies between the overlapped designed portions.

Cheers Out of scope

Airport Interchange below:

Airport to Causeway below:



From: Out of scope @pittsh.com.au>
Sent: Thursday, August 1, 2024 5:35 PM
To: Out of scope @pittsh.com.au>
Subject: FW: Airport Interchange As builts

Hi Out of scope

DSG have asked if there is sufficient info in the as builts to avoid the need for a ground survey of the tie-in. I'm guessing the answer is no, but could you check and see if there any revised levels there.

Regards

Out of scope

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PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

From: Out of scope
Sent: Thursday, August 1, 2024 5:22 PM
To: Out of scope @pittsh.com.au>
Subject: Airport Interchange As builts

Hi Andy

As builts are here Out of scope

Regards

Out of scope

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Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

From: [redacted]@pittsh.com.au>
Sent: Wednesday, 7 August 2024 1:53 PM
To: McIntyre, Denise; [redacted]
Subject: FW: Airport Interchange to Midway Point Causeway
Attachments: [redacted] Revised Design Reduction RevB.pdf

Hi Denise and [redacted]

This is better and probably the best we can do given your timeframe.

Regards

[redacted]

Mobile [redacted] | [redacted]@pittsh.com.au | Connect on LinkedIn
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

From: [redacted]
Sent: Wednesday, August 7, 2024 1:45 PM
To: [redacted]
Subject: RE: Airport Interchange to Midway Point Causeway

Hello [redacted],

Please find attached the revised map and shapefiles.

Regards,

[redacted]

From: [redacted]@pittsh.com.au>
Sent: Wednesday, August 7, 2024 1:04 PM
To: [redacted]@pittsh.com.au>
Subject: RE: Airport Interchange to Midway Point Causeway

[redacted]

Mobile [redacted] | [redacted]@pittsh.com.au | Connect on LinkedIn
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

From: [redacted]
Sent: Wednesday, August 7, 2024 1:01 PM

To: Out of scope @pittsh.com.au>
Subject: RE: Airport Interchange to Midway Point Causeway

Hi Out of scope

Client has come back to me with a couple of changes – are you able to get onto these straight away. They have a meeting to discuss this at 3 pm.

Regards

Out of scope

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Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

From: Out of scope @pittsh.com.au>
Sent: Monday, August 5, 2024 3:06 PM
To: Out of scope @pittsh.com.au>; Out of scope @pittsh.com.au>
Subject: RE: Airport Interchange to Midway Point Causeway

Hello Out of scope,

Please find attached the draft map. It has taken about 2 hours to draft given the large amount of data. Out of scope I can edit as required.

Regards,

Out of scope

From: Out of scope @pittsh.com.au>
Sent: Monday, August 5, 2024 11:22 AM
To: Out of scope @pittsh.com.au>
Cc: Out of scope @pittsh.com.au>
Subject: RE: Airport Interchange to Midway Point Causeway

Gday Out of scope – yes we do.
Out of scope has capacity and will get started if you like.
Cheers, Out of scope

pitt&sherry Out of scope

Out of scope

Mobile Out of scope | Out of scope @pittsh.com.au | pittsh.com.au

---

From: Out of scope @pittsh.com.au>
Sent: Monday, August 5, 2024 10:31 AM
To: Out of scope @pittsh.com.au>
Subject: Airport Interchange to Midway Point Causeway

Hi Out of scope

Is there someone in your team who can produce a GIS map reflecting the key aspect highlighted below in emails from Out of scope and Out of scope. Relevant design information can be obtained form the autocad files in this link.
Duplicate
In summary we want to show how the revised design reduces impact on the Milford property so want to show the

i. Historic boundary, original design acquisition boundary, proposed new acquisition boundary (light blue, magenta and green lines in extract below)
ii. Pavement and edge and all design features south of the pavement including batter and access track along the Milford frontage.

If you could assign some one to this today that would be much appreciated. I can be contacted on Out of scope and can then get to my computer to share screens if you need clarification.

Regards

Out of scope

Mobile Out of scope | Out of scope @pittsh.com.au | Connect on LinkedIn
Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

From: Out of scope @stategrowth.tas.gov.au>
Sent: Friday, August 2, 2024 5:19 PM
To: Out of scope @pittsh.com.au>; Out of scope @stategrowth.tas.gov.au>
Subject: RE: Out of scope shared "HB19197-P10 - Standard" with you

Hi Out of scope

Unfortunately, I'd suggest compliance with Out of scope's request is the best approach as negotiating an alternative approach doesn't seem to progress matters and supports the criticism that we haven't provided what Out of scope has requested. Furthermore any meeting to explain and respond to questions would need to be minuted and provide as a true record of the conversation.

I'm happy to include your notes below along with the appropriate drawing/GIS file but it has to be single file and needs to be decluttered including removing the new road design but leaving only the old and new boundary and works outside the road formation ie retaining the edge of pavement and batters and beyond.

I believe Out of scope requires the file in spatial format so it can be overlayed on her own aerial backdrop (perhaps from Google, Open Maps, the List or other) and not rely on ours.

Regards

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
PH: Out of scope | MB: Out of scope
www.stategrowth.tas.gov.au

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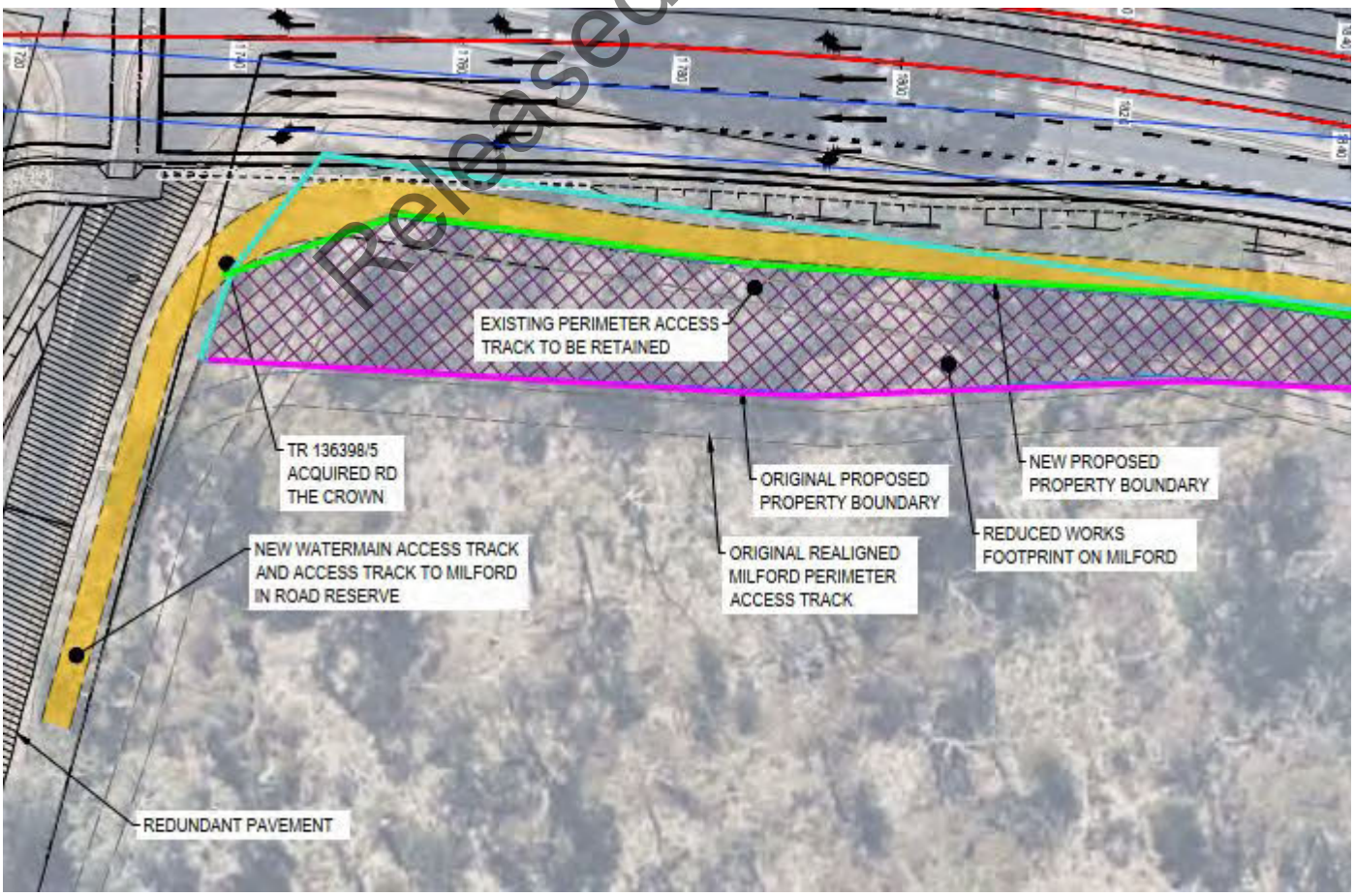
respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope @pittsh.com.au>
Sent: Friday, August 2, 2024 3:49 PM
To: Out of scope @stategrowth.tas.gov.au>; Out of scope @stategrowth.tas.gov.au>
Subject: RE: Out of scope shared "HB19197-P10 - Standard" with you

Hi Out of scope

This is very tedious. It would be much simpler for this to be explained to Out of scope and respond to any questions she might have. I do think the revised drawing is better on the aerial background. I'll see if I can get the attached drawing transferred to a GIS format and remove some notes. I think the key points for Out of scope are

i. Light blue line historic boundary (current fence line)
ii. Magenta line – compulsory acquisition associated with the original dual carriageway design
iii. Lime green – proposed new boundary line under the realignment
iv. Hatched area between lime green and magenta – land to be returned to Milford. This is approximately 180 metres long and 14 m wide at the widest point. The area is approximately 1350 m^2 subject to cadastral survey.
v. The solid yellow line represents the access from Pittwater road which will continue into the highway reserve to access the sections of the watermain that are in the road reserve. This access will also connect to the existing Milford perimeter track located immediately to the south of the lime green boundary.
vi. All other aspects of the realignment design are the same as the original design just moved by up to 14 metres to the north.
vii. All items/facilities previously agreed with Out of scope will be retained in the new design including but not limited to – fence type, sliding gate to access the perimeter fire/service track, details at the current highway access at chainage 2360, alteration of 180 m of perimeter access track west of the access at ch 2360.
viii. Under the previous design approximately 80 metres of the watermain east of Pittwater Road was to be moved into the road reserve. Under the realignment this will reduce to approximately 15 metres. A new water connection to the Pines will be provided as previously agreed.



Regards

Out of scope

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Hobart Office — Level 1, Surrey House, 199 Macquarie Street
PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466
pittsh.com.au

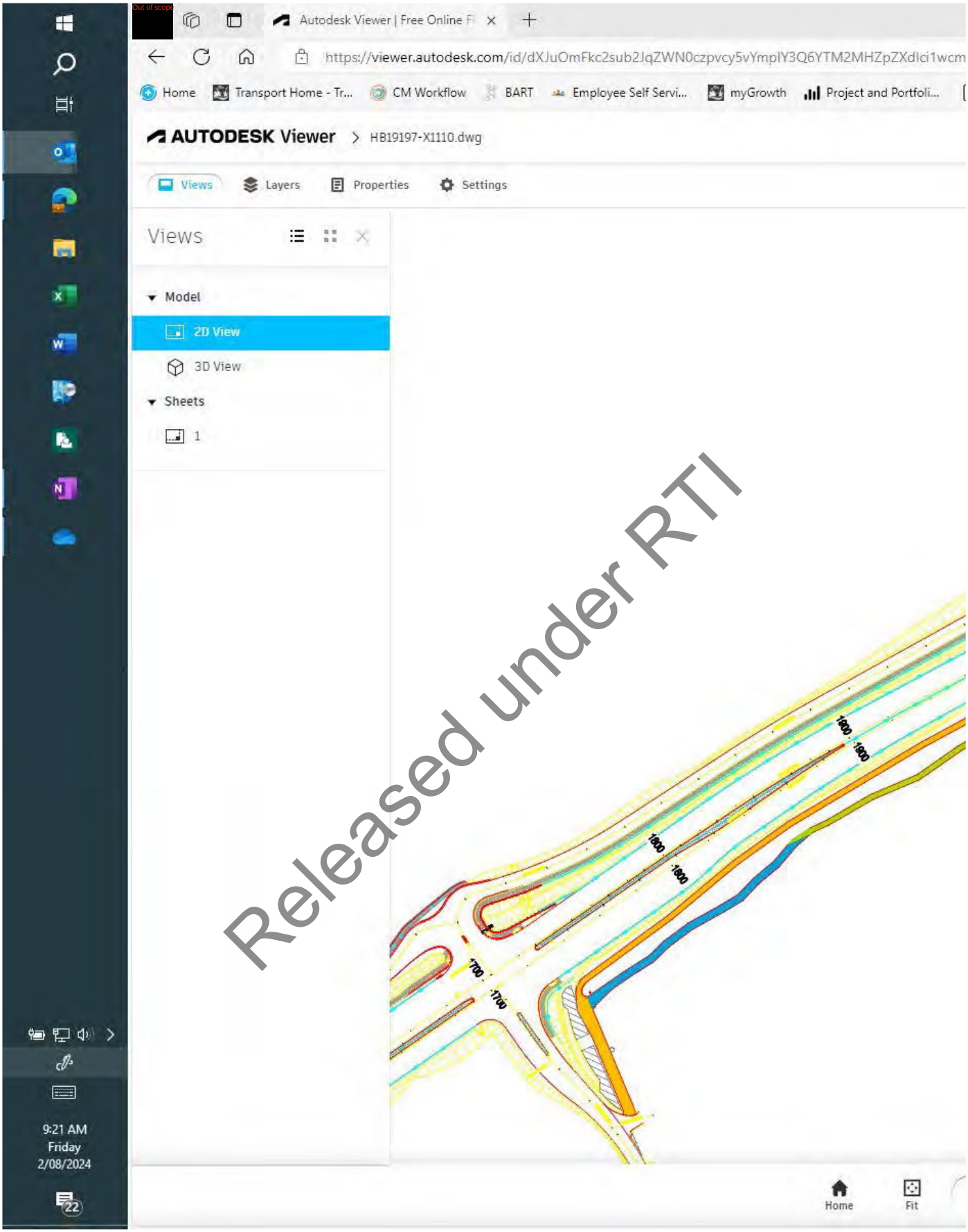
From: Out of scope @stategrowth.tas.gov.au>
Sent: Friday, August 2, 2024 9:27 AM
To: Out of scope @pittsh.com.au>
Cc: Out of scope @stategrowth.tas.gov.au>
Subject: RE: Out of scope shared "HB19197-P10 - Standard" with you

Hi Out of scope

I'd rather send Out of scope a single file rather than the full set and from my limited understanding the attached file (and see below screen shot of viewer) appears to be the most suitable however it is unclear as to which is the old and new boundaries.

I'm assuming the orange path is the new service track and sits directly on the new property boundary with eh old Tas water access track being the blue/green path but can you please confirm and/or provide/suggest another DWG file that will provide the information Out of scope is seeking noting here request was as follows:

So that I can understand what I am being asked to consent to, and given the complexity of the technical drawings and what appear to me to be considerable changes, plus the difficulty of viewing them on a laptop screen, can you please provide me with a spatially accurate map showing the Milford land title with DSG's proposed works (full extent of all works including any buffers being applied) proposed, including a shapefile of the same areas shown on the map(s)? (I might also require full size hard copies, but let's start with these pls).



Regards

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
PH: Out of scope | MB: Out of scope

www.stategrowth.tas.gov.au

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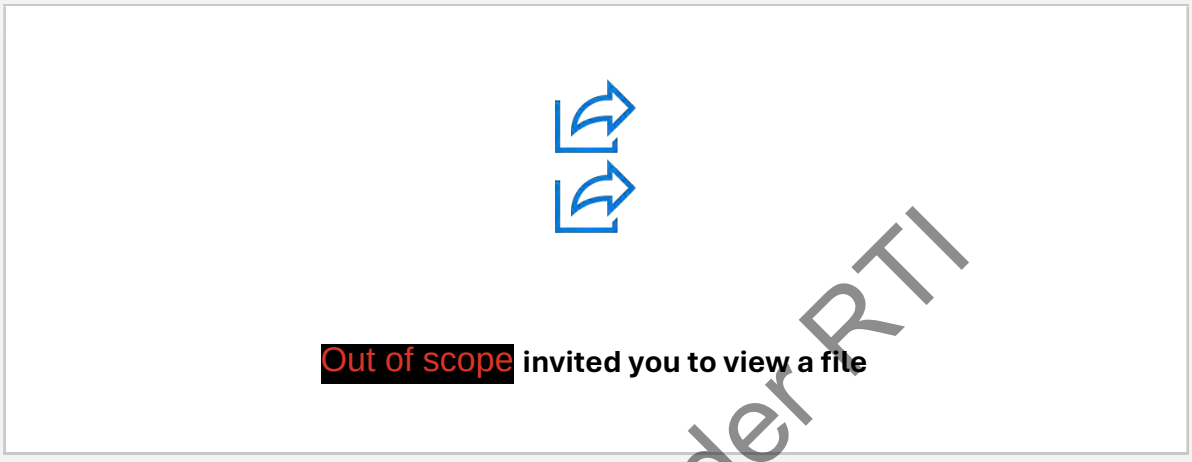
From: Out of scope @pittsh.com.au>
Sent: Tuesday, July 23, 2024 1:42 PM
To: Out of scope @stategrowth.tas.gov.au>
Subject: Out of scope shared "HB19197-P10 - Standard" with you



Out of scope **invited you to view a file**

Hi Out of scope, heres the file.It's the full autocad including the original design. its a lot of work to simplify it down to thebasics of the realignment and then we risk leaving out important details.
Regards
Out of scope

Duplicate

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State Growth

Reduced Acquisition

pitt&sherry

N

0 5 10 20 30 40 Meters

Coordinate System: WGS 1984 Web Mercator Auxiliary Sphere

1:1,217 When Printed at A4

MAP REF	P.19.0270
AUTHOR	[redacted]
REVISION	B
DATE	7/08/2024

DATA SOURCES: Base data and map from The LIST Tasmanian Government

Legend

- Property Fence
- Road Design
- Gate
- Property Fence new
- Existing Access Track
- Earthworks Batter
- Footpath
- Table Drain
- Verge
- WBeam new
- Wire Rope new
- Reduced Acquisition

From: Out of scope
Sent: Thursday, 17 October 2024 12:00 PM
To: Out of scope
Subject: FW: CN24-239909 - 1388 - 1431 Tasman Highway CAMBRIDGE

Hi,

Can you please arrange this package of information and include the previous TasNetwork design. We are currently having many challenges with TasNetworks, s35

Thanks, Out of scope

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: Out of scope@stategrowth.tas.gov.au / MB: Out of scope
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Network Customer Supply <networkcustomersupply@tasnetworks.com.au>
Sent: Thursday, October 17, 2024 11:55 AM
To: Out of scope @stategrowth.tas.gov.au>
Cc: Out of scope@pittsh.com.au
Subject: CN24-239909 - 1388 - 1431 Tasman Highway CAMBRIDGE

Good morning,

Apologies, some further documentation has been requested by our Portfolio Lead team.

Are you please able to provide the below (if available)

- Environmental Reports (noted on the application as available)
- Roads and Jetties notice
- Full set of PDF plans showing which TN infrastructure requires relocating

Kind Regards

TasNetworks | Powering a Bright Future

Out of scope

Out of scope
Negotiated Connection Applications

Out of scope

P Out of scope |E Out of scope @tasnetworks.com.au
1 Australis Dr, Rocherlea 7248
PO Box 419, Launceston TAS 7250

www.tasnetworks.com.au
@TasNetworks
/TasNetworks

From: Out of scope
Sent: Tuesday, 26 November 2024 4:47 PM
To: Out of scope
Subject: FW: D24/268727 - Letter to Out of scope, TasNetworks - Tasman Highway Hobart Airport to Midway Point Causeway
Attachments: Notice to Move Infrastructure - Letter to accompany Notice - Tasman Highway Hobart Airport to Midway Point Causeway.pdf; Notice to Move Infrastructure- Tasman Highway -Hobart Airport to Midway Point Causeway - CN24-239909.pdf

FYI

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: Out of scope@stategrowth.tas.gov.au / MB: Out of scope
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope @stategrowth.tas.gov.au>
Sent: Tuesday, November 26, 2024 4:43 PM
To: Out of scope @tasnetworks.com.au>
Cc: Out of scope @stategrowth.tas.gov.au>; Office of the Deputy Secretary Transport <dst@stategrowth.tas.gov.au>; Office of the General Manager State Roads <GMSR@stategrowth.tas.gov.au>
Subject: D24/268727 - Letter to out of scope, TasNetworks - Tasman Highway Hobart Airport to Midway Point Causeway

Dear Out of scope

Please find attached correspondence from the A/General Manager State Roads, Elspeth Moroni.

Regards

Out of scope

Out of scope
Office of the Deputy Secretary, Transport | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Phone: Out of scope
www.stategrowth.tas.gov.au

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In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

Department of State Growth

Salamanca Building Parliament Square
4 Salamanca Place, Hobart TAS

GPO Box 536, Hobart TAS 7001 Australia
Ph Out of scope
Email Out of scope @stategrowth.tas.gov.au Web www.stategrowth.tas.gov.au
Our Ref: D24/268727

Out of scope
[redacted]
TasNetworks
PO Box 419
LAUNCESTON TAS 7025

Dear Out of scope

NOTICE PURSUANT TO SECTIONS 12A AND 14 OF THE *ROADS AND JETTIES ACT 1935* (TAS)

Enclosed with this letter is a notice issued pursuant to sections 12A and/or 14 of the *Roads and Jetties Act 1935* (Tas) requiring your organisation to undertake those works specified in the notice (**Works**).

Please note that you are entitled to claim the reasonable cost of undertaking the Works.

If you have any questions regarding the required Works please contact:

Out of scope
[redacted]
Programming and Delivery
Department of State Growth

Ph: Out of scope
Email: Out of scope @stategrowth.tas.gov.au

Yours sincerely

Out of scope
[redacted]
Elspeth Moroni
A/GENERAL MANAGER STATE ROADS

26 November 2024

NOTICE ISSUED PURSUANT *ROADS AND JETTIES* ACT 1935 (TAS)

TO: Chief Executive Officer, Tasmanian Networks Pty Ltd

TAKE NOTICE THAT:

1. You, as the Service Authority identified in Item 1 of the below Schedule, are directed by the Minister for Infrastructure pursuant to sections 12A and/or 14 of the *Roads and Jetties* Act *1935* (Tas) (**Act**) to undertake those works described in Item 3 of the Schedule (**Works**) at the site identified in Item 4 of the Schedule (**Site**). The Works must be in accordance with any conditions specified in Item 6 of the Schedule.

2. Pursuant to sections 12A and/or 14 (3) of the Act, you are:

    a. required to comply with this requirement of the Minister; and

    b. entitled to claim the reasonable cost of undertaking the Works to the extent permitted by the Act. A detailed cost breakdown will be required to support your claim.

3. No additional permit for the relocation Works is required from State Roads.

4. Please contact the Department of State Growth's Contact shown in Item 3 of the Schedule to discuss or clarify any aspect of the Works and to provide a timeframe for completion of the Works.

Signed by for and on behalf of the **Minister for Infrastructure and Transport** by the undersigned as **General Manager State Roads** under an Instrument of Delegation dated 12 April 2021)

Out of scope 26/11/24

.....
Elspeth Moroni
Acting General Manager State Roads
Department of State Growth

Schedule

1. **Service Authority:** Tasmanian Networks Pty Ltd (ACN 167 357 299) (TasNetworks)

2. **Description of Works:** To undertake such works as are necessary to:

   a. Provide quality assurance of construction works undertaken by the Department of State Growth (*State Growth*) contractor, as described below.
   b. Assist with or enable State Growth to undertake road works and associated alterations at the Project Site, listed below
      i. Tasman Highway between the Airport Interchange and the Midway Point Causeway

   c. Supply and install of relocated electricity services within the Project Site:
      i. Relocate fibre optic cable over the length of the site
      ii. Replace and relocate over head power to underground from east of Airport runway to Pittwater Road (ch 1220 appro to ch 1720 approx) including new connection to Barilla Bay Oysters
      iii. Relocate overhead power from Pittwater Road to Tasmania Golf club and Milford property – nominally 9 relocated/new poles. Connection to Milford property to follow existing easement
      iv. Provide streetlighting at Pittwater Road Junction and Tasmania Golf Clun – nominally 10 lights
   d. Commissioning and connection of new and/or relocated infrastructure to mains supply.
   e. Decommissioning and/or removal (where applicable) of redundant infrastructure, including underground cable and overhead services.
   f. Power supply to traffic signals at Pittwater Road Junction

   The final type of service, number and length of relocations may vary from what is listed above.

   Preliminary Design drawings have been prepared and have been supplied under separate cover - HB19195 Sheets 3205 to 3214 inclusive

   Site Tasman Highway – Airport Interchange to Midway Point Causeway

3. **Department of State Growth's Contact**

Out of scope
[redacted]
Programming and Delivery
State Roads Division
Department of State Growth

Ph: Out of scope
Email: Out of scope @stategrowth.tas.gov.au

4. **Timeframe for Completion of Works** A construction start remains uncertain as an Approval under the EPBC Act is still being obtained. Based on best available information, the estimated start of construction is early 2026 with completion approximately 12 months later. The actual start date could be earlier or later, as the Department will start work as soon as the approval is received.

5. **Contractors** **Not yet awarded. Pitt and Sherry (Operations) Pty Ltd are currently assisting State Growth to complete the design**

Out of scope
[redacted]
Pitt&Sherry

Ph: Out of scope
Email: Out of scope @pittsh.com.au

6. **Your Ref** CN24-239909 and previously C19-7902

7. **Our Ref** Tasman Highway- Hobart Airport to Midway Point Causeway
Drawings HB19197 – 3205,6,7,8,9,10,11,12,13,14 (PDF)
HB19197-00-CIV-XRF-1110-Revised Design-R14
Project file P.19.0406

8. **Conditions of Work**

1. Traffic Management

a. Works are to be carried out such that at least one clear lane is open to traffic at all times. After hours (7.00 PM to 6:00 AM), at least one lane in each direction shall be maintained and open to traffic. The Service Authority is responsible for assisting State Growth contractors to plan and provide adequate and appropriate traffic management at the Sites, in accordance with the Department of State Growth's Standard 100 Series General Specification adapted to the Sites (currently under development) and "Traffic Control for Works on Roads Tasmanian Guidelines", see https://www.transport.tas.gov.au/roads_and_traffic_management/permits_and_bookings/traffic_management

2. Work Health and Safety

All works within the road reservation must comply with relevant Work Health and Safety legislation.

a. As a condition of this Notice the Service Authority will at all times , identify and exercise all necessary precautions for the health and safety of all persons including their employees, subcontractor employees, Principal employees and members of the public who may be affected by the Works.

b. The Service Authority must comply with all reasonable directions of the State Growth road contractor if the Site is under the control and management of the State Growth road contractor. This includes completing the induction, risk assessments, and supervisory requirements of the State Growth road contractor, prior to commencing any Works on Site.

c. The Service Authority must at all time comply with and ensure that all its employees, subcontractors and agents comply with any Acts, Regulations, local laws and by-laws, Codes of Practice, Australian Standards and the department's Health and Safety policy and procedures, which are in any way applicable to this Notice or the performance of the Works under this Notice.

d. If the Service Authority is required by the *Workplace Health and Safety Act 2012* or any other Legislation or Regulations to give any notice of an incident occurring

during the performance by the Service Authority of Works under the Notice, the Service Authority shall at the same time or as soon thereafter as possible in the circumstances give a copy of the notice to the department's Representative.

e. In addition, the Service Authority is responsible for ensuring adequate and appropriate work health and safety management at the Site, in accordance with the Department of State Growth's General Specification 168 "Occupational Health and Safety Management" see Occupational Health and Safety Management (MS Word Document, 61.0 KB)

3. Other Approvals

a. All work will be carried out in the road reserve and necessary permits and approvals will be obtained by the Department of State Growth. Clearing for the works footprint will be conducted by the Department's Road Contractor and all environmental controls and no-go zones will be established the Road Contractor prior to Tasnetworks coming onto the site. The Service Authority is responsible for obtaining any other necessary approvals from relevant Government authorities to undertake the Works, including those relating to environmental, cultural, flora, fauna and heritage matters that fall outside the road reserve. The Service Authority is liable for any compliance failure.

b. Gas, electricity, water, sewerage and other utilities may be located within the State road reservation. Prior to the commencement of the Works, the Service Authority is responsible for obtaining all necessary approvals and information on the location of utilities from other utility owners having infrastructure in the road reservations. The Service Authority must contact 'Dial Before You Dig' on 1100 or via http://1100.com.au/contact/ to obtain this information. The Service Authority will be responsible for any costs, claims, proceedings and any damages, should any other utilities be damaged as a result of its actions. No warranty is given as to the existence, location and condition of other utilities within the road reservation.

4. Reinstatement

Reinstatement of any road or pedestrian pavements and other affected surfaces in the State road reservation is required where there is a disturbance of any kind as part of the Works. Reinstatement shall be in accordance with the State Growth's Standard Specifications. This includes returning the road profile, drains, road cutting and embankment batters, sight benching and other transport infrastructure assets or facilities to their original condition or better. All kerb, gutter, culverts, stormwater pipes, line marking, fencing, traffic control devices and any other associated infrastructure damaged, altered or removed during construction are to be reinstated to the satisfaction of the State Growth's Contact.

Where a service trench runs through the pavement, other than at right angle to the lane or shoulder, reinstatement of the sealed surface shall be carried out across the full lane/shoulder width.

5. Construction Standards

a. All works, pavements and other materials shall comply with the State Growth Standard Specifications available at, http://www.transport.tas.gov.au/road/contractor/specifications

b. All trenching and back filling within the reservation is to be carried out in accordance with the State Growth Standard Specifications to the satisfaction of State Growth's Contact.

c. Any above ground facilities shall comply with State Growth, AUSTROADS and Standards Australia requirements and be located outside the clear zone or protected by and acceptable road safety barrier or other measures.

6. Management of Site

a. The Site may be under the legal control of State Growth's contractor and the Service Authority must comply with the reasonable requirements and directions of that contractor. The Service Authority must make contact with the contractor before entering the site.

b. The Service Authority is responsible for maintaining the Site while undertaking the Works, especially for ensuring that the carriageway is kept clean and tidy and free of debris. The Service Authority is responsible for any claims from the public arising from debris from the works tracked over the State road pavement.

c. The Service Authority is responsible for ensuring that the Site is left in a neat and tidy condition at the completion of the Works, and any spoil or excess materials must be removed from the Site.

7. Inspection of Works

a. State Growth may inspect the Site at any time while the Works are being undertaken to ensure compliance with Notice conditions. The Service Authority will be responsible for the costs for any changes required to ensure the Works are compliant with this Notice.

b. State Growth may conduct a completion inspection to ensure that the Works comply with this Notice. The Service Authority will be responsible for the costs of any works required to ensure the Works are compliant with this Notice.

8. Maintenance

a. The final reinstatement of any bitumen surface will be carried out by the Service Authority who will be required to meet all maintenance charges for a period of twelve (12) months from the time the seal is reinstated.

b. The Service Authority will be responsible for the repair of any defects or damage to road pavement, shoulder, verge, drainage and other structures on State Growth's infrastructure arising from the Works within the road reservation, for 12 months from the date of written notification by State Growth of satisfactory completion of the Works.

c. The Service Authority is responsible for the maintenance of any of its assets at the Site.

9. Liability for Damage

a. The Department of State Growth, or its maintenance contractor, will not be responsible for any damage to infrastructure installed by the Service Authority caused by routine maintenance or planned rehabilitation works if the installation is

not in accordance with the terms of this Notice, the Service Authority's standards or as-constructed information provided by the Service Authority.

b. No warranty is given in regard to land stability, fire, vandalism or other impacts, which may occur within the road reservations.

10. Indemnification

The Service Authority will save and keep indemnified the Crown in Right of Tasmania against any costs, claims, proceedings and demands whatsoever and by whomsoever, arising out of or in respect of the Works undertaken in the State road reservation.

ADDITIONAL INFORMATION

Emergency Repairs

Should there be any failure of the Works carried out under this Notice, the Minister reserves the right for State Growth to arrange for emergency repairs to be carried out. All costs associated with such repairs will be the responsibility of the Service Authority.

From: Out of scope
Sent: Friday, 13 September 2024 9:30 AM
To: Out of scope'
Subject: FW: DA 24147 - permit to take Wilsonia rotundifolia - Milford - Cambridge
Attachments: DA 24147 - DSG - New Access - Permit to take threatened flora - Wilsonia rotundifolia - Milf.pdf; DA 24147- Letter - DSG - New Access - Permit to take threatened flora - Wilsonia rotundifolia - Milford - Cambridge -.pdf; DA 24147 - MAP - DSG - New Access - Permit to take threatened flora - Wilsonia rotundifolia - Milford - Cambridge.pdf; Permit Activity Report Form Template.docx

FYI

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: Out of scope@stategrowth.tas.gov.au / MB: Out of scope
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope
Sent: Thursday, September 12, 2024 2:33 PM
To: Moroni, Elspeth
Cc: Out of scope
Subject: DA 24147 - permit to take Wilsonia rotundifolia - Milford - Cambridge

Dear Elspeth

Please find attached the letter and permit to take threatened flora in order to build a new access off Pittwater Road into 'Milford' at 1431 Tasman Highway Cambridge TAS 7170. Schedule 3 (map) and Schedule 4 (permit activity report) of the permit are attached as separate files.

Currently, we are not posting out hard copies of the permit and letter.

Please don't hesitate to contact me if you have any queries regarding the permit and/or permitting process.

Kind regards
Out of scope

Tasmanian Government

Out of scope
Policy,Projects, and Regulatory Services Branch I Environment Unit
Environment, Heritage and Land
Department of Natural Resources and Environment Tasmania
171 Westbury Road, Prospect, TAS 7250
M: Out of scope
E: Out of scope @nre.tas.gov.au
W: www.nre.tas.gov.au
Out of scope

Delivering a **sustainable Tasmania**

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past and present custodians of the land.

From: Out of scope >
Sent: Friday, August 30, 2024 12:03 PM
To: Out of scope @nre.tas.gov.au>
Cc: Out of scope @jmg.net.au; Out of scope @jmg.net.au; Out of scope (StateGrowth) <Out of scope @stategrowth.tas.gov.au>
Subject: Update: WRT: permit to take Wilsonia rotundifolia - Milford - Cambridge

Dear Out of scope

Thanks for your patience with the application for the Milford property project which requires the taking of *Wilsonia rotundifolia* plants.

I attach a revised memo document which reflects the slightly modified design of the access to be built over the drain and associated slight fenceline realignment. Alteration to the water main/access and water trough is now not proposed by the works..

I also attach the permit application with a modified start date in late September (25 September), and a revised upper number of plants to be taken which reflects that stated in the memo.

Please let me know if the attached documents are acceptable to NRE, and if there is anything further you require from us or the applicant to progress the application.

Thanks and regards
Out of scope

On Tue, Jul 23, 2024 at 2:57 PM Out of scope @nre.tas.gov.au> wrote:

> Dear Out of scope
>
> Thank you for your email.
>
> The approach you have outlined sounds fine, thank you.
>
> I will keep an eye out for your email next week.
>
> Kind regards
>
> Out of scope

Out of scope

Policy,Projects, and Regulatory Services Branch I Environment Unit

Environment, Heritage and Land

Department of Natural Resources and Environment Tasmania

171 Westbury Road, Prospect, TAS 7250

M: Out of scope

E: Out of scope@nre.tas.gov.au

W: www.nre.tas.gov.au

Out of scope

Delivering a **sustainable Tasmania**.

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past and present custodians of the land.

From: Out of scope >
Sent: Tuesday, July 23, 2024 2:54 PM
To: Out of scope @nre.tas.gov.au>
Cc: Out of scope @jmg.net.au; Out of scope @jmg.net.au; Out of scope (StateGrowth) Out of scope @stategrowth.tas.gov.au>
Subject: Re: WRT: permit to take Wilsonia rotundifolia - Milford - Cambridge

Dear Out of scope

Thanks for your followup email.

Yesterday I received advice from JMG that the final drawings of the design were being reviewed, and that we should receive these shortly (likely this week). Once received, we will produce the map showing the area we need covered by the permit. I suggest that once done, we will send the map to you to see if there is still enough time for CAS to issue the permit before 15 August, and if there is not, we will amend the start date time again to enable CAS the time it needs to process and issue the permit (if one is granted). Does that approach sound okay?

As an aside, the records of *Wilsonia rotundifolia* have been submitted to the NVA but they have not appeared through TheLIST portal as yet, they may be batched awaiting verification/acceptance into the NVA.

Thanks and regards

Out of scope

On Tue, Jul 23, 2024 at 1:29 PM Out of scope @nre.tas.gov.au> wrote:

Hi Out of scope

I trust this finds you in good health and humour.

As I have not received any further correspondence, I am checking in please to see when we are to expect the information outlined below as I am not able to progress permit processing without it.

I note that updated start date is 15 August and there remains enough time to issue the permit without impacting the nominated start date.

Kind regards

Out of scope

Out of scope

Policy,Projects, and Regulatory Services Branch I Environment Unit

Environment, Heritage and Land

Department of Natural Resources and Environment Tasmania

171 Westbury Road, Prospect, TAS 7250

M: Out of scope

E: Out of scope@nre.tas.gov.au

W: www.nre.tas.gov.au

Out of scope

Delivering a **sustainable Tasmania**

In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past and present custodians of the land.

From: Out of scope >
Sent: Wednesday, July 10, 2024 2:17 PM
To: Out of scope @nre.tas.gov.au>
Cc: Out of scope @jmg.net.au; Out of scope @jmg.net.au; Out of scope (StateGrowth) <Out of scope @stategrowth.tas.gov.au>
Subject: Re: WRT: permit to take Wilsonia rotundifolia - Milford - Cambridge

Dear Out of scope

Thank you for your email. I also note the email I received dated 3 July from Out of scope about the start date nominated on the form having passed.

I attach an amended application to nominate the start date as 15 August, which also accommodates the standard 28 day response time for a permit to be issued, if one is issued. The application amendment has not been countersigned or initialled by the applicant, in this case the Department of State Growth - please advise if this needs to be initialled or countersigned by DSG.

In relation to the other matters you raised in your email of today, I provide the below comments (in blue):

To progress your application, there are a couple of matters that require your further attention please:

- Upon reviewing the Natural Values Atlas (NVA), it appears that the observations relied upon within the permit to take application have not been uploaded into the NVA. CAS is unable to progress this permit until the data relied upon in the application has been entered into the NVA. As the NVA is the state's comprehensive database for natural values information it is prudent that this database contains as much information as possible to facilitate the informed management of natural values. As such CAS will not issue any permit to authorise take until the data relied upon in the application is entered into the NVA. Please notify CAS when the survey observations have been entered into the NVA to enable the progression of the permit for the *Wilsonia rotundifolia* take.
- Out of scope will upload the data to the NVA in the next day or two, it is part of a batch that we need to upload. We will advise you when the data has been submitted to the NVA team, noting that we have no control over the subsequent validation process that the NVA has in place for data entry.

- Despite the high-quality mapping included in the information provided to support the permit application, the individuals to be impacted vs. unimpacted individuals is not clear. Can you please provide a map that clearly shows the works footprint, the records/area of *Wilsonia rotundifolia* to be taken and the records/area of *Wilsonia rotundifolia* not to be taken (different colour to the *Wilsonia rotundifolia* for take).

We will prepare a map (and associated shapefile if that is preferred) to identify the area where the permit would apply, if one is issued, with the remainder of the survey assessed area being undisturbed. We should have this to you in the next day or two, and could (if NRE Tas considered it appropriate to do so) form the basis for the map attached to the permit.

- Please note that, generally permits to take will not be issued until all relevant planning approvals are obtained. Can you please confirm in writing that all other required approvals for this activity have been attained? At this stage, and based on the information I have, the planning permit has not yet been determined by the Clarence City Council but it has concluded advertising - I will seek further information from JMG and advice shortly.

Thanks and regards

Out of scope

On Wed, Jul 10, 2024 at 12:12 PM Out of scope @nre.tas.gov.au> wrote:

Dear Out of scope & Co,

Thank you for your application to take *Wilsonia rotundifolia* from 'Milford' at Cambridge.

To progress your application, there are a couple of matters that require your further attention please:

- Upon reviewing the Natural Values Atlas (NVA), it appears that the observations relied upon within the permit to take application have not been uploaded into the NVA. CAS is unable to progress this permit until the data relied upon in the application has been entered into the NVA. As the NVA is the state's comprehensive database for natural values information it is prudent that this database contains as much information as possible to facilitate the informed management of natural values. As such CAS will not issue any permit to authorise take until the data relied upon in the application is entered into the NVA. Please notify CAS when the survey observations have been entered into the NVA to enable the progression of the permit for the *Wilsonia rotundifolia* take.

- Despite the high-quality mapping included in the information provided to support the permit application, the individuals to be impacted vs. unimpacted individuals is not clear. Can you please provide a map that clearly shows the works footprint, the records/area of *Wilsonia rotundifolia* to be taken and the records/area of *Wilsonia rotundifolia* not to be taken (different colour to the *Wilsonia rotundifolia* for take).

- Please note that, generally permits to take will not be issued until all relevant planning approvals are obtained. Can you please confirm in writing that all other required approvals for this activity have been attained?

Kind regards

Out of scope

Out of scope

Policy,Projects, and Regulatory Services Branch I Environment Unit

Environment, Heritage and Land

Department of Natural Resources and Environment Tasmania

171 Westbury Road, Prospect, TAS 7250

M: Out of scope

E: Out of scope@nre.tas.gov.au

W: www.nre.tas.gov.au

Out of scope

Tasmanian Government

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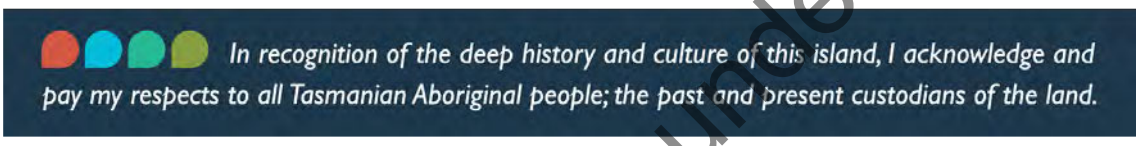


From: Out of scope
Sent: Tuesday, July 2, 2024 6:15 PM
To: Conservation Assessments ConservationAssessments@nre.tas.gov.au
Cc: Out of scope @jmg.net.au; Out of scope @jmg.net.au; Out of scope (StateGrowth) Out of scope@stategrowth.tas.gov.au; Out of scope
Subject: Submission of permit to take application - Wilsonia rotundifolia

Dear Sir/Madam

I am writing to submit an application for a permit to take round-leaf Wilsonia (*Wilsonia rotundifolia*) at the property Milford, at Cambridge. The works proposed include the construction of a property access and track (internal to Milford) to access the farmhouse from Pittwater Road.

The applicant is the Department of State Growth.

Please advise me directly if you require any further 'biological' related information for the assessment process, or direct queries about the project more broadly to Out of scope, Out of scope or Out of scope (all copied into this email).

regards
Out of scope

--
[redacted] Out of scope
Out of scope
Out of scope
Out of scope, Van Diemen Consulting Pty Ltd,
Mobile: Out of scope

Attachment 23a

DEPARTMENT of NATURAL RESOURCES and ENVIRONMENT

PERMIT TO TAKE THREATENED FLORA

Permit No. DA 24147

Issued in accordance with Regulation 4 of the Threatened Species Protection Regulations 2016

Elspeth Moroni
Acting General Manager, State Roads
Department of State Growth
Level 2, 4 Salamanca Place
Hobart TAS 7001

Inquiries : Kathryn Pugh
Phone : Out of scope
Our Ref. : NH-NH-PE-219320-015.123
Email : Out of scope@nre.tas.gov.au

is authorised to take

Wilsonia rotundifolia (round leaf wilsonia) - up to 4,436 individuals

from

1431 Tasman Highway Cambridge TAS 7170 - as shown in Schedule 3

for

construction of a new access off Pittwater Road into the 'Milford' property at Cambridge for the South East Traffic Solution project

subject to the conditions in Schedule 1 (overleaf)

This authority is valid only from 25/09/2024 to 30/01/2027

Issued by:

Out of scope

Date: 10/09/2024

Kathryn Pugh
Delegate of the Secretary of the Department of Natural Resources and Environment Tasmania

DEPARTMENT of NATURAL RESOURCES and ENVIRONMENT

PERMIT TO TAKE THREATENED FLORA

Permit No. DA 24147

Issued in accordance with Regulation 4 of the Threatened Species Protection Regulations 2016

SCHEDULE 1 Conditions of Permit

1. This permit must be carried while taking the threatened flora specified in the permit and shown to an authorised officer on request.

2. Only the permit holder and those persons listed on Schedule 2 are authorised to take the threatened flora specified in the permit.

3. Where relevant, permission must be obtained from the land owners or land managers prior to entering their land to take the threatened flora specified in the permit. This permit does not constitute permission to enter land.

4. All known threatened flora locations outside of, but adjacent to, the permitted works area must be taped or fenced off in order to prevent incursion by machinery or personnel.

5. Vegetation clearance must be minimised. Mechanical disturbance, dumping of fill, alteration of drainage patterns and soil compaction on sites known or likely to support the specified threatened flora must be avoided.

6. Topsoil from areas known to contain the specified threatened flora must be stockpiled and used for rehabilitation on site.

7. In order to minimise impact on the specified threatened flora, measures to control the introduction, spread and movement of disease and weeds by equipment or by on ground operations must be undertaken in accordance with the DPIPWE (2015) *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* as relevant.

8. The Conservation Assessments and Wildlife Services Section (CAWS), Department of Natural Resources and the Environment Tasmania (NRE Tas) must be notified in writing within 30 days of the completion of the activity authorised under this permit. Details of individual plants taken, or the area of population taken, along with the date and location of the works undertaken that directly impacted the threatened flora species must be entered into the Permit Activity Report Form (the form) attached in Schedule 4, and the form returned to ConservationAssessments@nre.tas.gov.au.

SCHEDULE 2 The following people are joint holders of this permit

All contractors, personnel, and staff working on the project under the direction of Out of scope [redacted]) on behalf of the Department of State Growth.

Attachment 23b

Department of Natural Resources and Environment Tasmania
ENVIRONMENT, HERITAGE AND, LAND DIVISION

Hobart GPO Box 44, Hobart, Tasmania, 7001
Launceston PO Box 46, Kings Meadows, Tasmania, 7249
Devonport PO Box 303, Devonport, Tasmania, 7310
Ph 1300 368 550
Web nre.tas.gov.au

Inquiries: Out of scope
Phone: Out of scope
Email: ConservationAssessments@nre.tas.gov.au
Our ref: NH-NH-PE-219320-015.123

Tasmanian Government

10 September 2024

Ms Elspeth Moroni
Acting General Manager, State Roads
Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7001

Email: Elspeth.Moroni@stategrowth.tas.gov.au

Dear Ms Moroni

PERMIT TO TAKE THREATENED FLORA – DA 24147

I refer to Department of State Growth's application dated 30 August 2024 for a permit to take threatened flora for the development of a new access off Pittwater Road into the 'Milford' property at Cambridge.

I have enclosed a permit to take issued in accordance with the regulations under the *Threatened Species Protection Act 1995.* Please read the conditions carefully prior to commencing any of the relevant activities under the permit.

Please note that in accordance with Regulation (5)(2) of the *Threatened Species Protection Regulations 2016*, the Secretary may amend or revoke a permit after giving notice to the permit holder of the intention to do so.

If you have any queries, please contact the officer nominated at the head of this letter.

Yours sincerely

Out of scope

Kathryn Pugh
Section Head, Conservation Assessment and Wildlife Management
Policy, Projects and Regulatory Services Branch, NRE Tas

Encl. Permit to Take Threatened Flora No. DA 24147

Department of Natural Resources and Environment Tasmania

ENVIRONMENT, HERITAGE, AND LAND DIVISION

Tasmanian Government

SCHEDULE 3 – MAP

DA 24147 – Permit to take threatened flora – *Wilsonia rotundifolia* (round-leaf Wilsonia) – up to 4,436 individuals.
Department of State Growth, new access off Pittwater Road into 'Milford', 1431 Tasman Highway Cambridge TAS 7170.
Issued in accordance with Regulation 4 of the *Threatened Species Protection Regulations 2016*

SCHEDULE 4: PERMIT ACTIVITY REPORT FORM

Department of Natural Resources and Environment Tasmania

Tasmanian Government

Permit

Permit number:_____ Permit expiry date:_____

Short title of project: _____

Permit Holder Details:

Name title: ☐ Mr ☐ Mrs ☐ Ms ☐ Miss ☐ Other: _____

Given names: _____

Family name: _____

Business/Organisation Information

Name: _____

Telephone: ( ) _____

Email: _____

Location of 'take'

Address and PID _____

Or Land Title _____

Signature of permit holder

(or approved delegate): _____ Date: _____

Please ensure you have completed the impact table overleaf before submitting

Completed forms can be emailed or posted to:
Conservation Assessments, Natural and Cultural Heritage Division
Department of Primary Industries, Parks, Water and Environment
GPO Box 44, Hobart, TAS, 7001
Phone (03) 6165 4381, ConservationAssessments@dpipwe.tas.gov.au

Privacy statement
Personal information is being collected from you for the purpose of managing Tasmania's natural values and will be used by DPIPWE for assessing, considering, advising upon, managing and/or determining the relevant application, and may be used for other purposes permitted by the *Crown Lands Act 1976, National Parks and Reserves Management Act 2002, Nature Conservation Act 2002, Threatened Species Protection Act 1995 and Wellington Park Act 1993*, and regulations made under these Acts. You are required to provide this information by the *Crown Lands Act 1976, National Parks and Reserves Management Act 2002, Nature Conservation Act 2002, Threatened Species Protection Act 1995 and Wellington Park Act 1993*, and regulations made under these Acts. Completing this form is a permit requirement. Your personal information will be used for the primary purpose for which it is collected, and may be disclosed to law enforcement agencies, courts and other organisations authorised to collect it. Your basic personal information may be disclosed to other public sector bodies where necessary, for the efficient storage and use of the information. Personal information will be managed in accordance with the *Personal Information Protection Act 2004* and may be accessed by the individual to whom it relates on request to NRE (formerly DPIPWE). You may be charged a fee for this service.

IMPACT TABLE

Permit Number:

Tasmanian Government

Species (scientific name)	Date(s) of 'take'	Number or estimate (including +/- range) of individuals taken	Area of population taken (m^2)	GPS Easting (GDA 94 format)	GPS Northing (GDA 94 format)	GPS position accuracy (m)	Location description (e.g. 200m west of the farm gate on Clarke Road)	Impact type (e.g. vegetation clearance, burning)	Any additional information (e.g. likelihood of survival of specimens taken)

Any other comments:

From: Out of scope
Sent: Friday, 9 August 2024 2:30 PM
To: 'Out of scope'
Subject: FW: FOR ACTION - Minor Amendment Planning Permit Report and Landowner Consent forms

Hi Out of scope,

There may be not point updating the reports until we received feedback from Out of scope and the Golf Club, but please note some miner edits for North Barker to amend prior to our submisison.

Thanks

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: Out of scope@stategrowth.tas.gov.au / MB: Out of scope
www.stategrowth.tas.gov.au

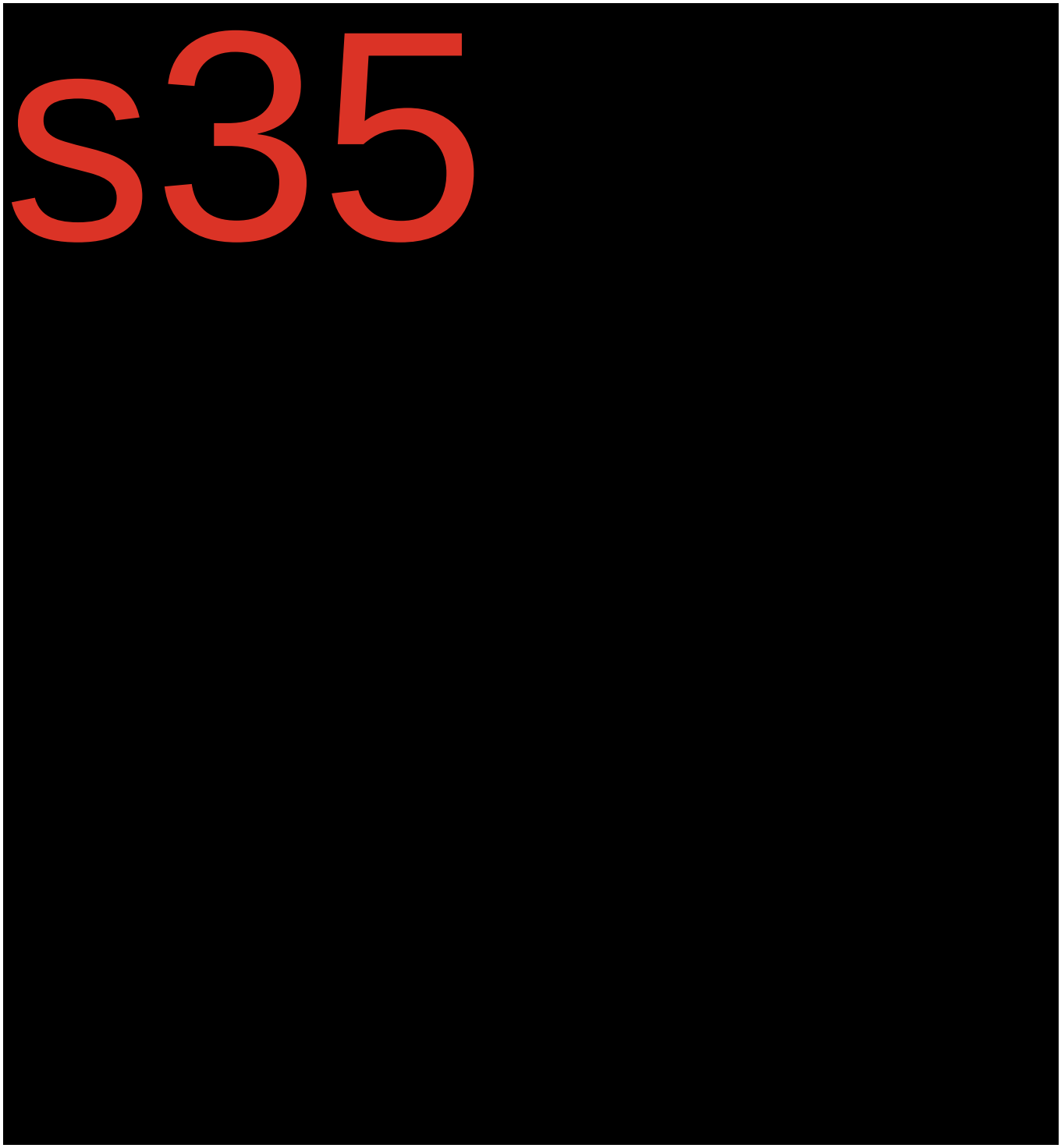
Courage to make a difference through
TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope
Sent: Friday, July 19, 2024 11:42 AM
To: Out of scope
Subject: RE: FOR ACTION - Minor Amendment Planning Permit Report and Landowner Consent forms

Hi Out of scope

See following comments on the Planning Report.

S35



Regards

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
PH: Out of scope | MB: Out of scope
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope @stategrowth.tas.gov.au>
Sent: Wednesday, July 3, 2024 3:48 PM

To: Out of scope @stategrowth.tas.gov.au>
Subject: RE: FOR ACTION - Minor Amendment Planning Permit Report and Landowner Consent forms

Hi Out of scope,

Everything is in the one report (including appendices) located here: Record D24/148092: Tasman Highway Hobart Airport to Midway Point Causeway Planning Report for Amendments 2 Planning Permits

Both planning permits required amendment due to changes in the road corridor and Milford property including Natural Values and changes in the landscape buffer zone on the Golf Course including Natural Values (more *E. viminalis* community cleared).

Regards, Out of scope

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: Out of scope@stategrowth.tas.gov.au / MB: Out of scope
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope
Sent: Wednesday, 25 September 2024 1:42 PM
To: Out of scope n
Subject: FW: Notice of Decision - Variation to Proposal - Tasman Highway Upgrade EPBC 2020/8805 [SEC=OFFICIAL]
Attachments: 2020-8805 - Variation - Letter to Proponent.pdf; 2020-8805 - Variation - Notice of Decision.pdf

Well this is a good start.

Out of scope

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: Out of scope@stategrowth.tas.gov.au / MB: Out of scope
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope
Sent: Wednesday, September 25, 2024 1:26 PM
To: Out of scope
Cc: Moroni, Elspeth ; Out of scope
Subject: Notice of Decision - Variation to Proposal - Tasman Highway Upgrade EPBC 2020/8805 [SEC=OFFICIAL]

[SEC=OFFICIAL]

Afternoon,

The delegate has finalised their decision to accept the request to vary your proposed action, the Tasman Highway Upgrade - Hobart Airport to Sorell Causeway (EPBC 2020/8805).

Please find attached letter of notification and signed decision notice.

The notice and formal letter requesting variation will be published on the department's website in the coming days.

Kindest,

Out of scope

Tasmania Assessments Section | Environment Assessments (Vic and Tas) and Post Approvals Branch | Nature Positive Regulation Division
Department of Climate Change, Energy, the Environment and Water
E: Out of scope@dcceew.gov.au |

We acknowledge the Traditional Owners of country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

[SEC=OFFICIAL]

Australian Government
Department of Climate Change, Energy, the Environment and Water

EPBC 2020/8805

Out of scope
[redacted]@stategrowth.tas.gov.au
Project Management Team Leader
4 Salamanca Place
HOBART TAS 7000

Decision on variation request
Tasman Highway Upgrade – Hobart Airport to Sorell Causeway, near Hobart Tasmania (EPBC 2020/8805)

Dear Out of scope

I am writing in response to your request of 6 August 2024 to vary the Tasman Highway Upgrade – Hobart Airport to Sorell Causeway proposal under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

As a delegate of the Minister for the Environment, I have decided to accept the variation to the proposal. A copy of the notice recording this decision is enclosed. This document, along you're your request, will be published on the EPBC public portal.

I note that all provisions under the EPBC Act have ceased to apply to the original proposal and now apply to the varied proposal and, that for the purpose of the application of those provisions, anything done in relation to the original proposal is taken to have been done in relation to the varied proposal.

If you have any questions about this decision, please contact the assessment officer, Out of scope, by email at Out of scope@dcceew.gov.au and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Out of scope

Jennifer Meehan
Tasmania Director
Environment Assessments (Vic Tas) and Post Approvals Branch
Nature Positive Regulation Division

Australian Government
Department of Climate Change, Energy, the Environment and Water

Notification of variation of proposal to take an action

Tasman Highway Upgrade – Hobart Airport to Sorell Causeway, Tasmania (EPBC 2017/8805)

This decision is made under Section 87 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Proposed Action

designated proponent	Department of State Growth ABN: 36 388 980 563
Original proposed action	To upgrade an approximately 1.77km section of the Tasman Highway between Hobart International Airport and the Sorell Causeway and undertake works in the Tasmanian Golf Club, approximately 15km east of Hobart, Tasmania [See EPBC Act 2020/8805 and variation request dated 22 June 2022].
Varied proposed action	To reposition approximately 480 metres of the 1.77km section of the Tasman Highway alignment approximately 10 meters to the north of the original project area and narrow the highway shoulders by 1 metre [See EPBC Act 2020/8805 and variation requested dated 6 August 2022].
Decision on variation	Accepted / Refused

Person authorised to make decision

name and position	Jennifer Meehan, Director, Tasmania Assessments Section, Environment Assessment (Vic, Tas) and Post Approvals Branch, NPRD
signature	Out of scope
date of decision	25 September 2024

From: Out of scope
Sent: Friday, 13 September 2024 9:30 AM
To: 'Out of scope'
Subject: FW: PDPLANPMTD-2024-045221 - Permit and approved plans - 1431 Tasman Highway, Cambridge.pdf
Attachments: PDPLANPMTD-2024-045221 - Permit and approved plans - 1431 Tasman Highway, Cambridge.pdf

FYI

Out of scope
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: Out of scope@stategrowth.tas.gov.au / MB: Out of scope
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.

From: Out of scope
Sent: Friday, September 13, 2024 8:34 AM
To: Out of scope
Cc: Out of scope
Subject: FW: PDPLANPMTD-2024-045221 - Permit and approved plans - 1431 Tasman Highway, Cambridge.pdf

Out of scope,

Approved planning permit is as per attached. As soon as we have the Landscaping plans we will be able to provide you with a full set of drawings, a schedule and a specification. As per yesterday's correspondence we are scheduled to receive these by mid next week, so if we allow a day for completing the schedule, we should be in a position to have documents ready to incorporate into the tender.

Out of scope

Out of scope
117 Harrington St. Hobart TAS 7000
E: Out of scope@jmg.net.au
P: 03 6231 2555

Privacy Policy

From: Out of scope @mcplanners.com.au>
Sent: Thursday, 12 September 2024 8:55 PM
To: Out of scope @jmg.net.au>
Cc: Out of scope @jmg.net.au>; Out of scope ; Out of scope @mcplanners.com.au>
Subject: FW: PDPLANPMTD-2024-045221 - Permit and approved plans - 1431 Tasman Highway, Cambridge.pdf

Hi Out of scope ,

This is approved. The conditions all look fine.

Out of scope

Out of scope
Out of scope, **MC Planners**

Ph. Out of scope | Mob. Out of scope
www.mcplanners.com.au | Out of scope @mcplanners.com.au

2/129 Bathurst Street Hobart Tasmania 7000

MC Planners respectfully acknowledges the First Peoples of Australia who are the traditional owners of the land on which we live and work.

News feed: The Huon Valley Local Provisions Schedule is active from 20th July 2024

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From: City Planning <cityplanning@ccc.tas.gov.au>
Sent: Thursday, 12 September 2024 1:33 PM
To: Out of scope <planning@mcplanners.com.au>
Cc: Out of scope @ccc.tas.gov.au>
Subject: PDPLANPMTD-2024-045221 - Permit and approved plans - 1431 Tasman Highway, Cambridge.pdf

Please see attached correspondence.

Kind regards
Out of scope

Out of scope
Out of scope | Clarence City Council

Clarence... a brighter place

a 38 Bligh Street | PO Box 96 Rosny Park TAS 7018
p Out of scope
e Out of scope@ccc.tas.gov.au | **w** www.ccc.tas.gov.au

Clarence City Council pays respect to all First Peoples, including the Mumirimina (mu mee ree mee nah) People of the Oyster Bay Nation whose unceded lands, skies, and waterways we are privileged to conduct our business on. We pay respect to, and value the deep knowledge of Elders past and present, and we acknowledge the survival and deep spiritual connection of the Tasmanian Aboriginal People to their Country, a connection which has endured since the beginning of time. Our work reflects our ongoing commitment to truth-telling and respectful understanding.

Clarence... a brighter place

38 Bligh St Rosny Park
PO Box 96
Rosny Park TAS, 7018
Ph 03 6217 9500
E clarence@ccc.tas.gov.au

Out of scope
PDPLANPMTD-2024/045221

11 September 2024

MC Planners OBO Johnstone McGee & Grandy Pty Ltd
Email: planning@mcplanners.com.au

Dear Sir/Madam,

PDPLANPMTD-2024/045221 - Planning Permit Discretionary - 1431 Tasman Highway, Cambridge

I refer to your application for the above proposal, which has now been approved.

I have attached the Planning Permit containing the conditions under which the approval was granted. The development / use may only be undertaken in accordance with the endorsed plans and the permit conditions and must not be altered without the consent of Council. You can avoid unnecessary delays to your development if you action any planning conditions which are required to be satisfied prior to the commencement of development or permit issue before lodging your building and plumbing applications, if required.

You may appeal Council's decision to the Resource and Planning Stream of the Tasmanian Civil and Administrative Tribunal (TASCAT) within 14 days of service of this notice. If you have any queries regarding appeal procedures, please contact TASCAT on 1800 657 500. If you wish to commence the development / use prior to 14 days of the service of this notice, you must notify Council in writing and forfeit your right to appeal.

During the course of the planning assessment your application was advertised and site notices placed on all property boundaries with public frontage. It would be appreciated if you would arrange for these signs to be removed and disposed of appropriately.

Should you have any queries concerning the above, please contact Out of scope on (03) Out of scope who will be happy to assist.

Yours sincerely

Out of scope

Vanessa Tomlin
MANAGER CITY PLANNING

Clarence... a brighter place

Clarence City Council

PLANNING PERMIT

LAND USE PLANNING AND APPROVALS ACT 1993

Development No: **PDPLANPMTD-2024/045221** **Approval Date:** **10 September 2024**

Description: **New Access & Driveway & Associated works. (Place listed on the Tasmanian Heritage Register)**

Address: **1431 Tasman Highway, Cambridge**

This permit is granted, subject to the following conditions:

General Conditions:

1 The use or development must only be undertaken in accordance with the endorsed plans and any permit conditions and must not be altered without the consent of Council.

2 The development must be undertaken in accordance with the environmental best practice guidelines prescribed in the *Wetlands and Waterways Works Manual* and the guidelines in the *Tasmanian Coastal Works Manual*.

3 The development must be undertaken in accordance with the recommendations contained within the Coastal Vulnerability Assessment prepared by Geo-Environmental Solutions and dated 16 May 2024. A report certifying compliance with the conclusions and recommendations made within the report must be provided to the satisfaction of the Chief Executive Officer or delegate prior to the commencement of use of the driveway.

4 The development must be undertaken in accordance with the recommendations contained within the Flood Hazard Report prepared by JMG and dated 17 May 2024.

5 The development must be undertaken in accordance with the recommendations contained within the Natural Values Assessment Report prepared by Van Diemen Consulting Pty Ltd and dated May 2024. A report certifying compliance with the conclusions and recommendations made within the report must be provided to the satisfaction of the Chief Executive Officer or delegate prior to the commencement of use of the driveway.

Engineering conditions:

6 The access must be constructed from the road carriageway to the property boundary in accordance with Standard Drawing [TSD-R05-v3 (Rural)] (copy available from Council). This access must be inspected by Council's Development Works Officer prior to sealing or pouring new concrete and the works completed prior to the commencement of use.

Following construction, the crossover must be maintained or repaired by the owner at the owner's expense in accordance with any directions given by Council to the owner.

7. Engineering designs, prepared by a suitably qualified person, are required for:

- access arrangements;
- driveways construction;
- service upgrades or relocations;

and must show the extent of any vegetation removal proposed for these works. Such designs must be submitted to and approved by Council's Head of Infrastructure and Natural Assets.

A 'start of works' permit must be obtained prior to the commencement of any works.

A Works in Road Reservation Permit must also be obtained if any proposed works are to be conducted within the road reservation or Council land.

Works for all stages shown on the design plans must be commenced within 2 years of the date of their approval or the engineering designs will be required to be resubmitted.

8 An erosion and sedimentation control plan, in accordance with the Derwent Estuary Program Soil and Water Management on Building and Construction Sites document, must be submitted and approved by Council's Head of Infrastructure and Natural Assets prior to the commencement of the works. All debris/construction materials must be contained within the property. All works must be carried out in compliance with the approved erosion and sediment control plan and to the satisfaction of Council's Head of Infrastructure and Natural Assets.

The following advice is also provided:

a. This Permit will lapse after 2 years from the date on which it is granted unless the development / use has been substantially commenced. Upon request, under Section 53(5A) of the *Land Use Planning and Approvals Act 1993* Council may grant an extension of time for a further 2 years. A further 2 years may be granted upon request

under Section 53(5B) of the *Land Use Planning and Approvals Act 1993*. Any such requests must be made in writing and within 6 months of the day on which the permit has lapsed.

b. This is a town planning permit only. Please be aware that a building permit and / or a plumbing certificate of likely compliance or plumbing permit may be required before the development can proceed. It is recommended that you contact Council's Building Department on (03) 6217 9580 to discuss the requirement for any additional permits or certification.

c. Based on the information supplied and maximum height it does NOT appear that this proposal is classed as a controlled activity, as defined in the Regulations. Hobart Airport does not object to this proposal regarding the maximum height, approval from Airspace Protection and Airport Safeguarding is not required for this development. Controlled activities are also defined as any activities causing intrusions into the protected airspace through glare from artificial light or reflected sunlight, air turbulence from stacks or vents, smoke, dust, steam or other gases or particulate matter. Details will need to be provided to Hobart Airport for consideration if this proposal may subject the protected airspace around Hobart Airport to one or more of these items.

   Please note that further to the above, any structures used in the construction process, such as cranes, may in fact be controlled activities and require separate approval under the Regulations.

d. Non-compliance with this permit is an offence under Section 63 of the *Land Use Planning and Approvals Act 1993* and may result in enforcement action under Division 4A of the *Land Use Planning and Approvals Act 1993* which provides for substantial fines and daily penalties.

Out of scope

Vanessa Tomlin
MANAGER CITY PLANNING
THIS APPROVAL IS GIVEN UNDER DELEGATION GRANTED BY COUNCIL

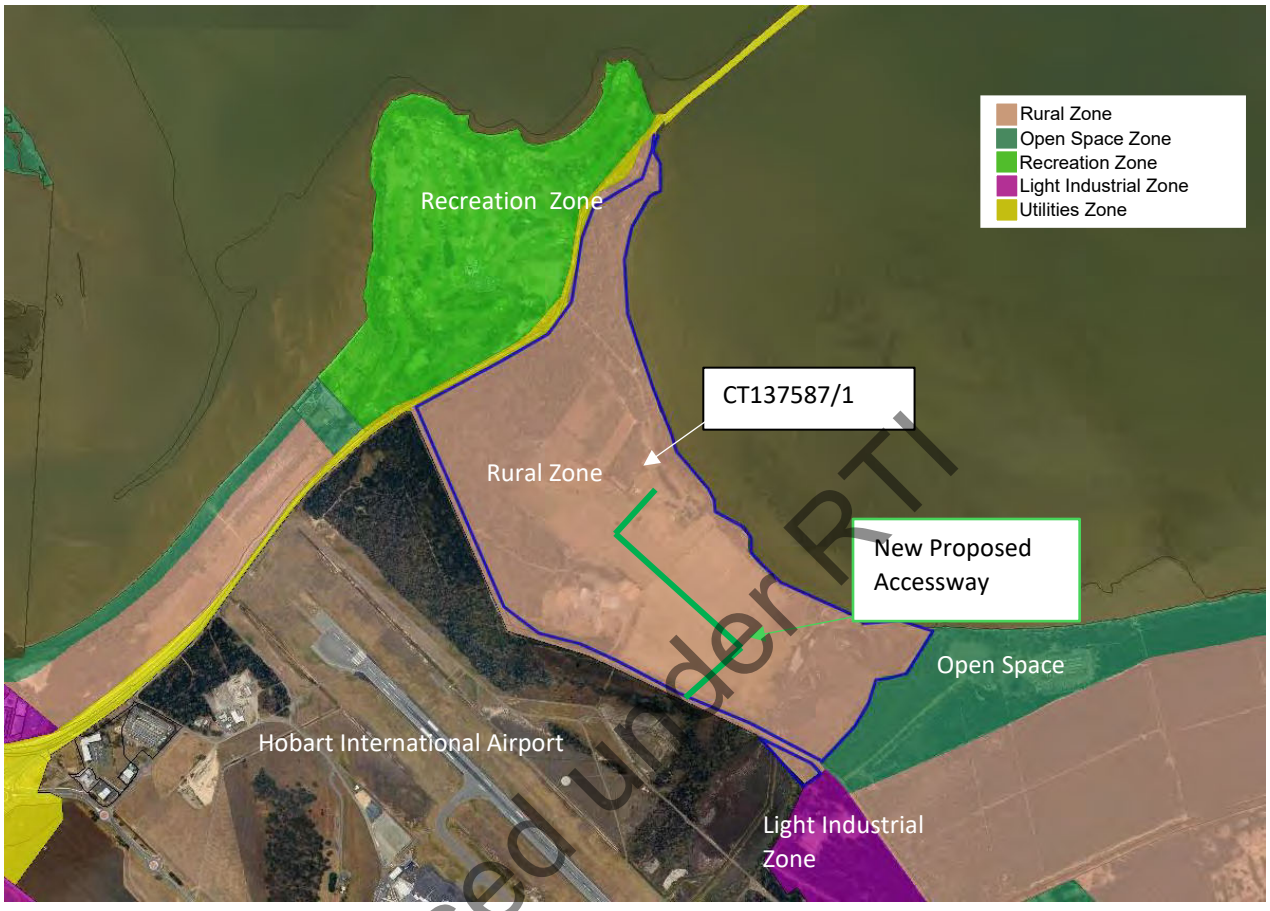
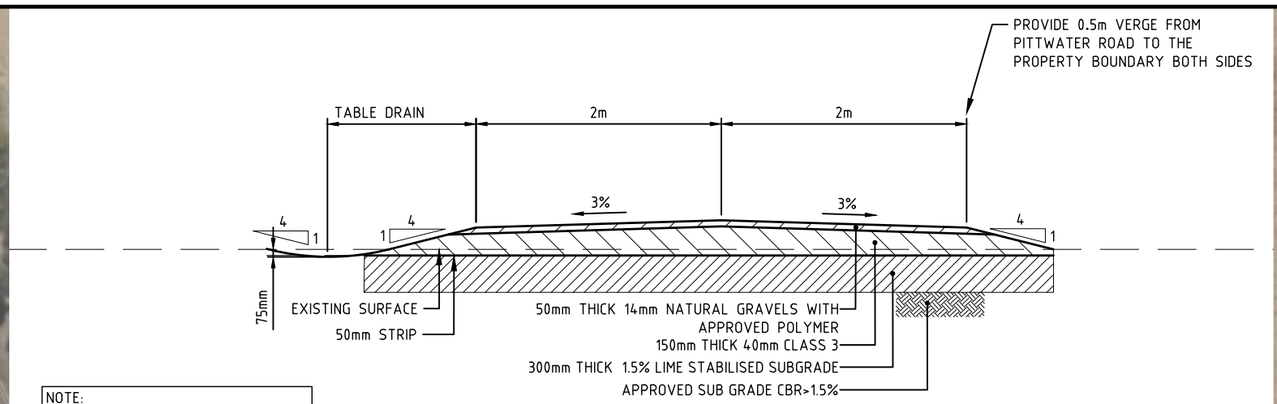


Figure 2. Land use zones subject site in Blue (source: LIST map - accessed on 18.3.2024).



NOTE:
WHERE SUB GRADE CBR>5%, 300mm THICK 1.5% STABILISED SUBGRADE IS NOT REQUIRED (CH0-260)

TYPICAL DRIVEWAY CROSS SECTION

SCALE 1:50

0 10 20 30 40 50m
SCALE 1:1,000

LEGEND

- NEW WATER TROUGH
- NEW FENCE (TO MATCH EXISTING)
- NEW GATE
- EXISTING FENCE
- EXISTING OPEN DRAIN
- EXISTING WATER LINE
- NEW STORMWATER CULVERT

CH 350
CH 300
CH 250
CH 200
CH 150
CH 100
CH 50
CH 0

EXISTING OPEN DRAIN CONTAINING WILSONIA ROTUNDIFOLIA (THREATENED SPECIES)
EXISTING FENCE (TYP)
EXISTING TROUGH TO BE RETAINED
NEW FENCE (TYP)
NEW TROUGH AND WATER SUPPLY
EXISTING CULVERT TO BE CLEANED AND FLUSHED
NEW PADDOCK ACCESS (TYP)
NEW GATE (TYP)
3 NO. NEW DN450 CULVERTS TO CONVEY THE 5% AEP FLOW EVENT. PERMIT TO TAKE WILSONIA ROTUNDIFOLIA REQUIRED
APPROXIMATE LOCATION OF EXISTING WATER
PITTWATER ROAD
NEW CATTLE GRID
NEW GATE
PILLARS TO MATCH EXISTING DRIVEWAY
ENTRANCE TO SUIT 19m SEMI WHEEL PATH
NEW LOCKABLE LETTERBOX
EDGE OF DRIVEWAY (TYP)
INVERT OF TABLE DRAIN (TYP)
TOE OF BATTER (TYP)
GUIDE POSTS TO BE PROVIDED AT 75m CENTRES ON STRAIGHTS AND 25m ON CORNERS
NEW WATER SUPPLY TO BE EXTENDED FROM EXISTING TROUGH
NEW TROUGH LOCATION. PROVIDE LARGE BALL VALVE TAP FOR TREE WATERING TANKER
NEW PADDOCK ACCESS
NEW GATE
NEW FENCE (TYP)
20m x 2m PASSING BAY (TYP)

No.	Amendment Description	Initials	Date
DA1	ISSUED FOR DEVELOPMENT APPROVAL	Out of scope	10.05.2024

A3 original | This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:1000

Co-ordinate System: MGA2020 | Height Datum: AHD

JMG JOHNSTONE McGEE & GANDY PTY LTD

Tasmanian Government

DESIGNED Out of scope
REVIEWED Out of scope

Department of State Growth

MILFORD DRIVEWAY, 1431 TASMAN HIGHWAY, CAMBRIDGE
TASMAN HIGHWAY (A0113) UPGRADES BETWEEN
HOBART AIRPORT & MIDWAY POINT

GENERAL ARRANGMENT SHEET 1

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	1301 - GENERAL ARRANGEMENTS.dwg	10-May-24, 2:37 PM	1301

REGISTRATION NUMBER
TBD

REVISION DA1

0 10 20 30 40 50m
SCALE 1:1,000

LEGEND

- NEW WATER TROUGH
- NEW FENCE (TO MATCH EXISTING)
- NEW GATE
- EXISTING FENCE
- EXISTING OPEN DRAIN (WC)
- EXISTING WATER LINE (W)
- NEW STORMWATER CULVERT (SW)

EXISTING TROUGH
EXISTING GATE
APPROXIMATE LOCATION OF EXISTING WATER
20m x 2m PASSING BAY (TYP)
EXISTING FENCE (TYP)
EXISTING OPEN DRAIN
NEW DN300 CULVERTS
EXISTING TROUGH
PROVIDE LARGE BALL VALVE TAP FOR TREE WATERING TANKER
NEW DN300 CULVERT
20m x 2m PASSING BAY (TYP.)
NEW GATE (TYP)
CH 700
CH 650
CH 600
CH 550
CH 500
CH 450
CH 400
NEW TROUGH AND WATER SUPPLY
NEW AUTOMATIC GATES
NEW FENCE (TYP)
NEW PADDOCK ACCESS (TYP)
NEW GATE (TYP)
NEW PADDOCK ACCESS (TYP)
NEW GATE (TYP)
THE PINES

No.	Amendment Description	Initials	Date
DA1	ISSUED FOR DEVELOPMENT APPROVAL	Out of scope	10.05.2024

A3 original — This sheet may be prepared using colour and may be incomplete if copied

SCALES
1:1000

Co-ordinate System: MGA2020 — Height Datum: AHD

JMG JOHNSTONE McGEE & GANDY PTY LTD

Tasmanian Government

DESIGNED Out of scope
REVIEWED Out of scope

Department of State Growth

MILFORD DRIVEWAY, 1431 TASMAN HIGHWAY, CAMBRIDGE
TASMAN HIGHWAY (A0113) UPGRADES BETWEEN
HOBART AIRPORT & MIDWAY POINT

GENERAL ARRANGMENT SHEET 2

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	1301 - GENERAL ARRANGEMENTS.dwg	10-May-24, 2:37 PM	1302

REGISTRATION NUMBER
TBD

REVISION DA1

				SCALES 1:1000	JMG JOHNSTONE McGEE & GANDY PTY LTD	Tasmanian Government	Department of State Growth
							MILFORD DRIVEWAY, 1431 TASMAN HIGHWAY, CAMBRIDGE TASMAN HIGHWAY (A0113) UPGRADES BETWEEN HOBART AIRPORT & MIDWAY POINT
DA1	ISSUED FOR DEVELOPMENT APPROVAL	Out of Scope	10.05.2024				
No.	Amendment Description	Initials	Date		DESIGNED Out of Scope		GENERAL ARRANGMENT SHEET 3
A3 original	This sheet may be prepared using colour and may be incomplete if copied			Co-ordinate System: MGA2020	REVIEWED Out of Scope	Height Datum: AHD	

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	1301 - GENERAL ARRANGEMENTS.dwg	10-May-24, 2:37 PM	1303

REGISTRATION NUMBER
TBD

REVISION DA

SHEET 2

Design Principles for new driveway
- Provide 90º entry off Pittwater Rd
- Protect existing trees - both Black Gums (*E. ovata*) and White Gums (*E. viminalis* subsp. *pryoriana)* at Pittwater Rd entry
- Protect threatened flora species as indicated
- Provide a 4m width of road with passing bay 20m long x 2m wide every 200m or where indicated
- Limit straightness of driveway
- Generally provide roadside drainage either side of road

Landscape Principles along the driveway
- Plant local whitegums at the driveway entrance. Use native hop, prickly box, local wattles and lower shrubs, and saggs to provide an enclosed informal native plant entrance to Milford.
- Hydromulch native grasses and saggs adjacent roadway.
- Limit distant views to farm buildings as one drives into the site - slowly reveal buildings by reducing density of planting
- Minimise views to 'The Pines' along the east-west leg of the driveway
- Gradually move from mixed shrubs and trees to groves of single Eucalypt species and grasses to an informal avenue up the final approach to the heritage-listed farm building precinct
- To maintain and establish planted areas along new driveway
  - *planting groups to be protected where indicated to prevent animal browsing.
  - *provide water crystals at time of planting

Existing paddocks

Retain gravel access track to gate

Remove existing fence

Protect *Wilsonia rotundifolia* in this area

Retain existing drainage. Ensure existing drainage lines fall to swales.

4m wide roadway

Make good pasture grass

Provide distant views to homestead and Pittwater from entry

2 rows of existing Black Gums (*Eucalyptus ovata*)
Provide additional infill planting of Eucalypts and locally endemic native shrubs and groundcovers to strengthen the arrival sequence from Tasman Highway (by others)

Tasmanian White Gum (*Eucalyptus viminalis* subsp. *pryoriana*)

Provide additional eucalypts at entry. Continue row planting

PITTWATER ROAD

Existing paddocks

Make good pasture grass

New fence

Retain existing fence

Informal planting of eucalypts with understorey of native shrubs and grasses - similar to understorey on other side of Pittwater Road

Location of new double gate and cattle grid at entry

Provide timber rail fence similar to existing entry off Tasman Highway

Boxthorn, Briar Rose and Californian thistle to be removed in this area

Existing fence to be retained, either side of new entry

All landscape works based on surveyed plans provided by JMG (2.5.24)

Location and identity of weeds and threatened plants from Natural Value Assessment Survey - Milford Property Access - Van Diemen Consulting

Aerial photos courtesy of The List

LEGEND

- Existing tree (surveyed)
- Existing bush to be retained
- Existing threatened plants to be protected *Wilsonia rotundifolia*
- Existing weeds to be removed
  - Boxthorn
  - Briar Rose
  - Californian Thistle
- Proposed formal avenue tree
  - eg. *Eucalyptus citriodora, E. maculata E. sideroxylon* or *E. viminalis*
- Proposed 'bush' rehabilitation
  - Trees eg. *Eucalyptus viminalis or E. maculata*
  - Medium / large shrubs eg. *Allocasuarina littoralis Banksia marginata Bursaria spinosa Dodonea viscosa Leptospermum scoparium*
  - Understorey *eg. Dianella revoluta Lomandra longifolia Austrostipa spp. Poa labillardierei Rhagodia candolleana*
- Hydroseed and strawblow - native grass seed mix
- Make good pasture grass
- New raised compacted gravel track
- Existing hardened roadway surface or grass track
- 32.16 Existing level
- Existing fence to be retained
- Proposed new farm fence to match existing
- TF Temporary fencing
- G(e)G Gate (existing / proposed)
- Power pole and overhead line
- New trough
- Existing contour at 0.1m interval

N

DRAFT

0 5 10 15 m 30 45 m

LCO1- Sheet 1

Milford

Replacement Driveway due to Tasman Hwy proposed upgrade

Landscape Concept Plan

Susan Small Landscape Architects
25/33 Salamanca Place I Battery Point
p: 03 6224 4889 I **e**: ss@ssla.net.au

1:1000 @ A3 06.05.24

Retain section of existing fence and provide new gate

Provide 2 rows of *Lomandra longifolia* at 1m centres either side of new driveway below eucalypts

SHEET 3

Begin to open up view to north of homestead and farm buildings. Provide formal line of *Eucalyptus sp* or similar at regular intervals with occasional large shrub on northern side of road

Existing paddocks

Retain section of existing fence and provide new gate

New fence and gate to manage sheep when moving between paddocks

Provide dense shrub planting on southern side to minimise views to landscape supplies operation

Manage view of water / house / outbuildings with informal planting of eucalypts and understorey of shrubs on northern side.

clay soil

Boxthorn in this area to be removed

Occasional gap in vegetation to provide distant views to homestead and Pitt Water.

Existing paddocks

Strategic planting of shrubs and trees at base of bank to minimise views to 'The Pines' Landscape Supplies.

SHEET 1

All landscape works based on surveyed plans provided by JMG (2.5.24)

Location and identity of weeds and threatened plants from Natural Value Assessment Survey - Milford Property Access - Van Diemen Consulting

Aerial photos courtesy of The List

Design Principles for new driveway

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Landscape Principles along the driveway

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  - *planting groups to be protected where indicated to prevent animal browsing.
  - *provide water crystals at time of planting

LEGEND

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- Existing threatened plants to be protected *Wilsonia rotundifolia*
- Existing weeds to be removed
  - Boxthorn
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  - Californian Thistle
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  - eg. *Eucalyptus citriodora, E. maculata E. sideroxylon* or *E. viminalis*
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  - Trees eg. *Eucalyptus viminalis or E. maculata*
  - Medium / large shrubs eg. *Allocasuarina littoralis Banksia marginata Bursaria spinosa Dodonea viscosa Leptospermum scoparium*
  - Understorey *eg. Dianella revoluta Lomandra longifolia Austrostipa spp. Poa labillardierei Rhagodia candolleana*
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- 32.16 Existing level
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- TF Temporary fencing
- G(e) G Gate (existing / proposed)
- Power pole and overhead line
- New trough
- Existing contour at 0.1m interval

DRAFT

N

0 5 10 15 m 30 45 m

LCO1- Sheet 2

Milford

Replacement Driveway due to Tasman Hwy proposed upgrade

Landscape Concept Plan

Susan Small Landscape Architects
25/33 Salamanca Place I Battery Point
p: 03 6224 4889 I e: ss@ssla.net.au

1:1000 @ A3 06.05.24

LEGEND

Existing tree (surveyed)
Existing bush to be retained

Existing threatened plants to be protected *Wilsonia rotundifolia*
Existing weeds to be removed
Boxthorn
Briar Rose
Californian Thistle

Proposed formal avenue tree
eg. *Eucalyptus citriodora, E. maculata E. sideroxylon* or *E. viminalis*
Proposed 'bush' rehabilitation
Trees eg. *Eucalyptus viminalis or E. maculata*
Medium / large shrubs
eg. *Allocasuarina littoralis*
Banksia marginata
Bursaria spinosa
Dodonea viscosa
Leptospermum scoparium
Understorey
eg. *Dianella revoluta*
Lomandra longifolia
Austrostipa spp.
Poa labillardierei
Rhagodia candolleana

Hydroseed and strawblow - native grass seed mix

Make good pasture grass

New raised compacted gravel track
Existing hardened roadway surface or grass track

32.16 Existing level

Existing fence to be retained
Proposed new farm fence to match existing
TF Temporary fencing
G(e) G Gate (existing / proposed)

Power pole and overhead line

New trough

Existing contour at 0.1m interval

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- Limit straightness of driveway
- Generally provide roadside drainage either side of road

Landscape Principles along the driveway

- Plant local whitegums at the driveway entrance. Use native hop, prickly box, local wattles and lower shrubs, and saggs to provide an enclosed informal native plant entrance to Milford.
- Hydromulch native grasses and saggs adjacent roadway.
- Limit distant views to farm buildings as one drives into the site - slowly reveal buildings by reducing density of planting
- Minimise views to 'The Pines' along the east-west leg of the driveway
- Gradually move from mixed shrubs and trees to groves of single Eucalypt species and grasses to an informal avenue up the final approach to the heritage-listed farm building precinct
- To maintain and establish planted areas along new driveway
  *planting groups to be protected where indicated to prevent animal browsing.
  *provide water crystals at time of planting

All landscape works based on surveyed plans provided by JMG (2.5.24)

Location and identity of weeds and threatened plants from Natural Value Assessment Survey - Milford Property Access - Van Diemen Consulting

Aerial photos courtesy of The List


Example of driveway lined with *Eucalyptus citriodora*

Pitt Water

Existing road approximately 3.5m wide with another 3m to trees

Marry new driveway into existing driveway to house and existing driveway to Tasman Highway

provide shrub planting as screening to conceal house / office requiring privacy

Existing gate and gateway to be retained / widened. Retain existing large timber post, widen to 5m and provide additional timber post to match

Existing row of mature pines. Some are beginning to fail. Protect trees and shrubs on eastern side during construction

Approximate location existing water main. Locate trees to avoid

Provide 2 rows of *Lomandra longifolia at* 1m centres either side of new driveway. Protect trees and shrubs within this area

Retain existing fence and gate

Formal avenue of *Eucalyptus citriodora, E. maculata, E. sideroxylon E. viminalis* or similar

Remove African Boxthorn in this area

Remove section of existing fence

Existing paddocks

Woolstore

SHEET 2

DRAFT

N

0 5 10 15 m 30 45 m

LCO1- Sheet 3

Milford

Replacement Driveway due to Tasman Hwy proposed upgrade

Landscape Concept Plan

Susan Small Landscape Architects
25/33 Salamanca Place I Battery Point
p: 03 6224 4889 I **e**: ss@ssla.net.au

1:1000 @ A3 06.05.24

GES

GEO-ENVIRONMENTAL

SOLUTIONS

COASTAL VULNERABILITY ASSESSMENT

PROJECT:

Proposed Driveway

Site Address:

1431 Tasman Highway,
Cambridge
TAS
7170

CLIENT:

JMG Engineering & Planners

DATE:

16/05/2024

DOCUMENT CONTROL

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Project Type:	Coastal Vulnerability Assessment (CVA)	
Client:	JMG Engineering & Planners	
Project Job Number:	J10067	
Revision Version:	V02	
Date:	16/05/2024	
Approved By:	Out of scope	
	Signature:	Date
	Out of scope	16/04/2024

FIGURES

TABLE

EXECUTIVE SUMMARY

Geo-Environmental Solutions Pty Ltd (GES) were contracted by JMG Engineering & Planners to prepare a coastal vulnerability assessment for a proposed works at Cambridge, Tasmania. The project area consists of a single cadastral title (CT - 137587/1) located at 'Milford' 1431 Tasman Highway Cambridge TAS 7170 (The Site).

An application to conduct construction works has triggered the assessment in accordance with the Tasmania Planning Scheme (TPS) – Clarence Council and following of the Director's Determination for Inundation areas which provides building requirements for building and demolition work in inundation hazard areas.

GES has conducted a site assessment to evaluate the potential risks of sea level rise associated with the proposed driveway. It has been determined that, based on the 2100 high emissions scenario (1% Annual Exceedance Probability), stillwater levels could rise to 2.04 meters above Australian Height Datum (AHD) increasing to 2.24m AHD including wave and a local northeast fetch wind setup in a significant coastal inundation event. The proposed works are located at approximately 1.5m AHD elevation to Milford Property. The proposed new driveway can be achieved by design and regular maintenance. GES recommend that the proposed driveway should be constructed on an elevated embankment to minimize the risk of flooding. Part of the development should consider to use of appropriate fill materials and compaction methods to ensure stability and install efficient drainage systems, including culverts, ditches, and drainage pipes to redirect water away from the road. Ensure these systems are designed to handle the maximum expected water flow. It is important to conduct regular inspections, especially after significant weather events, to identify and address any damage or potential issues. Also, it is necessary to keep drainage systems clear of debris to ensure they function effectively including regularly checking and cleaning culverts, ditches, and pipes. Repair any cracks, potholes, or other surface damage immediately to prevent water infiltration and further deterioration. It is suggested to monitor and repair any erosion around the road or embankment using erosion control methods such as silt fences, erosion control blankets, or replanting vegetation. After combining these design, maintenance, and monitoring approaches it can effectively manage and maintain roads within inundation area, ensuring their long life and safety for access to Milford Property.

If the recommendations are adhered to, the proposed works will meet the requirements for works in the inundation hazard area and it will fulfill the performance solution codes C11.6.1, as outlined in the Tasmanian Planning Scheme – Clarence City Council (2021).

1 INTRODUCTION

Geo-Environmental Solutions Pty Ltd (GES) were contracted by JMG Engineering & Planners to prepare a coastal vulnerability assessment for a proposed works at Cambridge, Tasmania. The project area consists of a single cadastral title (CT - 137587/1) located at "Milford" 1431 Tasman Highway Cambridge TAS 7170 (The Site). An application to conduct construction works has triggered the assessment in accordance with the Tasmania Planning Scheme (TPS) – Clarence Council and following of the Director's Determination for Inundation areas which provides building requirements for building and demolition work in inundation hazard areas.

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 performance criteria relevant to the project which need addressing;
- Conduct a literature review of all geological, geomorphologic, hydrodynamic information and any erosion or inundation assessments which are relevant to the site;
- Identify generalised site inundation potential;
- Review hydrodynamic assessments of the local area to determine projected sea level rise, storm tides and site-specific hydrodynamic conditions and where applicable,
- 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 – 137587/1

3.2 Project Area

The project area is located on Tasmanian's Southeast Coast, approximately 16 km directly southeast from Hobart (Figure 1). The site is approximately 118.3ha in size and located at Cambridge. It is bordered by the Tasman Highway to the west and Pittwater Road to the south. To the north and northeast lies Pittwater, and to the southeast, it shares the northern edge of the Seven Mile Beach sand spit, which is part of the estuary formed by the Coal River. Although there is a deep tidal channel at the eastern end of the spit that connects with the sea, most of Pittwater is not affected by ocean swells. The site is primarily influenced by winds from the northeast, which can generate local wind-waves along the shoreline.

3.2.1 Proposed Works

The project area spans approximately 118.3 hectares and currently includes a residential building, "Milford," located in the central part of the northeast along the site boundary, about 70 meters from the current shoreline. The existing access driveway to the Milford property is from the Tasman Highway on the northwest side of the site. Due to the Tasman Highway upgrade works, the proposed project includes a new driveway. The new access driveway will be built from Pittwater Road on the southern portion of the site.

The design principles for the proposed new driveway include:

- A 90-degree entry off Pittwater Road.
- A 4-meter wide road with passing bays that are 20 meters long and 2 meters wide every 200 meters or as indicated.
- General drainage on either side of the road.
- Maintenance and establishment of planted areas along the new driveway, with planting groups fenced off with temporary fencing until established.

Elevations across the site range from approximately 1.5 to 3.4 meters AHD (Australian Height Datum). The site contours were exported from Clarence 2019 Lidar data using QGIS software. The plans for the proposed works have been provided to GES from Susan Small Landscape Architects (Drawing No210916, Dated: 09/09/2021). The plans are presented in Figure 2.

Figure 1 - Location of the site

Figure 2 - Site Plans

4 PLANNING

4.1 Australian Building Code Board

This report presents a summary of the overall building construction risk to coastal erosion and inundation processes. This assessment has been conducted a 'normal' building design life category based on a 2023 baseline (ABCB 2015).

'The design life of buildings should be taken as 'Normal" for all building importance categories unless otherwise stated.'

As per Table 3-1, the following sub systems are identified for the proposed development:

- Building foundations subsystems are considered not accessible or economical to repair and therefore are to be designed with a 50-year life till 2073; and
- Wastewater subsystems are considered to have moderate ease of access but difficult or costly to replace or repair and are therefore to be designed with a 15-year life till 2038.

Table 3-1 Design life of building and plumbing installations and their components

Building Design Life Category	Building Design Life (years)	Design life for components or sub systems readily accessible and economical to replace or repair (years)	Design life for components or sub systems with moderate ease of access but difficult or costly to replace or repair (years)	Design life for components or sub systems not accessible or not economical to replace or repair (years)
Short	1 < dl < 15	5 or dl (if dl<5)	dl	dl
Normal	50	5	15	50
Long	100 or more	10	25	100

Note: Design Life (dl) in years

4.2 The Tasmanian Building Regulations 2016

The Tasmanian Building Regulations are regulated by the Consumer, Building and Occupation Services (CBOS) department and are formed from the Tasmanian Building Act 2016. New state-wide planning and building requirements are being implemented for hazardous areas. These include areas potentially subject to landslip, bushfire, flooding, coastal erosion, & costal inundation. Details of the Tasmanian Building Regulations are presented in Appendix 1.

4.3 Tasmanian Planning Scheme Overlay – Clarence Council (TPS, 2021)

4.3.1 Coastal Inundation Hazard Code Overlay (CIHC)

The proposed works are located within the Low and Medium Coastal Inundation Overlay (CIHC) Figure 3.

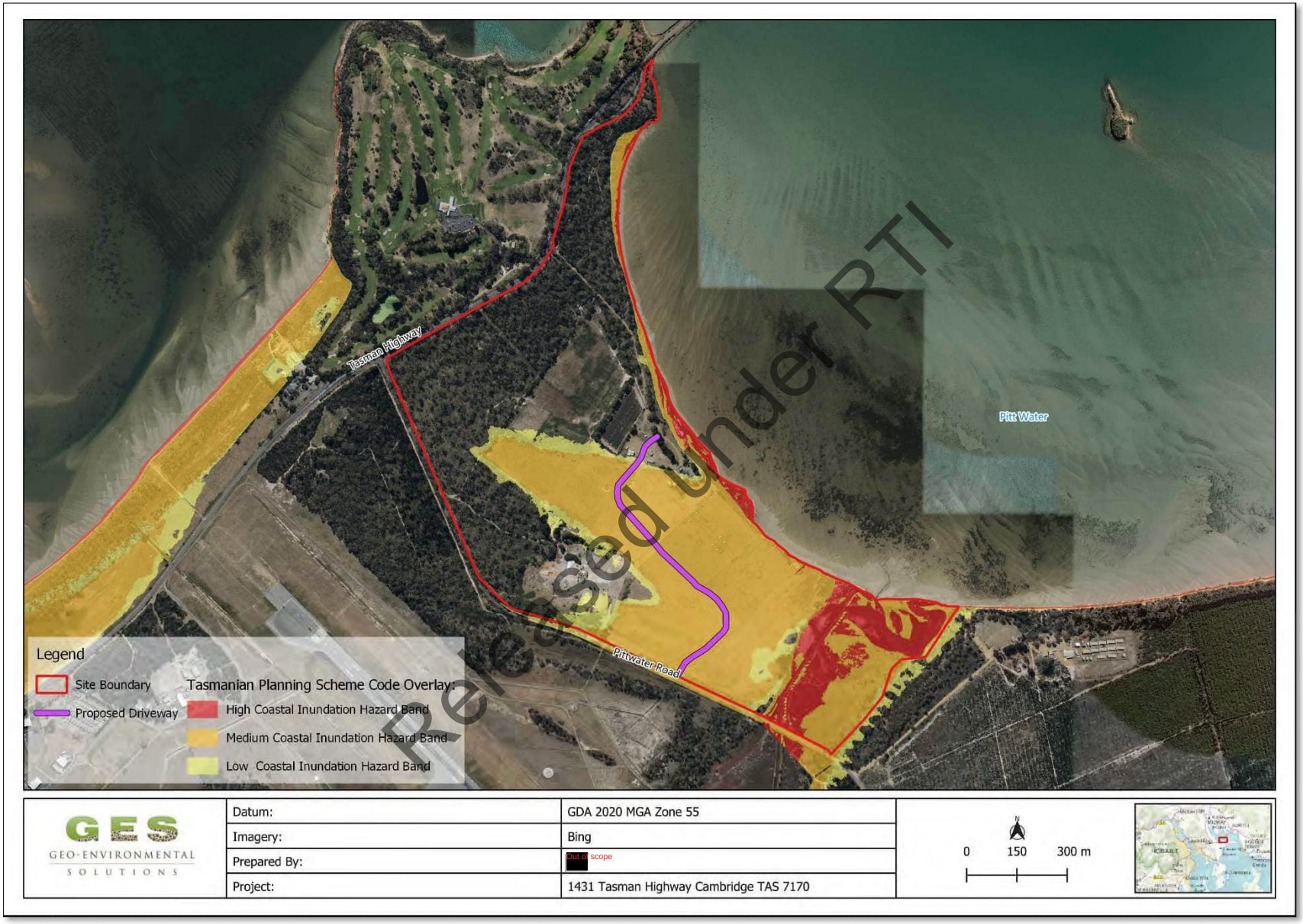

Figure 3 - Coastal Inundation Hazard Overlay (Source: The List)

4.4 Development & Works Acceptable Solutions

Where applicable, the need for further performance criteria compliance is outlined in Appendix 1.

4.4.1 Coastal Inundation Hazard Areas Code (CIHC)

C11.6.1.P1 Buildings and works.

The proposed development fall within the CIHC overlay and there are no acceptable solutions for buildings and works in a CIHC Area. The following performance criteria need to be addressed:

- C11.6.1 P1.1 and P1.2

*As per Tasmanian Planning Scheme – Clarence Council requirements for the minimum level of the habitable rooms finished floor for the site in Cambridge the 1% AEP flood level for 2100 is defined at **2.6 m AHD for Cambridge (which includes 300mm freeboard for defined flood level of 2.3m AHD).***

5 COASTAL INUNDATION HAZARD ASSESSMENT

As identified in the directors Determination and regulation 56(3) of the Building Regulations 2016, the defined flood level is the level above the 0 metre Australian Height Datum with a one percent probability of being exceeded in a storm surge flooding event in the year 2100, as specified in the Coastal Inundation Hazard Band Levels List for the relevant locality in the relevant Local Provisions Schedule of the Tasmanian Planning Scheme.

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. GES obtained data for storm tide levels from Canute 3.0. taking in account greenhouse gas emission scenario - very high RCP 8.5, Climate Model Ensemble Percentile Upper (95th), IPCC Version AR6 (Baseline 1995 -2014). (Source: Canute 3.0)

The storm tide level adopted for the site is 1.24 m AHD.

5.2 Sea Level Rise

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. The TPS - Clarence Council SLR adopted 0.8m rise by 2100:

- *0.8m rise by 2100 (as per CCC)*

5.1 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 estimates Table 1.

Table 1 Summary of Site Stillwater Levels for 2100 estimates (1% AEP)

Stillwater Elevations	2100
Sea Level Rise (m, AHD)	0.8m
Tidal Influence & Barometric Low Influence (m)	1.24
Summary (m, AHD)	2.04

5.1.1 Site Stillwater Levels

The sea level heights for a 100-year ARI (1% AEP) event were calculated taking into account all the factors contributing (barometric set up, astronomical tides, and wave setup) for present-day conditions for 2100. The wave runup will deliver lateral forcing which has not been considered in this assessment.

Site inundation levels are defined by:

- Sea levels Rise of 1.01 m AHD by 2100
- Storm tide levels of 1.24 m
- Wind setup of 0.10 m
- Wave setup of 0.10 m

The combined inundation levels for 2100

- *Still Water Elevations (m AHD) Including Wave and Wind Setup Where Applicable – 2.24m taking in consideration of CCC adopted levels.*

6 CONCLUSIONS AND RECOMMENDATIONS

GES has conducted a site assessment to evaluate the potential risks of sea level rise associated with the proposed construction area. It has been determined that, based on the 2100 high emissions scenario (1% Annual Exceedance Probability), stillwater levels could rise to 2.04 meters above Australian Height Datum (AHD) increasing to 2.24m AHD including wave and a local north fetch wind setup in a significant coastal inundation event. The proposed works are located at approximately 1.5m AHD elevation to Milford Property. The proposed new driveway can be achieved by design and regular maintenance. GES recommend that the proposed driveway should be constructed on an elevated embankment to minimize the risk of flooding. Part of the development should consider to use of appropriate fill materials and compaction methods to ensure stability and install efficient drainage systems, including culverts, ditches, and drainage pipes to redirect water away from the road. Ensure these systems are designed to handle the maximum expected water flow. It is important to conduct regular inspections, especially after significant weather events, to identify and address any damage or potential issues. Also, it is necessary to keep drainage systems clear of debris to ensure they function effectively including regularly checking and cleaning culverts, ditches, and pipes. Repair any cracks, potholes, or other surface damage immediately to prevent water infiltration and further deterioration. It is suggested to monitor and repair any erosion around the road or embankment using erosion control methods such as silt fences, erosion control blankets, or replanting vegetation. After combining these design, maintenance, and monitoring approaches it can effectively manage and maintain roads within inundation area, ensuring their longevity and safety for access to Milford Property.

If the recommendations are adhered to, the proposed works will meet the requirements for works in the inundation hazard area and it will fulfill the performance solution codes C11.6.1, as outlined in the Tasmanian Planning Scheme – Clarence City Council (2021).

7 RISK ASSESSMENT

The qualitative risk assessment criteria have been developed to identify key risks that may arise from works in areas that are vulnerable to inundation hazard. The risk assessment based on year 2100, 1.01m AHD high SLR scenario. Given the current data set and uncertainty over long term responses (more than 77 years) to climate change the calculated long term future risk must be viewed with caution, and adjustments to the risk assessment will need to be made over time. Future data and modelling may calculate a low or higher risk, and it is important to understand that the risk estimations in this report are based upon worst case scenario sea level rise from the current data sets. 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 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 4. GES has established from the risk assessment that the level of risk is tolerable within the lifetime of the proposed development works.

LIMITATIONS STATEMENT

The following limitations apply to this report:

- Climate Futures Light Detection and Ranging (LIDAR) digital elevation model is used for the site modelling;
- 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 – ACCEPTABLE SOLUTIONS

Coastal Inundation Hazard Code (CIHC) Areas

C11.6.1 Buildings and works, excluding coastal protection works, within a coastal inundation hazard area

Objective:

That:

(a) building and works, excluding coastal protection works, within a coastal inundation hazard area, can achieve and maintain a tolerable risk from coastal inundation; and

(b) buildings and works do not increase the risk from coastal inundation to adjacent land and public infrastructure.

Acceptable Solutions	Performance Criteria
A1 No Acceptable Solution.	**P1.1** Buildings and works, excluding coastal protection works, within a coastal inundation hazard area must have a tolerable risk, having regard to: (a) whether any increase in the level of risk from coastal inundation requires any specific hazard reduction or protection measures; (b) any advice from a State authority, regulated entity or a council; and (c) the advice contained in a coastal inundation hazard report. **P1.2** A coastal inundation hazard report also demonstrates that the building or works: (a) do not cause or contribute to coastal inundation on the site, on adjacent land or public infrastructure; and (b) can achieve and maintain a tolerable risk from a 1% annual exceedance probability coastal inundation event in 2100 for the intended life of the use without requiring any specific coastal inundation protection works.

APPENDIX 2 – DIRECTORS DETERMINATION & BUILDING REGULATIONS 2016 COASTAL INUNDATION HAZARD REPORTING

Works in a Coastal Inundation Hazard Area

According to this director's determination, the following regulations are applicable for the works in a coastal inundation hazard area:

(1) For the purposes of this Determination and regulation 56(3) of the Building Regulations 2016, the defined flood level is the level above the 0 metre Australian Height Datum with a one percent probability of being exceeded in a storm surge flooding event in the year 2100, as specified in the Coastal Inundation Hazard Band Levels List for the relevant locality in the relevant Local Provisions Schedule of the Tasmanian Planning Scheme.

(2) Where land is not located in a specified locality, the defined flood level for the relevant municipal area average applies.

(3) A coastal inundation hazard report must be prepared.

(4) The design of the building footing system must be prepared by an engineer-civil.

(5) The building design (including the footing system) must take into account the coastal inundation hazard report.

(6) In determining an application for a Certificate of Likely Compliance, the building surveyor must:

(a) take into account the coastal inundation hazard report and any relevant coastal inundation management plan; and

(b) be satisfied that the proposed work will not cause or contribute to coastal inundation on the site, on adjacent land or of public infrastructure; and

(c) be satisfied that the proposed work can achieve and maintain a tolerable risk for the intended life of the building without requiring any specific coastal inundation protection measures.

(7) In determining an application for a permit, the permit authority must take into account the coastal inundation hazard report and any relevant coastal inundation management plan.

Report Determination Criteria	Coastal Inundation Hazard Report Compliance Checklist	Compliance	Specific Comments
4. (1)	Report is prepared by a specified practitioner being a practitioner with relevant qualifications, experience and competence in the preparation of coastal inundation hazard reports	Yes	Up to date models, literature and methods are used in this assessment, which draw on regional and site-specific information to determine present day and forward projected site hazards.
4. (1) (a)	Signed Declaration	Yes	
4. (1) (b)	Conclusions based on consideration of the proposed work as to:	Yes	
4. (1) (b) (i)	whether the work is likely to cause or contribute to coastal inundation on the land or on adjacent land or of public infrastructure;	Yes	
4. (1) (b) (iii)	whether the work can achieve and maintain a tolerable risk for the intended life of the building having regard to:	Yes	Modelling has been conducted with measures put in place to ensure that by the end of the building's lifetime, the risks are tolerable in line with the sites typical residential use and typical intensity of this use. This assessment is based on the intended use as outlined in the development application. All potential and site-specific inundation factors are considered to assess tolerable risks which include: • Government sea level projections which are calibrated to the Local Government Authority area and scaled to the building design life (DPAC 2016), • Storm tide projections (combined 1% AEP storm surge and tides) which are calculated on a local scale (0.5 km accuracy)
	• the nature, intensity and duration of the use;	Yes	The risk assessment herein is based on the highest intensity of use. The full inundation extent is based on a 1% AEP event occurring at the end of the buildings design life.
	• the type, form and duration of any development;	Yes	This assessment is based on the specific plans as outlined in the development application, with the duration based on the building design life as defined herein.
	• the likely change in the risk across the intended life of the building;	Yes	As indicated in 4. (1) (b) (iii), consideration is given to risk in the most adverse of modelled consecutive 1% AEP storm conditions for the projected end life of the building. Where deemed necessary, a 0.3 m freeboard 'buffer' is to be applied to design 1% AEP stillwater level for the building end of life.
	• the ability to adapt to a change in the risk;	Yes	Engineering solutions may be applied if it is so desired to reduce the risk through hazard reduction. Increased risk may occur as a result of increased user vulnerability beyond

			what is modelled as a tolerable risk in this assessment. Eg. Changed site layout meaning reduced access during a floodwater event. Hazard reduction may include onsite wave attenuation structures such as wave breaker walls and/or revetments.
	• the ability to maintain access to utilities and services;	Yes	
	• the need for specific coastal inundation hazard reduction or protection measures on the site;	Yes	Coastal inundation hazard reduction or protection measures are not recommended on the site based on the projected lifetime of the proposed development.
	• the need for coastal inundation hazard reduction or protection measures beyond the boundary of the site;	NA	Coastal inundation hazard reduction or protection measures are not recommended beyond the boundary of the site based on the projected lifetime of the proposed development.
	• any coastal inundation management plan in place for the site and/or adjacent land.	NA	
4. (2)	protection measures for any hazardous chemical used, handled, generated or stored on the site, taking into consideration the potential risks of the hazardous chemical to human health and safety as a consequence of coastal erosion on the site or adjacent land.	Yes	GES are not aware of any proposal for hazardous chemicals to be used, handled, generated or stored on the site. It is recommended that if such chemicals are to be stored within the proposed extension, they are elevated above the designated inundation level.
4. (4)	The declaration format for a coastal inundation hazard report must contain:		
4. (4) (a)	details of, and be signed by, the person who prepared or verified the report;	Yes	
4. (4) (b)	confirmation they have the appropriate qualifications, expertise and level of	Yes	

	current indemnity insurance;		
4. (4) (c)	confirmation that the report has been prepared in accordance with the specified methodology.	**Yes**	

APPENDIX 3 QUANTITATIVE RISK ASSESSMENT TABLES

Consequence Index

Consequence	Details - Storm Erosion and Inundation	Details – Waterways and Coastal Protection
Catastrophic	Loss of life, loss of significant environmental values due to a pollution event where there is not likely to be recovery in the foreseeable future.	Very serious environmental effects with impairment of ecosystem function. Long term, widespread effects on significant environment (eg. RAMSAR Wetland)
Major	Extensive injuries. Complete structural failure of development, destruction of significant property and infrastructure, significant environmental damage requiring remediation with a long-term recovery time.	Serious environmental impact effects with some impairment of ecosystem function. Relatively widespread medium-long term impacts.
Moderate	Treatment required, significant building or infrastructure damage i.e. loss of minor outbuildings such as car ports, garages and the like. Replacement of significant property components. linings, hard paved surfaces, cladding, flooring. Moderate environmental damage with a short-term natural or remedial recovery time.	Moderate effects on biological or physical environment (air, water) but not affecting ecosystem function. Moderate short term widespread impacts (e.g. significant spills)
Minor	Medium loss – repair of outbuildings and repair and minor replacement of building components of buildings. Replacement of floor/window coverings, some furniture through seepage (where applicable). Minor environmental damage easily remediated.	Minor effects on biological or physical environment. Minor short-term damage to small area of limited significance.
Insignificant	No injury, low loss – no replacement of habitable building components, some remediation of garden beds, gravel driveways etc. Environment can naturally withstand and recover without remediation. Inundation of the site, but ground based access is still readily available and habitable buildings are not inundated, including incorporated garages.	Limited damage to minimal area of low significance.

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 4 QUANTATIVE RISK ASSESSMENT

BUILDING AND WORKS WITHIN A COASTAL INUNDATION HAZARD

Performance Criteria C11.6.1 P1.1 Buildings and works, excluding coastal protection works, within a coastal inundation hazard area must have a tolerable risk, having regard to:	Relevance	Management Options	Preliminary Risk Assessment (where relevant)			Further Assessment Required
			Consequence	Likelihood	Risk	
a) whether any increase in the level of risk from coastal inundation requires any specific hazard reduction or protection measures;	Proposed development will not impose any additional risk.		Minor (2)	Unlikely (D)	Low (5)	No
b) any advice from a State authority, regulated entity or a council; and	N/A		Minor (2)	Unlikely (D)	Low (5)	No
c) the advice contained in a coastal inundation hazard report.	Refer to conclusions		Minor(1)	Rare (E)	Low (1)	No

FLOOD HAZARD REPORT

MILFORD PROPERTY,
1431 TASMAN HWY, CAMBRIDGE

230287CS

CLARENCE CITY COUNCIL
17 05 2024

TABLE OF CONTENTS

Issuing Office: 117 Harrington Street, Hobart 7000 **JMG Project No. 230287CS**									
Document Issue Status									
Ver.	**Issue Date**	**Description**	**Originator**		**Checked**		**Approved**		
1	17.05.2024	Issue for DA	Out of scope	Out of scope	Out of scope	Out of scope	Out of scope	Out of scope	

1. Introduction

JMG Engineers (JMG) have been engaged by the Department of State Growth to provide design documentation for a new access to the existing dwelling at the Milford property at 1431 Tasman Highway, Cambridge. The new access will come off Pittwater Rd, opposed to the existing access which came directly off the Tasman Hwy opposite the Tasmania Golf Club. As part of the design, a Flood Hazard Report as detailed herein, has been carried out for the area.

A Flood Hazard Report is required as the proposed access falls within a Flood Prone Area, as defined by the Tasmanian Planning Scheme – Clarence. In general terms, the objective of this report is to ensure the purpose of the Flood-Prone Areas Hazard Code is met –

Tasmanian Planning Scheme - Clarence

C12.1 Code Purpose

The purpose of the Flood-Prone Areas Hazard Code is:

C12.1.1 - To ensure that use or development subject to risk from flood is appropriately located and managed, so that:

a) People, property, and infrastructure are not exposed to an unacceptable level of risk.
b) Future costs associated with options for adaption, protection, retreat or abandonment of property and infrastructure are minimised.
c) it does not increase the risk from flood to other land or public infrastructure.

C12.1.2 - To preclude development on land that will unreasonably affect flood flow or be affected by permanent or periodic flood.

Figure 1 - Site location and flood prone area code overlay.

2. Tasmanian Planning Scheme – Clarence

2.1 Flood Prone Areas Hazard Code

This report has been completed to comply with the Flood Prone Areas Hazard Code - C12.0. As the development is only for an access driveway and it does not involve a habitable building, C12.6.1 – 'Building and works' is the relevant condition.

Tasmanian Planning Scheme - Clarence

C12.6.1 Buildings and works within a flood-prone hazard area.

That:

a) building and works within a flood-prone hazard area can achieve and maintain a tolerable risk from flood; and
b) buildings and works do not increase the risk from flood to adjacent land and public infrastructure.

Performance Criteria

P1.1

Buildings and works within a flood-prone hazard area must achieve and maintain a tolerable risk from a flood, having regard to:

- *the type, form, scale and intended duration of the development;*
- *whether any increase in the level of risk from flood requires any specific hazard reduction or protection measures;*
- *any advice from a State authority, regulated entity or a council; and*
- *the advice contained in a flood hazard report.*

P1.2

A flood hazard report also demonstrates that the building and works:

- *do not cause or contribute to flood on the site, on adjacent land or public infrastructure; and*
- *can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures.*

Section C12.1 - Code Purpose, as detailed in Section 1 and which defines the overarching intent of the code, implies that a development and the use that would be associated with the development needs to protect people, property, and infrastructure from a non-tolerable flood risk. As such, it is acknowledged that this report is required to not only address the question of whether the physical works are exposed to a tolerable flood risk, but also that users of those works are also protected.

2.2 *"Tolerable Risk"*

A tolerable risk is defined as the lowest level of likely risk from the relevant hazard:

a) to secure the benefits of a use or development in a relevant hazard area; and
b) which can be managed through:
i. routine regulatory measures; or
ii. by specific hazard management measures for the intended life of each use or development.

When considering the 'lowest level of likely risk it is useful to review the proposed development and its intended use against the Hazard Rating curves. Flood Hazard Rating is typically based on inundation depth and flow velocity as per *'Updating National Guidance on Best Practice Flood Risk Management (D. McLuckie et al., 2014)* (Figure 2), but it is important to note that these charts alone cannot exclusively define the level of risk associated with a development. Decisions regarding tolerable risk are more nuanced, and often come down to engineering judgement.

The development proposes a new driveway, which will be utilised by the property owner and any guests/visitors accessing their residence or the surrounding paddocks. This is most likely to be in a vehicle, but it's reasonable to assume users could be on foot also. The flood report needs to assess the risk in relation to both vehicles and people.

As a starting point, based on the expected use associated with the development it would be reasonable to state that regular and unpredictable exposure to the H3 flood rating would be considered a non-tolerable risk. H3 is defined as unsafe for vehicles, children, and the elderly. Noteworthy, for the Milford property is that the H3 rating requires flood depths in excess of 0.5m for low velocity flows.

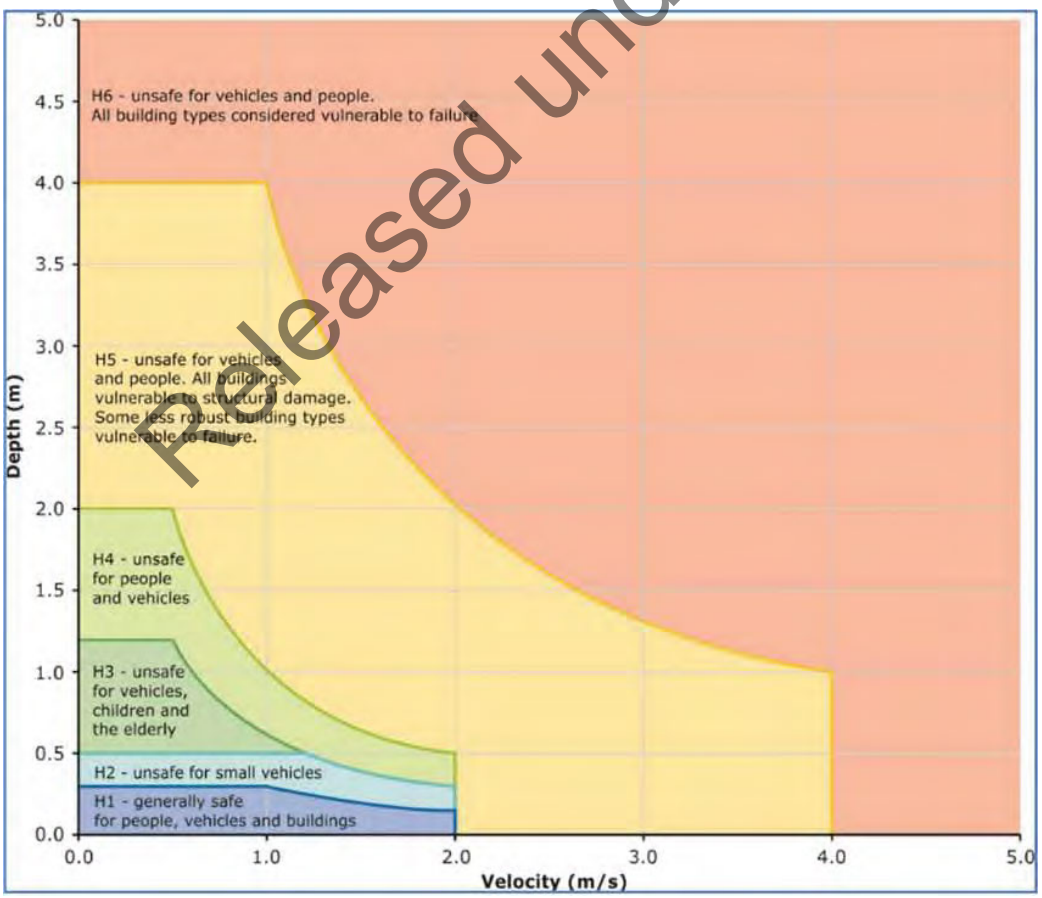

Figure 2 - Flood Hazard Ratings

3. Problem Definition

3.1 Site and Flow Path Overview

The site is mainly farmland with farm buildings/sheds scattered throughout. The residence is located along the North-East boundary of the property, and a landscaping supply centre on the South-Western side. The site is approximately 118 ha and is predominantly flat but with a very gradual fall towards the east. The flood prone area code overlay for the site, shown in Figure 1, is distributed throughout the site in low level areas and through existing open drains. There are also a number of very small farm dams located around the property – all of which were dry at the time of inspection. Some drainage channels have been formed to serve these dams.

Anecdotal evidence from the property owner also indicates that previous flood levels have not exceeded an approximate RL of 1.55m AHD. JMG have no detail of the associated Annual Exceedance Probability (AEP) of these previous events. This assumption of RL is based on verbal advice from the property owner that ponding water has reached within 1m horizontal distance of the barn shown in the middle-left Figure of the below sequence. The barn is clearly identified by its red doors.

Figure 3 - Site Photos, demonstrating flat paddocks and limited flow paths.

3.2 Existing Council Flood Mapping

As the site is located on the shore of the Pittwater lagoon it is not at risk of inundation from a significant riverine source. The only flood risk to the Milford Property is due to the low lying and flat nature of the site. As there is limited grade across the site in any direction, drainage is inefficient and ponding/slow moving water prevalent.

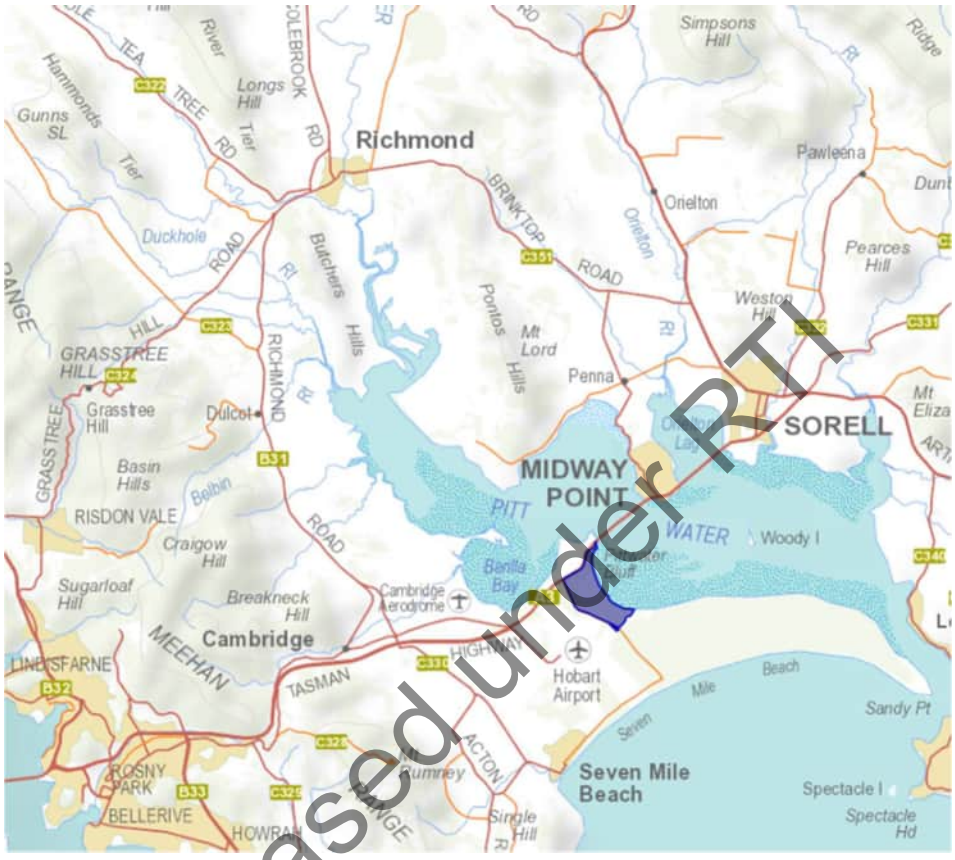

Figure 4 - Locality Plan. Milford Property shown 'blue' adjacent the Pittwater Lagoon.

There are minor flow paths to the east of the proposed development that are shown on the Clarence City Council (CCC) flood mapping (Figure 5). The one closest to the development area is a small, excavated, swale drain which discharges directly into the Pittwater Lagoon. Further to the east a larger natural flow path collects runoff from the airport precinct. The details of the airport's influence on flooding cannot be determined as the flood mapping over the whole precinct has been excluded from the publicly available data set on the CCC website.

In addition to these more defined flow paths, flood mapping indicates that several isolated areas of inundation impact the site (Figure 5). These areas are assumed to be a result of localised depressions within the modelled surface that capture and hold water. This is a common result of 'rain-on-grid' modelling which simulates rain falling over the entirety of the modelled surface. As a result, any low points within the surface will hold water and the outcome will be that many areas that are not near a flow path are shown to be at risk of inundation. Whilst this is not an unreasonable reflection of reality, as localised ponding will occur in any significant rainfall event (particularly a 1% AEP), it is generally not the intention of the flood-prone areas code to protect against all surface water ponding. The code is in place to ensure infrastructure is safe from major flow paths, in the case of the proposed works on this site this risk is negligible.

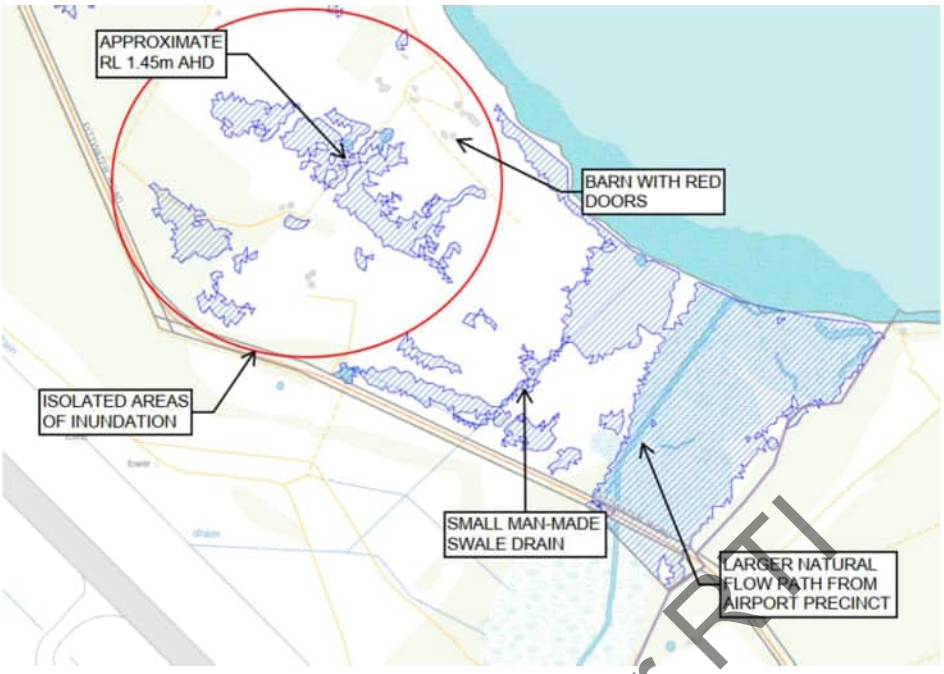

Figure 5 - Summary of Inundation Mapping

Mapping shown in Figure 5 is inconsistent with the anecdotal flood evidence. Mapping only indicates flood levels reach an approximate RL of 1.45m AHD.

4. Design Review

The flat nature of the site and surrounding area makes it very difficult to determine exactly where all site flows come from and are directed, but best estimates have been made to provide insight into the expected flow paths and flow rates. Hydrological calculations have been undertaken to guide culvert sizing, but the complexities of the contributing catchments don't lend themselves to reliable results. For the purposes of this review against the flood prone areas code the flow calculations are considered supplementary material to the physical site review. This approach varies from typical inundation reviews where the calculations would be used as the primary design tool, but JMG believe a practical site review is the most sensible and reliable approach to addressing the risk of flood on the Milford property.

The proposed driveway alignment and the predicted post development flow paths are shown in Figure 6. Identified are three major flow paths, which define the largest stormwater culverts that pass under the driveway (although there are a few smaller culverts proposed at strategic locations elsewhere). As the driveway will be raised above natural surface, the topside of the road will form a natural barrier to the free flow of water, as such roadside table drains will be constructed. These will be graded to ensure flow control towards the proposed culverts.

Based on best estimates of catchment shape and characteristics, it has been determined that a 5% AEP flow can be accommodated within the proposed stormwater infrastructure, and flood levels kept below the design road levels. Refer Appendix B - Hydrologic Analysis and Appendix C - Culvert Analysis.

1. Culvert 1 – 4 No. DN450, Road Design Level – RL 1.6m AHD
2. Culvert 2 – 2 No. DN300, Road Design Level – RL 2.2m AHD
3. Culvert 3 – 3 No. DN450, Road Design Level – RL 2.0m AHD

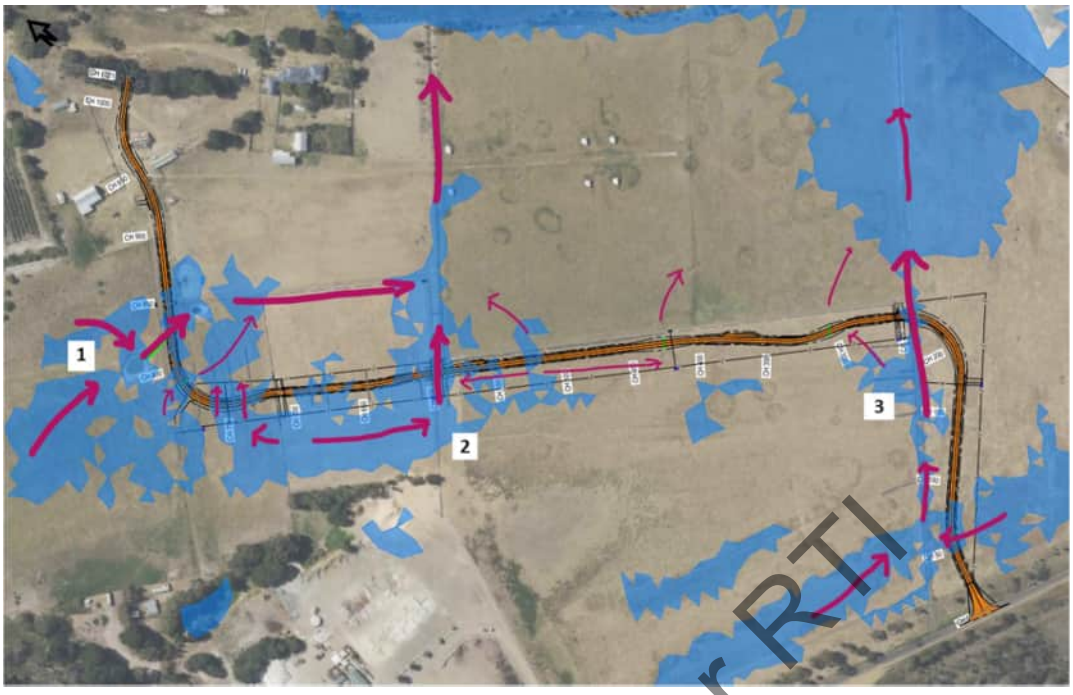

Figure 6 - Predicted Post Development Flow Paths

Figure 7 Flow path 1 (looking downstream)

Figure 8 Flow path 2 (looking upstream)

Figure 9 - Flow Path 3 Open Channel (looking upstream).

For events larger than a 5% AEP (ie. 1% AEP) the capacity of these culverts is likely to be exceeded and the resultant overland flow will be dispersed across the typically flat topography of the property. Whilst the design has nominated finished surface levels that are higher than both the anticipated flood levels and the anecdotal flood levels indicated by the property owner, it is not inconceivable that over topping of the access will occur. It remains possible that flood water in these larger events doesn't overtop the driveway, but as hydrology is a probabilistic analysis, the possibility of overtopping does exist. Flood water from such events will also disperse quickly, with the driveway only exposed to shallow sheet flow. The flat grades that are characteristic of the site will also ensure flow velocity into the upstream side of the driveway is low. Given risk is considered in terms of velocity and depth, it is clear neither factor is going to contribute to a high hazard rating on this site.

JMG acknowledge the broader scale ponding in existing low-lying areas offers the greater risk. We also acknowledge the possibility these areas of ponding could be added to, or exacerbated, in the regions surrounding the proposed access driveway due to it being built above natural surface level. Ponding water, by definition, has very low velocity which places it at the bottom end of the velocity scale on the hazard rating chart. For these velocities, the upper depth limit for a H2 rating (which has previously been identified as a tolerable risk for the proposed development) is 0.5m. Due to the consistently flat site, the volume of water required to produce flood depths greater than 0.5m for more than just a few very small, isolated areas, would be significant. This would be comfortably more water than could be expected from rare (ie. 1% AEP) rainfalls. The existence of farm dams on the property also indicate users are likely to be aware of the risks posed by deep bodies of water.

The response time of the catchment is of no concern, as the slow moving and shallow flows pose negligible risk and will, by definition, allow time for pedestrians or vehicles to remove themselves from these areas. There will be many parts of the site that will remain free from inundation, and these areas can be easily accessed in the event such action is required.

The combination of all these considerations indicates the risk to a user of the driveway (likely the property owner or a visitor accessing the house) is negligible and JMG do not believe further detailed hydraulic analysis is required. Particularly as the results are likely to be varied given the wide bell curve of hydraulic modelling in flat and difficult to defined catchments characterized by the Milford Estate property.

The road is anticipated to only overtop infrequently, as such it is not deemed necessary to treat the wearing course with the aim of preventing or protecting from erosion. Despite this, we understand the new driveway will be constructed with a polymer coating to match what was present on the existing access driveway. This polymer coating will create a more durable wearing course that further reduces the risk of erosion.

Refer Appendix B - Hydrologic Analysis and Appendix C - Culvert Analysis.

5. Conclusions and Recommendations

JMG identify the proposed access driveway as extremely low inundation risk with regards to both the works themselves and any vehicle and pedestrian users accessing the Milford property. There is also no risk with regards to displacement of water onto neighbouring properties.

The development meets the performance criteria of C12.6.1 of Tasmanian Planning Scheme – Clarence and the general purpose of the code.

Overtopping of the access may take place in large events, and guideposts are recommended to assist delineation of the accessway if such an event was to occur.

APPENDIX A

Site Photos

Photo A - Looking East

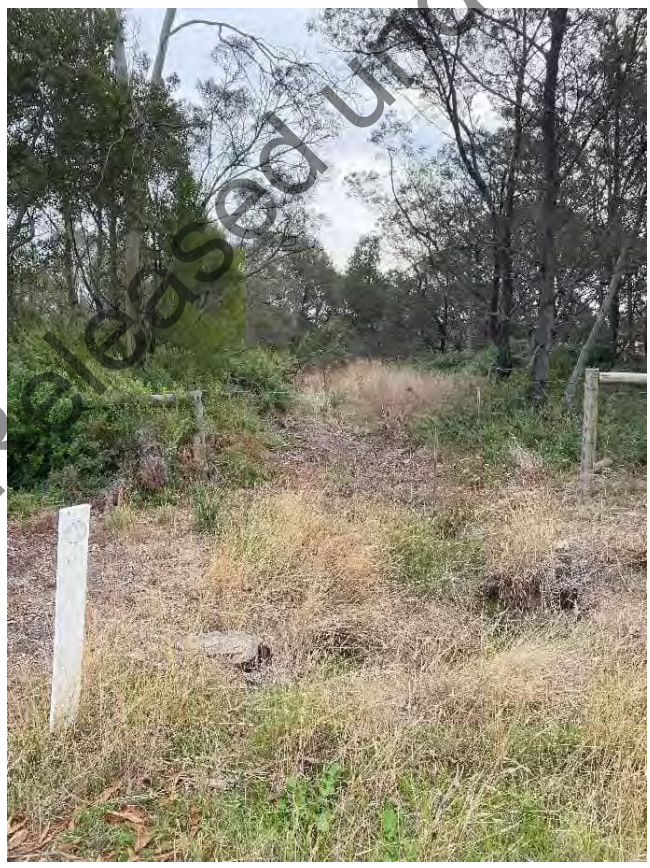

Photo B - Looking North

Photo C - Looking North West

Photo C - Looking South East

Photo D - Looking North West

Photo E - Looking South West

Photo E - Looking North West

Photo F - Looking South West

Photo F - Looking North West

Photo F - Looking North East

Photo G - Looking North East

Photo G - Looking South West

Photo H - Looking South West

Photo I - Looking South East

Photo I - Looking South West

Photo I - Looking North West

Photo J - Looking South East

Photo J - Looking South West

Photo J - Looking West

Photo J - Looking North West

Photo J - Looking North

Photo K - Looking South West

Photo K - Looking North West

Hydrological Analysis

Catchments

The overall contributing catchment has been approximated to be 60 ha, split into the four catchments shown in Figure 10 made up of rural farmland and forested areas to the west. The catchments have been extended to the Tasman Highway and along Pittwater Road.

The overland flow path for catchment 1 is not well defined as the majority of flood water ponds within the paddocks. The catchment does generally grade towards the south-west with an average slope of 0.3% into the existing dam, as shown in Figure 10 indicated by the black arrows.

The overland flow path for catchment 2 and 3 is more defined with an open drain along the southern side of the two catchments as shown in Figure 10 by the blue arrows. This channel collects flows from both catchments 2 and 3 and diverts any overland flows towards the outflow of the site. A second open drain is formed along the fence line on the north-eastern boundary of catchments 3 and 4 which undulates up and down but generally grades towards the open drain to the south.

Locally formed drainage lines are also present throughout the catchments, as shown in Figure 10 by the black arrows which generally grades towards the open drains at an average slope of 0.3%.

Figure 10 - Catchments and flow paths overview, blue arrows indicating well defined flow paths, black arrows indicating minor drainage lines and letters referring to site photos (Refer Appendix A for corresponding photos)

Table 1 - Catchment Properties

Name	Area (ha)	Avg. Slope (%)	Longest Flow Path (m)
Catchment 1	35.5	0.2	830
Catchment 2	12.3	0.3	940
Catchment 3	8.1	0.6	520
Catchment 4	4.1	0.3	270

Hydrology

The flows generated from each of the smaller catchments were calculated using the hydrological modelling software Watercom DRAINS (DRAINS). All Meteorological data (Rainfall IFDs, temporal patterns, rainfall pre-burst data and climate change factors) used in the hydrological analysis were sourced from the Australian Rainfall and Runoff (ARR) Data Hub and the Bureau of Meteorology (BOM). These parameters are all specific to the site location and are based on the following coordinates:

- Longitude: 147.514(E)
- Latitude: 42.826(S)

The ARR Data Hub (which sources information from the *Climate Change in Australia* Website) provides projections for Interim Climate Change Factors all around the country. However, ARR advises that the design of significant stormwater infrastructure is based on a predicted Climate Change increase in the year 2100, but the Data Hub only provides data up until 2090. The data was extrapolated linearly to determine the factor for the year 2100—a simple yet appropriate extrapolation that best fits the data set.

Table 2 - Climate Change Allowance

Location	Richmond Tasmania
Representative Concentration Pathway (RCP)	8.5
Year	2090
Factor	3.090 (16.3%)
Year	2100
Factor (Extrapolated)	18.3%

The four catchments have been approached using a rainfall-runoff model, RAFTS, as a storage routing hydrological analysis, appropriate for rural or larger urban catchments. Additionally, the 2019 ARR procedure uses sets or ensembles of rainfall patterns, being an extraction from longer sequences of rainfalls, rather than a single storm. A summary of the 5% AEP with Climate Change results is presented below:

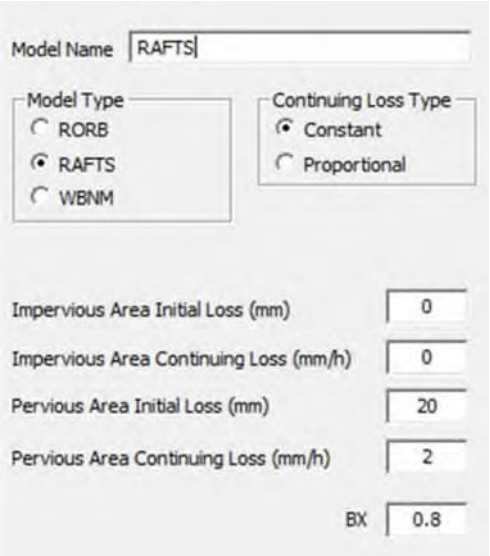

Figure 11 - Storage Routing Hydrological Model - RAFTS (Screenshot from DRAINS)

The Manning's n value used for the catchments ranged from 0.035 for the grassed paddocks and 0.06 for the densely forested areas in catchment 1. As this area has high dense vegetation it is reasonable to adopt a high n-value for this area to reflect the overgrown and unmaintained flow path.

Table 3 - Manning's 'n' values for catchments

Name	Manning's 'n' value
Catchment 1	0.035-0.06
Catchment 2	0.035
Catchment 3	0.035
Catchment 4	0.035

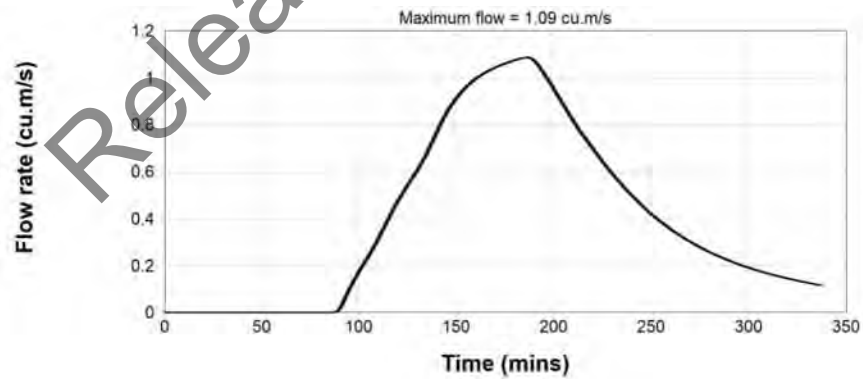

Figure 12 - Catchment 1 Hydrograph (Screenshot from DRAINS)

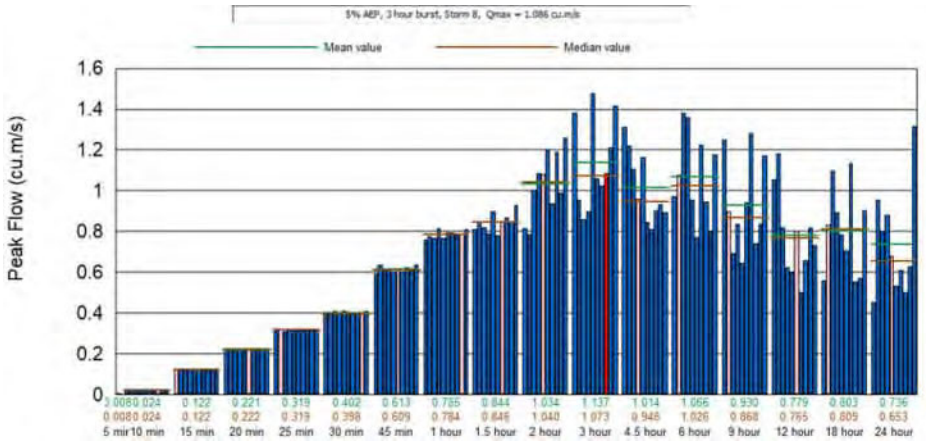

Figure 13 - Catchment 1 Peak Flow (Screenshot from DRAINS)

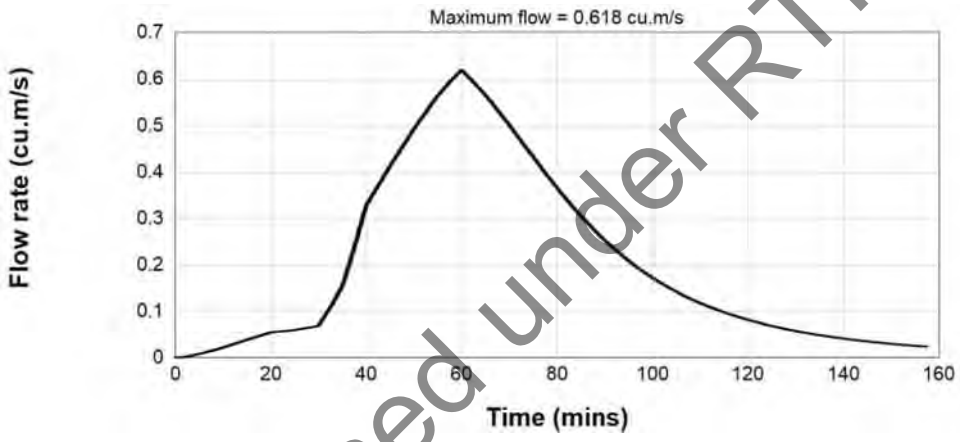

Figure 14 - Catchment 2 Hydrograph (Screenshot from DRAINS)

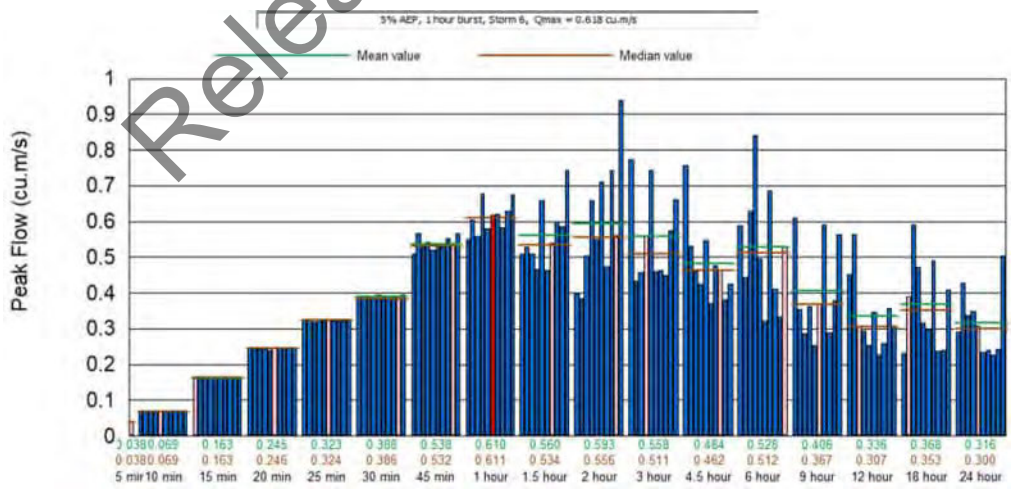

Figure 15 - Catchment 2 Peak Flow (Screenshot from DRAINS)

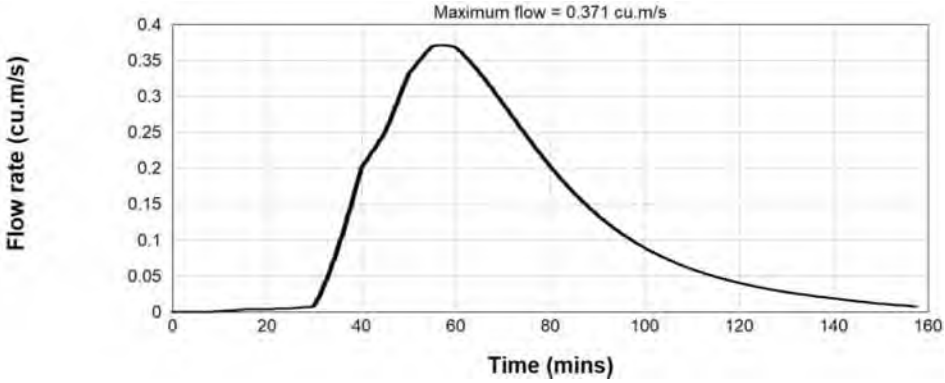

Figure 16 - Catchment 3 Hydrograph (Screenshot from DRAINS)

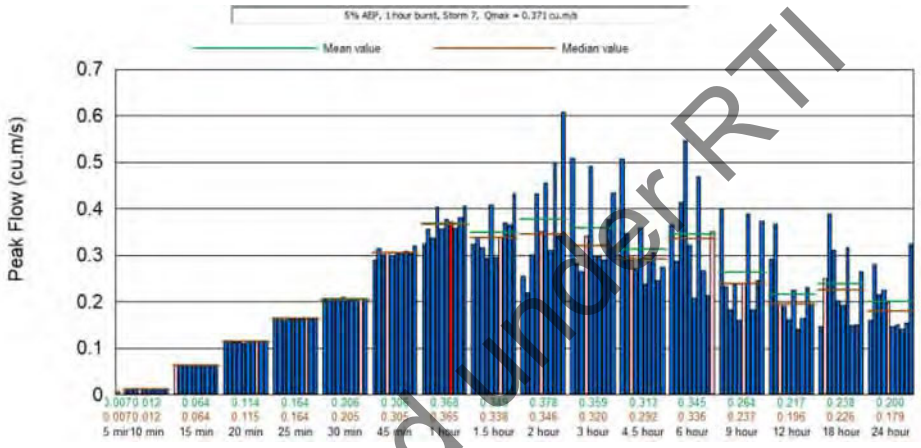

Figure 17 - Catchment 3 Peak Flow (Screenshot from DRAINS)

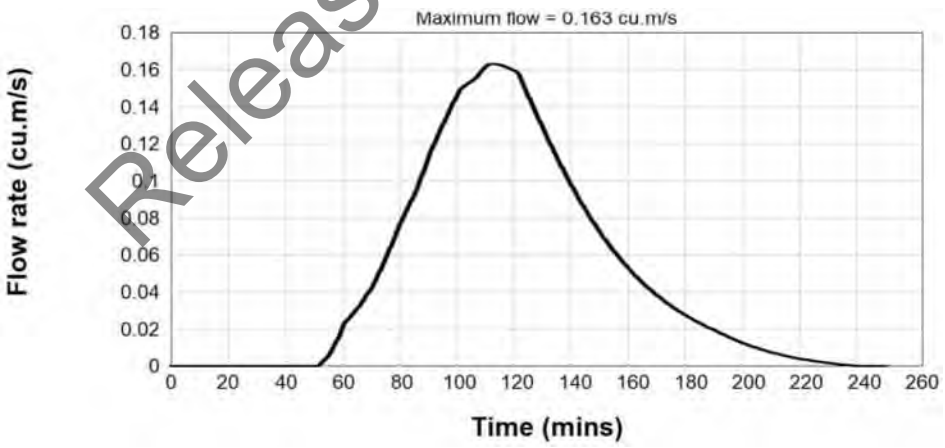

Figure 18 - Catchment 4 Hydrograph (Screenshot from DRAINS)

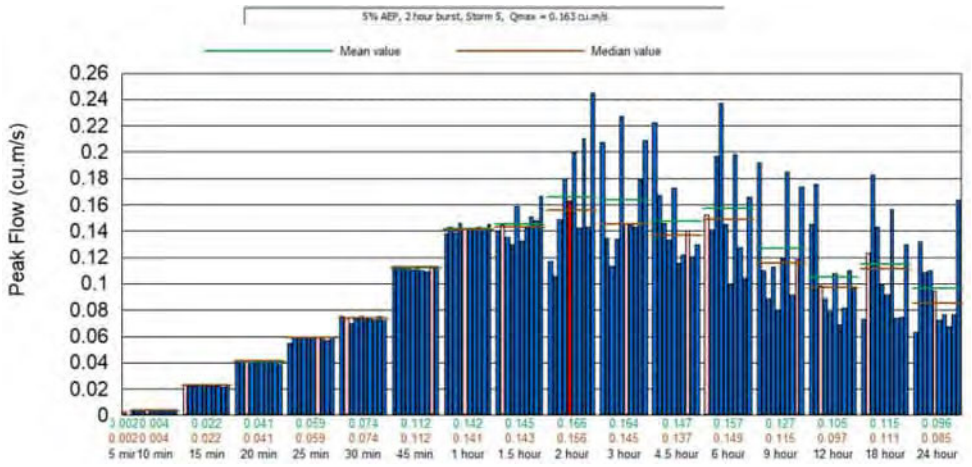

Figure 19 - Catchment 4 Peak Flow (Screenshot from DRAINS)

APPENDIX C

Culvert Analysis

Culvert 1

Invert Elev Dn (m)	= 0.5500
Pipe Length (m)	= 30.0000
Slope (%)	= 0.5000
Invert Elev Up (m)	= 0.7000
Rise (mm)	= 450.0
Shape	= Circular
Span (mm)	= 450.0
No. Barrels	= 4
n-Value	= 0.012
Culvert Type	= Circular Concrete
Culvert Entrance	= Square edge w/headwall (C)
Coeff. K,M,c,Y,k	= 0.0098, 2, 0.0398, 0.67, 0.5

Embankment

Top Elevation (m)	= 1.6000
Top Width (m)	= 10.0000
Crest Width (m)	= 20.0000

Calculations

Qmin (cms)	= 1.0000
Qmax (cms)	= 1.2000
Tailwater Elev (m)	= (dc+D)/2

Highlighted

Qtotal (cms)	= 1.1000
Qpipe (cms)	= 1.1000
Qovertop (cms)	= 0.0000
Veloc Dn (m/s)	= 1.8128
Veloc Up (m/s)	= 1.7291
HGL Dn (m)	= 0.9585
HGL Up (m)	= 1.1967
Hw Elev (m)	= 1.3908
Hw/D (m)	= 1.5350
Flow Regime	= Inlet Control

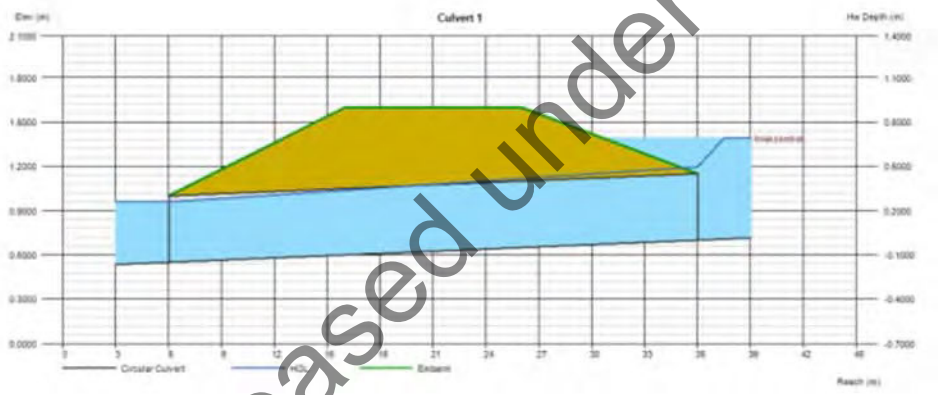

Figure 20 - Culvert 1 Analysis

Culvert 2

Invert Elev Dn (m)	= 1.4000
Pipe Length (m)	= 20.0000
Slope (%)	= 0.5000
Invert Elev Up (m)	= 1.5000
Rise (mm)	= 300.0
Shape	= Circular
Span (mm)	= 300.0
No. Barrels	= 2
n-Value	= 0.012
Culvert Type	= Circular Concrete
Culvert Entrance	= Square edge w/headwall (C)
Coeff. K,M,c,Y,k	= 0.0098, 2, 0.0398, 0.67, 0.5

Embankment

Top Elevation (m)	= 2.2000
Top Width (m)	= 10.0000
Crest Width (m)	= 20.0000

Calculations

Qmin (cms)	= 0.1000
Qmax (cms)	= 0.2000
Tailwater Elev (m)	= (dc+D)/2

Highlighted

Qtotal (cms)	= 0.1500
Qpipe (cms)	= 0.1500
Qovertop (cms)	= 0.0000
Veloc Dn (m/s)	= 1.1648
Veloc Up (m/s)	= 1.3953
HGL Dn (m)	= 1.6567
HGL Up (m)	= 1.7133
Hw Elev (m)	= 1.8480
Hw/D (m)	= 1.1602
Flow Regime	= Inlet Control

Figure 21 - Culvert 2 Analysis

Culvert 3

Invert Elev Dn (m)	= 1.0000
Pipe Length (m)	= 10.0000
Slope (%)	= 0.5000
Invert Elev Up (m)	= 1.0500
Rise (mm)	= 450.0
Shape	= Circular
Span (mm)	= 450.0
No. Barrels	= 3
n-Value	= 0.012
Culvert Type	= Circular Concrete
Culvert Entrance	= Square edge w/headwall (C)
Coeff. K,M,c,Y,k	= 0.0098, 2, 0.0398, 0.67, 0.5

Embankment

Top Elevation (m)	= 2.0000
Top Width (m)	= 9.0000
Crest Width (m)	= 20.0000

Calculations

Qmin (cms)	= 0.9000
Qmax (cms)	= 1.1000
Tailwater Elev (m)	= (dc+D)/2

Highlighted

Qtotal (cms)	= 1.0000
Qpipe (cms)	= 1.0000
Qovertop (cms)	= 0.0000
Veloc Dn (m/s)	= 2.1471
Veloc Up (m/s)	= 2.0959
HGL Dn (m)	= 1.4235
HGL Up (m)	= 1.5432
Hw Elev (m)	= 1.9240
Hw/D (m)	= 1.9421
Flow Regime	= Inlet Control

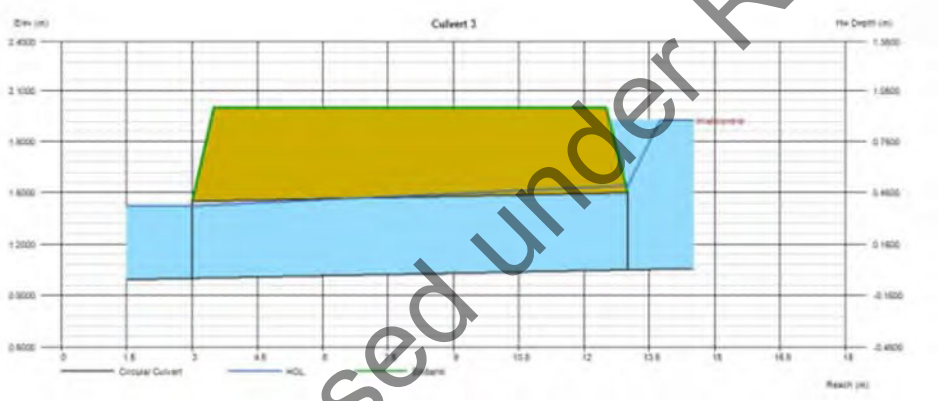

Figure 22 - Culvert 3 Analysis

ACN 009 547 139 | ABN 76 473 834 852

117 HARRINGTON STREET, HOBART (03) 6231 2555
49-51 ELIZABETH STREET, LAUNCESTON (03) 6334 5548
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Van Diemen Consulting
PO Box 1
New Town TAS 7008
Mob: Out of scope
Email: Out of scope

Memo

To: Out of scope, JMG

From: Out of scope, Van Diemen Consulting Pty Ltd

Date: May 9, 2024

Re: **'Milford', new driveway and access** - *Wilsonia rotundifolia* permit to take

SCOPE

Van Diemen Consulting Pty Ltd was engaged by JMG to conduct a natural values assessment of an area proposed for the construction of a new access road into the property 'Milford' at Cambridge. The new access is off Pitt Water Road. The 'Milford' property is located at 1431 TASMAN HWY CAMBRIDGE TAS 7170 (Certificate of Title 137587 Folio 1). It is bounded to the west by the Tasmanian International Airport (Pitt Water Road) and to the east by Pitt Water.

One threatened flora species were observed in the Survey Area; *Wilsonia rotundifolia* – roundleaf Wilsonia, listed as Rare. A permit from the Department of Natural Resources and Environment Tasmania (NRE Tas) is required to 'take'[1] *Wilsonia rotundifolia* plants for the Development.

This memo provides the details of the numbers of *Wilsonia rotundifolia* plants (a maximum) that may be taken by the proposed works to populate the permit to take application.

BACKGROUND

A Survey Area of approximately 3.9 hectares was identified for the desktop assessment and field survey for Natural Values were confined to biological values. The field survey was conducted on 17 March 2024 by Out of scope s. The report from that survey is in **Attachment 1.**

One species listed on the *Threatened Species Protection Act 1995* was observed in the Survey Area:

- *Wilsonia rotundifolia* – roundleaf Wilsonia, listed as Rare (see notesheet in **Attachment 2**).

  Observed growing on a slightly elevated section of ground along a property internal fenceline and associated paddock drains. The soils are exposed light sands that lack pasture growth which appears to be the primary driver for the species' occurrence in the Survey Area. Two plants were also observed on a sand exposed section of track adjacent to a fenceline. The species is small but very distinctive in

[1] includes kill, injure, catch, damage, destroy and collect;

form and colour (dark green, trailing plants), especially on the exposed white sands and amongst the yellow-coloured dead pasture and herbs.

FIGURES

Figure 1	Observed *Wilsonia rotundifolia* plants and Population Estimate Zones
Figure 2	Observed *Wilsonia rotundifolia* plants and Population Estimate Zones and the Development Footprint

ATTACHMENTS

Attachment 1	NATURAL VALUES ASSESSMENT. NEW ACCESS FOR 'MILFORD', PITTWATER ROAD, CAMBRIDGE. Report to JMG, May 2024.
Attachment 2	NRE *Wilsonia rotundifolia* Listing Statement

RESULTS

Wilsonia rotundifolia – roundleaf Wilsonia, listed as Rare – was observed growing on a slightly elevated section of ground along a property internal fenceline and associated paddock drains.

The high abundance of the species in the area associated with the drain and fenceline makes an absolute count impracticable. An estimate of plants in the potential impact area was conducted using zones and plots to quantify the size of the area, and the average number of plants in a plot which could then be multiplied by the area to determine a plant estimate.

Population estimate zones and estimation method

Four zones were identified along the fenceline and drainage system, with the fenceline demarcating the boundary of zones 2 and 3, to enable a more accurate count of the population to be conducted.

Plate 1 shows the drain from west looking eastwards towards Pitt Water Road, and the approximate zones that were delineated and population counts done to estimate numbers in each zone and by default the impact area.

Plants occur throughout Zones 1 and 3, however the grass dominated base of the drain lacks *W. rotundifolia* plants possibly due to the dense grass coverage (and the likely root competition from the grass).

Zone 1 and 3 were delineated as they have different densities of plants (based on an initial visual assessment), with the former having fewer plants due possibly to the presence of grasses and herbs, while Zone 1 is generally bare sand with only a light covering of competing grasses and some herbs.

Zone 2 is on the southern side of the fenceline, where plants are locally abundant but do not extend very far into the paddock as they become replaced by cocksfoot grass, and bare ground (possibly an artefact of horses walking the fenceline).

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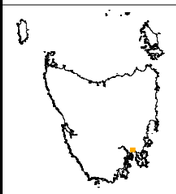
NATURAL VALUES ASSESSMENT SURVEY

MILFORD PROPERTY ACCESS

FIGURE 1: OBSERVED WILSONIA ROTUNDIFOLIA PLANTS AND POPULATION ESTIMATE ZONES

TASMAP: CARLTON 5425	LGA: CLARENCE

Van Diemen CONSULTING
PO BOX 1 NEW TOWN TAS 7008



DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A3 - NA

CLIENT:
JMG

DATE: 6/5/2024

542250

542300

542350

5258100

5258050

S42

NATURAL VALUES ASSESSMENT SURVEY

MILFORD PROPERTY ACCESS

FIGURE 2: OBSERVED WILSONIA ROTUNDIFOLIA PLANTS, POPULATION ESTIMATE ZONES AND THE DEVELOPMENT FOOTPRINT

TASMAP: CARLTON 5425	LGA: CLARENCE

Van Diemen CONSULTING
PO BOX 1 NEW TOWN TAS 7008

DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A3 - NA

CLIENT:
JMG

DATE: 6/5/2024

Zone 4 is specifically an area around the existing water trough and the end of the water main which had a much lower density of plants (possibly due to the presence of freshwater and a higher incidence of trampling by stock) than the other three zones.

Plots of 20x100cm were placed into the zones and plant number counted. The figure was multiplied by 5 to give an estimate based on a square metre of area. The area of each zone was then multiplied by the average number of plants, and then halved as about half of each zone does not have the species (e.g. the base of the grass dominated drain that is the edge of Zones 1 and 3 lacks the species or it is very sparse). The resulting figures for population estimates in each zone is provided in **Table 1.**

Plate 1. Annotated photograph showing Zones 1, 2 and 3 for population estimates

Table 1. Population estimates for *Wilsonia rotundifolia* at the Development site

Zone Number	Zone size in square metres (m^2)	Average plant number per square metre	Estimate of plants in Zone
1	385.34	31 (25 plots performed)	**5,973 plants** (species occurs in about half of the zone so 11946/2)
2	231.26	24 (20 plots performed)	**2,775 plants** (species occurs in about half of the zone so 5550/2)
3	211.29	71 (20 plots performed)	**7,500 plants** (species occurs in about half of the zone so 15,001/2)
4	44.9	14 (10 plots performed)	**315 plants** (species occurs in about half of the zone so 629/2)
TOTAL NUMBER OF PLANTS			**16, 563**

POPULATION ESTIMATE

Areas to be taken by the earthworks and associated development

Zone 4 will be taken completely as the water main needs to be extended to provide an additional water trough to the south-east of the current trough. Minor to large earthworks will occur at that location.

Approximately 25% of Zones 1, 2 and 3 may be affected by the works with taping and exclusion; this is a mitigation measure that may further reduce the number of plants taken.

The number of plants, as a maximum, to be taken by the Development is provided in **Table 2.**

Table 2. Population estimates for *Wilsonia rotundifolia* at the Development site

Zone Number	Estimate of plants in Zone	PTT requirements (plant number)
1	5,973	1493
2	2,775	693
3	7,500	1875
4	315	315
TOTALS	16, 563	4,377 (26.4%)

Retained portion of the population

The species *Wilsonia rotundifolia* extends its occurrence along the drain to the east (to the drain where it discharges into Pitt Water) and west (to end just before Pitt Water Road.

To the west, there is approximately (at least) 1,950 square metres of habitat (associated with the drain edges and fenceline) in which the species occupies at varying densities (density estimates appeared comparable to the plots established, with the same sort of densities per zone being about the same).

If a density of 50 plants per square metre was used for example to *estimate* the retained population, then there would be about 98,000 plants retained and undisturbed by the proposed Development. As a percentage, the population likely to be disturbed by earthworks is about 4.25% of the total population that inhabits the drain/fenceline area from the existing culvert to be upgraded through to near Pitt Water Road.

The drain extending to the east also has the species in it, but no formal counts or assessment was made of that drain section. The species also occurs on land to the west of Pitt Water Road.

Permit to Take and reporting

The permit to take application must identify, as a maximum, 4,377 plants to be taken by the Development. The final numbers taken should be reported in the Final Report for the PTT based on the actual disturbance footprint and the estimates provided in **Table 1** for each of the Zones.

Conclusion

A permit to take up to 3,477 *Wilsonia rotundifolia* plants is required from the Department of Natural Resources and Environment to physically impact on the species for the Development. The number of plants to be taken is based on an estimation method process given the actual numbers are impossible to count precisely.

It is likely that up to 4.25% of the total population along the drainage system where the works are proposed will be affected by the Development. The species is also elsewhere in the landscape, including adjacent land (see **Figure 4** of the Natural Values Assessment Report, VDC).

ATTACHMENTS

Attachment 1 NATURAL VALUES ASSESSMENT. NEW ACCESS FOR 'MILFORD', PITT WATER ROAD, CAMBRIDGE. Report to JMG, May 2024.

NATURAL VALUES ASSESSMENT
NEW ACCESS FOR 'MILFORD', PITTWATER ROAD, CAMBRIDGE

For JMG obo The Department of State Growth

Van Diemen CONSULTING PO BOX 1, NEW TOWN, TAS 7008

Van Diemen Consulting Pty Ltd

PO Box 1
New Town, Tasmania

T: Out of scope E: Out of scope

This document has been prepared in accordance with the scope of services agreed upon between Van Diemen Consulting (VDC) and the Client.

To the best of VDC's knowledge, the report presented herein represents the Client's intentions at the time of completing the document. However, the passage of time, manifestation of latent conditions or impacts of future events may result in changes to matters that are otherwise described in this document. In preparing this document VDC has relied upon data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this document, VDC has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans and other information.

No responsibility is accepted for use of any part of this document in any other context or for any other purpose by third parties.

This document does not purport to provide legal advice. Readers should engage professional legal advisers for this purpose.

Document Status

Revision	Author	Review	Date
1	Out of scope	Out of scope, VDC	31-3-2024
1	Out of scope	Out of scope, JMG, DSG comments	1-4-2024
2	Out of scope	Out of scope, VDC	24-5-2024
2	Out of scope	Out of scope, JMG, and DSG	24-5-2024

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TABLES

FIGURES

ACRONYMS

DPIPWE (now NRE Tas)	Department of Primary Industries, Parks, Water and Environment
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
NRE Tas (was DPIPWE)	Department of Natural Resources and Environment Tasmania
NVA	Natural Values Atlas (database maintained by DPIPWE)
PMST Report	Protected Matters Search Tool (in relation to the EPBC Act) Report
TheLIST	The Land Information System Tasmania (www.thelist.tas.gov.au)
TSP Act	*Threatened Species Protection Act 1995*

GLOSSARY

(the) Development	the construction and associated works for the new access into 'Milford' from Pitt Water Road.
Natural Values	The Natural and Cultural Heritage Division (2015) Guidelines define this as 'biological and geodiversity values of conservation significance, being those species, vegetation communities and other values that have significance and/or statutory protection under the Tasmanian *Threatened Species Protection Act 1995* (TSPA), *Nature Conservation Act 2002* (NCA) and other relevant policies and regulations.
TASVEG	A comprehensive digital map of Tasmania's vegetation, including sub-Antarctic Macquarie Island. The map depicts the extent of more than 150 vegetation communities, including coastal heathlands, eucalypt forest and alpine communities. To assist with using the map, these communities are fully described in the accompanying technical manual - *From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation* (Edition 2). Available to the public via LISTmap and can be requested as a standalone file for use within a Geographic Information System (GIS).

EXECUTIVE SUMMARY

BACKGROUND

Van Diemen Consulting Pty Ltd was engaged by JMG to conduct a natural values assessment of an area proposed for the construction of a new access road into 'Milford' at Cambridge. The new access is off Pitt Water Road. The 'Milford' property is located at 1431 TASMAN HWY CAMBRIDGE TAS 7170 (Certificate of Title 137587 Folio 1 (**Figure 1**). It is bounded to the west by the Tasmanian International Airport (Pitt Water Road) and to the east by Pitt Water.

A Survey Area of approximately 3.9 hectares was identified for the desktop assessment and field survey for Natural Values were confined to biological values. The field survey was conducted on 17 March 2024 by [redacted] Out of scope .

VEGETATION COMMUNITIES

There are no native vegetation communities within the Survey Area. The entire Survey Area can be mapped as the broad TASVEG mapping unit of 'FUM – Extra-urban miscellaneous' which includes some paddocks, a planted shelterbelt adjacent to Pitt Water Road, a pine shelterbelt near the homestead, and existing internal property tracks.

THREATENED FLORA SPECIES

The surveys were conducted in March 2024 during a very dry period, with little rainfall recorded in the previous 9 months. Ordinarily, such conditions are not conducive to the detection of all or most plant species that may be present in the area surveyed; some of these may be conservation significant. However, in this case, the historical and ongoing use of the land for agriculture, and the lack of native vegetation communities in the Survey Area, all indicate that conservation significant are unlikely to be present, or if present they are likely to be robust species.

One species listed on the *Threatened Species Protection Act 1995* was observed in the Survey Area:

- *Wilsonia rotundifolia* – roundleaf Wilsonia, listed as Rare. Observed growing on a slightly elevated section of ground along a property internal fenceline and associated paddock drains. The soils are exposed light sands that lack pasture growth which appears to be the primary driver for the species' occurrence in the Survey Area. Two plants were also observed on a sand exposed section of track adjacent to a fenceline. The species is small but very distinctive in form and colour (dark green, trailing plants), especially on the exposed white sands and amongst the yellow-coloured dead pasture and herbs.

No species listed on the *Environment Protection and Biodiversity Conservation Act 1999* were observed during the surveys of the Survey Area, and none are immediately adjacent to the Survey Area.

WEEDS AND PATHOGENS

Two weeds listed on the *Biosecurity Act 2019* as declared weeds are present in the Survey Area; Californian thistle (*Cirsium arvense*) and boxthorn (*Lycium ferocissimum*). Boxthorn is sporadically distributed around fencelines and posts, and under pine trees where they have likely germinated from bird dispersed seed.

The Survey Area is unlikely to support *Phytophthora cinnamomi* (root rot fungus, which is a water mould), and chytrid fungus (frog pathogen(, and does not support myrtle rust, myrtle wilt or didymo.

The following recommendations are made about weed and pathogen management.

Soil management to limit the risk of transporting weeds

The soil and subsoils Pitt Water Road to be excavated and handled are likely to contain seed and root stock of the highly invasive Californian thistle, and perhaps other weeds (possibly annuals or other weed propagules).

It is recommended that the area occupied by this weed is identified on-ground and the soil and subsoils excavated and managed to minimise the risk of spreading seed and rootstock to another location. The transport and use of the excavated material into the property is to be avoided; the burying of potentially weed contaminated soil and subsoils to a depth of at least 1m is recommended.

Clean Machinery Policy

Heavy machinery, such as excavators, can carry large clods of dirt and mud in which seed propagules can be lodged. Heavy machinery should be brought to the Development in a clean condition; free of weed propagules, clods of dirt and vegetative matter.

Biosecurity measures of relevance to the Development that the landowner has in place for the property should be integrated into the construction management program for the Development.

Weed Spraying Program

A Weed Spraying Program (WSP) should be developed in consultation with the landowner (to identify any specific requirements for chemical use) generally based on the document - 'Department of Primary Industries, Parks, Water and Environment (2015). *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania*.'

The WSP should –

- be instigated for the growing season (spring) immediately after the road works are completed,
- be applied for at least three growing seasons, and
- be reviewed each year (preferably prior to the active growing season for weeds) and updated as new information about the occurrence of weeds become available.

THREATENED FAUNA MANAGEMENT

There is no significant habitat (including bird nests and nesting habitat, mammal dens and nests, and significant foraging resources) for any conservation significant fauna species in the Survey Area. Accordingly, no recommendations are made.

PART A - BACKGROUND

JMG commissioned VDC to conduct a natural values assessment of an area proposed to construct a new access and road into Milford from Pitt Water Road.

A.1 LOCATION

The 'Milford' property is located at 1431 TASMAN HWY CAMBRIDGE TAS 7170 (Certificate of Title 137587 Folio 1 (**Figure 1**). It is bounded to the west by the Tasmanian International Airport (Pitt Water Road) and to the east by Pitt Water. A Survey Area of approximately 3.9 hectares was identified for the desktop assessment and field survey and is spatially shown in **Figure 1**.

The property supports for example, a homestead (stone Georgian house of three sections built about 1840 by Richard Lewis, an early Tasmanian colonist who was elected one of the 15 commissioners for Hobart), sheds, vineyard, native forest, and woodland (critical habitat for the survival of the critically endangered orchid species; *Caladenia saggicola* and *Prasophyllum milfordense*), and agricultural land (pasture). **Figure 5** illustrates the occurrence of these two species, and Caladenia caudata (and hybrids), relative to the Survey Area.

A.2 DEVELOPMENT OVERVIEW

The Development is the construction of a new access off Pitt Water Road and connecting road into 'Milford', and includes the associated construction and rehabilitation works.

A.3 FIELD SURVEY AND REPORT SCOPE

The purpose of the study was to undertake both desktop assessments and field surveys to identify and document the Natural Values in the Survey Area and relevant surrounds of the Development.

The Survey Area is approximately 3.9 hectares and is spatially shown in **Figure 1**.

The following tasks were undertaken as part of the terrestrial ecological and Natural Values assessment:

1. A review of flora and fauna values recorded previously in the area within and adjacent to the Survey Area, including vegetation types (TASVEG), observations of threatened flora and fauna species,

2. The potential occurrence of threatened fauna and flora species listed under the TSP Act and the EPBC Act in the Survey Area was evaluated using the –

   (a) NRE Tas Natural Values Atlas database (see NVA Report in **Attachment A**),

   (b) EPBC Protected Matters Search Tool (see Report in **Attachment B**).

3. Field survey to investigate the occurrence of threatened fauna and flora species which included:

   (a) Consideration of the mapped vegetation communities (TASVEG mapping units/descriptions and the Conservation Advice of EPBC Act listed ecological communities) in the Survey Area,

   (b) A survey of terrestrial annual and perennial plants and aquatic flora (if habitat is present),

   (c) Habitat assessment for threatened fauna species using known occurrences and habitat descriptions issued by DNRE, and

(d) The identification and mapping of declared weeds listed in the *Biosecurity Act 2019* within the Survey Area.

4. Where relevant, to provide recommendations to avoid and/or mitigate potential or actual impacts to conservation significant species, ecological communities, and other natural values of significance.

The report generated from the study generally follows the format prescribed by the Natural and Cultural Heritage Division (2015) Guidelines.

Mitigation and impact assessments are presented here to assist the planning and construction process for the Development.

NATURAL VALUES ASSESSMENT SURVEY

MILFORD PROPERTY ACCESS

FIGURE 1: LOCATION OF SURVEY AREA

TASMAP: CARLTON 5425	LGA: CLARENCE

541700 541800 541900 542000 542100 542200 542300 542400 542500 542600

5258600 5258500 5258400 5258300 5258200 5258100 5258000 5257900

CT137587/1

SURVEY AREA FOR MILFORD ACCESS NVA (3.9 HA)

N

PITTWATER ROAD

0 0.125 0.25 0.5 KILOMETERS

Van Diemen CONSULTING
PO BOX 1 NEW TOWN TAS 7008

DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A3 - NA

CLIENT: JMG

DATE: 19/3/2024

PART B - METHODS

B.1 SURVEY AREA AND PERSONNEL

B.1.1 Survey Area

The Survey Area (**Figure 1**) is approximately 3.9 hectares and was identified for the desktop assessment and field survey. A buffer was included in the Survey Area to account for the potential alignment of the road and associated works and laydown areas to fully consider the potential footprint of the Development.

B.1.2 Personnel

The Natural and Cultural Heritage Division (2015[1]) note that -

> 'The proponent or their representative must ensure that the personnel undertaking surveys and preparing reports have appropriate skills, qualifications and experience in identification and documentation of all natural values of interest, including a knowledge of Tasmanian species, their habitat and other ecological requirements, and vegetation communities.'

In this case, Out of scope holds a PhD in a relevant field of science – ecology – and over 25 years of field expertise in natural values assessment, plant/animal identification and habitat assessment, vegetation, and habitat mapping, reporting and ecological impact assessment/mitigation.

B.2 VEGETATION CLASSIFICATION AND MAPPING

Vegetation communities were those identified by the TASVEG Tasmanian Vegetation Mapping Units (Kitchener and Harris 2013, 2nd Edition and with revisions in April 2019). Flora species were recorded as they were encountered in a meandering survey. Scientific names for flora species follow de Salas and Baker (2023).

An iPhone14 ProMax was used to navigate within the Survey Area which had been loaded with shapefiles of the Survey Area boundaries.

Consideration was given to the presence of ecological communities listed under s18 of the EPBC Act identified in **Attachment B** as 'Community likely to occur within area' or 'Community may occur within area'. These are identified in the PMST Report as:

- Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (*Eucalyptus ovata / E. brookeriana*), and
- Tasmanian white gum (*Eucalyptus viminalis*) wet forest.

[1] Natural and Cultural Heritage Division (2015). Guidelines for Natural Values Surveys - Terrestrial Development Proposals. Department of Primary Industries, Parks, Water and Environment. Version 1.1 – 13th August 2019 (minor updates to links in document).

The Conservation Advice for each ecological community was considered when assessing and classifying the vegetation types present, if any, in the Survey Area.

B.3 GENERAL FLORA AND FAUNA SPECIES SURVEY

Queries of the following database sources were used to generate reports to identify previous recorded locations of species (flora and fauna) and range boundaries for significant or threatened fauna species.

- Natural Values Atlas (NVA, **Attachment A**) managed by the Department of Natural Resources and Environment Tasmania (NRE Tas),
- Protected Matters Search Report (PMST Report) accessed from the EPBC Search Tool Portal (**Attachment B**).

The conservation status of flora and fauna species follow the:

- Tasmanian *Threatened Species Protection Act 1995,* and
- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

The survey directly assessed the range of habitat types present in the Survey Area**.**

B.4 TARGETED FLORA AND FAUNA SPECIES SURVEYS

Given the small area to be surveyed, the full extent was assessed directly for flora and fauna values.

Flora species of particular focus were those listed in the Natural Values Atlas as having known records, or potential habitat, within and near the Survey Area. The flora surveys were limited to vascular species: species of mosses, lichens and liverworts were not recorded. However, consideration was made of species (vascular and non-vascular) likely to be present based on available habitat information and database records.

Potential habitat for threatened fauna was assessed by reference to the vegetation communities present and the associated characteristics of the habitat values each provided to fauna species - assessments were made by comparing the characteristics of known fauna habitat with the habitat present in the Survey Area.

B.5 FAUNA HABITAT ASSESSMENT CRITERIA

The assessment of fauna (habitat and occurrence) was done for the species listed in the TSP Act and EPBC Act, for which some fauna species occur on both Acts.

B.5.1 State-based guidelines and impact assessment criteria

Fauna species with potential or known habitat in the Survey Area were considered in the context of habitat ranges/descriptions provided below (FPA 2020), listed below:

Habitat Descriptor	**Definition**
Core Range	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
Potential Range	Encompasses the area, within the known range, known to support the highest densities of the species and/or thought to be of highest importance for the maintenance of breeding populations of the species.
Known Range	Is the area within which the species is most likely to occur, being the area of land within a minimum convex polygon of all known localities of the species. This term is synonymous with 'extent of occurrence' as referred to in the *Guidelines for Eligibility for Listing under the* Threatened Species Protection Act 1995 (DPIW 2009).
Potential habitat	Is all habitat types within the potential range of a species that are likely to support that species in the short and/or long term. It may not include habitats known to be occupied intermittently (e.g., occasional foraging habitat only). Potential habitat is determined from published and unpublished scientific literature and/or expert opinion and is agreed by the Threatened Species Section (DPIPWE) in consultation with species' specialists.
Significant habitat	Is habitat within the known or core range of a species that (1) is known to be of high priority for the maintenance of breeding populations throughout the species' range and/or (2) conversion of which to non-native vegetation is considered to result in a long-term negative impact on breeding populations of the species. It may include areas that do not currently support breeding populations of the species but that need to be maintained to ensure the long-term future of the species. Significant habitat is determined from published and unpublished scientific literature and/or expert opinion, and is agreed by the Threatened Species Section (DPIPWE) in consultation

B.5.2 EPBC Assessment Guidelines and Significant Impact Assessment

Attachment E provides an overview table of the assessment conducted for all matters of National Environmental Significance that were identified in the PMST Report (**Attachment B**).

Most of the MNES listed in **Attachment E** are not relevant to the action (the Development), such as Commonwealth lands, or none were identified in the PMST Report (e.g., reserves).

Of the biodiversity related MNES, most of the listed, migratory and/or marine species are not relevant because the action (the Development) is not being taken in the marine environment, nor is it likely to cause or result in any impact (direct or indirect) to the nearby marine environment; there will not be any increase or change to the discharge of surface water, additional noise or different noise introduced to the location, or external lighting infrastructure added and/or intensified.

Only 3 fauna species were considered in the broader assessment, provided in **Table F.1 (Attachment F)** because so few species have habitat present, or their presence would be transient only.

For relevant EPBC-listed species the following guidelines and species and species groups guidelines and reports were considered –

Publication/Theme	**Description**	**Species or species groups**
EPBC Act Significant Impact Guidelines	General Significant Impact Guidelines Species or Species groups Significant Impact Guidelines	All species. Specific guidelines also considered – • Tasmanian devil
Conservation Advice	Advice prepared and published under the *Environment Protection and Biodiversity Conservation Act 1999* (s266B)	All EPBC-listed species considered in this assessment.
Light Pollution	'National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds, Commonwealth of Australia 2020'.	Masked Owl
Recovery Plans	Recovery Plans adopted under the *Environment Protection and Biodiversity Conservation Act 1999*	All species where they exist such as - • Wedge-tailed eagle • White bellied sea eagle • Spotted-tail quoll State-based 'recovery plan' – • Tasmanian devil (draft)

B.6 LIMITATIONS

B.6.1 Flora

The survey was conducted in March 2024 during a very dry period, with little rainfall recorded in the previous 9 months. Ordinarily, such conditions are not conducive to the detection of all or most plant species that may be present in the area surveyed; some of these may be conservation significant. However, in this case, the historical and ongoing use of the land for agriculture, and the lack of native vegetation communities in the Survey Area, all indicate that conservation significant are unlikely to be present, or if present they are likely to be robust species. Notwithstanding this, due to varying flowering times and seasonality of occurrence not all flora species that occur in the Survey Area may have been recorded during the on-ground surveys.

Short lived annuals, orchids and lilies that may be present at the site may have been missed because they were not able to be identified (they were not flowering) or they were not evident (they were annual plants that had died back or not emerged at the time of survey). The habitat components present for those species were specifically searched when they were present in the Survey Area. On this basis, it is unlikely that any species of conservation significance were overlooked or not observed.

B.6.2 Fauna

The fauna assessment (except for direct searches of nests and dens etc as outlined above) was limited to a habitat assessment, including the ground truthing of potential habitats for significant fauna species that were identified through database searches (see also section B.4 TARGETED FLORA AND FAUNA SPECIES SURVEYS).

B.6.3 Micro Flora and Fauna

The flora and fauna surveys excluded micro-flora and micro-invertebrates such as algae, zooplankton, and cave-dwelling fauna.

PART C - RESULTS

C.1 VEGETATION COMMUNITIES

Only one TASVEG mapping unit was identified in the Survey Area (**Table 1**); Extra-urban miscellaneous. There are no native vegetation communities (forest or non-forest) in the Survey Area.

Table 1. Vegetation and other land use categories recorded in the Survey Area

TASVEG CODE	TASVEG COMMUNITY	Threatened native vegetation community#	Total In Survey Area – potential impact area (ha)
	Agricultural land, Urban and Exotic Vegetation		
FUM	Extra-urban miscellaneous	No	3.9

Threatened native vegetation communities are those listed in Schedule 3A of the *Nature Conservation Act 2002*

The flora species observed within the Survey Area are listed in **Attachment G**.

Descriptions of the mapping unit in the Survey Area and some representative images are provided below.

C.1.1 Extra-urban miscellaneous (FUM)

This mapping unit has been broadly applied to the Survey Area because it is a relatively small area and mapping at a finer resolution would not yield the identification of any native vegetation mapping units.

Table 2 provides images of the Survey Area which ranges from shelterbelts, to paddocks and farm buildings and internal property tracks.

The area adjacent to Pitt Water Road is a planted shelterbelt (R. Lewis pers. comm.) which is formed by locally sourced eucalypts, hopbush, and other shrubs. Pin rush (*Juncus* sp.), sagg (*Lomandra longifolia*) and pasture grasses (mainly *Dactylis glomerata* and *Holcus lanatus*) dominate the understorey.

A fence adjacent to the paddocks demarcates the agricultural land used for livestock (sheep), horses, and hay production. Drains and associated infrastructure for the drainage of paddocks is present, being mainly located on the northern side of the east – west located fenceline. The pastures were very dry, and most grasses have been heavily browsed by stock, but the paddocks appeared to be largely comprised of cocksfoot (*Dactylis glomeratus*).

Towards the homestead is several small outbuildings and a shelterbelt comprised of mature *Pinus radiata*.

Table 2. Images of the broadly applied Extra-urban miscellaneous mapping unit

Shelterbelt adjacent to Pitt Water Road

Paddocks (agricultural land), drains and fencelines in Survey Area

Buildings and pine shelterbelt near homestead

C.2 THREATENED FLORA SPECIES

C.2.1 Previous Observations

There are several threatened flora species recorded near the Survey Area based on the data contained within the Natural Values Atlas (**Attachment A**) and EPBC Protected Matters Search Tool Report (**Attachment B**).

Table 3 provides a summary of the assessment made for each species listed in these reports.

Table 3. Summary of likely occurrence of flora species in the Survey Area listed by the relevant Act

TSP Act	**Table C.1** provides a list threatened flora identified in the NVA with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded. Habitat is absent for most of the listed species known to occur in the region. One TSP Act species were observed in the Survey Area.
EPBC Act	**Attachment E** (Overview Assessment of MNES and Other EPBC Act Protected Matters) provides a summary list of EPBC flora species that have predicted occurrences, or likely occurrences/habitat, in the region. Habitat is absent for most of the listed species known to occur in the region. Three species were further considered in **Attachment F**; basalt peppercress, Milford leek orchid and sagg spider orchid. No EPBC Act species were observed in the Survey Area.

C.2.2 Threatened flora species observed in the Survey Area

A single plant species listed on the TSP Act was observed in the Survey Area.

Table 4 provides details on the species observed, and comments about its distribution in the Survey Area which is spatially shown in **Figure 2.**

Roundleaf Wilsonia is already known to occur in the Cambridge area, mainly within saltmarsh and coastal vegetation, and saline pans within agricultural and degraded land (see **Figure 4**). The species was observed in the Survey Area co-occurring with *Wilsonia backhousei* (narrow-leaf Wilsonia), which is a non-threatened species.

Further information about this species is in the Notesheet issued by NRE Tas (**Attachment D**).

No flora species listed on the *Environment Protection and Biodiversity Conservation Act 1999* were observed during the surveys of the Survey Area.

Table 4. Details of the threatened flora species observed in the Survey Area

***Wilsonia rotundifolia* – roundleaf Wilsonia, listed as Rare listed on the TSP Act**	
Plants of this species were observed growing on a slightly elevated section of ground parallel to a property internal fenceline and associated paddock drains. The soils are exposed light sands that lack pasture growth which appears to be the primary driver for the species' occurrence in the Survey Area. Soils are likely to be saline. The species was noted to be present no further than 8 or so m south-eastwards from the fenceline where pasture grasses and other weedy herbs became dominant. Two isolated plants were also observed on a sand exposed section of track adjacent to a fenceline nearer the homestead. The species is small but very distinctive in form and colour (dark green), especially on the exposed white sands and amongst the yellow-coloured dead pasture and herbs.	

541700 541800 541900 542000 542100 542200 542300 542400 542500 542600

5258600 5258500 5258400 5258300 5258200 5258100 5258000 5257900

s42

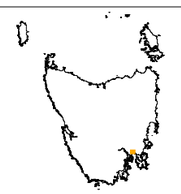
NATURAL VALUES ASSESSMENT SURVEY

MILFORD PROPERTY ACCESS

FIGURE 2: OBSERVED THREATENED FLORA IN THE SURVEY AREA

TASMAP: CARLTON 5425	LGA: CLARENCE

Van Diemen CONSULTING
PO BOX 1 NEW TOWN TAS 7008



DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A3 - NA

CLIENT:
JMG

DATE: 19/3/2024

541700 541800 541900 542000 542100 542200 542300 542400 542500 542600

5258600 5258500 5258400 5258300 5258200 5258100 5258000 5257900

s42

NATURAL VALUES ASSESSMENT SURVEY

MILFORD PROPERTY ACCESS

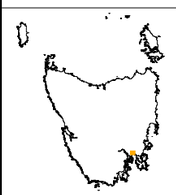
FIGURE 3: OBSERVED WEED SPECIES IN THE SURVEY AREA

TASMAP: CARLTON 5425	LGA: CLARENCE

WEEDS SPECIES

- BOXTHORN
- BRIAR ROSE
- CALIFORNIAN THISTLE

Van Diemen CONSULTING
PO BOX 1 NEW TOWN TAS 7008



DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A3 - NA

CLIENT:
JMG

DATE: 19/3/2024

539000 540000 541000 542000 543000 544000 545000 546000 547000

5260000 5259000 5258000 5257000 5256000 5255000 5254000

s42

NATURAL VALUES ASSESSMENT SURVEY

MILFORD PROPERTY ACCESS

FIGURE 4: REGIONAL OBSERVATIONS OF WILSONIA ROTUNDIFOLI

TASMAP: CARLTON 5425	LGA: CLARENCE

Van Diemen CONSULTING
PO BOX 1 NEW TOWN TAS 7008

DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A3 - NA

CLIENT:
JMG

DATE: 24/5/2024

541000

542000

543000

5260000

5259000

5258000

s42

NATURAL VALUES ASSESSMENT SURVEY

MILFORD PROPERTY ACCESS

FIGURE 5: REGIONAL OBSERVATIONS OF CALADENIA AND PRASOPHYLLUM SP.

TASMAP: CARLTON 5425	LGA: CLARENCE

Van Diemen CONSULTING
PO Box 1 New Town TAS 7008

DATUM: GDA94
GRID: MGA ZONE 55
SCALE: @A3 - NA

CLIENT:
JMG

DATE: 24/5/2024

C.3 DECLARED AND ENVIRONMENTAL WEEDS

C.3.1 Declared Weeds

Two species listed as a Declared Weed on the *Biosecurity Act 2019* were recorded in the Survey Area –

- Californian thistle (*Cirsium arvense*) (also known as spreading thistle), and
- Boxthorn (*Lycium ferocissimum*) (also known as African boxthorn)

All species are identified in their respective Statutory Weed Management Plans for the Clarence Municipality as a **Zone B Municipality -** *Containment is the principal management objective*[2] (**Table 5**).

Comments about the abundance and occurrence of each species are provided in **Table 5** and spatially identified in **Figure 3.**

Table 5. Statutory Weed Management Plan requirements for Declared Weeds in the Survey Area

Scientific name Common name	**Distribution and occurrence in Survey Area**	**Risk of spreading weed and main vector**	**Weed Management Plan requirements for Clarence Municipality**
Cirsium arvense Californian thistle	Very restricted, only observed at Pitt Water Road where it is associated with a damp area and culvert under Pitt Water Road. Species is spreading into the private property from Pitte Water Road.	**Very High** (seed and rootstock spread by soil)	Zone B Localised infestations
Lycium ferocissimum Boxthorn	Located as isolated small bushes along fencelines in paddock and as an undershrub associated with the *Pinus radiata* shelterbelt near the homestead. The observed distribution of the species in the Survey Area is indicative of seed drop by birds which have ingested the palatable berries.	**Low** (Seed spread by birds)	Zone B Widespread infestations

[2] Containment is the most appropriate management objective for Zone B municipalities which have problematic infestations but no plan and/or resources to undertake control actions at a level required for eradication. The management outcome for Zone B municipalities is ongoing prevention of the spread of [the declared weed] from existing infestations to areas free or in the process of becoming free of [the declared weed].

C.3.2 Environmental Weeds

Pasture and environmental 'weeds' were observed sporadically across the Survey Area, most commonly in association with the edge of the pasture (northern edge of the Survey Area), and the margin of the existing property track –

- spear thistle (*Cirsium vulgare*),
- briar rose (*Rosa rubiginosa,* see **Figure 3**),
- pasture grasses and herbs (e.g., *Holcus lanatus, Prunella vulgaris, Hypochaeris radicata*).

C.4 PATHOGENS

C.4.1 Phytophthora cinnamomi, *PC*

Root-rot fungus (*Phytophthora cinnamomi,* PC) is a soil borne water mould that causes death in a wide range of native plant species often leading to floristic and structural changes in susceptible plant communities.

PC evolved in tropical areas, and it requires warm moist soils for at least some time of the year to produce sporangia and release zoospores (Rudman 2005). Only those areas of the State that are below an altitude of about 700m above sea level have soils sufficiently warm for this to occur (Podger *et al* 1990). Vegetation types below 700m elevation may not be wholly or partly susceptible if closed canopies keep soil temperatures cool during the summer months, such as tall wet eucalypt forests over rainforest species, or rainforest communities. Equally, if conditions are too dry for the water mould to grow then it may be naturally excluded from those areas.

PC can be spread through the movement of infected soil or plant material by people or animals and can even be transported by water percolating through soil or via surface water, such as in creeks and other drainage lines. Transport of PC to new areas is usually through soil/dirt adhering to vehicles and machinery. Transport into non-roaded areas of high human usage is mainly via bushwalking items such as tents or footwear but can also occur by bird activity.

The fungus is not always evident in the landscape as it attacks root systems of susceptible species, usually causing death in new growth or the yellowing of leaves followed by loss of vigour and, in most cases, death. The fungus can inhabit the root systems of resistant species without any visible signs of infection within the host plant.

The Survey Area is not within a PC Management Area[3].

Soil samples to directly survey for the presence of PC were not collected. No 'symptom' evidence of the water mould was observed, probably because the location is currently so dry (the Survey Area receives rainfall less

[3] See Schahinger, R., Rudman T., and Wardlaw, T. J. (2003). Conservation of Tasmanian Plant Species & Communities threatened by *Phytophthora cinnamomi*. Strategic Regional Plan for Tasmania. Technical Report 03/03, Nature Conservation Branch, Department of Primary Industries, Water and Environment, Hobart

than 600mm/year, so it is unlikely to support the water mould in any year), there are very few susceptible species present, and that no native vegetation communities occur the Survey Area.

C.4.2 Myrtle Wilt

Myrtle wilt, caused by a wind-borne fungus (*Chalara australis*), occurs naturally in rainforest where myrtle beech (*Nothofagus cunninghamii*) is present. The fungus enters wounds in the tree, usually caused by damage from wood-boring insects, wind damage and forest clearing. The incidence of myrtle wilt often increases forest clearing events such as windthrow and wildfire. *Nothofagus cunninghamii* is not present within or adjacent to the Survey Area, such that no special management is considered warranted.

C.4.3 Myrtle Rust

Myrtle rust is a disease limited to plants in the Myrtaceae family. This plant disease is a member of the guava rust complex caused by *Austropuccinia psidii*, a known significant pathogen of Myrtaceae plants outside Australia. Infestations are currently limited to NSW, Victoria, Queensland, and Tasmania (DPIPWE 2015).

No evidence of myrtle rust was noted.

C.4.4 Chytrid fungus and other freshwater pathogens

The freshwater pests and pathogens *Batrachochytrium dendrobatidis* (chytrid frog disease), *Mucor amphibiorum* (platypus mucor disease) and the freshwater algal pest *Didymosphenia geminata* (didymo) (Allan and Gartenstein 2010) pose a threat to native freshwater species and habitat and can be spread via contaminated water, mud, gravel, soil and plant material or infected animals are moved between sites. Contaminated materials and animals are commonly transported on boots, equipment, vehicles tyres and during road construction and maintenance activities.

Chytrid fungus causes the disease known as chytridiomycosis or chytrid infection. The fungus infects the skin of frogs destroying its structure and function and can ultimately cause death. Sporadic deaths occur in some frog populations, and 100 per cent mortality occurs in other populations. The disease is difficult to positively confirm within the landscape as mouth-swab samples need to be collected from numerous (>60) tadpoles at a site to enable testing to be conducted (PCR testing).

Chytrid fungus may be present in the resident frog population, but given the current dry conditions there was no water in sufficient quantities to facilitate frog breeding. The installation and use of the proposed access and road does not impact on a new area (the location is already roaded and used for agricultural purposes), or sensitive area, for any frog species.

Didymo was not observed in the waterways in the Survey Area.

C.5 THREATENED FAUNA ASSESSMENT

There are several threatened fauna species recorded near the Survey Area based on the data contained within the Natural Values Atlas (**Attachment A**) and EPBC Protected Matters Search Tool Report (**Attachment B**). **Table 6** provides a summary of the assessment made for each species listed in these reports.

Table 6. Summary of likely occurrence of fauna species in the Survey Area listed by the relevant Act

TSP Act	**Table C.2** provides a list threatened fauna identified in the NVA with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded. Habitat is absent for most of the listed species known to occur in the region.
EPBC Act	**Attachment E** (Overview Assessment of MNES and Other EPBC Act Protected Matters) provides a summary list of EPBC fauna (including marine and migratory) species that have predicted occurrences, or likely occurrences/habitat, in the region. Habitat is absent for most of the listed/marine/migratory species known to occur in the region. Three species were further considered in **Attachment F**; Chaostola skipper, swift parrot, and masked owl. No EPBC Act species were observed in the Survey Area.

The fauna assessment found that there is no significant habitat (including for example bird nests and nesting habitat, mammal dens and nests, and significant foraging resources) for any fauna species in the Survey Area.

PART D. DISCUSSION AND RECOMMENDATIONS

D.1 VEGETATION COMMUNITIES

Only one TASVEG mapping unit was identified in the Survey Area (**Table 1**); Extra-urban miscellaneous. There are no native vegetation communities (forest or non-forest) in the Survey Area. Accordingly, no recommendations are made.

D.2 THREATENED FLORA SPECIES

One threatened flora species were observed in the Survey Area.

A permit from the Department of Natural Resources and Environment Tasmania will be required to 'take'[4] *Wilsonia rotundifolia* plants, if any, are to be taken by the Development. The exact numbers of plants to be taken by the Development (necessary for the application to 'take') will need to be determined when the final Development footprint is known.

D.3 WEEDS AND PATHOGENS

The following recommendations are made about weed and pathogen management.

D.3.1 Soil management to limit the risk of transporting weeds

The soil and subsoils Pitt Water Road to be excavated and handled are likely to contain seed and root stock of the highly invasive Californian thistle, and perhaps other weeds (possibly annuals or other weed propagules).

It is recommended that the area occupied by this weed is identified on-ground and the soil and subsoils excavated and managed to minimise the risk of spreading seed and rootstock to another location. The transport and use of the excavated material into the property is to be avoided; the burying of potentially weed contaminated soil and subsoils to a depth of at least 1m is recommended.

D.3.2 Clean Machinery Policy

Heavy machinery, such as excavators, can carry large clods of dirt and mud in which seed propagules can be lodged. Heavy machinery should be brought to the Development in a clean condition; free of weed propagules, clods of dirt and vegetative matter.

Biosecurity measures of relevance to the Development that the landowner has in place for the property should be integrated into the construction management program for the Development.

[4] includes kill, injure, catch, damage, destroy and collect;

D.3.2 Weed Spraying Program

A Weed Spraying Program (WSP) should be developed in consultation with the landowner (to identify any specific requirements for chemical use) generally based on the document - 'Department of Primary Industries, Parks, Water and Environment (2015). *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania*.'

The WSP should –

- be instigated for the growing season (spring) immediately after the road works are completed,
- be applied for at least three growing seasons, and
- be reviewed each year (preferably prior to the active growing season for weeds) and updated as new information about the occurrence of weeds become available.

D.4 FAUNA MANAGEMENT

There is no significant habitat (including for example bird nests and nesting habitat, mammal dens and nests, and significant foraging resources) for any conservation significant fauna species in the Survey Area. Accordingly, no recommendations are made.

PART E. REFERENCES

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Kitchener, A. and Harris, S. (2013). From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation. Edition 2. Department of Primary Industries, Parks, Water and Environment, Tasmania. 2nd Edition and revisions April 2019.

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Obendorf, DL (2005). Application of field and diagnostic methods for chytridiomycosis in Tasmanian frogs. Central North Field Naturalists Inc. Tasmania, Australia.

Podger F, Mummery DC, Palzer CR and Brown MJ (1990) Bioclimatic analysis of the distribution of damage to native plants in Tasmania by *Phytophthora cinnamomi*. *Australian Journal of Botany* **15,** 281-289.

Rudman T (2005). Interim *Phytophthora cinnamomi* Management Guidelines. Nature Conservation Report 05/7, Biodiversity Conservation Branch, Department of Primary Industries, Water and Environment, Hobart.

ATTACHMENTS

ATTACHMENT A: NATURAL VALUES ATLAS REPORT (DNRE)

Natural Values Atlas Report

Authoritative, comprehensive information on Tasmania's natural values.

Reference:	
Requested For:	Milford new driveway
Report Type:	Summary Report
Timestamp:	11:27:29 AM Friday 15 March 2024
Threatened Flora:	buffers Min: 500m Max: 5000m
Threatened Fauna:	buffers Min: 500m Max: 5000m
Raptors:	buffers Min: 500m Max: 5000m
Tasmanian Weed Management Act Weeds:	buffers Min: 500m Max: 5000m
Priority Weeds:	buffers Min: 500m Max: 5000m
Geoconservation:	buffer 1000m
Acid Sulfate Soils:	buffer 1000m
TASVEG:	buffer 1000m
Threatened Communities:	buffer 1000m
Fire History:	buffer 1000m
Tasmanian Reserve Estate:	buffer 1000m
Biosecurity Risks:	buffer 1000m

The centroid for this query GDA94: 542119.0, 5258217.0 falls within:

Property: 2865497

Threatened flora within 500 metres

543045, 5259307

541228, 5257093

Please note that some layers may not display at all requested map scales

Threatened flora within 500 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Caladenia caudata	tailed spider-orchid	v	VU	e	33	18-Sep-2021
Caladenia caudata x saggicola		ph	PH	n	50	08-Oct-2022
Caladenia saggicola	sagg spider-orchid	e	CR	e	909	08-Oct-2022
Calocephalus citreus	lemon beautyheads	r		n	12	23-Mar-2021
Coronidium gunnianum	swamp everlasting	?e		n	37	08-Mar-2022
Cotula vulgaris var. australasica	slender buttons	r		n	2	21-Apr-2004
Lachnagrostis robusta	tall blowngrass	r		n	1	20-Aug-2007
Limonium australe var. australe	yellow sea-lavender	r		n	1	30-Jan-2022
Prasophyllum milfordense	milford leek-orchid	e	CR	e	510	04-Jan-2023
Triglochin minutissima	tiny arrowgrass	r		n	3	06-Nov-2010
Vittadinia muelleri	narrowleaf new-holland-daisy	r		n	7	21-Jan-2021
Vittadinia muelleri (broad sense)	narrow leaf new holland daisy	p		n	1	21-Apr-2004
Wilsonia rotundifolia	roundleaf wilsonia	r		n	21	04-Jan-2023

Unverified Records

No unverified records were found!

For more information about threatened species, please contact Threatened Species Enquiries.
Telephone: 1300 368 550
Email: ThreatenedSpecies.Enquiries@nre.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened flora within 500 metres

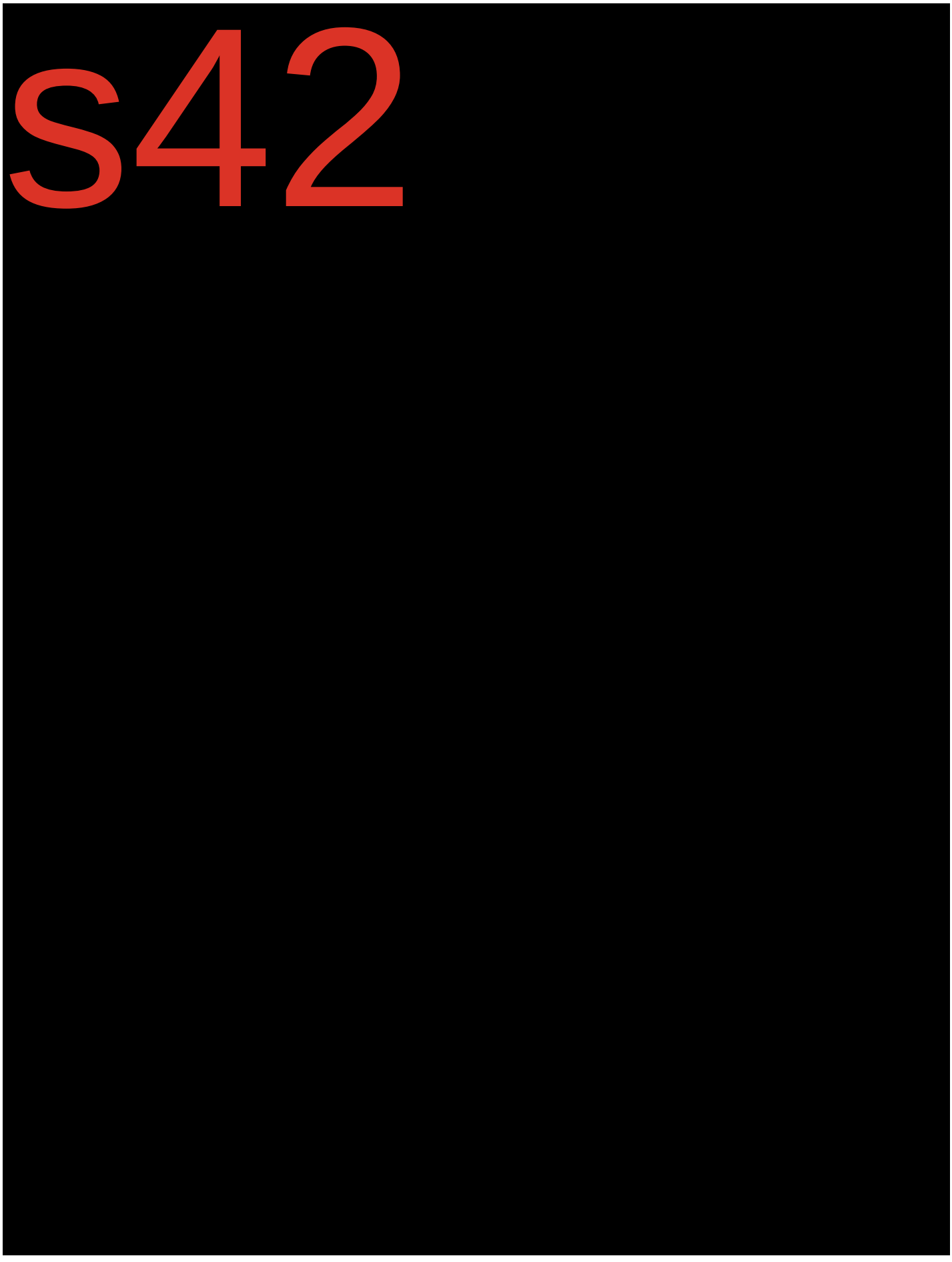
Legend: Verified and Unverified observations

- Point Verified
- Point Unverified
- Line Verified
- Line Unverified
- Polygon Verified
- Polygon Unverified

Legend: Cadastral Parcels

Threatened flora within 5000 metres

546382, 5263801



537897, 5252575

Please note that some layers may not display at all requested map scales

Threatened flora within 5000 metres

Legend: Verified and Unverified observations

- Point Verified
- Point Unverified
- Line Verified
- Line Unverified
- Polygon Verified
- Polygon Unverified

Legend: Cadastral Parcels

Threatened flora within 5000 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Aphelia gracilis	slender fanwort	r		n	1	01-Jan-1993
Bolboschoenus caldwellii	sea clubsedge	r		n	16	12-May-2022
Caladenia caudata	tailed spider-orchid	v	VU	e	43	18-Sep-2021
Caladenia caudata x saggicola		ph	PH	n	50	08-Oct-2022
Caladenia patersonii	patersons spider-orchid	v		n	1	05-Nov-1990
Caladenia saggicola	sagg spider-orchid	e	CR	e	972	08-Oct-2022
Calocephalus citreus	lemon beautyheads	r		n	386	10-Mar-2022
Coronidium gunnianum	swamp everlasting	?e		n	84	10-Mar-2022
Cotula vulgaris var. australasica	slender buttons	r		n	3	21-Apr-2004
Craspedia paludicola	swamp billybuttons	?r		n	6	09-Dec-2020
Dianella amoena	grassland flaxlily	r	EN	n	2	25-Jan-2022
Eutaxia microphylla	spiny bushpea	r		n	1	23-Sep-1984
Haloragis heterophylla	variable raspwort	r		n	19	23-Dec-2020
Juncus vaginatus	clustered rush	r		n	2	01-Jan-2008
Lachnagrostis robusta	tall blowngrass	r		n	11	11-Mar-2020
Lachnagrostis semibarbata var. filifolia	narrowleaf blowngrass	r		n	1	01-Feb-2007
Limonium australe var. australe	yellow sea-lavender	r		n	10	30-Jan-2022
Lobelia pratioides	poison lobelia	v		n	23	08-Dec-2020
Myriophyllum integrifolium	tiny watermilfoil	v		n	2	05-Dec-1986
Prasophyllum milfordense	milford leek-orchid	e	CR	e	588	04-Jan-2023
Ranunculus pumilio var. pumilio	ferny buttercup	r		n	10	10-Dec-2020
Senecio squarrosus	leafy fireweed	r		n	56	25-Jan-2022
Stuckenia pectinata	fennel pondweed	r		n	2	06-Apr-1970
Stylidium despectum	small triggerplant	r		n	1	05-Dec-1986
Triglochin minutissima	tiny arrowgrass	r		n	4	06-Nov-2010
Vittadinia cuneata var. cuneata	fuzzy new-holland-daisy	r		n	1	01-Nov-1984
Vittadinia gracilis	woolly new-holland-daisy	r		n	15	21-Jan-2021
Vittadinia muelleri	narrowleaf new-holland-daisy	r		n	65	05-Feb-2021
Vittadinia muelleri (broad sense)	narrow leaf new holland daisy	p		n	17	09-Dec-2007
Wilsonia humilis	silky wilsonia	r		n	5	06-Jan-2020
Wilsonia rotundifolia	roundleaf wilsonia	r		n	58	21-Feb-2023
Xerochrysum bicolor	eastcoast paperdaisy	r		n	1	01-Feb-1929
Xerochrysum palustre	swamp paperdaisy	v	VU	n	30	10-Dec-2020

Unverified Records

No unverified records were found!

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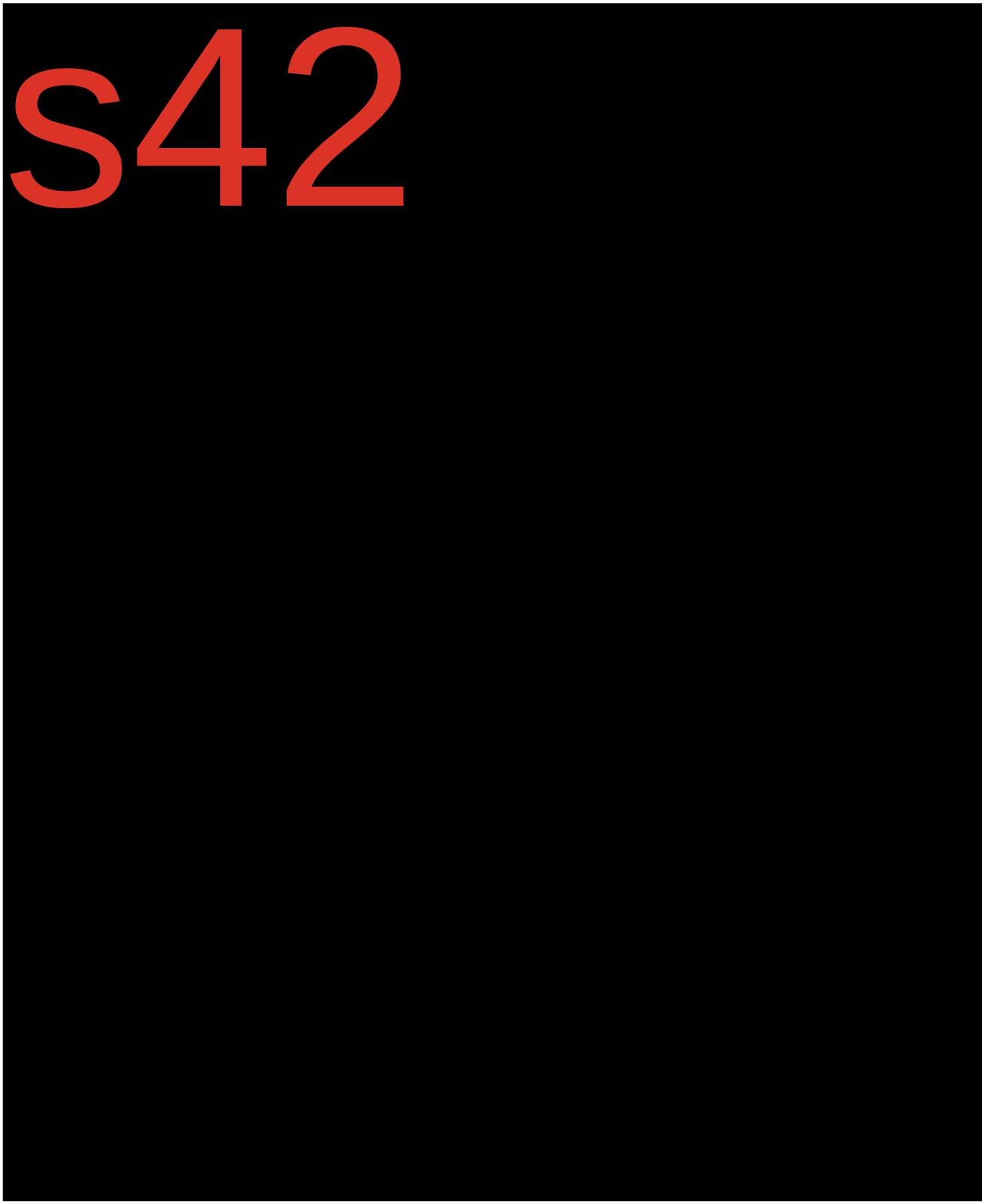
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 500 metres

543045, 5259307



541228, 5257093

Please note that some layers may not display at all requested map scales

Threatened fauna within 500 metres

Legend: Verified and Unverified observations

- Point Verified
- Point Unverified
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- Polygon Verified
- Polygon Unverified

Legend: Cadastral Parcels

Threatened fauna within 500 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	10	18-Oct-2023
Dasybela achroa	saltmarsh looper moth	v		ae	1	22-Mar-2007
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	3	16-Aug-2023
Hirundapus caudacutus	white-throated needletail		VU	n	1	01-Jan-1900
Numenius madagascariensis	eastern curlew	e	CR	n	2	06-Feb-2024
Perameles gunnii	eastern barred bandicoot		VU	n	2	04-Apr-2017
Sarcophilus harrisii	tasmanian devil	e	EN	e	3	08-Oct-2023
Tringa nebularia	common greenshank		EN	n	2	01-Jan-1900
Tyto novaehollandiae	masked owl	pe	PVU	n	1	28-Aug-1993
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	3	10-Jun-2022

Unverified Records

No unverified records were found!

Threatened fauna within 500 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Litoria raniformis	green and gold frog	v	VU	n	1	0	0
Lathamus discolor	swift parrot	e	CR	mbe	1	0	1
Prototroctes maraena	australian grayling	v	VU	ae	1	0	0
Antipodia chaostola	chaostola skipper	e	EN	ae	2	0	0
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	0
Dasybela achroa	saltmarsh looper moth	v		ae	1	1	0
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	1	0	1
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	0	0
Amelora acontistica	chevron looper moth	v			1	0	1
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	1	0	0
Theclinesthes serpentatus lavara	Chequered Blue	r		e	1	0	0
Sarcophilus harrisii	tasmanian devil	e	EN	e	1	0	0
Accipiter novaehollandiae	grey goshawk	e		n	1	0	0
Pardalotus quadragintus	forty-spotted pardalote	e	EN	e	1	0	0
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Brachionichthys hirsutus	spotted handfish	e	CR	e	1	0	0
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1

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Threatened fauna within 5000 metres

546382, 5263801

537897, 5252575

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Threatened fauna within 5000 metres

Legend: Verified and Unverified observations

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Legend: Cadastral Parcels

Threatened fauna within 5000 metres

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Accipiter novaehollandiae	grey goshawk	e		n	2	04-Apr-2023
Aquila audax	wedge-tailed eagle	pe	PEN	n	24	31-Mar-2021
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	16	20-Feb-2024
Arctocephalus forsteri subsp. doriferus	new zealand fur seal	r		n	2	06-Aug-2008
Arctocephalus tropicalis	sub-antarctic fur seal	e	VU	n	1	25-May-2011
Arenaria interpres	ruddy turnstone		VU	n	2	17-Dec-2000
Calidris acuminata	sharp-tailed sandpiper		VU	n	64	18-Sep-2019
Calidris canutus	red knot		VU	n	63	11-Jan-2020
Calidris ferruginea	curlew sandpiper		CR	n	67	10-Feb-2019
Calidris tenuirostris	great knot		VU	n	15	01-Feb-2019
Dasybela achroa	saltmarsh looper moth	v		ae	1	22-Mar-2007
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	1	01-Aug-2016
Dasyurus viverrinus	eastern quoll		EN	n	1	26-Sep-2020
Eubalaena australis	southern right whale	e	EN	m	7	03-Jul-2012
Gallinago hardwickii	lathams snipe		VU	n	4	01-Feb-2019
Gazameda gunnii	Gunn's screw shell	v		ae	3	26-Jun-2004
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	53	16-Aug-2023
Hirundapus caudacutus	white-throated needletail		VU	n	5	24-Mar-2018
Lathamus discolor	swift parrot	e	CR	mbe	10	16-Nov-2014
Limosa limosa	black-tailed godwit		EN	n	46	03-Apr-2018
Megaptera novaeangliae	humpback whale	e		m	1	09-Jun-2017
Mirounga leonina	southern elephant seal	e	VU	n	1	17-Oct-1980
Mirounga leonina subsp. macquariensis	southern elephant seal	pe	PVU	n	2	02-Mar-1992
Neophema chrysostoma	blue-winged parrot		VU	n	26	29-Oct-2022
Numenius madagascariensis	eastern curlew	e	CR	n	160	06-Feb-2024
Pardalotus quadragintus	forty-spotted pardalote	e	EN	e	3	05-Sep-2017
Parvulastra vivipara	live-bearing seastar	e	VU	e	310	27-Jul-2022
Perameles gunnii	eastern barred bandicoot		VU	n	64	16-Aug-2023
Perameles gunnii subsp. gunnii	eastern barred bandicoot		VU		2	30-Aug-2021
Pluvialis squatarola	grey plover		VU	n	3	11-Dec-1999
Podiceps cristatus	great crested grebe	v		n	320	18-Sep-2021
Pseudemoia pagenstecheri	tussock skink	v		n	2	28-Apr-2016
Pterodroma lessonii	white-headed petrel	v		n	2	15-Nov-1976
Sarcophilus harrisii	tasmanian devil	e	EN	e	26	08-Oct-2023
Seriolella brama	Blue Warehou		CD	n	7	01-Jan-1995
Sterna nereis subsp. nereis	fairy tern	pv	PVU		3	01-Jan-1958
Sternula nereis subsp. nereis	fairy tern	v	VU	n	2	01-Jan-1900
Theclinesthes serpentatus	chequered blue	pr		n	1	06-Apr-2014
Theclinesthes serpentatus lavara	Chequered Blue	r		e	2	04-Apr-2009
Thinornis cucullatus	hooded plover		PVU	ae	4	25-Jul-2019
Thinornis rubricollis	hooded plover		VU	n	11	09-Jan-1999
Thymichthys politus	red handfish	e	CR	e	1	30-Apr-2021
Tringa nebularia	common greenshank		EN	n	319	13-Nov-2021
Tyto novaehollandiae	masked owl	pe	PVU	n	10	18-Oct-2016
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	5	10-Jun-2022

Unverified Records

Species	Common Name	SS	NS	Bio	Observation Count
Numenius madagascariensis	eastern curlew	e	CR	n	2
Podiceps cristatus	great crested grebe	v		n	1
Sarcophilus harrisii	tasmanian devil	e	EN	e	1
Tringa nebularia	common greenshank		EN	n	3

Threatened fauna within 5000 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Litoria raniformis	green and gold frog	v	VU	n	1	0	1
Lathamus discolor	swift parrot	e	CR	mbe	1	0	1
Prototroctes maraena	australian grayling	v	VU	ae	12	0	0
Antipodia chaostola	chaostola skipper	e	EN	ae	5	0	0

Threatened fauna within 5000 metres

Species	Common Name	SS	NS	BO	Potential	Known	Core
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	1
Dasybela achroa	saltmarsh looper moth	v		ae	1	1	0
Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	e	VU	e	1	0	1
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	0	0
Amelora acontistica	chevron looper moth	v			5	0	5
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	1	0	1
Theclinesthes serpentatus lavara	Chequered Blue	r		e	1	0	0
Chrysolarentia decisaria	tunbridge looper moth	e		ae	1	0	0
Sarcophilus harrisii	tasmanian devil	e	EN	e	1	0	0
Accipiter novaehollandiae	grey goshawk	e		n	1	0	0
Pardalotus quadragintus	forty-spotted pardalote	e	EN	e	1	0	0
Antechinus vandycki	Tasman Peninsula Dusky Antechinus	v		eH	1	0	0
Thymichthys politus	red handfish	e	CR	e	1	0	0
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Brachionichthys hirsutus	spotted handfish	e	CR	e	1	0	0
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1

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Raptor nests and sightings within 500 metres

543045, 5259307

541228, 5257093

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Raptor nests and sightings within 500 metres

Legend: Verified and Unverified observations

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Legend: Cadastral Parcels

Raptor nests and sightings within 500 metres

Verified Records

Nest Id/Location Foreign Id	Species	Common Name	Obs Type	Observation Count	Last Recorded
552	Tyto novaehollandiae subsp. castanops	masked owl (Tasmanian)	Nest	1	01-Jan-1985
	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Roost site	2	06-Dec-2022
	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Sighting	8	18-Oct-2023
	Falco longipennis	australian hobby	Sighting	1	18-Jan-2019
	Haliaeetus leucogaster	white-bellied sea-eagle	Sighting	3	16-Aug-2023
	Tyto novaehollandiae	masked owl	Sighting	1	28-Aug-1993

Unverified Records

No unverified records were found!

Raptor nests and sightings within 500 metres

(based on Range Boundaries)

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

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Raptor nests and sightings within 5000 metres

546382, 5263801

537897, 5252575

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Raptor nests and sightings within 5000 metres

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