From: s36
To: s36
Subject: RE: re: Hobart Airport to Midway Point Causeway Revised design
Date: Tuesday, 24 October 2023 2:38:30 PM

That's good news s36. I have asked s36 to send through revised drawings. We will now discuss this with the EPBC people in Canberra.

Regards

s36

Principal Engineer

Mobile s36 | s36 @pittsh.com.au | Connect on LinkedIn

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From: s36 @stategrowth.tas.gov.au>
Sent: Tuesday, 24 October 2023 2:07 PM
To: s36 @pittsh.com.au>
Subject: FW: re: Hobart Airport to Midway Point Causeway Revised design

s36 ,

See below, sounds like the meeting was held on Friday, which is good. Can you do an overlay of the increased acquisition area on the golf course redesign or do you need to do further design work to confirm this?

Thanks

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36 @stategrowth.tas.gov.au>
Sent: Tuesday, 24 October 2023 1:47 PM
To: s36 @stategrowth.tas.gov.au>
Subject: re: Hobart Airport to Midway Point Causeway Revised design

Hi s36

Denise and I had a very successful meeting with Tasmania Golf Club on Friday, whilst they are not over the moon with the news, they remain willing to work with us with this further change.

They did ask however that, in order for them to better understand the implications of the further acquisition, could we please have the new golf course design overlaid on the attached new revised road design showing the new acquisition boundary and therefore clearly showing the further encroachment on the fairway and the practice green in particular.

They obviously would just like a visual confirmation of our assurance that this 10 metre further encroachment and acquisition does not trigger the need for a further redesign of the course.

Regards

s36
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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: s36
To: s36 ; s36
Subject: Tasman Highway - EPBC 2020/8805
Date: Wednesday, 15 November 2023 2:10:40 PM
Attachments: image001.png
Department comments Tasman Highway Upgrade Hobart Airport to Sorell Causeway (EPBC 20208805) SECOFFICIAL.msg
Pittwater Road Drainage Improvements.pdf

Hi s36 and s36

Please refer below to a draft submission to DCCEEW reflecting the revised impact of the proposed realignment of the Tasman Highway in the vicinity of Pittwater Road. The person managing the referral for DCCEEW is now s36 . s39 [redacted] The proposed drainage improvements on Pittwater Road were agreed by s36 last year and have been discussed with Clarence City Council

I refer to your email advice of 16/3/2022. In that email your Department advised that

s39 [redacted]

- [redacted]
- [redacted]
- [redacted]

s39 [redacted]

s39 [redacted]

s39 [redacted]

These are provided below.

Pre-construction and to be incorporated into the CEMP

s39 [redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
- [redacted]

During construction

- s39 [redacted]

s39 [redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Post Construction

s39 [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Pittwater Road Drainage

Drainage along Pittwater Road has been identified as a facilitated impact by DCCEEW and s39 [redacted] The proposed mitigation is described in attachment 5 (Pittwater Road Drainage Improvements)

Please review and advise of any comments or revisions to the above so that we can forward on to DCCEEW.

s36 we should also look to discuss the revised alignment with Clarence to determine what we need to do with the highway DA.

Regards

s36 [redacted]

Principal Engineer

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PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466

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From: s36
To: s36
Cc: s36
Subject: Department comments: Tasman Highway Upgrade Hobart Airport to Sorell Causeway (EPBC 2020/8805) [SEC=OFFICIAL]
Date: Wednesday, 16 March 2022 4:40:34 PM
Attachments: Significant Impact Guidelines 1.1 – Matters of National Environmental Significance.pdf
2020-8805 Assessment - PD request and Attachment A.pdf

Hi s36
Thank you for providing the amended preliminary documentation on 28 February 2022, we are satisfied that most department comments have been resolved and refer to those outstanding below:

Reference	DAWE comments 17 January 2021	Proponent Response
Appendix I Orchid Habitat Impact Assessment and Mitigation Plan – General	The department understands that there is a current Milford Fire Management Plan prepared for the Department of Primary Industry and Water which manages orchid preservation. Please clarify how this current management plan ties into the included Orchid Habitat Impact Assessment and Mitigation Plan. Please demonstrate that the Orchid Habitat Impact Assessment and Mitigation Plan has the agreement of the landholder to be implemented effectively on the Milford Property.	It is understood that current management practices on the Milford property favours slashing for burning over burning, due to the proximity to Hobart Airport. The proposed action would not impact the ability of the landowner to manage vegetation using either method. Regarding agreement with the landowner, the Orchid Habitat Management Plan focusses on managing impacts within the new road reserve, through weed management, stormwater management and other measures. The Department is seeking agreement with the landholder.

The department notes that in Section 9 *Residual Impacts* of the Preliminary Documentation it is stated in relation to the Roadside Conservation Program that "This outcome has been negotiated with the landholder to ensure mutually agreed outcomes for orchid habitat can be realised through appropriate resourcing, supported by monitoring and adaptive management". However, it is noted above that agreement is currently being sought from the landholder. Please clarify if agreement has been obtained from the landholder. This agreement will ensure the implementation of a management plan as an enforceable condition to maintain the orchid habitat and populations.

Reference	DAWE comments 17 January 2021	Proponent Response
General – **New survey orchid data,** *relevant across PD documentation*	All waypoints for recent 2021 survey orchid survey data for the two critically endangered Milford Leek-orchid (*Prasophyllum milfordense)* and Sagg Spider-orchid (*Caladenia saggicola*) are available through Tasmanian Natural Values Atlas. This data demonstrates the extent of orchid sightings have increased in the Milford property, notably with sightings for individuals extending closer to the footprint of works. Given the recent survey results, please reconsider the current representation of core habitat to align with new survey records. Additionally, given the two critically endangered Milford Leek-orchid and Sagg Spider-orchid are unlikely to occur anywhere else other than the Milford property, basing estimates on known-recent records only (in the absence of appropriate disturbance regime of burning or slashing along the northern boundary) is an underestimation of potential habitat availability and of the significance of these areas to these species. Therefore, please include all areas of suitable vegetation composition and structure of *Eucalyptus viminalis – E. globulus* coastal forest habitat in core habitat, irrespective of the categorisation of 'primary' or 'secondary potential habitat'. Please update the direct, indirect and residual impacts to individuals and redefined core habitat areas. If it is concluded that residual significant impacts on the threatened orchid species are likely (or it cannot be satisfactorily demonstrated that residual significant impacts are not likely) offsets should be considered, as per the EPBC Act Offsets Policy and Offsets Assessments Guide.	The original stratification of habitat aimed to provide greater understanding of the most important habitat areas. However, based on new records provided in November 2021, Appendix I has re-stratified habitat into two categories: • core habitat (which includes critical habitat and primary potential habitat under the previous assessment); and • secondary potential habitat. It should be noted that the character of vegetation closer to existing highway differs and it is less suitable for orchids, not least due to heavy infestation of weeds and other long-term edge effects Appendix I has been updated to reflect the above assessment. Residual impacts are considered to be minimal, based on management proposed in Appendix M

As now reflected in the documentation, the department will consider all areas currently identified as 'core habitat' and 'primary potential habitat' as habitat for the critically endangered Milford Leek-orchid and Sagg Spider-orchid in line with the broadening extent of species occupation in recent annual surveys. As noted in the department's further comments, the direct, indirect and residual impacts to habitat areas and individuals will need to be updated in line with this reclassification, including the consideration of the need for offsets.
Residual impacts are defined as the impacts that remain after avoidance and mitigation measures. For assessments under the EPBC Act, offsets are required if residual impacts are considered significant. Avoidance and mitigation measures are the primary strategies for managing the potential significant impact of a proposed action, and offsets will not be considered until all reasonable avoidance and mitigation measures are considered, or acceptable reasons are provided as to why avoidance or mitigation of impacts cannot be reasonably achieved
According to the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance* (December 2013) (attached to this email for your reference), an action is likely to have a significant impact on a critically endangered species if there is a real chance or possibility that it will adversely affect habitat critical to the survival of a species or reduce the area of occupancy of the species. Given the critically endangered Milford Leek-orchid and Sagg Spider-orchid are unlikely to occur anywhere else other than the Milford property, all habitat can be considered critical to the survival of the species.
Considering the information on impacts which is now available, the department's view is that (without substantial avoidance of direct impacts) the action will have a residual significant impact on these species given that:

- the action will directly impact on approximately 0.40% of the known range of the Milford Leek-orchid and 0.37% of Sagg Spider-orchid habitat, and indirectly impact 0.31% of the known range of Milford Leek-orchid and 0.24% of Sagg Spider-orchid habitat
- the Minister's delegate has already decided that the action is a significant impact (as per the referral decision); and
- there has not been a substantive reduction (for example though avoidance) of impacts to the species.

Therefore unless there is a new proposed substantial avoidance of impacts, offsets will be required in order for the proposal to meet the department's offset policy. This document is available at: www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy.
I have attached the original request for additional information, please refer to section 5 which outlines the information required to progress the assessment, including a need for offsets. Once the information request is satisfied then the assessment process can continue.
Additionally, we have received a request for a longer public consultation period than the minimum 10 business day period once the preliminary documentation is ready to publish. Please note a consultation period that allows adequate review and comment provision will be proposed to the delegate.
Throughout this process, both your team and the landholder of the Milford property, s36, have indicated that it would be valuable for our team to come down and walk around the site ourselves. We now have further guidance from the department regarding the reintroduction of domestic travel for site visits, and are hoping to organise a visit with both of your team and s36 in the month of April. Would this be possible for your team?
Please feel free to call me on s36 if you have any questions. We are also happy to set up another Microsoft Teams meeting ASAP if you would like to discuss this further.
Kind regards

s36
(she/her)

s36 | Victoria & Tasmania Assessments Section
Department of Agriculture, Water and the Environment
Environment Assessments (Vic and Tas) & Post Approvals Branch | Environment Approvals Division
John Gorton Building, King Edward Terrace, Parkes, ACT
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Australian Government
Department of the Environment

Matters of National Environmental Significance

Significant impact guidelines 1.1
Environment Protection and Biodiversity Conservation Act 1999

Disclaimer
The contents of this document have been compiled using a range of source materials and is valid as at October 2009. The Australian Government is not liable for any loss or damage that may be occasioned directly or indirectly through the use of or reliance on the contents of the document.

Photo:
Front – Budgee Creek in the Barmah State Forest (John Baker)
Back – Carnaby's black cockatoo (Leonie McMahon)

Contents

Introduction

The purpose of these guidelines is to assist any person who proposes to take an action to decide whether or not they should submit a referral to the Australian Government Department of the Environment (the Department) for a decision by the Australian Government Environment Minister (the minister) on whether assessment and approval is required under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)[1].

Under the EPBC Act an action will require approval from the minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance.

These guidelines outline a 'self-assessment' process, including detailed criteria, to assist persons in deciding whether or not referral may be required. Important terms and phrases are explained in the shaded boxes. The appendix to the guidelines provides further assistance for specific industry sectors.

These guidelines may also assist members of the public or interest groups who wish to comment on actions which have been referred under the EPBC Act.

[1] Note that an action does not require approval under the EPBC Act if it meets the criteria for the 'prior authorisation' or 'continuing use' exemptions. These criteria are explained in the Practice Guide entitled *Prior Authorisation and Continuing Use Exemptions – Sections 43A and 43B*, available on the Department's web site at: **www.environment.gov.au/epbc/publications/exemptions.html**
Further exemptions include:

- certain activities allowed in the Great Barrier Reef Marine Park "as of right" (that is, without a permission) under a *Great Barrier Reef Marine Park Act 1975* (GBRMP Act) zoning plan (EPBC Act section 43)
- certain forestry operations in Regional Forestry Agreement Areas (EPBC Act section 42), and
- certain actions requiring separate authorisation by an Australian Government agency or employee and subject to an alternative assessment and advice process under section 160 of the EPBC Act

What is an action?

'Action' is defined broadly in the EPBC Act and includes: a project, a development, an undertaking, an activity or a series of activities, or an alteration of any of these things.

Actions include, but are not limited to: construction, expansion, alteration or demolition of buildings, structures, infrastructure or facilities; industrial processes; mineral and petroleum resource exploration and extraction; storage or transport of hazardous materials; waste disposal; earthworks; impoundment, extraction and diversion of water; agricultural activities; aquaculture; research activities; vegetation clearance; culling of animals; and dealings with land.

Actions encompass site preparation and construction, operation and maintenance, and closure and completion stages of a project, as well as alterations or modifications to existing infrastructure.

An action may have both beneficial and adverse impacts on the environment, however only adverse impacts on matters of national environmental significance are relevant when determining whether approval is required under the EPBC Act.

What are matters of national environmental significance?

The matters of national environmental significance are:

- world heritage properties
- national heritage places
- wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
- nationally threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- a water resource, in relation to coal seam gas development and large coal mining development.

A person who proposes to take an action that will have, or is likely to have, a significant impact on a matter of national environmental significance must refer that action to the minister for a decision on whether assessment and approval is required under the EPBC Act. Substantial penalties apply for taking such an action without approval (civil penalties up to $5.5 million or criminal penalties up to seven years imprisonment).

What is a significant impact?

A 'significant impact' is an impact which is important, notable, or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. You should consider all of these factors when determining whether an action is likely to have a significant impact on matters of national environmental significance.

When is a significant impact likely?

To be 'likely', it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility.

If there is scientific uncertainty about the impacts of your action and potential impacts are serious or irreversible, the precautionary principle is applicable. Accordingly, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on the environment.

What is a referral?

'Referral' of an action involves filling out a referral form and sending it to the Department of the Environment. A referral identifies the person proposing to take the action and includes a brief description of the proposal, the project location, the nature and extent of any potential impacts, and any proposed mitigation measures. The EPBC Act referral process is outlined in more detail at the end of these guidelines.

If you represent a Commonwealth agency or you propose to take an action which is either situated on Commonwealth land or which may impact upon Commonwealth land, you should also refer to the *Significant impact guidelines 1.2: Actions on, or impacting upon, Commonwealth land and actions by Commonwealth agencies*. However, if referral is necessary, you need only submit one referral that includes all relevant matters.

Determining whether an action is likely to have a significant impact on a matter of national environmental significance

These guidelines are intended to assist you in undertaking a 'self-assessment' to decide whether or not your action is likely to have a significant impact on any matters of national environmental significance. Your self-assessment should be as objective as possible and based on sufficient information to make an informed judgement. If you complete a self-assessment and you are still unsure whether the action you propose to take is likely to have a significant impact on a matter of national environmental significance then you should refer the action to the Department of the Environment. In considering taking this step, you may like to discuss the matter with the Department's referral business entry point. The referral business entry point can be contacted through the Department's community information unit on **1800 803 772** or by emailing **epbc.referrals@environment.gov.au**

To make a decision as to whether or not to refer an action to the Minister, you should consider the following:

1. Are there any matters of national environmental significance located in the area of the proposed action (noting that 'the area of the proposed action' is broader than the immediate location where the action is undertaken; consider also whether there are any matters of national environmental significance adjacent to or downstream from the immediate location that may potentially be impacted)?
2. Considering the proposed action at its broadest scope (that is, considering all stages and components of the action, and all related activities and infrastructure), is there potential for impacts, including indirect impacts, on matters of national environmental significance?
3. Are there any proposed measures to avoid or reduce impacts on matters of national environmental significance (and if so, is the effectiveness of these measures certain enough to reduce the level of impact below the 'significant impact' threshold)?
4. Are any impacts of the proposed action on matters of national environmental significance likely to be significant impacts (important, notable, or of consequence, having regard to their context or intensity)?

1. Are there any matters of national environmental significance located in the area of the proposed action?

The EPBC Act protected matters search tool allows you to search for matters of national environmental significance in an area where you propose to take an action[2]. The search tool is located on the Department's web site: **www.environment.gov.au/erin/ert/epbc/index.html**

Lists of threatened species and ecological communities can be accessed from the following web page: **www.environment.gov.au/epbc/protect/species-communities.html**

A list of migratory species can be accessed from the following web page: **www.environment.gov.au/epbc/protect/migratory.html**

A list of Australia's Ramsar Wetlands and a map showing their location can be accessed from the following web page: **www.environment.gov.au/epbc/protect/wetlands.html**

Information about the Commonwealth marine environment can be found at: **www.environment.gov.au/epbc/protect/marine.html**

A list of Australia's World Heritage properties and a map showing their general location can be found at: **www.environment.gov.au/epbc/protect/heritage.html**

A list of National Heritage places and a map showing their general location can be found at: **www.environment.gov.au/epbc/protect/heritage.html**

Information about the Great Barrier Reef Marine Park can be found at **www.gbrmpa.gov.au**

Information about a water resource, in relation to coal seam gas development and large coal mining development can be found at **www.environment.gov.au/epbc/about/water-trigger.html**.

2 In relation to listed threatened species and ecological communities and listed migratory species, the EPBC Act protected matters search tool is intended to be of guidance only and should not be regarded as definitive. Surveys in the area where you propose to take an action can assist in verifying the results of the EPBC Act protected matters search tool. It is also important to note that some species may be detectable at certain times of the year only. Surveys should be timed appropriately, and undertaken for a suitable period by a qualified person.

2. Considering the proposed action at its broadest scope, is there potential for impacts on matters of national environmental significance?

If there are matters of national environmental significance in the vicinity of your proposed action, you need to consider whether there is potential for your proposed action to impact upon those matters.

The proposed action should be considered at its broadest possible scope. This includes all stages and components of the action, all related activities, and all related infrastructure such as roads and powerlines, if applicable.

If the action consists of a series of activities or a number of related activities, you should consider the impacts of each activity, and then consider the combined impacts of those activities.

It is also necessary and important to consider off-site and indirect impacts of your proposed action on matters of national environmental significance (refer to shaded box on page 6).

3. Are there any proposed measures to avoid or reduce impacts on matters of national environmental significance?

It is important to consider the environmental impacts of the proposed action early in the planning of the proposal. Careful planning of the action can avoid, or reduce, the likelihood of a significant impact on matters of national environmental significance. Where possible and practicable it is best to avoid impacts. If impacts cannot be avoided then they should be minimised or mitigated as much as possible.

You should consider impacts on matters of national environmental significance in relation to the following:

- site selection and the location of buildings or activities on the selected site
- the timing of the action or its component activities, and
- the design of any buildings, or other structures or infrastructure.

However you should not conclude that a significant impact is not likely to occur because of management or mitigation measures unless the effectiveness of those measures is well-established (for example through demonstrated application, studies or surveys) and there is a high degree of certainty about the avoidance of impacts or the extent to which impacts will be reduced.

4. Are any impacts of the proposed action on matters of national environmental significance likely to be significant impacts?

In order to decide whether an action is likely to have a significant impact, it is necessary to take into account the nature and magnitude of potential impacts. In determining the nature and magnitude of an action's impacts, it is important to consider matters such as:

- the sensitivity of the environment which will be impacted
- the timing, duration and frequency of the action and its impacts
- all on-site and off-site impacts
- all direct and indirect impacts
- the total impact which can be attributed to the action over the entire geographic area affected, and over time
- existing levels of impact from other sources, and
- the degree of confidence with which the impacts of the action are known and understood.

Indirect and offsite impacts

When considering whether or not an action is likely to have a significant impact on a matter of national environmental significance it is relevant to consider all adverse impacts which result from the action, including indirect and offsite impacts.

Indirect and offsite impacts include:

a. 'downstream' or 'downwind' impacts, such as impacts on wetlands or ocean reefs from sediment, fertilisers or chemicals which are washed or discharged into river systems;

b. 'upstream impacts' such as impacts associated with the extraction of raw materials and other inputs which are used to undertake the action; and

c. 'facilitated impacts' which result from further actions (including actions by third parties) which are made possible or facilitated by the action. For example, the construction of a dam for irrigation water facilitates the use of that water by irrigators with associated impacts. Likewise, the construction of basic infrastructure in a previously undeveloped area may, in certain circumstances, facilitate the urban or commercial development of that area[3].

Consideration should be given to all adverse impacts that could reasonably be predicted to follow from the action, whether these impacts are within the control of the person proposing to take the action or not. Indirect impacts will be relevant where they are sufficiently close to the proposed action to be said to be a consequence of the action, and they can reasonably be imputed to be within the contemplation of the person proposing to take the action.

It may be helpful to consider the following:

- 'But for' the proposed action would the indirect impacts occur?
- Is the proposed action a 'material and substantial' cause of the indirect impacts?
- Are the potential impacts of any subsequent or third party actions known, or would they be expected to be known, by the person proposing to take the action (particularly where the subsequent or third party actions are an intended outcome of the proposed action)?

If the answer to these questions is 'yes', then it is necessary to consider whether these impacts are likely to occur, and whether they are likely to have a significant impact on a matter of national environmental significance. If so, as much information as possible should be provided to assist the minister in determining whether the impacts are relevant, and whether approval under the EPBC Act is required.

Notes:

- When deciding whether or not a proposed action is likely to have a significant impact on a matter of national environmental significance, the precautionary principle is relevant. Accordingly, where there is a risk of **serious** or **irreversible** damage, a lack of scientific certainty about the potential impacts of an action will not itself justify a decision that the action is not likely to have a significant impact on a matter of national environmental significance.
- When deciding whether or not a proposed action is likely to have a significant impact on a matter of national environmental significance, you should consider only the adverse impacts that the action is likely to have. Beneficial impacts cannot be offset against adverse impacts. For example, a hydro-electricity scheme may have both beneficial and adverse impacts on the environment, however, only the adverse impacts are relevant when determining whether approval is required under the EPBC Act. If a project does require approval, beneficial impacts are considered during the assessment and approvals stages of the process.

3 Note that consideration of the impacts of 'facilitated actions' during the assessment and approval of the original action has no effect on the requirement of the proponent of the facilitated action to make a referral when that action eventuates, if that action will have, or is likely to have, a significant impact on a matter of national environmental significance.

Significant impact criteria

The 'significant impact criteria', set out on the following pages, for each matter of national environmental significance, are intended to assist you in determining whether the impacts of your proposed action on any matter of national environmental significance are likely to be significant impacts.

The criteria are intended to provide general guidance on the types of actions that will require approval and the types of actions that will not require approval. They are not intended to be exhaustive or definitive. If you are still unsure whether the action you propose to take is likely to have a significant impact on a matter of national environmental significance you should refer the action to the Department of the Environment for a binding decision on whether approval is required.

The particular facts and circumstances of a proposed action will need to be taken into account in determining whether that action is likely to have a significant impact on a matter of national environmental significance. Remember that the general test for significance is whether an impact is 'important, notable or of consequence, having regard to its context or intensity'.

Listed threatened species and ecological communities

An action will require approval if the action has, will have, or is likely to have a significant impact on a species listed in any of the following categories:

- extinct in the wild
- critically endangered
- endangered, or
- vulnerable.

An action will also require approval if the action has, will have, or is likely to have a significant impact on an ecological community listed in any of the following categories:

- critically endangered, or
- endangered.

Notes:

- Species in the extinct and conservation dependant categories of species listed under the EPBC Act, and listed ecological communities in the vulnerable category of ecological communities listed under the EPBC Act, are not matters of national environmental significance for the purposes of Part 3 of the EPBC Act (requirements for environmental approvals).
- Species and ecological communities listed under the EPBC Act may differ from those listed under State and Territory legislation. This is due to the different status of some species and ecological communities in the different States and Territories, and nationally.

Extinct in the wild species

Significant impact criteria

An action is likely to have a significant impact on extinct in the wild species if there is a real chance or possibility that it will:

- adversely affect a captive or propagated population or one recently introduced/reintroduced to the wild, or
- interfere with the recovery of the species or its reintroduction into the wild.

Critically endangered and endangered species

Significant impact criteria

An action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

- lead to a long-term decrease in the size of a population
- reduce the area of occupancy of the species
- fragment an existing population into two or more populations
- adversely affect habitat critical to the survival of a species
- disrupt the breeding cycle of a population
- modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat
- introduce disease that may cause the species to decline, or
- interfere with the recovery of the species.

What is a population of a species?

A 'population of a species' is defined under the EPBC Act as an occurrence of the species in a particular area. In relation to critically endangered, endangered or vulnerable threatened species, occurrences include but are not limited to:

- a geographically distinct regional population, or collection of local populations, or
- a population, or collection of local populations, that occurs within a particular bioregion.

What is an invasive species?

An 'invasive species' is an introduced species, including an introduced (translocated) native species, which out-competes native species for space and resources or which is a predator of native species. Introducing an invasive species into an area may result in that species becoming established. An invasive species may harm listed threatened species or ecological communities by direct competition, modification of habitat or predation.

What is habitat critical to the survival of a species or ecological community?

'Habitat critical to the survival of a species or ecological community' refers to areas that are necessary:

- for activities such as foraging, breeding, roosting, or dispersal
- for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators)
- to maintain genetic diversity and long term evolutionary development, or
- for the reintroduction of populations or recovery of the species or ecological community.

Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the Register of Critical Habitat maintained by the minister under the EPBC Act.

Vulnerable species

Significant impact criteria

An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

- lead to a long-term decrease in the size of an important population of a species
- reduce the area of occupancy of an important population
- fragment an existing important population into two or more populations
- adversely affect habitat critical to the survival of a species
- disrupt the breeding cycle of an important population
- modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat
- introduce disease that may cause the species to decline, or
- interfere substantially with the recovery of the species.

What is an important population of a species?

An 'important population' is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:

- key source populations either for breeding or dispersal
- populations that are necessary for maintaining genetic diversity, and/or
- populations that are near the limit of the species range.

Critically endangered and endangered ecological communities

Significant impact criteria

An action is likely to have a significant impact on a critically endangered or endangered ecological community if there is a real chance or possibility that it will:

- reduce the extent of an ecological community
- fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines
- adversely affect habitat critical to the survival of an ecological community
- modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns
- cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting
- cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to:
  - assisting invasive species, that are harmful to the listed ecological community, to become established, or
  - causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community, or
- interfere with the recovery of an ecological community.

Further information on listed threatened species and ecological communities

The following information on listed threatened species and ecological communities is available on the Department's web site:

- General information: **www.environment.gov.au/biodiversity/threatened/index.html**
- Copies of recovery plans and threat abatement plans:
  www.environment.gov.au/biodiversity/threatened/recovery.html
  www.environment.gov.au/biodiversity/threatened/tap/index.html
- Species profile and threats database (information about individual listed threatened species and ecological communities): **www.environment.gov.au/sprat**

Listed migratory species

An action will require approval if the action has, will have, or is likely to have a significant impact on a listed migratory species. Note that some migratory species are also listed as threatened species. The criteria below are relevant to migratory species that are not threatened.

Significant impact criteria

An action is likely to have a significant impact on a migratory species if there is a real chance or possibility that it will:

- substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species
- result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species, or
- seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.

What is important habitat for a migratory species?

An area of 'important habitat' for a migratory species is:

a. habitat utilised by a migratory species occasionally or periodically within a region that supports an ecologically significant proportion of the population of the species, and/or

b. habitat that is of critical importance to the species at particular life-cycle stages, and/or

c. habitat utilised by a migratory species which is at the limit of the species range, and/or

d. habitat within an area where the species is declining.

What is an ecologically significant proportion?

Listed migratory species cover a broad range of species with different life cycles and population sizes. Therefore, what is an 'ecologically significant proportion' of the population varies with the species (each circumstance will need to be evaluated). Some factors that should be considered include the species' population status, genetic distinctiveness and species specific behavioural patterns (for example, site fidelity and dispersal rates).

What is the population of a migratory species?

'Population', in relation to migratory species, means the entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries including Australia.

Further information on Listed Migratory Species

- General information on listed migratory species is available on the Department's website: **www.environment.gov.au/epbc/protect/migratory.html**

Wetlands of international Importance

Approval is required for an action occurring within or outside a declared Ramsar wetland if the action has, will have, or is likely to have a significant impact on the ecological character of the Ramsar wetland.

A 'declared Ramsar wetland' is an area that has been designated under Article 2 of the Ramsar Convention or declared by the minister to be a declared Ramsar wetland under section 16 of the EPBC Act.

The 'ecological character' is the combination of the ecosystem components, processes and benefits/ services that characterise the wetland at a given point in time. The phrase 'at a given point in time' refers to the time of designation for the Ramsar List.

Descriptions of the ecological character of listed Ramsar wetlands can be obtained from the Australian wetlands database at: **www.environment.gov.au/water/wetlands/database/index.html**

Significant impact criteria

An action is likely to have a significant impact on the ecological character of a declared Ramsar wetland if there is a real chance or possibility that it will result in:

- areas of the wetland being destroyed or substantially modified
- a substantial and measurable change in the hydrological regime of the wetland, for example, a substantial change to the volume, timing, duration and frequency of ground and surface water flows to and within the wetland
- the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependant upon the wetland being seriously affected
- a substantial and measurable change in the water quality of the wetland – for example, a substantial change in the level of salinity, pollutants, or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health, or
- an invasive species that is harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.

Further information on Ramsar wetlands

The following information on Ramsar wetlands is available on the Department's web site:

- General information: **www.environment.gov.au/epbc/protect/wetlands.html**
- Ramsar wetlands fact sheet (including list and general location map): **www.environment.gov.au/water/publications/environmental/wetlands/ramsar.html**
- Australian wetlands database (including location maps and information for individual wetlands): **www.environment.gov.au/water/wetlands/database/index.html**

The Commonwealth marine environment

An action will require approval if:

- the action is taken in a Commonwealth marine area and the action has, will have, or is likely to have a significant impact on the environment, or
- the action is taken outside a Commonwealth marine area and the action has, will have, or is likely to have a significant impact on the environment in a Commonwealth marine area.

A 'Commonwealth marine area' is defined in section 24 of the EPBC Act. Maps showing Commonwealth marine areas are available through the Department's website at **www.environment.gov.au/epbc/protect/marine.html** or by contacting the Department's community information unit on 1800 803 772.

Marine protected areas are marine areas which are recognised to have high conservation value. Actions in or near marine protected areas, or other areas with high conservation value, have a greater likelihood of significant impacts on the Commonwealth marine environment. A map of marine protected areas is available on the Department's web site:
www.environment.gov.au/coasts/mpa/index.html

Significant impact criteria

An action is likely to have a significant impact on the environment in a Commonwealth marine area if there is a real chance or possibility that the action will:

- result in a known or potential pest species becoming established in the Commonwealth marine area
- modify, destroy, fragment, isolate or disturb an important or substantial area of habitat such that an adverse impact on marine ecosystem functioning or integrity in a Commonwealth marine area results
- have a substantial adverse effect on a population of a marine species or cetacean including its life cycle (for example, breeding, feeding, migration behaviour, life expectancy) and spatial distribution
- result in a substantial change in air quality[4] or water quality (including temperature) which may adversely impact on biodiversity, ecological integrity; social amenity or human health
- result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, social amenity or human health may be adversely affected, or
- have a substantial adverse impact on heritage values of the Commonwealth marine area, including damage or destruction of an historic shipwreck.

Further information on Commonwealth marine areas

The following information relevant to Commonwealth marine areas is available on the Department's web site:

- General information: **www.environment.gov.au/epbc/protect/marine.html**

World Heritage properties

Approval under the EPBC Act is required for any action occurring within or outside a declared World Heritage property that has, will have, or is likely to have a significant impact on the World Heritage values of the World Heritage property.

A 'declared World Heritage property' is an area that has been included in the World Heritage list or declared by the minister to be a World Heritage property. World Heritage properties are places with natural or cultural heritage values which are recognised to have outstanding universal value.

Example of World Heritage values – Kakadu National Park World Heritage property

The Kakadu National Park World Heritage property, located in the far north of Australia's Northern Territory, has both natural and cultural World Heritage values. These values include:

- diverse, expansive and relatively undisturbed natural landscapes, including coastal areas, river systems and floodplains, lowlands, wetlands, plateau complexes, escarpments and outliers
- diverse and relatively unmodified vegetation types, including open mangrove swamps, forest and woodlands, lowland and sandstone rainforests, shrubland and heath, wetland, riverine, floodplain and coastal vegetation
- diverse, endemic, relict and abundant plant and animal species
- extensive and diverse habitats, including open forest and woodlands, monsoon rainforest areas, heaths and shrublands, freshwater wetlands, mangrove and estuarine areas, foreshore and beach areas
- significant plant associations and plants with conservation significance
- animals with conservation significance, including mammals, reptiles, birds, invertebrates and fish
- exceptional natural beauty
- outstanding, diverse, unique and ancient Indigenous archaeological remains and rock art recording a continuous cultural development and environmental change, and
- a rich collection of Indigenous cultural sites with strong spiritual associations and connections to continuing practice of traditional beliefs.

A more comprehensive description of the World Heritage values of Kakadu National Park World Heritage Area can be found at: **www.environment.gov.au/heritage/places/world/kakadu/values.html**

4 The Commonwealth marine area includes any airspace over Commonwealth waters.

Significant impact criteria

An action is likely to have a significant impact on the World Heritage values of a declared World Heritage property if there is a real chance or possibility that it will cause:

- one or more of the World Heritage values to be lost
- one or more of the World Heritage values to be degraded or damaged, or
- one or more of the World Heritage values to be notably altered, modified, obscured or diminished.

Examples

The following examples provide an indication of levels of impact on World Heritage values that are likely to be significant. They are not intended to be exhaustive.

World Heritage properties with natural heritage values

An action is likely to have a significant impact on natural heritage values of a World Heritage property if there is a real chance or possibility that the action will:

Values associated with geology or landscape	• damage, modify, alter or obscure important geological formations in a World Heritage property • damage, modify, alter or obscure landforms or landscape features, for example, by excavation or infilling of the land surface in a World Heritage property • modify, alter or inhibit landscape processes, for example, by accelerating or increasing susceptibility to erosion, or stabilising mobile landforms, such as sand dunes, in a World Heritage property • divert, impound or channelise a river, wetland or other water body in a World Heritage property, and • substantially increase concentrations of suspended sediment, nutrients, heavy metals, hydrocarbons, or other pollutants or substances in a river, wetland or water body in a World Heritage property.
Biological and ecological values	• reduce the diversity or modify the composition of plant and animal species in all or part of a World Heritage property • fragment, isolate or substantially damage habitat important for the conservation of biological diversity in a World Heritage property • cause a long-term reduction in rare, endemic or unique plant or animal populations or species in a World Heritage property, and • fragment, isolate or substantially damage habitat for rare, endemic or unique animal populations or species in a World Heritage property.

Wilderness, natural beauty or rare or unique environment values	• involve construction of buildings, roads, or other structures, vegetation clearance, or other actions with substantial, long-term or permanent impacts on relevant values, and • introduce noise, odours, pollutants or other intrusive elements with substantial, long-term or permanent impacts on relevant values.

World Heritage properties with cultural heritage values

An action is likely to have a significant impact on cultural heritage values of a World Heritage property if there is a real chance or possibility that the action will:

Historic heritage values	• permanently remove, destroy, damage or substantially alter the fabric[5] of a World Heritage property • extend, renovate, refurbish or substantially alter a World Heritage property in a manner which is inconsistent with relevant values • permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a World Heritage property • involve activities in a World Heritage property with substantial and/or long-term impacts on its values • involve construction of buildings or other structures within, adjacent to, or within important sight lines of, a World Heritage property which are inconsistent with relevant values, and • make notable changes to the layout, spaces, form or species composition in a garden, landscape or setting of a World Heritage property which are inconsistent with relevant values.

5 'Fabric' means physical material including structural elements and other components, fixtures, fittings, contents and items with historic value

Other cultural heritage values including Indigenous heritage values	• restrict or inhibit the existing use of a World Heritage property as a cultural or ceremonial site causing its values to notably diminish over time; • permanently diminish the cultural value of a World Heritage property for a community or group to which its values relate • alter the setting of a World Heritage property in a manner which is inconsistent with relevant values • remove, damage, or substantially disturb cultural artefacts, or ceremonial objects, in a World Heritage property, and • permanently damage or obscure rock art or other cultural or ceremonial features with World Heritage values.

Notes:

- The above examples are general examples and their application will depend on the individual values of each World Heritage property. Alteration or disturbance which is small in scale may have a significant impact if a feature or component of a World Heritage property embodies values that are particularly sensitive or important.
- To have a significant impact on World Heritage values, it is not necessary for an action to impact upon the whole of a World Heritage property, all of the values of a World Heritage property, or a whole value of a World Heritage property. It is sufficient if an action is likely to have a significant impact on a part, element, or feature of a World Heritage property, which embodies, manifests, shows, or contributes to the values of that property.

Further Information on World Heritage properties

The following information on World Heritage properties is available on the Department's web site:

- General information: **www.environment.gov.au/heritage/about/world/index.html**

National Heritage places

Approval under the EPBC Act is required for any action occurring within, or outside, a National Heritage place that has, will have, or is likely to have a significant impact on the National Heritage values of the National Heritage place.

The National Heritage List contains places or groups of places with outstanding heritage value to Australia – whether natural, Indigenous or historic[6] or a combination of these.

Example of National Heritage values—Brewarrina Aboriginal fish traps (Baiames Ngunnhu)

The Brewarrina Aboriginal fish traps on the Barwon River in New South Wales, have indigenous National Heritage values. These values include:

- providing an example of a dry-stone fish trap of rare size, design and complexity
- demonstrating an unusual and innovative development in pre-European Aboriginal technology, which exhibits a thorough understanding of dry stone wall construction techniques, river hydrology and fish ecology
- providing a strong social, cultural and spiritual association with Aboriginal people
- demonstrating a delineation of responsibility for use and maintenance of particular traps between different aboriginal groups under Aboriginal law in accordance with the wishes of the ancestral creation being, Baiame
- historical and current use as a significant meeting place for Aboriginal people with connections to the area, and
- demonstrating an unusual aspect of Indigenous tradition, arising from the association between an ancestral being and the creation of the built structures of the fish traps.

A more comprehensive description of the National Heritage values of the Brewarrina Aboriginal Fish Traps can be found at: **www.environment.gov.au/heritage/places/national/brewarrina/index.html**

Significant impact criteria

An action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:

- one or more of the National Heritage values to be lost
- one or more of the National Heritage values to be degraded or damaged, or
- one or more of the National Heritage values to be notably altered, modified, obscured or diminished.

6 For historic built heritage places in the National Heritage List that are within the Australian jurisdiction, approval will be required where an action that has, will have or is likely to have a significant impact on the National Heritage values of the place will be taken by: a constitutional corporation; the Commonwealth or a Commonwealth agency; or a person for the purposes of trade or commerce between Australia and another country, between States, between Territories, or between a State and a Territory. There are no restrictions on the application of the EPBC Act in relation to natural or Indigenous heritage places in the National Heritage List, or places in a Commonwealth area or Territory, or outside the Australian jurisdiction.

Examples

The following examples provide an indication of levels of impact on National Heritage values that are likely to be significant. They are not intended to be exhaustive.

National Heritage places with natural heritage values

An action is likely to have a significant impact on natural heritage values of a National Heritage place if there is a real chance or possibility that the action will:

Values associated with geology or landscapes	• damage, modify, alter or obscure important geological formations in a National Heritage place • damage, modify, alter or obscure landforms or landscape features, for example, by clearing, excavating or infilling the land surface in a National Heritage place • modify, alter or inhibit landscape processes, for example, by accelerating or increasing susceptibility to erosion, or stabilising mobile landforms, such as sand dunes in a National Heritage place • divert, impound or channelise a river, wetland or other water body in a National Heritage place, and • substantially increase concentrations of suspended sediment, nutrients, heavy metals, hydrocarbons, or other pollutants or substances in a river, wetland or water body in a National Heritage place; permanently damage or obscure rock art or other cultural or ceremonial features with World Heritage values.
Biological and ecological values	• modify or inhibit ecological processes in a National Heritage place • reduce the diversity or modify the composition of plant and animal species in a National Heritage place • fragment or damage habitat important for the conservation of biological diversity in a National Heritage place • cause a long-term reduction in rare, endemic or unique plant or animal populations or species in a National Heritage place, and • fragment, isolate or substantially damage habitat for rare, endemic or unique animal populations or species in a National Heritage place.

Wilderness, aesthetic, or other rare or unique environment values	• involve construction of buildings, roads or other structures, vegetation clearance, or other actions with substantial and/or long-term impacts on relevant values, and • introduce noise, odours, pollutants or other intrusive elements with substantial and/or long-term impacts on relevant values.

National Heritage places with cultural heritage values

An action is likely to have a significant impact on historic heritage values of a National Heritage place if there is a real chance or possibility that the action will:

Historic heritage values	• permanently remove, destroy, damage or substantially alter the fabric[7] of a National Heritage place in a manner which is inconsistent with relevant values • extend, renovate, refurbish or substantially alter a National Heritage place in a manner which is inconsistent with relevant values • permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a National Heritage place • involve activities in a National Heritage place with substantial and/or long-term impacts on its values • involve the construction of buildings or other structures within, adjacent to, or within important sight lines of, a National Heritage place which are inconsistent with relevant values, and • make notable changes to the layout, spaces, form or species composition of a garden, landscape or setting of a National Heritage place in a manner which is inconsistent with relevant values.

Other cultural heritage values	• restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time • permanently diminish the cultural value of a National Heritage place for a community or group to which its National Heritage values relate • destroy or damage cultural or ceremonial, artefacts, features, or objects in a National Heritage place, and • notably diminish the value of a National Heritage place in demonstrating creative or technical achievement.

7 'Fabric' means physical material including structural elements and other components, fixtures, fittings, contents and items with historic value

National Heritage places with Indigenous heritage values

An action is likely to have a significant impact on Indigenous heritage values of a National Heritage place if there is a real chance or possibility that the action will:

Indigenous heritage values

- restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time
- permanently diminish the cultural value of a National Heritage place for an Indigenous group to which its National Heritage values relate
- alter the setting of a National Heritage place in a manner which is inconsistent with relevant values
- remove, destroy, damage or substantially disturb archeological deposits or cultural artefacts in a National Heritage place
- destroy, damage or permanently obscure rock art or other cultural or ceremonial, artefacts, features, or objects in a National Heritage place
- notably diminish the value of a National Heritage place in demonstrating creative or technical achievement
- permanently remove, destroy, damage or substantially alter Indigenous built structures in a National Heritage place, and
- involve activities in a National Heritage place with substantial and/or long-term impacts on the values of the place.

Notes:

- The above examples are general examples and their application will depend on the individual values of each National Heritage place. Alteration or disturbance which is small in scale may have a significant impact if a feature or component of a National Heritage place embodies values that are particularly sensitive or important.
- To have a significant impact on National Heritage values, it is not necessary for an action to impact upon the whole of a National Heritage place, all of the values of a National Heritage place, or a whole value of a National Heritage place. It is sufficient if an action is likely to have a significant impact on a part, element, or feature of a National Heritage place which embodies, manifests, shows, or contributes to the values of that place.

Further information on National Heritage places

The following information relevant to National Heritage places is available on the Department's web site:

- General information: **www.environment.gov.au/epbc/protect/heritage.html**
- Australian heritage places inventory: **www.heritage.gov.au/ahpi**

Nuclear actions

A nuclear action will require approval if it has, will have, or is likely to have a significant impact on the environment.

Significant impact criteria

All nuclear actions, as detailed in section 22 of the Act, should be referred to the Department of the Environment for a decision on whether approval is required.

These actions are:

- establishing or significantly modifying a nuclear installation or a facility for storing spent nuclear fuel
- transporting spent nuclear fuel or radioactive waste products arising from reprocessing;
- establishing or significantly modifying a facility for storing radioactive waste products arising from reprocessing
- mining or milling uranium ore
- establishing or significantly modifying a large-scale disposal facility for radioactive waste
- de-commissioning or rehabilitating any facility or area in which an activity described above has been undertaken, or
- establishing, significantly modifying, decommissioning or rehabilitating a facility where radioactive materials at or above the activity level specified in regulation 2.02 of the Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) are, were, or are proposed to be stored.

Electronic copies of the EPBC Act and EPBC Regulations can be accessed from the Department's web site at: **www.environment.gov.au/epbc/about/index.html**

Great Barrier Reef Marine Park

An action will require approval if:

- the action is taken in the Great Barrier Reef Marine Park and the action has, will have, or is likely to have a significant impact on the environment, or
- the action is taken outside the Great Barrier Reef Marine Park and the action has, will have, or is likely to have a significant impact on the environment in the Great Barrier Reef Marine Park.

The Great Barrier Reef Marine Park is established under the *Great Barrier Reef Marine Park Act 1975*. Maps showing the Great Barrier Reef Marine Park are available from **www.gbrmpa.gov.au**.

The Great Barrier Reef Marine Park is an area recognised to have high conservation value.

What is the Environment?

'Environment' is defined in the EPBC Act as:

a. ecosystems and their constituent parts including people and communities ('ecosystem' is defined in the EPBC Act as 'a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functioning unit'
b. natural and physical resources
c. qualities and characteristics of locations, place and areas
d. heritage values of places ('heritage value' is defined in the EPBC Act as including 'the place's natural and cultural environment having aesthetic, historic, scientific or social significance, or other significance, for current and future generations of Australians.' 'Indigenous heritage value' is defined as meaning ' a heritage value of the place that is of significance to Indigenous persons in accordance with their practices, observances, customs, traditions, beliefs or history'), and
e. the social, economic and cultural aspects of a thing mentioned in paragraphs (a), (b) or (c).

Significant impact criteria

An action is likely to have a significant impact on the environment of the Great Barrier Reef Marine Park if there is a real chance or possibility that the action will:

- modify, destroy, fragment, isolate or disturb an important, substantial, sensitive or vulnerable area of habitat or ecosystem component such that an adverse impact on marine ecosystem health, functioning or integrity in the Great Barrier Reef Marine Park results
- have a substantial adverse effect on a population of a species or cetacean including its life cycle (for example, breeding, feeding, migration behaviour, life expectancy) and spatial distribution
- result in a substantial change in air quality or water quality (including temperature) which may adversely impact on biodiversity, ecological health or integrity or social amenity or human health
- result in a known or potential pest species being introduced or becoming established in the Great Barrier Reef Marine Park
- result in persistent organic chemicals, heavy metals, or other potentially harmful chemicals accumulating in the marine environment such that biodiversity, ecological integrity, or social amenity or human health may be adversely affected, or
- have a substantial adverse impact on heritage values of the Great Barrier Reef Marine Park, including damage or destruction of an historic shipwreck.

Other protected matters potentially relevant to the Great Barrier Reef

- **The values of World Heritage properties –** The Great Barrier Reef is a World Heritage property
- **The values of National Heritage places –** The Great Barrier Reef is a National Heritage place
- **The ecological character of a Ramsar wetland –** a number of Ramsar wetlands are located adjacent to the Marine Park, including Shoalwater and Corio Bays and Bowling Green Bay
- **Listed threatened species and ecological communities –** a number of listed threatened species are located in the Marine Park
- **Listed migratory species –** a range of listed migratory species are found in the Marine Park
- **Commonwealth land –** a number of islands within the Marine Park are Commonwealth land
- **The environment of a Commonwealth marine area –** The majority of the Marine Park is within the Commonwealth marine area, and
- **Nuclear actions**.

Further information on the Great Barrier Reef Marine Park

- Further information on the Great Barrier Reef Marine Park is available on the Great Barrier Reef Marine Park Authority (GBRMPA) website: **www.gbrmpa.gov.au**
- General information: **www.gbrmpa.gov.au**

Note:

For actions/activities taken within the Great Barrier Reef Marine Park a permission may be required under the *Great Barrier Reef Marine Park Act 1975* (GBRMP Act). A permission under the GBRMP Act may be required even if significant impact on the environment of the Great Barrier Reef is not likely. Further information is provided on the Great Barrier Reef Marine Park web site at **www.gbrmpa.gov.au**

Protection of water resources from coal seam gas development and large coal mining development

Information on the protection of water resources from coal seam gas development and large coal mining development

The draft *Significant Impact Guidelines: Coal seam gas and large coal mining developments—Impacts on water resources* provides further details on the protection of water resources from coal seam gas and large coal mining developments website: **www.environment.gov.au/epbc/about/water-trigger.html**.

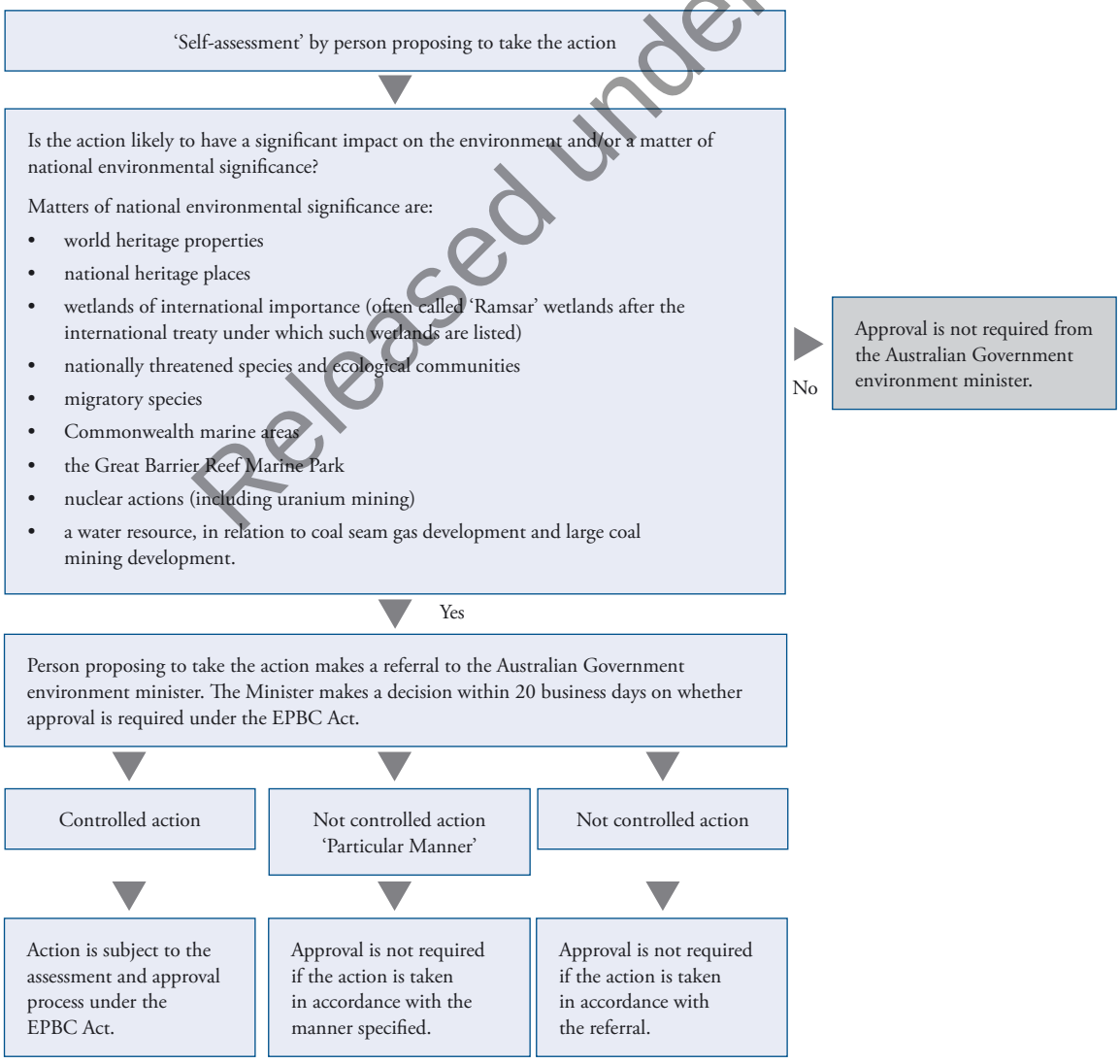
The referral, assessment and approval process

Referral process

If after undertaking a self-assessment you conclude that your action is likely to have a significant impact on a matter of national environmental significance, or if you are unsure, you should refer the action to the Australian Government environment minister. Substantial penalties apply for taking an action that has, will have or is likely to have a significant impact on a matter of national environmental significance without approval.

Referral forms and a guide to assist in filling out the referral form can be obtained from the Department's community information unit on 1800 803 772, or from the Department's website at: **www.environment.gov.au/epbc/assessments/referral-form.html**. The EPBC Act referral process is summarised in Figure 1 below.

Figure 1: EPBC Act referral process



After receiving a referral, the minister will decide whether the action is likely to have a significant impact on a matter of national environmental significance:

- if the minister decides that the action is likely to have a significant impact on a matter of national environmental significance, then the action requires approval under the EPBC Act (it is a controlled action), and
- if the minister decides that the action is not likely to have a significant impact on a matter of national environmental significance, then the action does not require approval under the EPBC Act (it is a not controlled action).[8]

The minister may also decide that an action is not likely to have a significant impact on a matter of national environmental significance, and does not require approval under the EPBC Act, because it will be taken in a 'particular manner'. However, the action must be undertaken in a way that is consistent with the manner specified in this decision, or penalties apply.[9]

The minister is generally required to make a binding decision on whether an action requires approval within 20 business days of receiving a referral. If the minister's decision is that an action does not require approval, a person will not contravene the Act if the action is taken in accordance with that decision.

Assessment and approval process

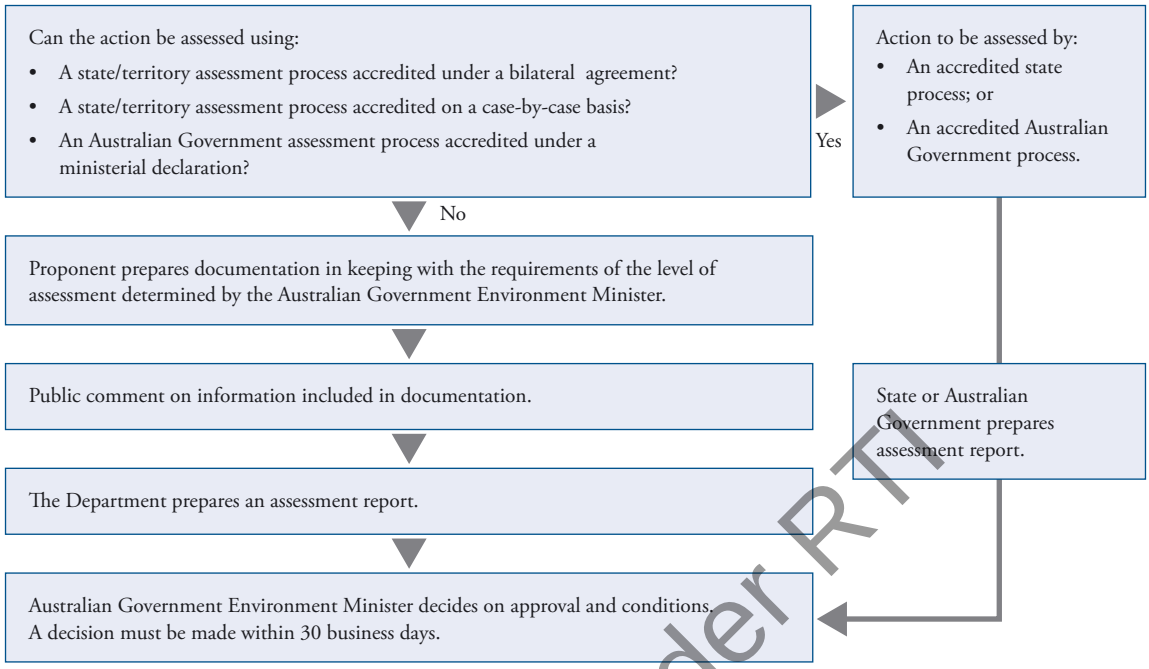
If the minister decides that an action requires approval, then an environmental assessment of the action must be carried out. If a bilateral agreement is in place the action may be assessed by the state or territory in which the action is to be undertaken, using the processes accredited under the bilateral agreement. If a ministerial declaration is in place accrediting another Australian Government assessment process, the action may be assessed by the process accredited under that declaration. Otherwise, the assessment will be undertaken by one of a range of assessment approaches outlined under the EPBC Act. An assessment report will then be prepared.

After considering the environmental assessment report, the Australian Government Environment minister decides whether to approve the action, and what conditions (if any) to impose. The EPBC Act assessment and approval process is summarised in Figure 2.

8 Please note that, regardless of whether approval is required under the EPBC Act, separate environmental assessment and approval may be required under state/territory and/or local government legislation.

9 More information about particular manner decisions can be found in the Practice Guide entitled *Application of 'Particular Manner' decision making under the EPBC Act*, available on the Department's web site at: **www.environment.gov.au/epbc/publications/manner.html**

Figure 2: EPBC Act assessment and approval process



General information

A range of other EPBC Act policy statements are available to assist you in determining whether you are likely to have a significant impact on a matter of national environmental significance.

EPBC Act Policy Statements can be obtained from the Department's community information unit on 1800 803 772 or can be downloaded from the Department's web site at: **www.environment.gov.au/epbc/publications/guidelines.html**

The Australian Natural Resources Atlas provides national, state and regional information about a range of environmental and land-use attributes: **www.anra.gov.au/**

Please note that the Department does not hold all of the information that may be required to assess the impacts of your action. state and territory government agencies also have a range of information that may be useful, including geographic information.

The sectoral information contained in the Appendix to these guidelines is intended to illustrate the application of the criteria for matters of national environmental significance in relation to specific industry sectors, and should be read in the context of, and in conjunction with, the significant impact criteria in these guidelines.

Appendix – Information for industry sectors

The purpose of this Appendix is to provide more detailed assistance in relation to whether, and in what circumstances, some selected sectoral activity is likely to have a significant impact on a matter of national environmental significance.

The examples in this appendix should be read in conjunction with the significant impact criteria in the guidelines and should not be taken to be conclusive.

This guidance relates to the following sectoral activities:

- mineral exploration
- urban development
- local government, and
- marine activities.

EPBC Act policy statements which provide further guidance in relation to specific industry sectors[10] are available from the Department's community information unit or the Department's web site: **www.environment.gov.au/epbc/publications/guidelines.html**

Mineral exploration activity

Terrestrial exploration

Surface geological mapping examining rock outcrops and exposures, which may involve the taking of small samples, would not normally be expected to have a significant impact on a matter of national environmental significance.

Surface geochemical sampling, using both regular grid pattern and irregular pattern methods to collect small samples, would not normally be expected to have a significant impact on a matter of national environmental significance.

Surface geophysical surveys including airborne surveys, gravity, magnetic and electromagnetic surveys, would not normally be expected to have a significant impact on a matter of national environmental significance.

Other geophysical surveys that include seismic surveys would not normally be expected to have a significant impact on matters of national environmental significance. However, an action involving seismic surveys (shot hole method or vibroseis) may have a significant impact on an endangered or critically endangered species if, for example, it is likely to damage habitat critical to the survival of the species or disrupt the breeding cycle of a population of the species. Such an action may also have a significant impact on listed threatened ecological communities where, for example, it adversely impacts on habitat. (See the criteria relating to endangered and critically endangered species and ecological communities.)

10 Industry-specific guidelines that have been, or are being, developed include guidelines for offshore seismic operations, offshore aquaculture, wind farms, agricultural land clearance, urban development, and actions undertaken by local government.

All exploratory drilling (including new field, wildcat, and appraisal drilling, auger, rotary air blast (RAB), open hole percussion, reverse circulation (RC), diamond drilling and wide diameter drilling), including the construction of drill pads, would not be expected to have a significant impact on a matter of national environmental significance where the discharges, emissions and waste from the drilling are contained and managed in an environmentally sensitive manner. However, an action involving exploratory drilling may have a significant impact on an endangered or critically endangered species if, for example, it is likely to damage habitat critical to the survival of the species or disrupt the breeding cycle of a population of the species. Such an action may also have a significant impact on listed threatened ecological communities where, for example, it adversely impacts on habitat. (See the criteria relating to endangered and critically endangered species and ecological communities.) Such an action may also have a significant impact if it occurs within a National Heritage place, for example, if it disturbs Indigenous burial grounds or artefacts with National Heritage values. It will also be necessary to consider the Ramsar criteria if the exploratory drilling is to occur in or immediately adjacent to a Ramsar wetland.

Costeaning and trenching (small scale) would not be expected to have a significant impact on a matter of national environmental significance where small trenches are excavated using hand tools. However, an action involving costeaning and trenching (small scale) may have a significant impact on an endangered or critically endangered species if, for example, it is likely to damage critical habitat for the species or disrupt the breeding cycle of a population of the species. Such an action may also have a significant impact on listed threatened ecological communities where, for example, it adversely impacts on habitat. (See the criteria relating to endangered and critically endangered species and ecological communities.) It will also be necessary to consider the National Heritage criteria and the Ramsar criteria if the costeaning or trenching is to occur in or immediately adjacent to a National Heritage place or a Ramsar wetland.

Costeaning and trenching (large scale), surface bulk sampling (such as establishing a trial pit, sinking shafts or driving decline tunnels deep into the target) and underground exploration and development (such as underground sampling, drilling and mine construction): whether or not these exploration activities are likely to have a significant impact on a matter of national environmental significance will depend upon the particular facts and circumstances of the proposed activity. It is necessary to apply the criteria in the guidelines to assist in determining when an action is likely to have a significant impact on a matter of national environmental significance. For example, if surface bulk sampling occurs in an area that is not in or near a Ramsar wetland, and if it is not damaging the habitat of a threatened species or important habitat for a migratory species, then the proposed exploration activity is not likely to have a significant impact on a matter of national environmental significance. However, if the proposed activity will result in the pollution of a Ramsar wetland then it is likely to have a significant impact on the ecological character of the Ramsar wetland.

Offshore exploration

Aerial surveys and diving for samples would not normally be expected to have a significant impact on a matter of national environmental significance.

Offshore exploratory drilling would be expected to have a significant impact if it is undertaken in an area that contains habitat for threatened or migratory species and the seismic activity is likely to interfere with breeding, feeding or migration, or if habitat critical to the survival of the species (or important habitat for a migratory species) is damaged by the drilling. Offshore exploratory drilling would also be expected to have a significant impact on a Ramsar wetland or the Commonwealth marine environment if drilling occurs in a sensitive area (for example, sea mounts and other areas with high biodiversity value or which contain important habitat). Offshore exploratory drilling may also potentially have a significant impact on historic shipwrecks in the Commonwealth marine area.

Other issues

The above discussion does not address issues associated with mineral exploration activity in a World Heritage property or National Heritage place. In addition, it does not take into account any impacts associated with gaining access to the exploration site, especially where heavy machinery is used.

Urban development

Repairing, maintaining, or making alterations to **commercial and domestic buildings and properties** would not be expected to have a significant impact on a matter of national environmental significance, unless the repairs, maintenance or alterations are being made to a World Heritage property or a National Heritage place and are inconsistent with the values of the property or place.

Repairing and maintaining existing distribution infrastructure for **utilities for power, water and sewage** would not normally be expected to have a significant impact on a matter of national environmental significance, unless there is a substantial expansion or modification of these utilities.

Establishing a **new subdivision** in an existing suburb, with established infrastructure designed to manage environmental impacts, upstream of a large Ramsar wetland (such as the Moreton Bay Ramsar wetland) would not be expected to have a significant impact on the wetland.

By contrast, establishing a **new subdivision** in the vicinity of a smaller Ramsar wetland is likely to have a significant impact on the wetland if it involves extensive vegetation clearing, clearing riparian vegetation, modifying the flow of water to or within the wetland, or if it will result in significant discharges of pollutants into the wetland.

Establishing a **new subdivision** within or adjacent to the Great Barrier Reef Marine Park, a World Heritage property or a National Heritage place is likely to have a significant impact on the World or National heritage values of that property or place.

Building a house on land in an existing subdivision in the vicinity of a Ramsar wetland or a World Heritage property would not normally be expected to have a significant impact on these matters of national environmental significance.

However, **building a house** in close proximity to a National Heritage place may have a significant impact on the values of the place, in particular where the place is located in a non-urban environment or where the proposed development would obstruct or detract from the viewing axes of the heritage place, where applicable.

Proposed urban development for a **housing subdivision or an industrial estate** on an area which contains nationally listed threatened species or ecological communities, or immediately adjacent to the Great Barrier Reef Marine Park, is likely to be significant under the EPBC Act and should be referred to the minister.

Local government

Maintaining existing facilities such as visitor centres and roadside facilities would not be expected to have a significant impact on a matter of national environmental significance.

Routine vegetation management to maintain existing roads in or adjacent to a World Heritage property, a National Heritage place, a Ramsar wetland or a listed threatened species or ecological community would not normally be expected to have a significant impact on a matter of national environmental significance.

A proposed **new road** through a World Heritage property, a National Heritage place, or a Ramsar wetland or a road that would require clearing of native vegetation that contains nationally listed threatened species or ecological communities is likely to be significant under the EPBC Act and should be referred to the minister. It will also be necessary to consider the environment of the Great Barrier Reef Marine Park if the proposed new road occurs immediately adjacent to the Great Barrier Reef Marine Park.

Where **road verge maintenance** is carried out regularly (for example, every one or two years) it would not be expected to have a significant impact on a critically endangered or endangered plant species.

On the other hand, if a population of a **critically endangered or endangered plant species** becomes established on a road verge (because the verge has not been graded or weeded for a number of years), then clearing that road verge is likely to have a significant impact on a matter of national environmental significance.

Widening an existing road would not normally be expected to be significant under the EPBC Act where the road verge has previously been cleared or the vegetation beside the road has been heavily modified. However, if road widening would require removal of native vegetation that contains critically endangered or endangered plant species or ecological communities, it is likely to have a significant impact and should be referred to the minister.

Development of a tourist resort in or adjacent to the Great Barrier Reef Marine Park, a World Heritage property or a National Heritage place is likely to be significant under the EPBC Act and should be referred to the minister. However, a **residential development** such as a block of units or other accommodation in an existing city or coastal town would not normally be expected to have a significant impact on an adjacent World Heritage property.

Marine activities

Otherwise lawful **recreational fishing and recreational boating** would not normally be expected to have a significant impact on a matter of national environmental significance.

Routine ship transits where appropriate precautions have been taken against translocating potential pest species would not normally be expected to have a significant impact on a matter of national environmental significance.

Ballast water operations from vessels in Australian waters, undertaken in accordance with an approved Australian Government arrangement for the management of ballast water, would not normally be expected to have a significant impact on the Commonwealth marine environment.

Small scale infrastructure projects such as new jetties within an existing port would not normally be expected to have a significant impact on a matter of national environmental significance.

Large scale infrastructure projects such as a large pontoon, new aquaculture proposals, construction of a jetty, or a tourist facility (for example, a marina) in the Great Barrier Reef Marine Park may have a significant impact on the environment of the Great Barrier Reef Marine Park and should be referred to the minister.

Expansion of an existing port which requires land reclamation or spoil disposal in a World Heritage property, a National Heritage place, in or adjacent to the Great Barrier Reef Marine Park, a Ramsar wetland or an area containing nationally listed threatened species or ecological communities, or which involves modifying an area of important habitat for a nationally listed migratory species, is likely to have a significant impact on a matter of national environmental significance.

Construction of a new port in a Commonwealth marine area, in or adjacent to the Great Barrier Reef Marine Park, a World Heritage property, or a National Heritage place is likely to have a significant impact on a matter of national environmental significance.

Dredging of a new shipping channel through a World Heritage property, a National Heritage place, through or next to the Great Barrier Reef Marine Park, a Ramsar wetland, or an area containing nationally listed threatened species or ecological communities, or which involves modifying an area of important habitat for a nationally listed migratory species, is likely to have a significant impact on a matter of national environmental significance.

Dredging to maintain existing navigational channels would not normally be expected to have a significant impact on the environment where the activity is undertaken as part of normal operations and the disposal of spoil does not have a significant impact.

environment.gov.au

BIO70.0913

Australian Government
Department of Agriculture, Water and the Environment

EPBC Ref: 2020/8805

Ms Denise McIntyre
A/g General Manager State Roads
Department of State Growth
4 Salamanca Place
HOBART TAS 7000

Dear Ms McIntyre

Additional information required for preliminary documentation.
Tasman Highway Upgrade Hobart Airport to Sorell Causeway, near Hobart, Tasmania

I am writing to you in relation to your proposal to upgrade a 2 km section of the Tasman Highway between Hobart International Airport and the Sorell Causeway and undertake works in the Tasmanian Golf Club, approximately 15 km east of Hobart, Tasmania.

On 8 February 2021, a delegate of the Minister for the Environment decided that the the proposed action is a controlled action and that it will be assessed by preliminary documentation. Further information will be required to be able to assess the relevant impacts of the proposed action.

Details outlining the further information required are at Attachment A. Please advise the department prior to submission of the preliminary documentation so that an invoice can be raised to cover Stage 2 of the assessment. Payment of the Stage 2 fee is required prior to the department commencing its review of the preliminary documentation.

Details on the assessment process and the responsibilities of the proponent are set out in our fact sheet EPBC Act — Environment Assessment process (see attached). Further information is available from the department's website at http://www.environment.gov.au/epbc.

If you have any questions about the referral process or this decision, please contact the project manager, s36 by email to s36 @awe.gov.au, or telephone s36 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

s36

Acting Director
Victoria and Tasmania Assessments Section
Environment Assessments (Vic, Tas) and Post Approvals Branch

17 February 2021

REQUEST FOR ADDITIONAL INFORMATION
ASSESSMENT BY PRELIMINARY DOCUMENTATION

Tasman Highway Upgrade Hobart Airport to Sorell Causeway, near Hobart, Tasmania (EPBC 2020/8805)

The proposed action to upgrade a 2 km section of the Tasman Highway between Hobart International Airport and the Sorell Causeway and undertake works in the Tasmanian Golf Club, approximately 15 km east of Hobart, Tasmania, has been determined likely to have a significant impact on listed threatened species and communities (sections 18 and 18A) protected under Part 3 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). It was also determined that the proposed action will be assessed by preliminary documentation.

The preliminary documentation should be sufficient to allow the minister (or delegate) to make an informed decision on whether or not to approve, under Part 9 of the EPBC Act, the taking of the action for the purposes of each controlling provision. The preliminary documentation should be provided as one document with attachments and in a format that is objective, clear and succinct. It must contain sufficient information to avoid the need to search out previous or supplementary reports and be written so that any conclusions reached can be independently assessed.

Where appropriate, the documentation must be supported by:

- the best available scientific literature
- relevant maps, plans, diagrams (clearly annotated, in colour and of high resolution) and technical information
- details on relevant uncertainties, including whether impacts are unknown, unpredictable or irreversible, as well as acceptability of the relevant impacts to Matters of National Environmental Significance (MNES)
- references or other descriptive detail in relation to the information provided, including how recent the various pieces of information are.

The documentation must avoid passive language and use active, clear commitments like ‘must’ and ‘will’ where appropriate. The additional information must include a copy of these guidelines and a table indicating where the information fulfilling the guidelines is included in the preliminary documentation. The preliminary documentation must address the matters set out below.

1. DESCRIPTION OF THE ACTION

Provide a description including location, boundaries, and size (in hectares) of all components of the action. Include the anticipated timing and duration (including start and completion dates) of each component of the project. Examples of components that must be described include but are not limited to are vegetation clearing, earthworks and installation of pipelines or other utilities.

2. DESCRIPTION OF THE ENVIRONMENT AND MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Specific matters this section must address include, but are not limited to, information that clarifies the Milford Leek-orchid *Prasophyllum milfordense*), Sagg Spider-orchid (*Caladenia saggicola*) and Tailed Spider-orchid (*Caladenia caudata*) population distributions and habitat present on and adjacent to the project site. This must include:

a. a copy of all available Milford Leek-orchid, Sagg Spider-orchid, and Tailed Spider-orchid survey reports and records from within 1 km of the action

b. a detailed assessment of the potential habitat value (for the Milford Leek-orchid, Sagg Spider-orchid, and Tailed Spider-orchid) of the land that may be directly or indirectly impacted by the action. This must include, but not be limited to, assessment of habitat including as it relates to soil, vegetation, ground and surface water, and life-history requirements of the orchid species' including for pollination and reproduction.

Please use the most up-to-date information available and attach all relevant ecological surveys referenced in the referral and preliminary documentation as supporting documents.

Note: It is the proponent's responsibility to be aware of any changes to species and ecological community distributions and the information available in the SPRAT Database. The proponent must ensure that a recent Protected Matters Search Tool has been generated and considered before finalising the draft preliminary documentation.

3. RELEVANT IMPACTS

The preliminary documentation must include an assessment of potential impacts (including direct, indirect, facilitated and cumulative impacts) that may occur as a result of all elements and project phases of the proposed action (such as construction and post-construction) on the MNES addressed at Section 2.

Consideration of impacts must not be confined to the immediate area of the proposed action but must also consider the potential of the proposed action to impact on adjacent areas that are likely to contain populations of, or habitat for, MNES.

All impacts, including direct, indirect, and consequential, on the above listed threatened species and ecological community and/or their habitat must be assessed in accordance with relevant departmental policies and guidelines.

For all threatened species and MNES likely to be impacted, this must include, but not be limited to:

c. an assessment of any direct loss of habitat and/or individuals as a result of the proposed action

d. an assessment of any potential indirect impacts resulting from the proposed action, including but not limited to any changes to habitat quality resulting from changes to hydrology and the introduction and/or spread of weeds

e. an assessment of potential facilitated impacts as a result of the proposed action

f. an assessment of the likely duration of all potential impacts as a result of the proposed action

g. an assessment of whether impacts are likely to be repeated, for example as part of maintenance or upkeep

h. a discussion of whether any impacts are likely to be unknown, unpredictable, or irreversible.

Full justification of all discussions and conclusions based on the best available information, including relevant conservation advices, recovery plans, threat abatement plans, and guidance documents must be included if applicable. Departmental documents regarding listed threatened species can be found at: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

4. PROPOSED AVOIDANCE AND MITIGATION MEASURES

In relation to the impacts of the proposed action on MNES, the preliminary documentation must include a detailed description of the avoidance and mitigation measures proposed, including but not limited to:

a. a statement of the objectives

b. the policy basis for the measures

c. the party responsible for implementing and funding each measure

d. and locations and timing of each measure

e. the ongoing management and monitoring plans

f. details of any measures to minimise weed introduction and spread, including discussion of what extent such measures will reduce the threats posed by edge effects and weed incursion

g. maps that illustrate the location of any proposed construction exclusion zones or buffer zones, and details on how these areas will be excluded or protected

h. an assessment of the expected or predicted effectiveness of the measures proposed.

The preliminary documentation must include a detailed monitoring and adaptive management plan that sets out the proposed approach to monitoring and responding to any impacts to the Milford Leek-orchid, Sagg Spider-orchid and Tailed Spider-orchid as a result of construction of the proposal. This must include, but not be limited to:

a. baseline species and habitat assessment

b. key species and habitat attributes that will be monitored during and following construction, including justification for selection of attributes

c. trigger points for actions to prevent further impacts or changes to habitat attributes if detected

d. actions to be taken in response to identified changes in species or habitat attributes.

5. RESIDUAL IMPACTS/PROPOSED OFFSETS

Describe the residual impacts on MNES that are likely to occur as a result of the proposed action in its entirety, after proposed avoidance and/or mitigation measures are considered. If applicable, this should include the reasons why avoidance or mitigation of impacts cannot be reasonably achieved.

If residual impacts are likely to be significant, provide details of an offset package to compensate for residual impacts to MNES. This should consist of an offset proposal (Offset strategy) and key commitments and management actions for delivering and implementing the proposed offset (an Offset management plan). The Offset strategy and Offset management plan should be a standalone document.

Offsets must directly contribute to the ongoing viability of the species and ecological communities and deliver an overall conservation outcome that improves or maintains the viability of the protected matter, as compared to what is likely to have occurred if neither the action nor the offset had taken place. The offset proposal should demonstrate how the conservation outcome will be delivered for the protected matter.

The proposed offset must meet the requirements of the department's *EPBC Act Environmental Offsets Policy* (October 2012). The department's *Offset Assessment Guide* may be used as a guide to estimate the area of offset required to adequately compensate for the residual impacts of the project. These documents are available at: www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy Offsets required by the state can contribute to offset obligations under the EPBC Act if those offsets also meet the requirements of the *EPBC Act Environmental Offsets Policy*.

A project officer within the department will assess the proposed offset based on the information provided in the offsets proposal using the offsets assessment guide. Please note, in all cases targets and criteria should be specific and measurable.

An Offset strategy must include:

a. a description of the offset site(s) including location, size, condition and environmental values

b. details of the surveys undertaken in accordance with the survey guidelines used to confirm the presence of the protected matter at the offset site

c. details of the quality of the offset site and habitat characteristics for the protected matter

d. details of on-going threats to the protected matter at the offset site

e. a comparison of the environmental values as compared to the impact site

f. justification

An Offset management plan must include:

a. the specific environmental outcomes to be achieved

b. details on how the offset will be secured, managed and monitored to meet these environmental outcomes, including: i. management actions, performance targets, monitoring methodology and review criteria

   i. management actions, performance targets, monitoring methodology and review criteria

   ii. responsibility and timing for implementation of actions.

6. OTHER APPROVALS AND CONDITIONS

The preliminary documentation must include information on any other requirements for approval or conditions that apply, or that you reasonably believe are likely to apply, to the proposed action.

This must include:

a. a description of any approval obtained or required to be obtained from a state or Commonwealth agency or authority (other than an approval under the EPBC Act)

b. any conditions that apply to the proposed action

c. a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the proposed action.

7. SOCIAL AND ECONOMIC

The preliminary documentation must address the economic and social impacts (both positive and negative) of the proposed action. This may include:

a. details of public consultation activities and their outcomes

b. projected costs and benefits of the proposed action, including the basis for their estimation.

8. ENVIRONMENTAL RECORD OF PERSON PROPOSING TO TAKE THE ACTION

Please provide the following information, including details of any proceedings under a Commonwealth, state or territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

a. the person proposing to take the action

b. for an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework should be described.

9. CONCLUSION

The preliminary documentation must provide an overall conclusion as to the environmental acceptability of the proposal, including discussion on compliance with the principles of Ecologically Sustainable Development (ESD) and the objects and requirements of the EPBC Act. To assist you, the *National Strategy for Ecologically Sustainable Development* (1992) is available on the following web site: https://www.environment.gov.au/about-us/esd/publications/national-esd-strategy.

You may wish to include a statement as to whether or not the controlled action should be approved and may recommend conditions pertaining to an approval. This should include justification for undertaking the proposed action in the manner proposed. The measures proposed or required by way of offset for any unavoidable impacts on MNES and the relative degree of compensation, should be restated here.

10. INFORMATION SOURCES

The preliminary documentation must state for the information provided, the following:

a. the source and currency (date) of the information

b. how the reliability of the information was tested

c. the uncertainties (if any) in the information

d. any guidelines, plans and/or policies considered.

From: s36
To: s36 s36
Subject: Re: Tasman Highway - EPBC 2020/8805
Date: Wednesday, 15 November 2023 4:35:17 PM
Attachments: image001.png

H s36

The indirect impacts are as listed in the tables in the email and shown on 2nd and 3rd attachments s39 [redacted]

Regards

s36

Principal Engineer

Mobile s36 | s36 @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

On 15 Nov 2023, at 14:27, s36 @stategrowth.tas.gov.au> wrote:

Thanks s36

We will need to discuss this internally to determine the extent of mitigation we

would like to proceed with. s39 [redacted]

s36 [redacted]

s36 [redacted]
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 [redacted] @stategrowth.tas.gov.au / MB: s36 [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.

From: s36
To: s36
Subject: RE: Project Schedule required
Date: Thursday, 11 January 2024 9:28:01 AM
Attachments: Airport Interchange to Midway Point Causeway - 09012024.mpp

Hi s36

Here's the program.
At this stage I have assumed that the DA is approved, hoping we can get away with a minor amendment. We've got a meeting with Council today to explain the realignment and try to obtain their advice on the way forward (Council told us to refer to TASCAT who believe it is a Council matter).
The May EPBC date with 18 month duration puts calling tenders out until 9 January 2026. We can discuss further on Thursday.

Regards

s36

Principal Engineer

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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: s36 @stategrowth.tas.gov.au>
Sent: Tuesday, 9 January 2024 3:56 PM
To: s36 @pittsh.com.au>
Subject: Project Schedule required

Hi s36

Is there any chance you could prepare a new project schedule for me before you head off on leave. We have a new system where these are uploaded to Power Bi for management reporting purposes. I have attached the template that is not to be changed.

I need it in MProject Native format

For the SETS project can we have the EPBC referral resubmission date as May with an 18 month approval timeframe.

This will mean we should not need to change the schedule for this exercise unless approvals occur prior to this date. I would put the other required approval (Commonwealth land transfer) as a similar date.

Thanks, s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: [redacted]
To: [redacted]
Subject: [redacted]
Date: Friday 12 January 2024
Attachments:

Hi [redacted] and [redacted]
R[redacted] looks February before we can get the Significant Impact Assessment. Note also no survey last spring due to lack of flowers
Regards
[redacted]
Sent from my iPhone

Begin forwarded message:

> From: Andrew North[redacted] @northbarlor.com.au>
> Date: 12 January 202[redacted] 08:06 GMT+11
> To: [redacted] @pitmh.com.au>
> Subject: [redacted] highway - EPBC 2020/8665

[redacted]

out of scope

[redacted]

Duplicate

From: s36
To: s36
Subject: RE: Request for Extension of Time for Planning Permit PDPLANPMTD-2021/017986 - Alts to Tasmania Golf Course - P.19.0406
Date: Tuesday, 16 January 2024 10:15:34 AM
Attachments: image001.png
image002.png

You're correct about the highway permit, which expires on 01 March 2024 – so we will need to substantially commence works by then or apply to extend it by 01 Sept 2024 at the latest.

From: s36 @stategrowth.tas.gov.au>
Sent: Tuesday, 16 January 2024 10:11 AM
To: s36 @pittsh.com.au>
Subject: RE: Request for Extension of Time for Planning Permit PDPLANPMTD-2021/017986 - Alts to Tasmania Golf Course - P.19.0406

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Ah sorry, I meant the other permit for the highway remainder of the project

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36 @pittsh.com.au>
Sent: Tuesday, 16 January 2024 10:10 AM
To: s36 @stategrowth.tas.gov.au>
Cc: s36 @pittsh.com.au>
Subject: RE: Request for Extension of Time for Planning Permit PDPLANPMTD-2021/017986 - Alts to Tasmania Golf Course - P.19.0406

Hi s36

As stated in my email below, we have until 03 March to make the application for the extension (we've applied early but need to pay the invoice by this time at the latest).

Council will then consider the application and will likely extend it to 03 Sept 2025. This keeps the permit alive and allows us to amend it.

Extending a permit may be done up to two times, so it could be extended again up to 03 Sept 2027.

Kind regards
s36

From: s36 @stategrowth.tas.gov.au>
Sent: Tuesday, 16 January 2024 10:02 AM
To: s36 @pittsh.com.au>
Cc: s36 @pittsh.com.au>
Subject: RE: Request for Extension of Time for Planning Permit PDPLANPMTD-2021/017986 - Alts to Tasmania Golf Course - P.19.0406

Thanks s36, no problems. Do you have the latest date for extension of the Golf Course DA?, I think it was in March and do we need to do anything now to progress that?

s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36 @pittsh.com.au>
Sent: Tuesday, 16 January 2024 9:53 AM
To: s36 @stategrowth.tas.gov.au>
Cc: s36 @pittsh.com.au>
Subject: FW: Request for Extension of Time for Planning Permit PDPLANPMTD-2021/017986 - Alts to Tasmania Golf Course - P.19.0406

Hi s36

Hope you can assist – s36 on leave.

The attached invoice is from Clarence council for an application to extend State Growth's planning permit for alterations to the Tasmania Golf Course (1420 Tasman Highway) – are you able to arrange payment?

The permit expired on 03 September 2023. We have until 03 March 2024 to make the application, so the invoice must be paid by then at the latest.

We have already been discussing this permit with Clarence, so don't anticipate any issues with getting the extension approved.

Kind regards
s36

s36

Principal Planner
BSc (Hons), DURP, MPSL
Member Royal Town Planning Institute

Direct s36 | s36 @pittsh.com.au | Connect on LinkedIn

Launceston Office — Level 4, 113 Cimitiere Street
PO Box 1409 Launceston Tasmania 7250 | Phone +61 3 6323 1900 | Mobile s36
pittsh.com.au

pitt&sherry acknowledge the Aboriginal and Torres Strait Islander people as the Traditional Custodians of country on which we live and work. We pay our respects to the Traditional Custodians and Elders past, present and emerging, and recognise their continuing connection to land, water and community.

From: s36
To: s36
Subject: CM: FW: Request for Extension of Time for Planning Permit PDPLANPMTD-2021/017986 - Alts to Tasmania Golf Course - P.19.0406
Date: Wednesday, 31 January 2024 4:21:49 PM
Attachments: image001.png
image002.png
image003.png
Out of scope

Hi s36

Please refer the attached extension of time from Clarence for the Golf Course Planning Permit. This is a 2 year extension form the original Permit expiry date of 3 September 2023.

s36

Principal Engineer

Mobile s36 | s36 @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: s36
To: s36
Subject: Fwd: Initial Advice re Tas Hwy Airport Interchange to Midway Point Causeway - PDPLANPMTD-2021/017986 & PDPLANPMTD-2021/017782
Date: Monday, 22 January 2024 10:34:50 AM
Attachments: image002.png
image005.png
image006.png
Out of scope

Hi s36
Refer below re DAs. s39 and I'll send one through next week.
Regards
s36
Sent from my iPhone

Begin forwarded message:

out of scope

From: s36
To: s36
Subject: Tasman Highway - Airport Interchange to Midway Point Causeway - January Invoice
Date: Wednesday, 31 January 2024 5:39:51 PM
Attachments: image001.png
3100B-6-37 - P.19.0406 - PIP021781.pdf
January 2024 Forecast.xlsx
HB19197 January 2024 Report.docx

Hi s36

Attached for your approval are January invoice , forecast and report.

Regards

s36

Principal Engineer

Mobile s36 | s36 @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

pitt&sherry

Pro forma Tax Invoice

Pitt & Sherry (Operations) Pty Ltd
Level 4, 113 Cimitiere Street
LAUNCESTON TAS 7250
AUS
Tel: 1300 748 874
Em: info@pittsh.com.au
ABN: 67140184309

Bill To:

Department of State Growth
4 Salamanca Place
HOBART TAS 7000
AUS
Tel:
Em:
ABN: 36388980563

Invoice number:	**PIP021781**
Invoice date:	23/01/2024
Payment terms:	14DAYS
Due date:	06/02/2024
Currency:	AUD
Customer reference:	3100B-6-37
Customer account:	C08439

SUMMARY OF CHARGES PAYABLE ON THIS INVOICE		NET AMOUNT
Professional services for the period to 19 January 2024		
P.19.0406.013 - SETS Project Management to 31 March 2023	**Time and material**	**1,587.67**
P.19.0406.020 - ADJ9 - Ongoing EPBC Approval Costs	**Time and material**	**317.53**
P.19.0406.021 - ADJ9-Options to Reduce Impact on Milford	**Time and material**	**3,774.05**

Details on next page

PAYABLE ON THIS INVOICE

Currency	Net amount	GST amount	Total
AUD	5,679.25	567.93	**6,247.18**

Due date : 06/02/2024

Out of scope

Interest will be charged on overdue accounts

pitt&sherry

Details + T/S

Description	Resource	Quantity	Unit price	Net amount
P.19.0406.013 - SETS Project Management to 31 March 2023				
Hours / Time & Materials				
SETS Project Management				
18/12/2023 Request to CCC re Permit amend	s36	s38		
18/12/2023 Invoice and report				
19/12/2023 Discuss with DF & email to CCC				
20/12/2023 Follow up with CCC				
09/01/2024 Project mgt				
09/01/2024 Program template				
11/01/2024 DA mtg with CCC				
Subtotal				

	Previous claims	New charges
Charges for P.19.0406.013	**19,552.55**	**1,587.67**

P.19.0406.020 - ADJ9 - Ongoing EPBC Approval Costs				
Hours / Time & Materials				
Ongoing EPBC Approval Costs				
11/01/2024 Realignment/EPBC response	s36	s38		
Subtotal				

	Previous claims	New charges
Charges for P.19.0406.020	**9,856.89**	**317.53**

P.19.0406.021 - ADJ9-Options to Reduce Impact on Milford				
Hours / Time & Materials				
Options to Reduce Impact on Milford				
18/12/2023 Project Admin	s36	s38		
18/12/2023 Reviewed & updated letter and attachments, sen to TASCAT				
19/12/2023 Discussions with TASCAT and David Conley				
10/01/2024 Reviewed planning act and discussion with coun planner				
11/01/2024 Reviewed material, internal discussions and meeting with council, began letter				
12/01/2024 Reviewed LUPAA, TASCAT directions, both sets plans & NVA, prepared and sent letter to council				
15/01/2024 Extension for golf course DA and discussion with council				
16/01/2024 EoT discussions with council and DSG, reviewed council advice, discussion with council and advic to David Conely				
Subtotal				

	Previous claims	New charges
Charges for P.19.0406.021	**33,395.95**	**3,774.05**

Department of State Growth Invoice Report

Department Project No: 2220-3-128
Project description SETS - Airport Interchange to Causeway 1 HB19197
Progress Claim: No. 49
Period:

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Project Management	$144,872	$144,872		$144,872	100.00%	$144,872	
DSG Reporting and Stakeholder Management	$70,800	$70,800		$70,800	100.00%	$70,800	
Geotechnical Investigations	$129,025	$129,025		$129,025	100.00%	$129,025	
Concept Design	$24,592	$24,592		$24,592	100.00%	$24,592	
Environmental Investigations	$96,795	$96,795		$96,795	100.00%	$96,795	
Land Use Planning	$18,306	$18,305		$18,305	100.00%	$18,306	
Reports	$38,628	$38,628		$38,628	100.00%	$38,628	
Stakeholder Engagement	$99,126	$99,126		$99,126	100.00%	$99,126	
Constructability Reviews	$31,223	$10,928		$10,928	35.00%	$10,928	
Preliminary Design	$216,494	$216,494		$216,494	100.00%	$216,494	
Detailed Design	$349,066	$349,066		$349,066	100.00%	$349,066	
RFT	$9,528	$4,764		$4,764	0.00%	$9,528	
Post Tender P50/P90	$1,544	$0		$0	0.00%	$1,544	
Land Acquisitions	$43,929	$43,928		$43,927	100.00%	$43,929	
Survey	$57,225	$57,225		$57,225	100.00%	$57,225	
Road Safety Audits	$12,664	$12,664		$12,664	100.00%	$12,664	Draft inv PIP002668
Independent QS Estimate	$21,204	$0		$0	0.00%	$0	

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Variations (Change Orders)							
CO1: Concept Design of Golf Course Modifications	$21,500	$21,500		$21,500	100%	$21,500	
CO2: Presentation to Golf Club Members	$4,945	$4,945		$4,945	100%	$4,945	
CO2: Ongoing Advice	$8,600	$6,235		$6,235	73%	$8,600	
CO3: Golf course design	$94,600	$94,600		$94,600	100%	$94,600	
CO3: Civil Design of Dam	$39,600	$39,600		$39,600	100%	$39,600	
CO3: Environmental Assessment	$3,494	$3,494		$3,494	100%	$3,494	
CO3: Geotechnical investigation	$5,812	$5,812		$5,812	100%	$5,812	
CO3: Development Application	$7,712	$7,712		$7,712	100%	$7,712	
CO3: Specification and Tender Documents	$3,764	$0		$0	0%	$3,764	
CO3: Project Management	$11,612	$11,612		$11,612	100%	$11,612	
P.19.0406.005 - 3100B-6-37							
1.Environmental managment	$29,483	$29,483		$29,483	100%	$29,483	$107,199
2.Golf Club negotiation	$16,238	$16,238		$16,238	100%	$16,238	
3. Airport and Commomnwealth negotiation	$21,158	$21,158		$21,158	100%	$21,158	
4. DSG Project management	$33,040	$33,040		$33,040	100%	$33,040	
5. Amend PSCPW report	$7,280	$7,280		$7,280	100%	$7,280	
P.19.0406.006 - 3100B-6-42 EPBC Controlled Action Response	$46,430	$72,888		$72,888	157%	$72,888	
P.19.0406.006.001 - 3100B-6-42 ADJ 1 EPBC Controlled Action Response	$52,000	$39,139		$39,139	100%	$39,139	
P.19.0406.007 - 3100B-6-37 ADJ1 - Respond to CCC RFIs on DA	$41,400	$63,545		$63,545	100%	$63,545	
P.19.0406.007.001 - 3100B-6-37 ADJ - Additional DA costs	$10,000	$19,034		$19,034	100%	$19,034	
P.19.0406.007.002 - 3100B-6- 37-ADJ 03 Planning Appeal & Tribunal Hearing Costs	$49,520					$24,760	
P.19.0406.008 -3100B-6-37 ADJ2 - Additional Design Tasks	**$77,976**	**$64,791**		**$64,791**			
Shared path lights	$8,325	$8,325		$8,325	100%	$8,325	
Golf course dam	$16,610	$16,610		$16,610	100%	$16,610	
Golf course toilet at practice area	$7,485	$7,485		$7,485	100%	$7,485	
Milford access road	$24,171	$24,171		$24,171	100%	$24,171	
Milford compensatory planting area	$7,904	$3,900		$3,900	49%	$7,904	
Specialist advice contour golf (earthworks volumes)	$581			$0		$581	
Specialist advice contour golf (specification, timing , general advice)	$12,900	$4,300		$4,300	33%	$12,900	
P.19.0406.009 - 3100B-6-46 SETS Project Management	$62,896	$72,685		$72,685	100%	$72,685	
P.19.0406.010 - 3100B-6-46 ADJ 1 Golf Course Dam Approval fee	$1,036	$1,036	$ -	$1,036	100%	$1,036	
P.19.0406.011 - 3100B-6-46 ADJ 2 Bird Strike Risk Assessment	$14,518	$14,518		$14,518	100%	$14,518	
P.19.0406.012 Forest Practices Plan	$4,837	$4,837		$4,837	100%	$4,837	
p.19.0406.015 3100B-6-37 ADJ 05 Milford Compensatory Planting	$31,894	$31,894		$31,894	100%	$31,894	
DESIGN COMPLETION 3100B-6-37 ADJ 06	**$209,563**	**$88,385**		**$89,973**		$209,563	
P.19.0406.013 3100B-6-37 ADJ 06 SETS Project Management - May 2023	$41,125	$19,552	$ 1,587.67	$21,140	51%	$41,125	
P.19.0406.014 3100B-6-37 ADJ 06 EPBC Additional	$41,870	$68,833		$68,833	164%	$66,110	
P.19.0406.016 3100B-6-37 ADJ 06 Design Completion	$65,239			$0	0%	$65,239	
P.19.0406.017 3100B-6-37 ADJ 06 Construction phase services	$61,330			$0	0%	$61,330	
P.19.0406.018 3100B-6-37 ADJ 07 Hazardous Testing at Tasmania Golf Club	$16,679	$14,906		$14,906		$14,906	
P.19.0406.019 3100B-6-37 ADJ 08 Milford Stakeholder Engagement Support	$10,000	$8,124		$8,124		$10,000	
P.19.0406.020 3100B-6-37 - ADJ 09 - Ongoing EPBC Approval Costs	$89,722	$9,857	$ 318	$10,175		$89,722	
P.19.0406.021 3100B-6-37 - ADJ 09 - Options to Reduce Impact on Milford	$27,970	$33,396	$ 3,774	$37,170		$27,970	
P.19.0406.019							
TOTALS	**$2,420,301**	**$2,158,956**	**$5,679.25**	**$2,164,634**		**$2,431,075**	

Tasmania

SETS
Tasman Highway – Airport Interchange to Midway Point Causeway

pitt&sherry

Status Report for period ending: 19 January 2024

Job. No.2220-3-128

1 Project Health Chart

	If this box is selected please shade the tick box green.	If this box is selected please shade the tick box yellow.	If this box is selected please shade the tick box red.
Scope Definition	s39		
Delivery / Timing			
Input Information			
Project Changes & Cost			

2 Progress

Activities Completed Last Month
P&S/DSG reviewed request to DCCEEW for direction on requirements for EPBC in light of realignment – Revised Natural Values Assessment required, request sent to North Barker
Met with Clarence City Council to discuss requirements for amended highway and Golf Course Planning Permits
Extension of time received for Golf Course Planning Permit

Current & Future Activities Next Month
Prepare submission to DCCEEW on realignment including NVA
Prepare amendments to Planning Permits

2

3 Critical Risks, Opportunities & Issues

Risk / Issue	Action
s39	

s39

4 Outstanding Information

Information requirement	From Who	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

5 Awaiting Client Action

Decisions, Approvals and Escalation Items	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

Contract 2220-3-128.

Tasman Highway – Airport Interchange to Midway Point Causeway

Monthly Report to 19 January 2024

1. Project Details

Key dates including acceptance of proposal and dates for all deliverables stated in the project brief.

Item	Date At Project Agreement	Anticipated/Actual Date Achieved	Comment
Project Agreement	11 July 2019	11 July 2019	Complete
Feature Survey	27 November 2019	9 December	Complete
Concept Design incl Options Analysis	3 September 2019	22 November	Complete
Environmental Investigation	6 February 2020		DSG has forecast EPBC Approval date at January 2026 whilst remaining hopeful of an earlier resolution. Once Preliminary Documentation is acceptable to DCCEEW there is a minimum 4 month timeframe to Approval
Geotechnical investigation	1 December 2019	20 April 2020	Complete
PPR Submission	31 October 2019	6 December 2019	Complete
PPR Approval	31December 2019	January 2020	Complete
Preliminary Design	24 March 2020	21 May 2020	Complete
Detailed Design	2 July 2020	28 February 2021	Complete
RFT Documentation	2 July 2020		Amendments to documentation on hold pending final agreement with s36 on scope of works and approved EPBC

Stakeholder Engagement	Ongoing		
Submission of Development Application	18 March 2020	2 April 2021	Approved 01/03/2022 with commencement required within 2 years. Extension of time required for Highway Permit. Extension has been obtained for Golf Course Permit
PSCPW Report and Hearing (3-month notice required)	21 April 2020	30 April 2021	Project approved by PSCPW
EPBC Approval		Refer above – unlikely before early 2025	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Golf Course Agreement		June 2024	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Airport land acquisition		June 2024	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Call tenders	To be confirmed		To be confirmed (subject to approvals) -Early 2025 at best

2. Progress

Detailed design completed. Outstanding items to be resolved/completed before highway tenders can be called

i. EPBC resolution

ii. Licence for works to be carried out on the Golf course

iii. Commonwealth land - lease then agreement for purchase, noting ideally Tripartite Deed can be finalised and Lease becomes redundant

iv. Additional items including Milford access, drawing changes resulting from extension of underground power to Pittwater Road and other changes due to the passage of time between completion of final design and calling tenders

v. Realignment design

3. Risk Assessment, Opportunities and Issues

Key risk/issue are now

i. Acquisition of Commonwealth land – Lease and purchase to be progressed simultaneously – timeframe remains uncertain.

ii. EPBC referral time.

4. Stakeholder Engagement Issues

Golf club – discussions at project level on hold.

s36 – Currently at Senior Management level with the Department

Airport accept resumption of land west of Pittwater Road, subject to HIAPL Board approval and Commonwealth approval. Discussions ongoing with key airport personnel.

5. Service Authorities / Utilities

Taswater – 375 mm watermain to Sorell. Design completed for relocation of 400 metres of main ch 1370 – 1825 and associated road crossings. Design fully approved.

Telstra – multiple services including Fibre Optic cable in Tasman Highway corridor – preliminary design received

Tasnetworks – HV, LV, streetlighting. Tasnetworks design finalised

6. Financial

a. Project Costs

ITEM	COST EST P50	COST EST P90	COMMENT
Outturn Cost – indicative only	s38		

b. Design Fee Cash Flow

Month Year	Forecast Expenditure	Actual Expenditure	Forecast Cum	Actual Cum
Jul-19	25671	25671		25671
Aug-19	59778	38137		63808
Sep-19	93049	77255		155168
Oct-19	131879	64198		205261
Nov-19	68482	121523		326784
Dec-19	115568	117869		444654
Jan-20	76528	135514		580168

Feb-20	163905	68392		648560
Mar-20	152498	156361		804921
Apr-20	134674	94127		899049
May-20	129290	110428		1009478
Jun-20	133625	65451		1074929
Jul-20	78529	114874		1189803
Aug-20	1544	87267		1277069
Sep-20		85190		1362260
Oct-20		42839		1405100
Nov-20		26289		1431094
Dec-20		13620		1444714
Jan-21		31548		1476262
Feb-21		51989		1528251
Mar 21		31745		1559995
Apr 21		40637		1600632
May 21		28511		1629143
Jun 21		30351		1659494
Jul 21		40294		1699788
Aug 21	28000	58349		1758138
Sep 21	28000	21065		1780239
Oct 21	28000	18051		1798293
Nov 21	28000	33009		1831301
Dec 21	28000	5754		1837055
Jan 22		1918		1838975
Feb 22		14968		1853941
Mar 22		19083		1873025
Apr 2022		10489		1883514
May 2022		5269		1888783
June 2022		17026		1905809

July 2022		12607		1918056
August 2022		2144		1920200
September 2022		11885		1932085
October 2022	14187	20555		1953000
November 2022	51499	48586		2001586
December 2022	14187	5481		2007070
January 2023	23839	4177		2011246
February 2023	16104	9931		202177
March 2023	16104	7683		2028859
April 2023	41509	9438		2038297
May 2023	31437	21041		2059338
June 2023	3900	23401		2082738
July 2023	21098	21098	2101692	2101691
August 2023	10438	26298	2127989	2127989
September 2023	17224	6361	2174041	2134351
October 2023	17733	447	2191774	2134797
November 2023	18224	9323	2209997	2144120
December 2023	18224	14835	2228221	2158955
January 2024	13224	5679	2241445	2164634
February 2024	21477		2262922	
March 2024	21477		2284400	
April 2024	41307		2325706	
May 2024	36183		2361890	
June 2024	21746		2383636	
2024/25	36320		2419956	
2025/26	30000		2451286	

7. Additional Information (as required)

N/A

From: s36
To: s36
Subject: FW: Milford Orchid Offset Management Plan Review
Date: Thursday, 1 February 2024 2:28:26 PM
Attachments: image001.png

Hi s36

Email trail below outlining our discussions with s36 .

s36

Principal Engineer

Mobile s36 | s36 @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

out of scope

From: s36
To: s36
Subject: FW: Milford Plantings
Date: Monday, 26 February 2024 12:09:27 PM
Attachments: Out of scope

Hi s36

Refer below and attached. s36, s39

The plan was prepared last year following input from the Department. I have attached a copy. s36, s39 . Maybe check with s36 , the last amendment to the plan was done following his review. I have asked s36 from Wildseed to resend the invoice made out to State Growth.

Regards

s36
Principal Engineer

Mobile s36 | s36 @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

out of scope

From: s36
To: s36
Subject: Tasman Highway - Airport Interchange to Midway Point Causeway - February Invoice
Date: Monday, 26 February 2024 1:03:19 PM
Attachments: HB19197 February 2024 Report.docx
February 2024 Forecast .xlsx
3100B-6-37 - P.19.0406 - Draft Invoice PIP022193.pdf

Hi s36

Attached please find February invoice forecast and report for your approval. You will notice an amount of $7938 which is time spent by s36 working through the planning issues associated with the realignment. I need to send a change order for this and the additional cost to actually amend the Planning Permits and will get that to you this week. In the meantime I hope you will be able to pay this invoice, but let me know if not.

Regards

s36
Principal Engineer

Mobile s36 | s36 @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

Tasmania	**SETS** **Tasman Highway – Airport Interchange to Midway Point Causeway**	pitt&sherry
	Status Report for period ending: 16 Februaryy 2024	Job. No.2220-3-128

1 Project Health Chart

	If this box is selected please shade the tick box green.	If this box is selected please shade the tick box yellow.	If this box is selected please shade the tick box red.
Scope Definition	s39		
Delivery / Timing			
Input Information			
Project Changes & Cost			

2 Progress

Activities Completed Last Month
North Barker updating NVA as it relates to the realignment
Preliminary work on revising Das to reflect realignment

Current & Future Activities Next Month
Prepare submission to DCCEEW on realignment including NVA
Prepare amendments to Planning Permits

2

3 Critical Risks, Opportunities & Issues

Risk / Issue	Action
s39	

4 Outstanding Information

Information requirement	From Who	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

5 Awaiting Client Action

Decisions, Approvals and Escalation Items	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

Contract 2220-3-128.

Tasman Highway – Airport Interchange to Midway Point Causeway

Monthly Report to 16 February 2024

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2. Progress

Detailed design completed. Outstanding items to be resolved/completed before highway tenders can be called

i. EPBC resolution

ii. Licence for works to be carried out on the Golf course

iii. Commonwealth land - lease then agreement for purchase, noting ideally Tripartite Deed can be finalised and Lease becomes redundant

iv. Additional items including Milford access, drawing changes resulting from extension of underground power to Pittwater Road and other changes due to the passage of time between completion of final design and calling tenders

v. Realignment design

3. Risk Assessment, Opportunities and Issues

Key risk/issue are now

i. Acquisition of Commonwealth land – Lease and purchase to be progressed simultaneously – timeframe remains uncertain.

ii. EPBC referral time.

4. Stakeholder Engagement Issues

Golf club – discussions at project level on hold.

s36 – Currently at Senior Management level with the Department

Airport accept resumption of land west of Pittwater Road, subject to HIAPL Board approval and Commonwealth approval. Discussions ongoing with key airport personnel.

5. Service Authorities / Utilities

Taswater – 375 mm watermain to Sorell. Design completed for relocation of 400 metres of main ch 1370 – 1825 and associated road crossings. Design fully approved.

Telstra – multiple services including Fibre Optic cable in Tasman Highway corridor – preliminary design received

Tasnetworks – HV, LV, streetlighting. Tasnetworks design finalised

6. Financial

a. Project Costs

ITEM	COST EST P50	COST EST P90	COMMENT
Outturn Cost – indicative only	s38		

b. Design Fee Cash Flow

Month Year	Forecast Expenditure	Actual Expenditure	Forecast Cum	Actual Cum
Jul-19	25671	25671		25671
Aug-19	59778	38137		63808
Sep-19	93049	77255		155168
Oct-19	131879	64198		205261
Nov-19	68482	121523		326784
Dec-19	115568	117869		444654
Jan-20	76528	135514		580168

Feb-20	163905	68392		648560
Mar-20	152498	156361		804921
Apr-20	134674	94127		899049
May-20	129290	110428		1009478
Jun-20	133625	65451		1074929
Jul-20	78529	114874		1189803
Aug-20	1544	87267		1277069
Sep-20		85190		1362260
Oct-20		42839		1405100
Nov-20		26289		1431094
Dec-20		13620		1444714
Jan-21		31548		1476262
Feb-21		51989		1528251
Mar 21		31745		1559995
Apr 21		40637		1600632
May 21		28511		1629143
Jun 21		30351		1659494
Jul 21		40294		1699788
Aug 21	28000	58349		1758138
Sep 21	28000	21065		1780239
Oct 21	28000	18051		1798293
Nov 21	28000	33009		1831301
Dec 21	28000	5754		1837055
Jan 22		1918		1838975
Feb 22		14968		1853941
Mar 22		19083		1873025
Apr 2022		10489		1883514
May 2022		5269		1888783
June 2022		17026		1905809

July 2022		12607		1918056
August 2022		2144		1920200
September 2022		11885		1932085
October 2022	14187	20555		1953000
November 2022	51499	48586		2001586
December 2022	14187	5481		2007070
January 2023	23839	4177		2011246
February 2023	16104	9931		202177
March 2023	16104	7683		2028859
April 2023	41509	9438		2038297
May 2023	31437	21041		2059338
June 2023	3900	23401		2082738
July 2023	21098	21098	2101692	2101691
August 2023	10438	26298	2127989	2127989
September 2023	17224	6361	2174041	2134351
October 2023	17733	447	2191774	2134797
November 2023	18224	9323	2209997	2144120
December 2023	18224	14835	2228221	2158955
January 2024	13224	5679	2241445	2164636
February 2024	21477	2164636	2262922	2174204
March 2024	21477		2284400	
April 2024	41307		2325706	
May 2024	36183		2361890	
June 2024	21746		2383636	
2024/25	36320		2419956	
2025/26	30000		2451286	

7. Additional Information (as required)

N/A

Department of State Growth Invoice Report

Department Project No: 2220-3-128
Project description SETS - Airport Interchange to Causeway 1 HB19197
Progress Claim: No. 50
Period:

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Project Management	$144,872	$144,872		$144,872	100.00%	$144,872	
DSG Reporting and Stakeholder Management	$70,800	$70,800		$70,800	100.00%	$70,800	
Geotechnical Investigations	$129,025	$129,025		$129,025	100.00%	$129,025	
Concept Design	$24,592	$24,592		$24,592	100.00%	$24,592	
Environmental Investigations	$96,795	$96,795		$96,795	100.00%	$96,795	
Land Use Planning	$18,306	$18,305		$18,305	100.00%	$18,306	
Reports	$38,628	$38,628		$38,628	100.00%	$38,628	
Stakeholder Engagement	$99,126	$99,126		$99,126	100.00%	$99,126	
Constructability Reviews	$31,223	$10,928		$10,928	35.00%	$10,928	
Preliminary Design	$216,494	$216,494		$216,494	100.00%	$216,494	
Detailed Design	$349,066	$349,066		$349,066	100.00%	$349,066	
RFT	$9,528	$4,764		$4,764	0.00%	$9,528	
Post Tender P50/P90	$1,544	$0		$0	0.00%	$1,544	
Land Acquisitions	$43,929	$43,928		$43,927	100.00%	$43,929	
Survey	$57,225	$57,225		$57,225	100.00%	$57,225	
Road Safety Audits	$12,664	$12,664		$12,664	100.00%	$12,664	Draft inv PIP002668
Independent QS Estimate	$21,204	$0		$0	0.00%	$0	

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Variations (Change Orders)							
CO1: Concept Design of Golf Course Modifications	$21,500	$21,500		$21,500	100%	$21,500	
CO2: Presentation to Golf Club Members	$4,945	$4,945		$4,945	100%	$4,945	
CO2: Ongoing Advice	$8,600	$6,235		$6,235	73%	$8,600	
CO3: Golf course design	$94,600	$94,600		$94,600	100%	$94,600	
CO3: Civil Design of Dam	$39,600	$39,600		$39,600	100%	$39,600	
CO3: Environmental Assessment	$3,494	$3,494		$3,494	100%	$3,494	
CO3: Geotechnical investigation	$5,812	$5,812		$5,812	100%	$5,812	
CO3: Development Application	$7,712	$7,712		$7,712	100%	$7,712	
CO3: Specification and Tender Documents	$3,764	$0		$0	0%	$3,764	
CO3: Project Management	$11,612	$11,612		$11,612	100%	$11,612	
P.19.0406.005 - 3100B-6-37							
1.Environmental managment	$29,483	$29,483		$29,483	100%	$29,483	$107,199
2.Golf Club negotiation	$16,238	$16,238		$16,238	100%	$16,238	
3. Airport and Commomnwealth negotiation	$21,158	$21,158		$21,158	100%	$21,158	
4. DSG Project management	$33,040	$33,040		$33,040	100%	$33,040	
5. Amend PSCPW report	$7,280	$7,280		$7,280	100%	$7,280	
P.19.0406.006 - 3100B-6-42 EPBC Controlled Action Response	$46,430	$72,888		$72,888	157%	$72,888	
P.19.0406.006.001 - 3100B-6-42 ADJ 1 EPBC Controlled Action Response	$52,000	$39,139		$39,139	100%	$39,139	
P.19.0406.007 - 3100B-6-37 ADJ1 - Respond to CCC RFIs on DA	$41,400	$63,545		$63,545	100%	$63,545	
P.19.0406.007.001 - 3100B-6-37 ADJ - Additional DA costs	$10,000	$19,034		$19,034	100%	$19,034	
P.19.0406.007.002 - 3100B-6- 37-ADJ 03 Planning Appeal & Tribunal Hearing Costs	$49,520					$24,760	
P.19.0406.008 -3100B-6-37 ADJ2 - Additional Design Tasks	**$77,976**	**$64,791**		**$64,791**			
Shared path lights	$8,325	$8,325		$8,325	100%	$8,325	
Golf course dam	$16,610	$16,610		$16,610	100%	$16,610	
Golf course toilet at practice area	$7,485	$7,485		$7,485	100%	$7,485	
Milford access road	$24,171	$24,171		$24,171	100%	$24,171	
Milford compensatory planting area	$7,904	$3,900		$3,900	49%	$7,904	
Specialist advice contour golf (earthworks volumes)	$581			$0		$581	
Specialist advice contour golf (specification, timing , general advice)	$12,900	$4,300		$4,300	33%	$12,900	
P.19.0406.009 - 3100B-6-46 SETS Project Management	$62,896	$72,685		$72,685	100%	$72,685	
P.19.0406.010 - 3100B-6-46 ADJ 1 Golf Course Dam Approval fee	$1,036	$1,036	$ -	$1,036	100%	$1,036	
P.19.0406.011 - 3100B-6-46 ADJ 2 Bird Strike Risk Assessment	$14,518	$14,518		$14,518	100%	$14,518	
P.19.0406.012 Forest Practices Plan	$4,837	$4,837		$4,837	100%	$4,837	
p.19.0406.015 3100B-6-37 ADJ 05 Milford Compensatory Planting	$31,894	$31,894		$31,894	100%	$31,894	
DESIGN COMPLETION 3100B-6-37 ADJ 06	**$209,563**	**$89,973**		**$98,828**		$209,563	
P.19.0406.013 3100B-6-37 ADJ 06 SETS Project Management - May 2023	$41,125	$21,140	$ 8,855	$29,995	73%	$41,125	
P.19.0406.014 3100B-6-37 ADJ 06 EPBC Additional	$41,870	$68,833		$68,833	164%	$66,110	
P.19.0406.016 3100B-6-37 ADJ 06 Design Completion	$65,239			$0	0%	$65,239	
P.19.0406.017 3100B-6-37 ADJ 06 Construction phase services	$61,330			$0	0%	$61,330	
P.19.0406.018 3100B-6-37 ADJ 07 Hazardous Testing at Tasmania Golf Club	$16,679	$14,906		$14,906		$14,906	
P.19.0406.019 3100B-6-37 ADJ 08 Milford Stakeholder Engagement Support	$10,000	$8,124		$8,124		$10,000	
P.19.0406.020 3100B-6-37 - ADJ 09 - Ongoing EPBC Approval Costs	$89,722	$10,175	$ 714	$10,889		$89,722	
P.19.0406.021 3100B-6-37 - ADJ 09 - Options to Reduce Impact on Milford	$27,970	$37,170		$37,170		$27,970	
P.19.0406.019							
TOTALS	**$2,420,301**	**$2,164,636**	**$9,568.98**	**$2,174,204**		**$2,431,075**	

pitt&sherry

Pro forma Tax Invoice

Pitt & Sherry (Operations) Pty Ltd
Level 4, 113 Cimitiere Street
LAUNCESTON TAS 7250
AUS
Tel: 1300 748 874
Em: info@pittsh.com.au
ABN: 67140184309

Bill To:

Department of State Growth
4 Salamanca Place
HOBART TAS 7000
AUS
Tel:
Em:
ABN: 36388980563

Invoice number:	**PIP022193**
Invoice date:	20/02/2024
Payment terms:	14DAYS
Due date:	05/03/2024
Currency:	AUD
Customer reference:	3100B-6-37
Customer account:	C08439

SUMMARY OF CHARGES PAYABLE ON THIS INVOICE		NET AMOUNT
Professional services for the period to 16/02/2024		
P.19.0406 - HB19197 - SETS - Airport Interchange to Causeway 1	**Time and material**	**7,938.26**
P.19.0406.013 - SETS Project Management to 31 March 2023	**Time and material**	**916.28**
P.19.0406.020 - ADJ9 - Ongoing EPBC Approval Costs	**Time and material**	**714.44**

Details on next page

PAYABLE ON THIS INVOICE

Currency	Net amount	GST amount	Total
AUD	9,568.98	956.90	**10,525.88**

Due date : 05/03/2024

Out of scope

Interest will be charged on overdue accounts

pitt&sherry

Details + T/S

Description	Resource	Quantity	Unit price	Net amount
P.19.0406 - HB19197 - SETS - Airport Interchange to Causeway 1				
Hours / Time & Materials				
Other activities				
25/01/2024 Transfer time to new subproject: Minor Amendments to 2 Planning Permits	s36	s38		
31/01/2024 Time to be transferred to new project - recorded Golf Course EoT and sent to DC, planning report for minor amendment				
01/02/2024 Time to be transferred to new project - planning report and internal discussions				
05/02/2024 Time to be transferred to new project - reviewed council's email & prepared planning report				
06/02/2024 Time to be transferred to new project - prepared planning report				
07/02/2024 Time to be transferred to new project - prepared planning report				
08/02/2024 Report				
09/02/2024 Planning report				
12/02/2024 Minor amendment report				
14/02/2024 Planning report				
Subtotal				

	Previous claims	New charges
Charges for P.19.0406	-	7,938.26

P.19.0406.013 - SETS Project Management to 31 March 2023				
Hours / Time & Materials				
SETS Project Management				
22/01/2024 Project Admin	s36	s38		
31/01/2024 Clarify revised planning permit requirements				
05/02/2024 Project management				
06/02/2024 Project management				
Subtotal				

	Previous claims	New charges
Charges for P.19.0406.013	21,140.22	916.28

P.19.0406.020 - ADJ9 - Ongoing EPBC Approval Costs				
Hours / Time & Materials				
Ongoing EPBC Approval Costs				
01/02/2024 Pm & general issue	s36	s38		
08/02/2024 Meeting & follow up	s36			
Subtotal				

	Previous claims	New charges
Charges for P.19.0406.020	10,174.42	714.44

From: s36
To: s36
Subject: RE: Tasman Highway - Airport Interchange to Midway Point Causeway - February Invoice
Date: Monday, 26 February 2024 7:58:09 PM
Attachments: Out of scope

Hi s36

The Planning Report is Work in Progress. I have attached a copy of what we sent to Council and their reply. We're working on the revised Drawings to satisfy Council for the amendment to the Planning Permit. I've sent a request to s36 to amend the Golf Course Drawings. Hopefully this will be ready in a couple of weeks.
Andrew North is working on the addendum to the NVA/Significant Impact assessment. I'm expecting that this week. Change order will be with you this week.

Regards

s36
s36
Mobile s36 | s36 @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: s36 @stategrowth.tas.gov.au>
Sent: Monday, February 26, 2024 4:42 PM
To: s36 @pittsh.com.au>
Subject: RE: Tasman Highway - Airport Interchange to Midway Point Causeway - February Invoice

Thanks s36, could you please send me the planning report s36 prepared, I saw a map P & S had made but I don't have a copy. I can progress this invoice as we have sufficient funds allocate but please can you submit the change request ASAP.

How are the plans progressing for the DA/TASCAT amendment and the Milford EPBC resubmission for the significant impact assessment, do you have some timeframes for when these could be ready?

Regards, s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36
To: s36
Subject: RE: Milford Plantings
Date: Monday, 26 February 2024 8:09:19 PM
Attachments: Out of scope
RE Compensationary Planting Area.msg

Hi s36

The quote is attached. The second attachment contains some further background and instructions from s36 .

Regards

s36
Principal Engineer

Mobile s36 | s36 @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: s36 @stategrowth.tas.gov.au>
Sent: Monday, February 26, 2024 4:21 PM
To: s36 @pittsh.com.au>
Subject: RE: Milford Plantings

Hi s36

I understand Denise supplied the maintenance plan in early December to s36 . What was the arrangement with wildseed, if it discussed in May it would be from when I was away and s36 was in charge. Can you please resupply the quote and some background. Is the maintenance work as per the plan you prepared?.

Good to hear that he has had access to the property and that the trees are still alive.

Cheers, s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
www.stategrowth.tas.gov.au

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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: s36
To: s36
Subject: RE: Compensationary Planting Area
Date: Tuesday, 2 May 2023 2:36:22 PM

HI s36
Recently you mentioned you were getting a firm quote for these works, can you please send through the quote once known.
Thanks,

s36
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
PH: s36 | MB: s36
www.stategrowth.tas.gov.au

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE
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.

Please note I do not work Fridays.

From: s36 @pittsh.com.au>
Sent: Friday, 3 March 2023 4:17 PM
To: s36 @stategrowth.tas.gov.au>
Subject: RE: Compensationary Planting Area
Hi s36
s36 has advised the following
There have been substantial losses of understory vegetation due to frosts followed by the plants then being under water. Most of the Eucalyptus viminalis have survived.
s36 will provide a cost in the near future for replacement planting. He expects of the order of $20k. Please confirm your approval to conduct this work at your earliest convenience and confirm that Wildseed are on your list of suppliers and payment can be made to Wildseed in a timely fashion following completion of that remedial work.
The Eucalyptus viminalsi that has been planted came from seed collected from a single tree opposite the airport runway. This thought in some quarters to be sub species pryoriana, however s36 an others think it is Eucalyptus Viminalis sub species viminalis. Is this what s36 wants to check via genetic testing?
I have a contact for the genetic testing and will follow up what is required for the testing, likely costs and timeframe. This will require further approval from s36 to enter Milford and collect plant material from the new trees.
s36 will update the maintenance /managment plan to a 10 year one.
Regards

s36
Principal Engineer
Mobile s36 | s36 @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: s36 @stategrowth.tas.gov.au>
Sent: Tuesday, 28 February 2023 9:01 AM
To: s36 @pittsh.com.aualyptus
Subject: Compensationary Planting Area

Out of Character | Suspicious Attachment

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s36

Can you let me know when the planting area will be sprayed for weeds and then cut? I've attached photos I took on 23 Jan.

Can you please send through the 10 year management plan for the area.

s36 has asked about genetic testing trees to minimise future cost of management. What would be involved if we were to do this? I believe her concern was around the trees no being the species/sub-species we were trying to save.

Thanks,

s36
Programming and Delivery | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
PH: s36 | MB: s36
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.

Please note I do not work Fridays.

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From: s36
To: s36
Subject: Fwd: Milford Plantings
Date: Tuesday, 27 February 2024 10:33:37 AM
Attachments: Out of scope

Hi s36
Invoices from Wildseed, made out to DSG
Regards
s36
Sent from my iPhone

Begin forwarded message:

Out of scope

From: s36
To: s36
Cc: Andrew North s36 @northbarker.com.au)
Subject: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Monday, 4 March 2024 1:26:08 PM
Attachments: image001.png
HB19197-P10-Image.pdf
2020-8805_Tasman Hwy_Orchid Habitat Impact Assessment_20240301.pdf
Pittwater Road Drainage Improvements.pdf
Section_176_-_Environmental_Management.pdf

Hi s36 and s36

Refer below the revised draft submission to DCCEEW including the revised Orchid Habitat Significant Impact Assessment. Please advise if this should be presented in a report format.

s39

[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

s39

[redacted]

[redacted]

[redacted]

[redacted]

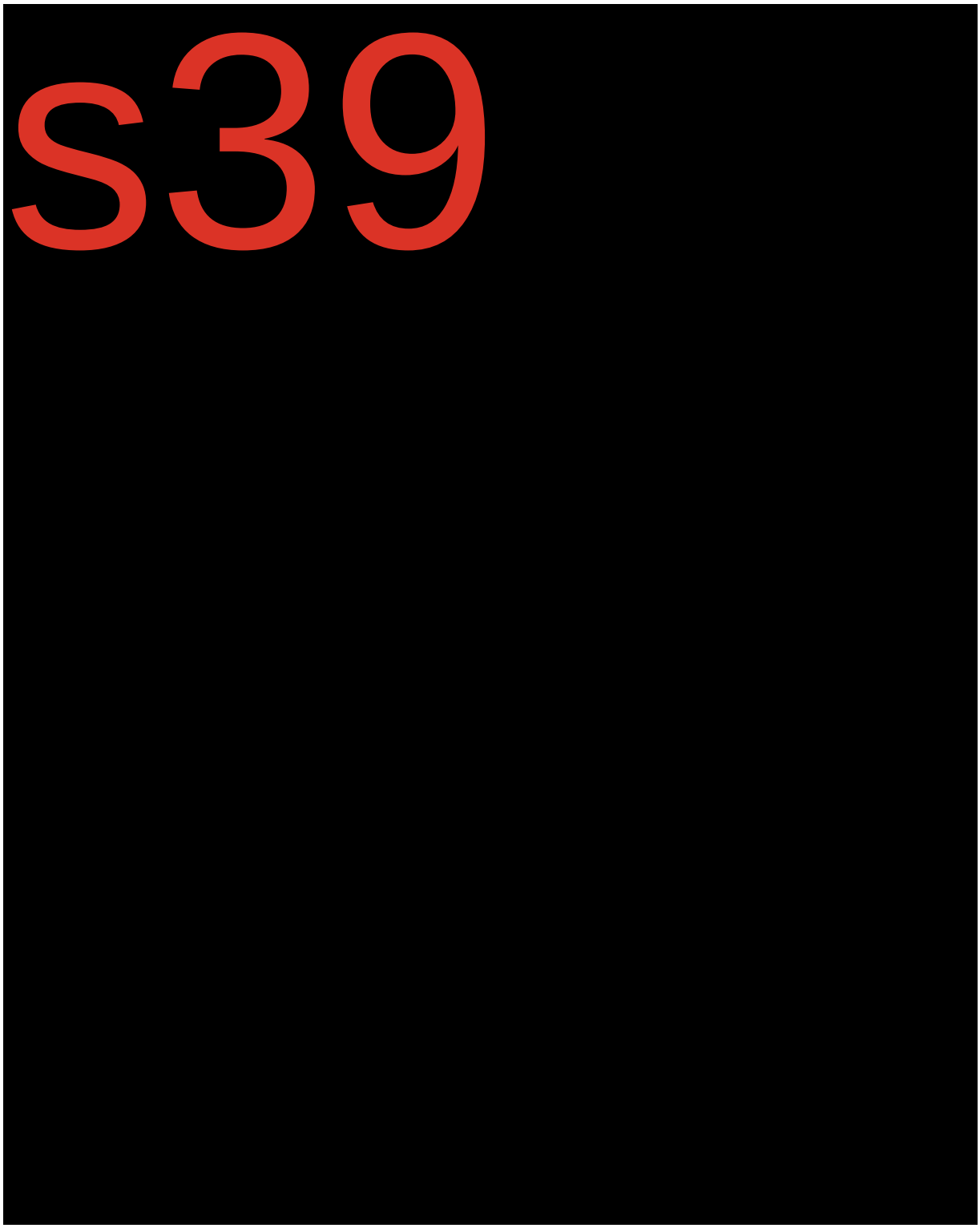
[redacted]

[redacted]

s39

s39

[redacted]



s39

s39

s39 [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Regards

s36 [redacted]

Principal Engineer

Mobile s36 [redacted] | s36 [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

---

[1] Exclusion fencing will utilise temporary high visibility barrier fence (safety bunting is not sufficient); includes signage every 50m stating "*Threatened Flora Exclusion Zone*" or similar; be checked and confirmed as correct by the Project Ecologist; and be referred to in all site inductions.

[2] Rain event is defined in Integrated Water Management Guidelines VicRoads 2013.

From: s36
To: s36
Subject: CM: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Monday, 18 March 2024 4:13:00 PM
Attachments: Layout map amendments.png
Section_176_-_Environmental_Management.pdf
image001.png
Tasman Highway to Midway Point Causeway EPBC altered referral location_16062022.pdf
2020-8805_Tasman Hwy_Orchid Habitat Impact Assessment_20240301 - KG comments.pdf

---

Hi s36 ,

Thank you for the information and associated documentation in relation to the redesign and EPBC issues. s36 and I have reviewed everything and have the following comments for your consideration. s39

There are some issues that do not seem to be covered that need to be addressed including:

- s39
-
-
-

In regard to the information submitted, please note the following aspects that need to be amended:

- s39
-
  -
-
-
- Management Actions –
  - s39
  -
  -

s39 [redacted]

Thanks, s36

s36 [redacted]
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 [redacted] @stategrowth.tas.gov.au / MB: s36 [redacted]
www.stategrowth.tas.gov.au

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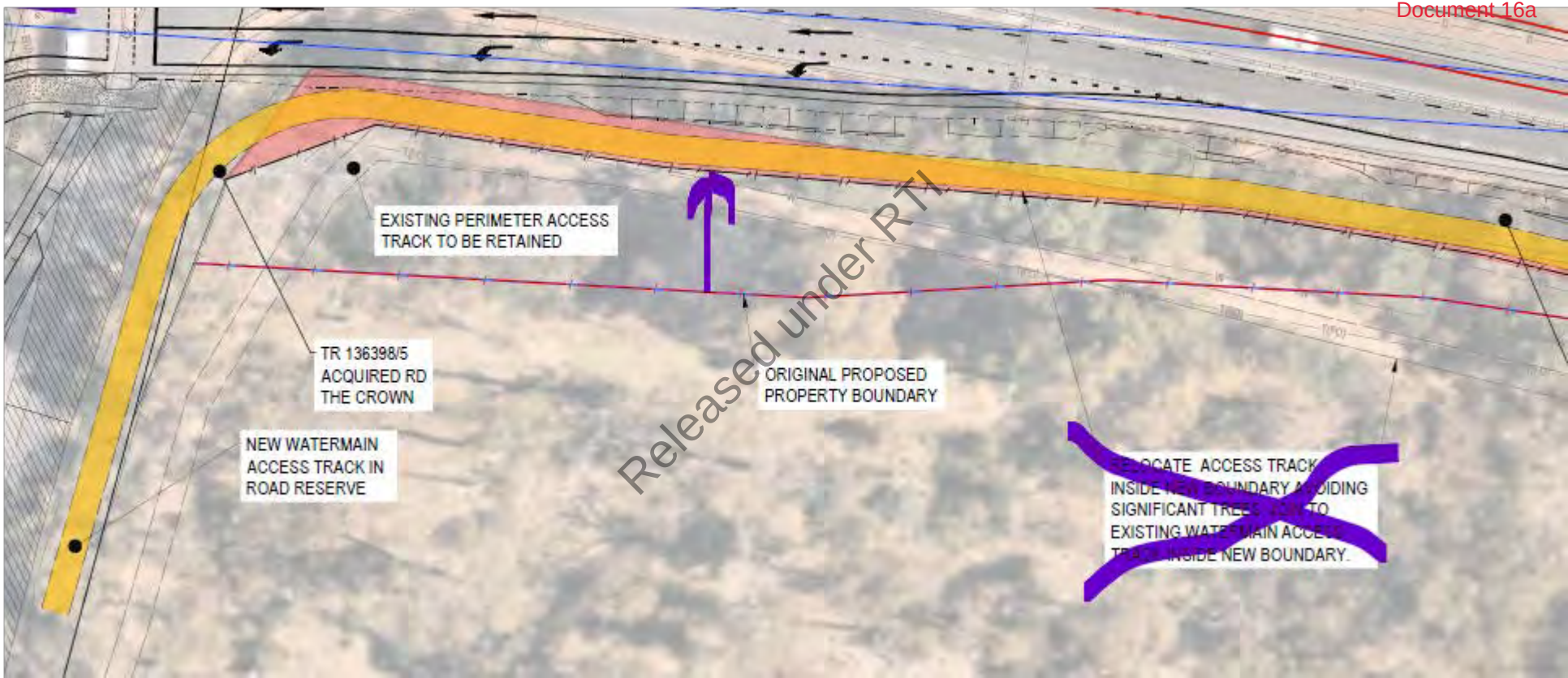
TEAMWORK | INTEGRITY | EXCELLENCE | RESPECT
In recognition of the deep history and culture of this island, I acknowledge and pay my respects to all Tasmanian Aboriginal people; the past, and present custodians of the Land.



No.	Amendment Description	Initials	Date

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

SCALES
1:5000m (A3)
50 0 50 100 150 200
SCALE IN METRES - 1:5000

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

DESIGNED T.T.
REVIEWED R.M.

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

VARIED EPBC FOOTPRINT

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-P102	16-Jun-22, 4:07 PM	P104

REGISTRATION NUMBER
A0113.028

REVISION -

From: s36
To: s36
Cc: s36
Subject: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Monday, 25 March 2024 9:08:00 AM
Attachments: Duplicate

Hi s36

Please see below and attached.

To add to the notes can we please add additional requirements to the standard 176 specification to demonstrate to the regulator and the landowner how important we see this issue. This should include:

- Specific requirements for the run-off and sedimentation control measures that must be implemented some of which we may consider implementing ahead of the contractor commencing works.
- Superintendent or Principal's Representative (preferably an independent specialist) inspection and reporting regime for the run-off and sedimentation control measures including at least twice weekly inspections and inspection prior to and post significant rain events.
- Contractual provisions for imposition of significant penalties on non-compliance with the environmental requirements.

s39

Thanks, s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
www.stategrowth.tas.gov.au

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Duplicate

Document 18

From: s36
To: s36
Cc: s36
Subject: Milford Conservation plans - Example
Date: Monday, 25 March 2024 12:12:00 PM
Attachments: HobartAirportInterchange_VegetationManagementPlan_NBES_20200611.pdf

Hi s36 ,

Please find attached two documents:

- A Vegetation Management Plan prepared by North Barker for Hazell Bros at the Hobart Airport
- A Conservation Area Management plan prepared by North Barker for the Department

We may need to confirm what we call the plan as Roadside Conservation Site implies we are impacting species which in this case is not the case as we are managing a buffer area to protect the species.

Thanks

s36
State Roads | Department of State Growth
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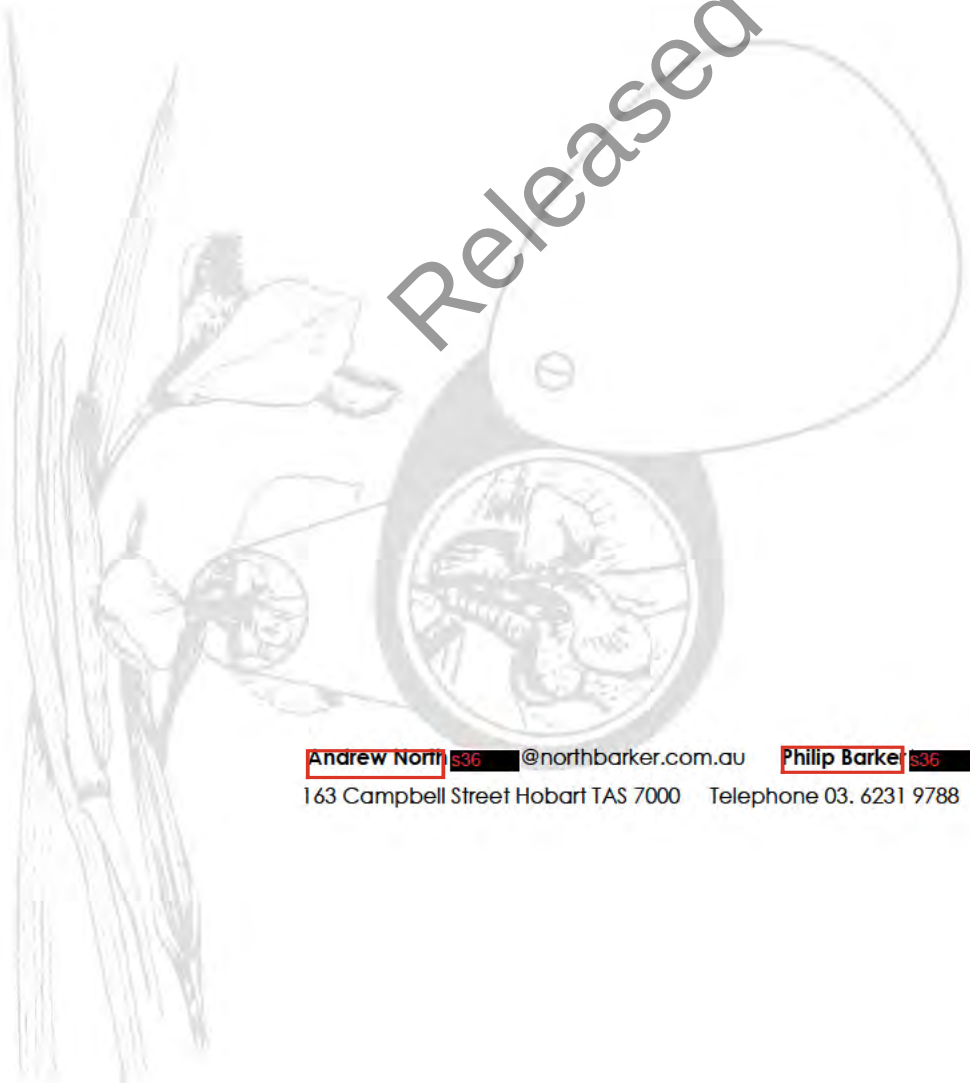
Tasman Highway
Hobart Airport Interchange

Vegetation Management Plan

11 June 2020
For Hazell Bros
HAZ008



Andrew North s36 @northbarker.com.au Philip Barker s36 @northbarker.com.au
163 Campbell Street Hobart TAS 7000 Telephone 03. 6231 9788 Facsimile 03. 6231 9877

1. Introduction

The Hobart Airport Interchange project occurs in the vicinity of a nationally listed threatened ecological community – *lowland temperate grasslands of Tasmania*, which is listed as critically endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. In addition, there are populations of several threatened flora listed as rare under the Tasmanian *Threatened Species Protection Act 1995.*

This Vegetation Management Plan (VMP) has been prepared specifically to address Condition 2 of the Planning permit D-2018/97 issued by Clarence City Council (17 December 2018):

> 2. Prior to the commencement of any works associated with this permit, a Vegetation Management Plan (VMP) for the development area must be prepared to the satisfaction of Council's Manger City Planning and implemented to ensure retained values are protected and appropriately managed during construction. Specifically, the VMP will identify the locations of threatened values that are not permitted to be impacted and are required to be marked as exclusion zones. The VMP will delineate areas for the storing and movement of materials and machinery that will not further impact threatened values.

This document should be read in conjunction with the:

- Environmental Management Plan Contract 2960; Feb 19, 2020 Hazell Bros

2. Background

The Department of State Growth intend to construct an interchange to service Hobart Airport on the Tasman Highway. A natural values assessment was undertaken for the site [1] that accurately mapped out the locations of threatened flora and vegetation communities.

Assessment of the Natural Assets Code of the Clarence Interim Planning Scheme 2015 was undertaken[2]. This demonstrated how the impact to priority biodiversity values could be minimised and how the project could comply with the Code.

A Permit to Take (DA 19063) under the Tasmanian *Threatened Species Protection Act 1995*, issued by DPIPWE authorises the removal of threatened flora from the development footprint including land within the new road construction layout and sufficient buffer to accommodate operational impacts during the construction phase. That permit includes a condition to establish two offset areas to be secured under a Crown Land Order. The offset areas are also identified as 'exclusion zones' for the duration of works. The requirements of the Permit to Take align with the intent of the Vegetation Management Plan required for Condition 2 of the Planning Permit.

3. Scope of Management Plan

The plan relates to the period from preconstruction through to postconstruction. There is considerable overlap with the Environmental Management Plan which addresses vegetation management, specifically weeds, flora and fauna. A separate Weed Management Plan [3] addressing Condition 10 of the Planning Permit has also been prepared.

[1] Holyman Avenue; Natural Values Assessment; For the Department of State Growth ; North Barker Ecosystem Services 11 Sept 2017

[2] Holyman Avenue – Hobart Airport Interchange, Compliance Statement – Local Planning Scheme. North Barker Ecosystem Services 31 July 2017

[3] North Barker Ecosystem Services 2020

This document provides procedures to ensure inadvertent impacts to priority vegetation are avoided and that identified areas of priority vegetation outside the impact area will be protected through the course of the project.

4. Management Activities

A. Prior to construction

There are two Exclusion Zones, each of which will be protected under Crown Land Orders as *offset areas* in accordance with the Planning Permit Condition 3 and the Permit to Take DA19063. These are delineated in Figure 1.

- The Exclusion Zones will be identified prior to any works being undertaken on site.
    - This requires the land to be surveyed and pegged by a Land Surveyor to accurately locate corner points on the Construction Area Boundary (CAB).
    - These boundaries will initially be temporarily defined with high visibility fencing such as Orange Safety Mesh.
    - The location of the mesh will be checked and confirmed by a third party.
    - Council will be informed of the correct placement of the fencing prior to granting approval to commence site clearance works.
    - The fence will include signs every 50 m saying "*Threatened Flora Exclusion Zone"* or similar.
    - Reference to the Exclusion Zone will be included in all site inductions.

B. During Construction

- No access within the Exclusion Zone is permitted other than for the construction of the *bandicoot habitat shelters*. Any access in the Exclusion Zone requires attendance by an Ecologist to ensure that no impacts to priority vegetation take place. The Ecologist will mark the sites for the bandicoot shelters and define route for access for Kennedy Drive and Holyman Drive.
- Fence monitoring
    - The exclusion fencing will be checked daily by the Contractor, as outlined in Section 11 *Environmental Inspections and Auditing* in the Environmental Management Plan.
    - A third party will inspect the fencing weekly during the site clearance works and report to Hazell Bros and Council.
    - On completion of site clearance works the fencing will be inspected every 3 months until which time permanent fencing is constructed.
    - Before the completion of the Construction Period permanent agricultural fencing will be constructed with 2 gates to a standard agreed with the landowner (Department of State Growth).
- Storing and construction haul road
    - The approximate location of construction haul road, stockpile areas for mulch, topsoil and pavement material are identified in Figure 2. No material or

disturbance will occur to the temporary fencing. No material, including sediment, will be permitted to spill beyond the fence into the Exclusion Zones.

- Any breach will be reported. An Ecologist will be brought on site to advise on best practise for removal of material before the Contractor enters the Exclusion Zone.
- The Ecologist will report to Council and to Department of State Growth of any incident.
- No weeds are permitted to establish on the stockpile material where they might provide a source of infestation into the Exclusion Zones. This will be achieved by treating stockpiles and disturbed ground adjoining the Exclusion Zones. Due to the proximity of threatened flora and the risk form spray drift this work sib to be undertaken by an appropriately qualified bushland management contractor.
- An Ecologist is to inspect the site every 3 months and advise of any additional weed treatment requirements. The inspection will include the Exclusion Zone to ensure no impacts from weeds spreading, rubbish blowing on site etc

C. Post Construction

- The Contractor will make good the disturbed ground adjacent to the Exclusion Zones. All stockpiled material is to be removed and topsoil spread across the area. This is to be seeded. It is strongly advised that species selection takes into account advice from the Dept State Growth. Planting of some kind of shrubby screening may be appropriate

5. Auditing and reporting

- The Contractor will contact the Ecologist on completion of the Exclusion Fencing.
- The Ecologist will inspect the Exclusion Fencing and report to the Council once it is correctly in place.
- The Ecologist will inspect the works and impacts to the Exclusion Fencing and Zone every 2 weeks during the period of vegetation site clearance. The Ecologist will report any breaches to Council.
- On completion of site clearance works it is expected the risk of impact to the Exclusion Zone is diminished. The Contractor will advise the Ecologist who will report to Council of the outcome of inspections and the impact, if any, of the clearing.
- The Ecologist will undertake 3 monthly inspections to assess the temporary exclusion fence and the stockpile material in the vicinity of the Exclusion Zone. This will also include a reconnaissance of the Exclusion Zone to ensure no adverse impacts. The Ecologist will advise the Contractor of any minor incidents eg rubbish blowing in or topsoil spilling in. Breaches considered to impact on threatened flora will be reported to Council.
- At the conclusion of the Construction Phase the Ecologist will prepare a brief report confirming the placement of permanent fencing and any impacts to the Exclusion Zone have been made good.

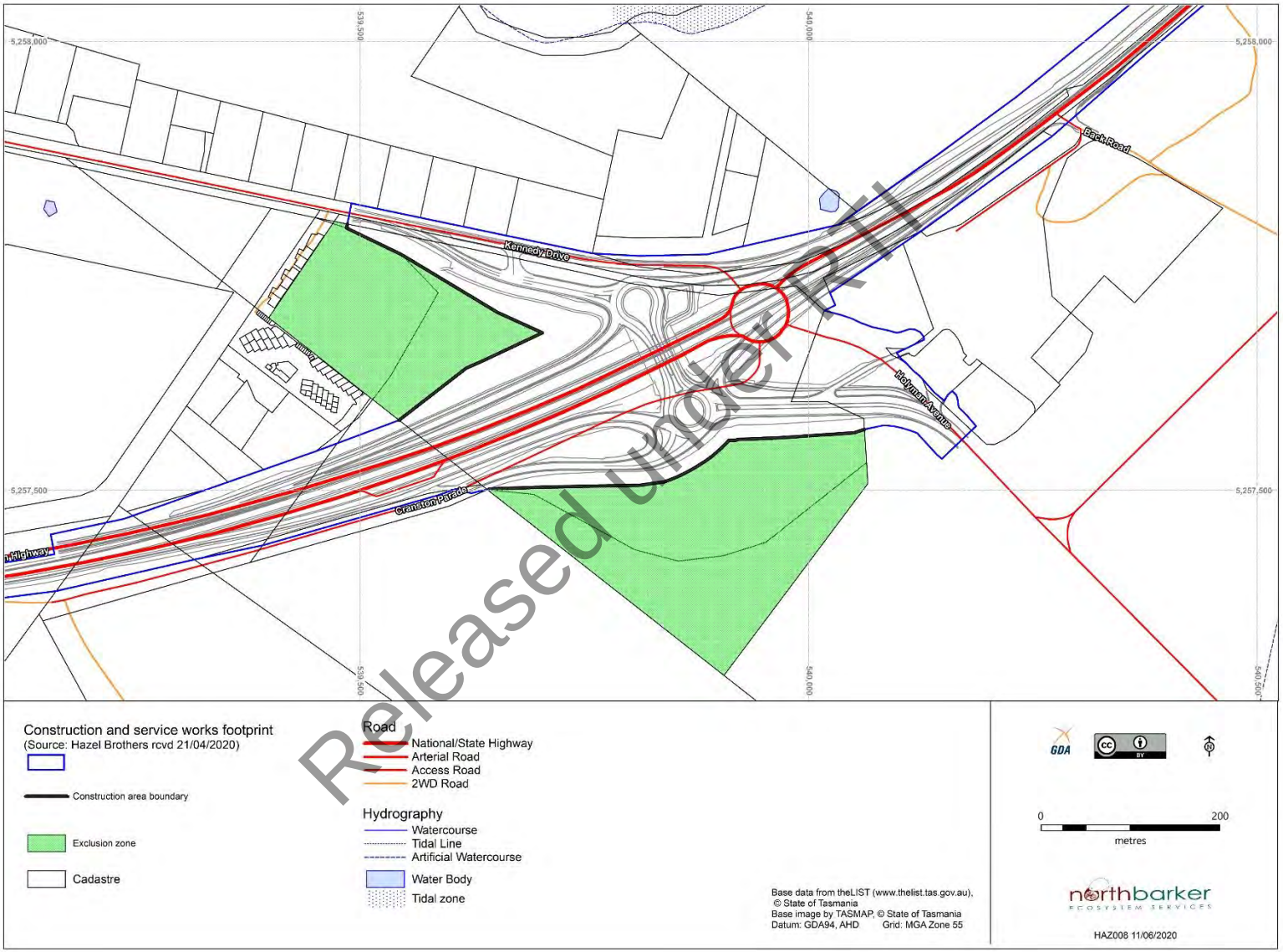


Figure 1: Exclusion Zones

s42

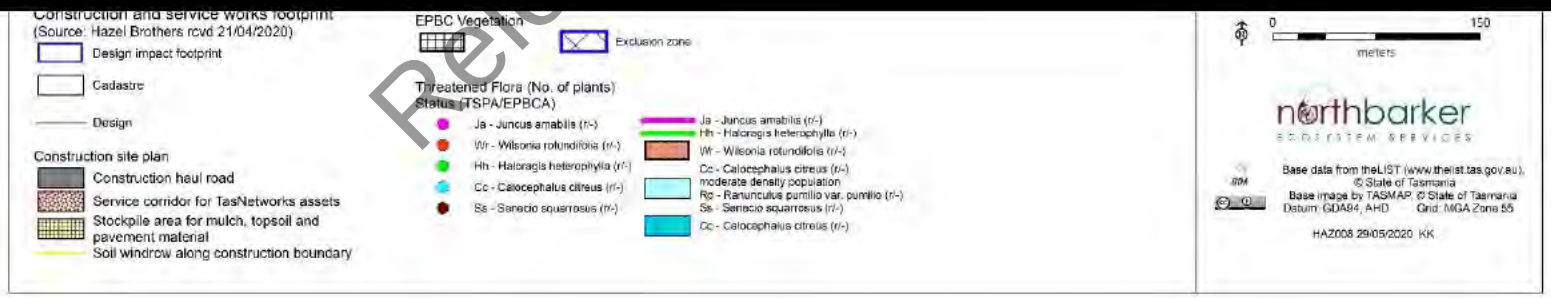


Figure 2; Vegetation Management Plan

From: s36
To: s36
Cc: s36
Subject: RE: Milford Conservation plans - Example
Date: Monday, 25 March 2024 1:02:00 PM
Attachments: AIRPORT GRASSLANDS Conservation Area (APT) Management Plan_16April2015.PDF

Opps sorry

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36 @pittsh.com.au>
Sent: Monday, March 25, 2024 12:21 PM
To: s36 @stategrowth.tas.gov.au>
Subject: RE: Milford Conservation plans - Example

Hi s36

Thanks for that, The Conservation area Management Plan was not attached.

Regards

s36
Principal Engineer

Mobile s36 | s36 @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

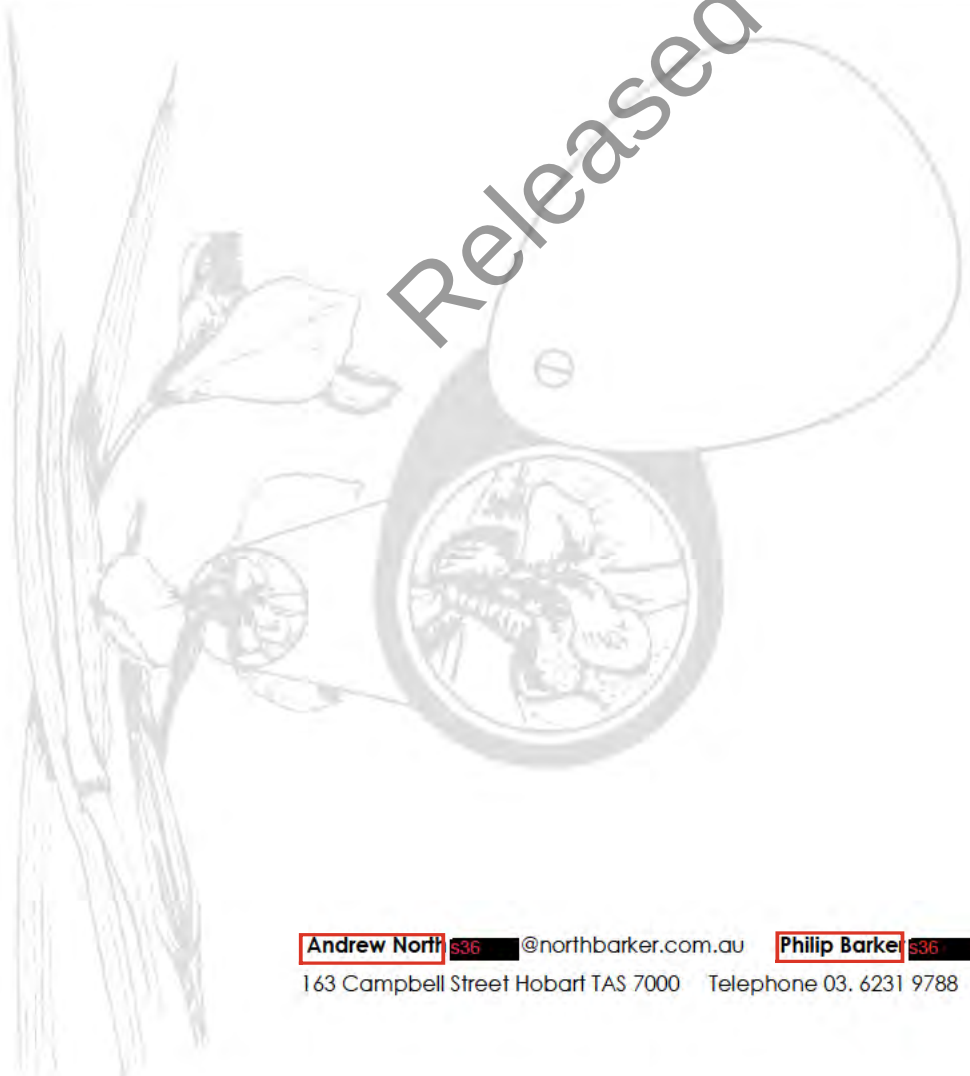
pittsh.com.au

northbarker
ECOSYSTEM SERVICES

Airport Grasslands Conservation Area (APT)
Tasman Highway

Management Plan

16 April 2015
For Department of State Growth
IER027



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CONTENTS

AIRPORT GRASSLANDS CONSERVATION AREA

This conservation area contains a large area of EPBC critically endangered grassland and a significant population of a state-listed rare species and several other threatened plant species.

Location

Tasman Highway (A0113)
Start Link/Chainage: 7/12.4
End Link/Chainage: 7/12.8
Sites occur on both sides of the road

Two sites where Tasman Highway goes through the round-about at the Hobart Airport Holyman Ave turn-off.

Site History

The land was acquired in 1994 from the Federal Airports Corporation (Commonwealth land) as part of the Tasman Highway project. This captures a well known significant example of Lowland Poa grassland (GPL) that meets the criteria for EPBC 'Lowland native grasslands in Tasmania' which is Critically Endangered. There is significant population of lemon beauty heads (*Calocephalus citreus*) along with several other state listed threatened flora species.

The sites were established by the DIER Environmental Sites Management program in 2001 and then monitored by Greening Australia.

Conservation Sites included in this Conservation Area

Site	Location	Side of the road	Length (m)
Airport 1 Cranston Parade (APT01)	Tasman Highway, Hobart Airport round-about; southwest corner between Cranston Parade and Holyman Avenue. 7/ 12.4 to 7/12.8	Right	400
Airport 2 Kennedy Drive (APT02)	Tasman Highway, Hobart Airport round-about; northwest corner between Kennedy Drive and Tasman Highway. 7/12.4 to 7/12.8	Left	400

APT01

AIRPORT 1 CRANSTON PARADE

Location details

Tasman Highway, Hobart Airport round-about; southwest corner between Cranston Parade and Holyman Avenue

Tasman Highway (A0113) Right side of the road.

Start link	Start chng	End link	End chng	Site length (m)
7	12.40	7	12.8	400

The northern end of a large area of lowland Poa grassland that extends into the neighbouring Hobart Airport property. Also includes silver and black wattle woodland with six threatened plant species. The site was monitored and received weed control by Greening Australia for 5 years. Lobelia pratioides has not been seen on the site since 2001. Calocephalus citreus occurs in tens of thousands across the grassland and the population has been maintained since 2001. The grassland fits the criteria for Critically Endangered under the EPBC Act. Ranunculus pumilio and Senecio squarrosus were seen in spring 2014. The boundary with Hobart Airport does not follow the fenceline.

A large area of lowland Poa grassland and silver/black wattle woodland with six threatened plant species recorded by Andrew North in 2001. The site was monitored and received weed control by Greening Australia for 5 years. *Lobelia pratioides* has not been seen on the site since 2001. *Calocephalus citreus* occurs in tens of thousands across the grassland and the population has probably increased since 2001. The grassland fits the criteria for Critically Endangered under the EPBC Act. *Ranunculus pumilio* and *Senecio squarrosus* were seen in spring 2014. The section of land between Tasman Highway and Cranston Parade is no longer included in this asset area.

APT01

Conservation Site Summary

Threatened Flora found at this site at some time since 2001

Common name	Scientific name	TSPA	EPBC
lemon beautyheads	*Calocephalus citreus*	r	
variable raspwort	*Haloragis heterophylla*	r	
gentle rush	*Juncus amabilis*	r	
poison lobelia	*Lobelia pratioides*	v	
ferny buttercup	*Ranunculus pumilio var. pumilio*	r	
leafy fireweed	*Senecio squarrosus*	r	

Vegetation Communities found at this site at some time since 2001

Common name	Area	TSPA	EPBC
Bursaria - Acacia woodland and scrub	2.83 ha	-	-
Lowland Poa labillardierei grassland	4.82 ha	-	CR
Lowland grassland complex	0.79 ha	-	-

Site Survey History

25/02/2015	s36 (North Barker Ecosystem Services), Andrew North (North Barker Ecosystem Services)	Threatened flora, Vegetation communities, Threats, Active management
12/07/2012	s36 (DIER), s36 (North Barker Ecosystem Services), s36 (Sinclair Knight Merz), Andrew North (North Barker Ecosystem Services)	Threats, Active management
1/10/2010	s36 (Greening Australia)	Threatened flora
21/11/2001	Andrew North (North Barker Ecosystem Services)	Threatened flora, Threats, Active management

Comment on traffic management

Not relevant as the site is off the road edge.

No signs used because can park on a little-used side road and work well away from the round-about and roadways.

APT01

Photo points

2001

Photopoint 1 looking along the *Calocephalus citreus* Transect SE from Cranston Pde culvert area

APT01
Photopoints

Photopoint 2 Boundary between grassland and woodland

Photopoint 3 View from old gate adjoining Motorcross Track looking at state of *Acacia* woodland

APT01
Threatened flora

Threatened flora count 25/02/2015:

Species	Number of plants / patches	Count error (+/-)	Area (m^2)
Calocephalus citreus	25,000	9,000	17500
Ranunculus pumilio var. *pumilio*	1000s		
Haloragis heterophylla	6 patches		
Juncus amabilis	150	50	
Senecio squarrosus	? likely to be 1000s		

Calocephalus citreus. The area the population occupies has increased although total numbers appear to have decreased. The densest area remains in the southern corner of the property where it extends into adjacent Hobart Airport land. Scattered elsewhere in low numbers with approx 50 plants in northwest corner down from 78 in 2010. Total population estimated to be between 16,000 and 33,000. Compares with 25000-100,000 in 2000. Burn of some of the densest portion of the population likely to result in increase in numbers of plants as they are struggling to compete with dense Poa sward.

Ranunculus pumilio var. *pumilio* was not seen during the February site visit as it was too late in the season for this spring ephemeral however, in spring 2014 it was widespread across much of the burnt section of Poa grassland with many thousands of plants.

Juncus amabilis continues to occur in scattered small patches.

Haloragis heterophylla. All previously known patches relocated along with several new sites. was not seen in February 2015.

Senecio squarrosus. Widespread throughout the Poa grassland although not evenly distributed.

Lobelia pratioides. Not seen since 2001 in spite of numerous searches in intervening years. Habitat overgrown with little suitable open ground available.

Summary for Earlier Inspections:

1/10/2010 recorded by s36 [redacted] (Greening Australia)

Species	Number of plants / patches	Count error (+/-)	Area (m^2)
Calocephalus citreus	120		120
Haloragis heterophylla	6 patches		7

21/11/2001 recorded by Andrew North (North Barker Ecosystem Services)

Species	Number of plants / patches	Count error (+/-)	Area (m^2)
Calocephalus citreus	62500	37500	
Haloragis heterophylla	3 patches	250	10
Juncus amabilis	10	5	
Lobelia pratioides	100 est	10	30
Ranunculus pumilio var. pumilio	1		
Senecio squarrosus	10	10	

APT01
Threatened Flora

Calocephalus citreus

Ranunculus pumilio

Senecio squarrosus

Lobelia pratioides 2001

Juncus amabilis

APT01
Threatened Flora

APT01
Threats

During the 2015 inspection, the following threats to conservation values were identified at the site.

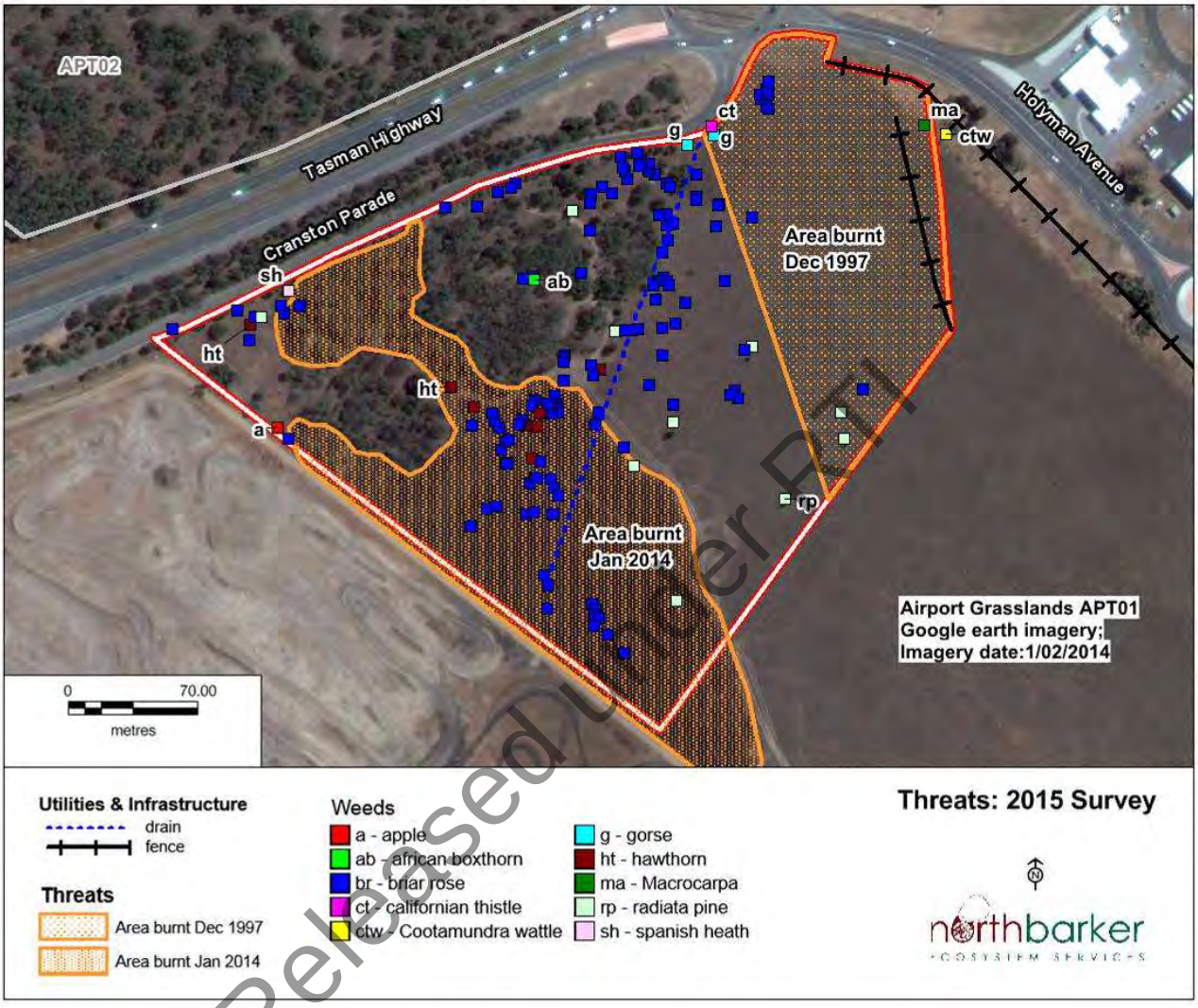
Threat type	Threat	Detail	Location description
Woody weeds	radiata pine	11 trees and 100's of seedlings	Predominantly in grassland with one tree in woodland
Woody weeds	sweet briar	Approximately a couple of hundred bushes	Widespread
Woody weeds	gorse	Approximately 30 plants.	Limited distribution and density on road verge extending into grassland near the drain.
Woody weeds	african boxthorn	Single occurrence	In woodland area
Woody weeds	spanish heath	one small patch	Near Cranston Parade
Grassy weeds	paspalum	Small numbers	
Herbaceous weed	Californian thistle	one small patch adjacent and amongst gorse	Cranston Parade
Native shrubs	Expansion of wattle trees into Poa grassland	Increased canopy closure is suppressing native grassland species	Adjacent to the drain
Native shrubs	Expansion along drain suppressing wetland habitat	Blackwood has spread around one section of the drain impacting on habitat for threatened flora	Along the drain
Native grass	loss of inter-tussock spaces	Long unburnt grassland loses spaces occupied by herbs.	30 % of area burnt in 2014 wildfire
Other	Dumped rubbish	General rubbish plus car tyres	Particularly along roadside adjacent to Cranston Parade

Limited active weed management occurred in the intervening period between the first and this site inspection, generally involving pine removal and some gorse treatment, although there is no evidence of management in past 10 years. Further pine development has taken place; trees have matured with seedlings regenerating around them. New weed threats have appeared including gorse, spanish heath and californian thistle - all currently with restricted occurrence and hence presently easy to manage.

A fire occurred in the most southerly portion of the conservation area in summer 2014 - this was not a planned burned but has been beneficial as the Poa swathe is lacking inter tussock space outside the burn area. Previous to that there was a grass fire in 1997 in the eastern section. The central section remains long unburnt. Consider either burning or slashing - with well cleaned equipment on a mosaic basis in the grassland to maintain intertussock spaces.

Ideally should aim for a burn affecting approximately half the area every 5 years. The burn should aim to be patchy allowing retention of habitat for invertebrates and skinks. In the event of a wildfire the burning plan should be reviewed.

APT01
Threats



Threats and utilities recorded during the most recent survey

APT01
Threats

Rubbish dumping

Car tyres

APT01
Threats

Radiata pine invading grassland

Gorse spreading Cranston Parade

APT01
Management Actions

Threat type	Nature of threat	Threshold	Response	Planned action	Comments
Woody weeds	Radiata pine	Present	Remove	Primary treatment - Fell larger stems, hand pull or cut at ground level the smaller plants.	Eleven small trees to be felled, approximately 100 seedlings and saplings to be cut or hand pulled.
Woody weeds	Gorse, African boxthorn, Spanish heath	Present	Aim for immediate eradication	Primary treatment - cut and paint with glyphosate Leave material to rot in situ	Localised new infestations
Woody weeds	Sweet briar	Considered to be spreading	Control	Primary treatment - spray with Grazon Extra , or cut and paint with glyphosate	Treat in spring/summer as it is winter deciduous
Grassy weeds	Expansion of grassy weed area	Expansion of area	Monitor boundary of patch, consider need for further treatment.	None at this stage	
Grassy weeds	Poa grassland failing to meet EPBC grassland criteria	>20% cover	Spray grassy and flat weeds with selective spray	None at this stage	
Herbaceous weed	Californian thistle	Impacting on Poa grassland	Control	Primary treatment - spray with Lontrel® as label prescribes.	
Native shrubs	Tree (*Acacia mearnsii and A. melanoxylon*) density in grassland changes EPBC status	Any trees beyond drain and mapped Poa boundary	Cut all trees (wattles) out of drain and beyond drain within grassland	Remove all trees from vicinity of drain and in grassland area	
Native shrubs	Adverse impact on ground cover	>80% crown cover on aerial photo	possibly remove old dying trees/ some juveniles	None. Tree cover will likely self-regulate.	
Native grass	Loss of inter-tussock spaces and herbs	Senescence of Poa, lack of interstitial spaces	Consider burning every ~5 yrs	Plan a burn in central section of grassland 2016	
Other	Rubbish	Present	Arrange for removal	Remove and take to tip. Look into inclusion within Maintenance Contract	Build-up along Cranston Pde embankment and in adj woodland
Grassy weeds	Paspalum	Considered to be invading grassland	Control	Primary treatment -spray with glyphosate	

APT01
DIER maintenance

Prescribed mowing regime:
Mow 10 m three times a year (September, November, February) inc median

Observed management:
Mowing around the round-about and road edges for sightlines.

Recommended changes to DIER maintenance:
No change.

Sightline:
Side roads and round-about.

Biological Monitoring

Next biological monitoring	2019
Time	October- February
Activities	This large site with significant conservation values is a potential off-set area for DIER. Determinations on this may influence the monitoring regime employed. Re-do the NBA Calocephalus transect across the grassland. Reassess all other threatened flora. Re-do the photo points. Monitor effectiveness of weed management.

APT02

AIRPORT 2 KENNEDY DRIVE

Location details

Tasman Highway, Hobart Airport round-about; northwest corner between Kennedy Drive and Tasman Highway

Tasman Highway (A0113) Left side of the road

Start link	Start chng	End link	End chng	Site length (m)
7	12.4	7	12.8	400

A large area of silver/black wattle woodland and grassland with several threatened plant species, recorded in 2001. The site was monitored by Greening Australia for 5 years. Lobelia pratioides has not been seen on the site since 2001, and its habitat was disturbed when the drains were rebuilt. Calocephalus citreus is fairly common across the site. Black wattles may be encroaching upon the open grassland. A large drain was excavated across the site in 2011, with threatened species protection measures undertaken during works.

APT02
Conservation Site Summary

Threatened flora found at this site at some time since 2001

Common name	Scientific name	TSPA	EPBC
lemon beautyheads	*Calocephalus citreus*	r	
gentle rush	*Juncus amabilis*	r	
poison lobelia	*Lobelia pratioides*	v	

Vegetation Communities

Common name	Area	TSPA	EPBC
Bursaria - Acacia woodland and scrub	6 ha	-	-

Other interests on the site

		Easting	Northing
Council	Stormwater drain		
TasWater	Pipeline easement		

Site Survey History

25/02/2015	s36 (North Barker Ecosystem Services), Andrew North (North Barker Ecosystem Services)	Threatened flora, Threats, Active management
12/07/2012	s36 (DIER), s36 (North Barker Ecosystem Services), s36 (Sinclair Knight Merz), Andrew North (North Barker Ecosystem Services)	Threatened flora, Threats, Active management
1/10/2010	s36 (Greening Australia)	Threatened flora, Threats
21/11/2001	Andrew North (North Barker Ecosystem Services)	Threatened flora, Threats, Active management

Comment on traffic management

Not relevant as the site is off the road edge.
Signs not needed; can park off the main road and work within a large, fenced site.

APT02
Photo points

Photopoint 1 Centre view facing east

Photopoint 2 Centre view facing west

Photopoint 3 Stormwater Drain

APT02
Threatened flora

Threatened flora count 25/02/2015:

Species	Number of plants / patches	Count error (+/-)	Area (m^2)
Calocephalus citreus	70	0	
Juncus amabilis	144	10	

Calocephalus citreus persists in low numbers including the same locations as recorded at past inspections plus several new occurrences. The central patch has declined from 30 plants to less than 5 (with some plants impacted by stormwater drain). Numbers close to the Tasman Highway have increased and a new patch established close to the eastern boundary near the roundabout. 62 plants compares well with 55 in 2010 and 47 in 2000.

Lobelia pratioides has not seen since 2001. Little suitable habitat at previous location.

Juncus amabilis. Occurs in original hollow where recorded in 2011, and has now colonised the large storm water drain.

Summary for Earlier Inspections:

1/10/2010 recorded by s36 [redacted] (Greening Australia)

Species	Number of plants / patches	Count error (+/-)	Area (m^2)
Calocephalus citreus	55	2	40

21/11/2001 recorded by Andrew North (North Barker Ecosystem Services)

Species	Number of plants / patches	Count error (+/-)	Area (m^2)
Calocephalus citreus	47	3	550
Lobelia pratioides	12		1

APT02
Threatened flora

APT02
Threats

Threat type	Threat	Detail	Location description
Woody weeds	radiata pine	One tree and tens of seedlings	Western corner
Woody weeds	sweet briar	Occasional	Primarily on the northern edge and along Kennedy Drive
Woody weeds	gorse	Occasional	Kennedy Drive
Woody weeds	spanish heath	Localised	Small patch in the black wattle woodland
Woody weeds	african boxthorn	Single plant	Edge of Kennedy Drive
Woody weeds	bluebell creeper	Three plants	In or immediately adjacent Kennedy Drive
Herbaceous weeds	fennel	Scattered	Roadside reserve Kennedy Drive
Grassy weeds	paspalum	Individual plants or small patches that have been introduced through the disturbance works	Kennedy Drive, water main and stormwater drain
Native shrubs	Shading of grassland natives	Trees are either closing canopy or suckers are spreading	Throughout
Other	Encroachment	Industrial building is using conservation area for storing unused building materials	Cambridge industrial estate.
Other	Nutrients and Weeds	Risk of nutrient introduction and weeds via the storm water drain	Storm water drain
Other	Damage to wattles	Wattle grub harvesting	Throughout

A large open stormwater drain, constructed in 2011, extends across the northern part adjacent to Kennedy Drive. This has been effective in closing off illegal vehicle access.

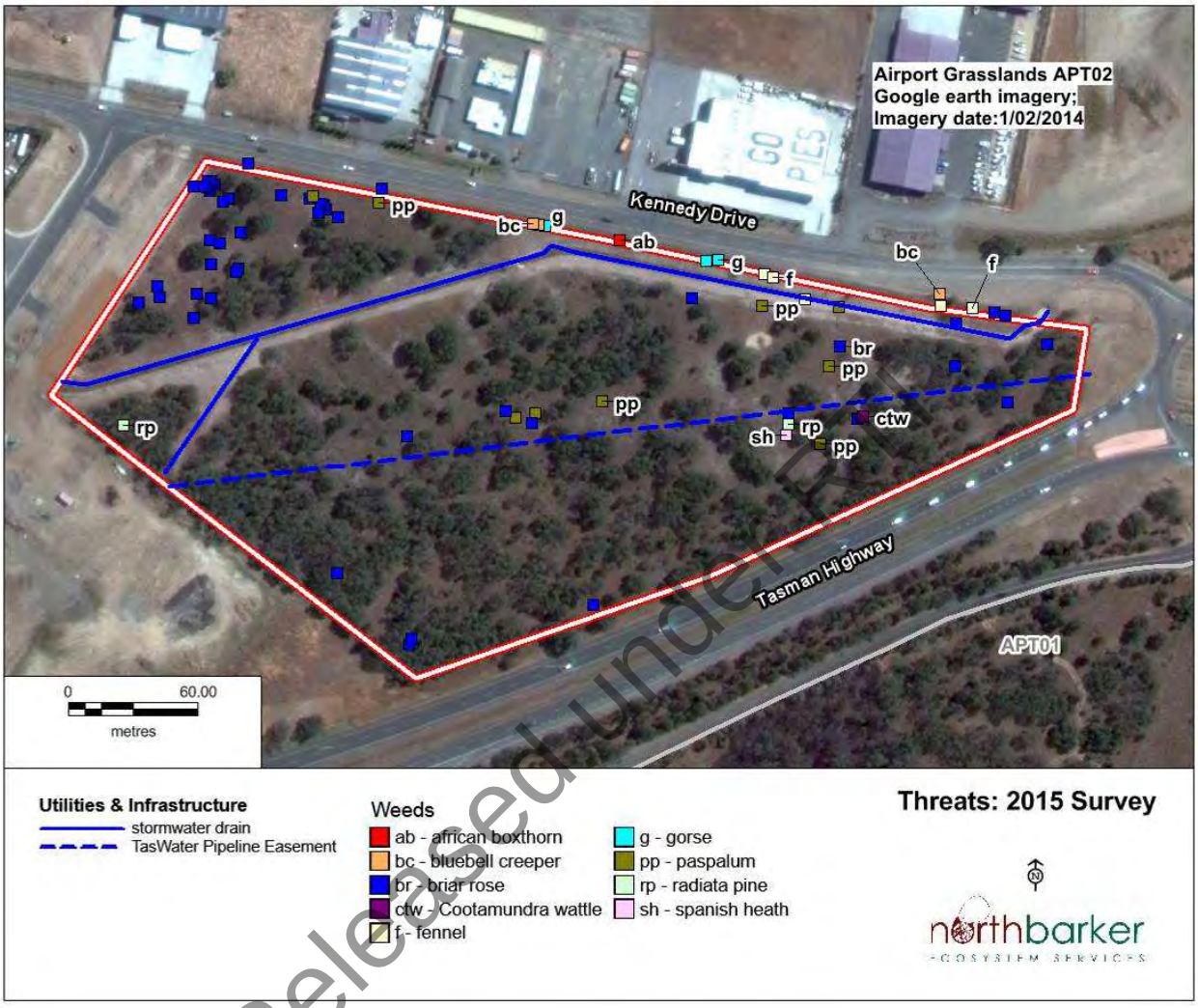
Since 2001 the woodland has closed canopy and the grassland is being out competed although numerous black wattle saplings have been killed for wattle grubs.

The development of the Industrial estate is resulting in some encroachment of the site for those businesses storing building material on the edge of the conservation area.

A young pine tree has mature fruit with many seedlings regenerating around it. New weed threats have appeared including Cootamundra wattle, spanish heath, blue bell creeper, fennel and paspalum. The gorse and boxthorn located along Kennedy Drive have failed to be treated effectively and require follow up.

Although many weeds introduced by the water main have been managed several persist along its line. The more recently constructed storm water drain is a conduit for the spread of numerous weeds. One that has proliferated in roadside drains in the area and in this drain is drain flatsedge (*Cyperus eragrostis*).

APT02
Threats



Threats and utilities recorded during the most recent survey

APT02
Threats

Damaged black wattle caused by grub harvesting

Building material being stored on site

APT02
Management Actions

Threat type	Nature of threat	Threshold	Response	Planned action	Comments
Woody weeds	Gorse, african boxthorn, spanish heath, Cootamundra wattle, pine	Any found	Eradicate	Primary treatment - cut and paint with glyphosate 360 or 450. Leave material to rot in situ	
Woody weeds	Sweet briar	Impacting on native vegetation	Control	Spary with Grazon or cut and paint with glyphosate 360 or 450. Leave material to rot in situ or chip larger trees.	
Herbaceous weed	Fennel, risk of invading site	Impacting on native vegetation	Treat with herbicide	Spray KambaM® for fennel or cut and paint with glyphosate 360 or 450	Risk of plants setting seed so cut and bag heads prior to spraying
Other	Rubbish dumped	Impacting on native vegetation	Remove	Remove all rubbish and targtet western end where dumped building supplies. Contact neighbours and advise of values.	Litter and other material smother native plants and may introduce nutrients which encourage dominance of introduced weeds.
Native shrubs	Shading of grassy species	Reduction in Calocephalus numbers	Thin	Remove select of younger cohort black wattle stems. Poison stumps with glyphosate 360 or 450. Leave trees to rot insitu. If significant numbers are to be removed they may be better chipped.	Many A. mearnsii have been killed for wattle grubs

Black wattle has proliferated and warrants thinning in places. However oldest trees are senescing and so naturally will thin out. Also some saplings have been killed in the process of illegally harvesting wattle grubs. Select thinning of saplings recommended especially in eastern half where changes have been greatest.

Limited active weed management occurred in the intervening period between the first and this site inspection, generally involving pine removal (29 trees) and gorse treatment although there is no evidence of management in past 10 years. Long absence of management has allowed weeds to slowly establish justifying need for management.

APT02
DIER maintenance

Prescribed mowing regime:
Mow 10 m three times a year (September, November, February) inc median

Observed management:
Around round-about and road edges for sightlines

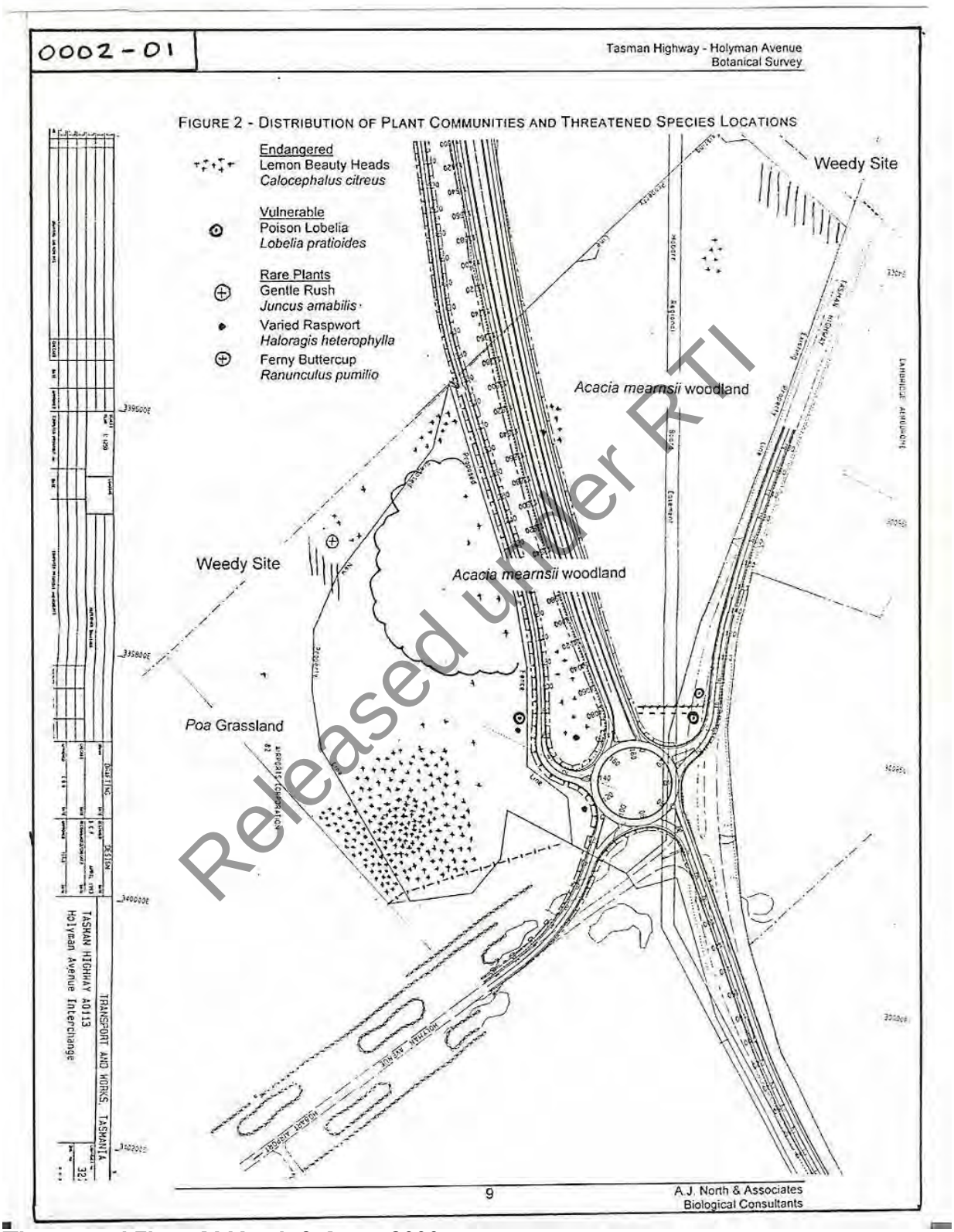
Recommended changes to DIER maintenance:
No change

Sightline:
Around round-about and side roads.

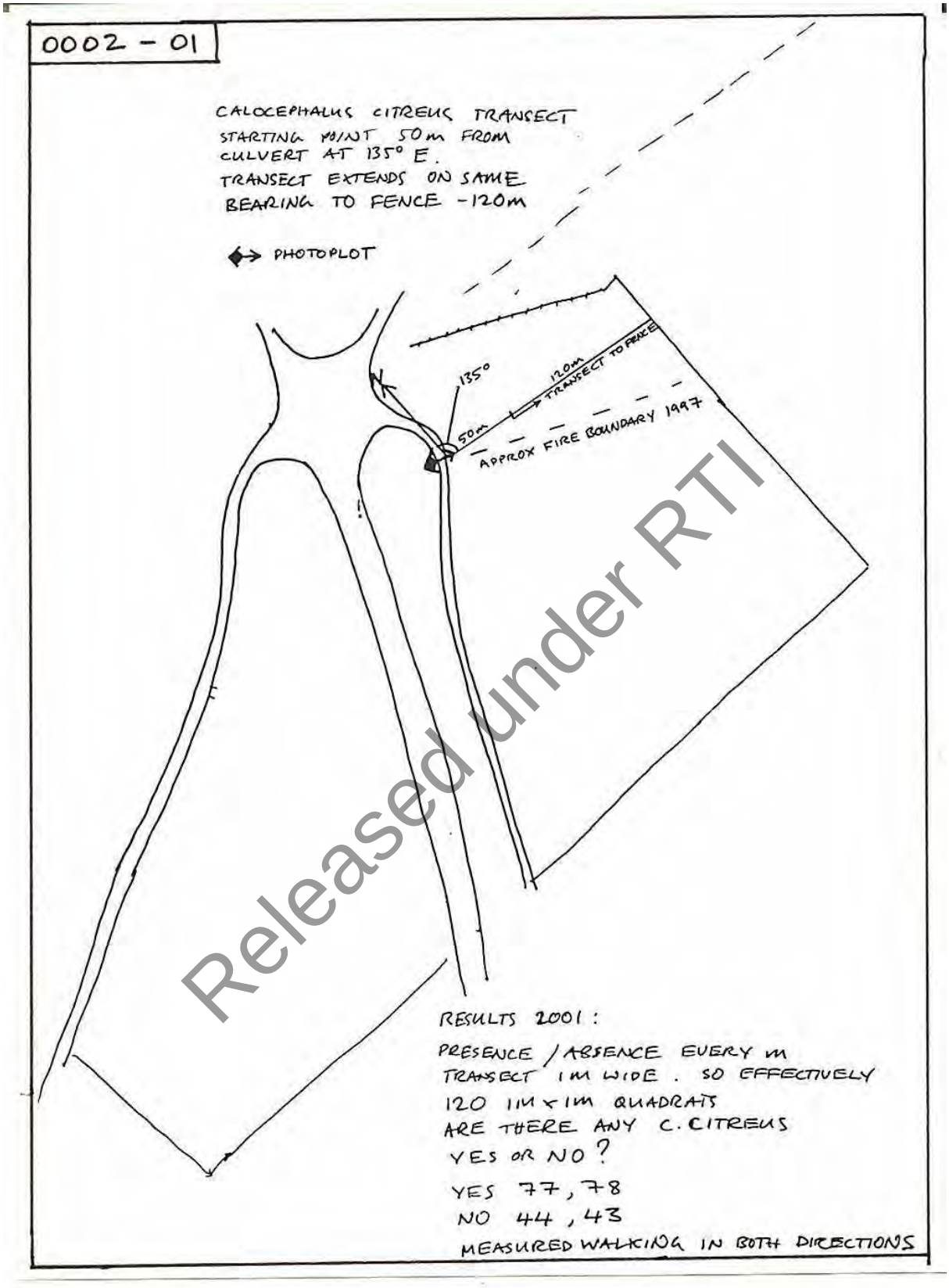
APT02
Biological Monitoring

Next biological monitoring	2019
Time	December- February
Activities	Retake photopoints, relocate previously recorded threatened flora using gps and recount. Search for new threatened flora. Review weed management.

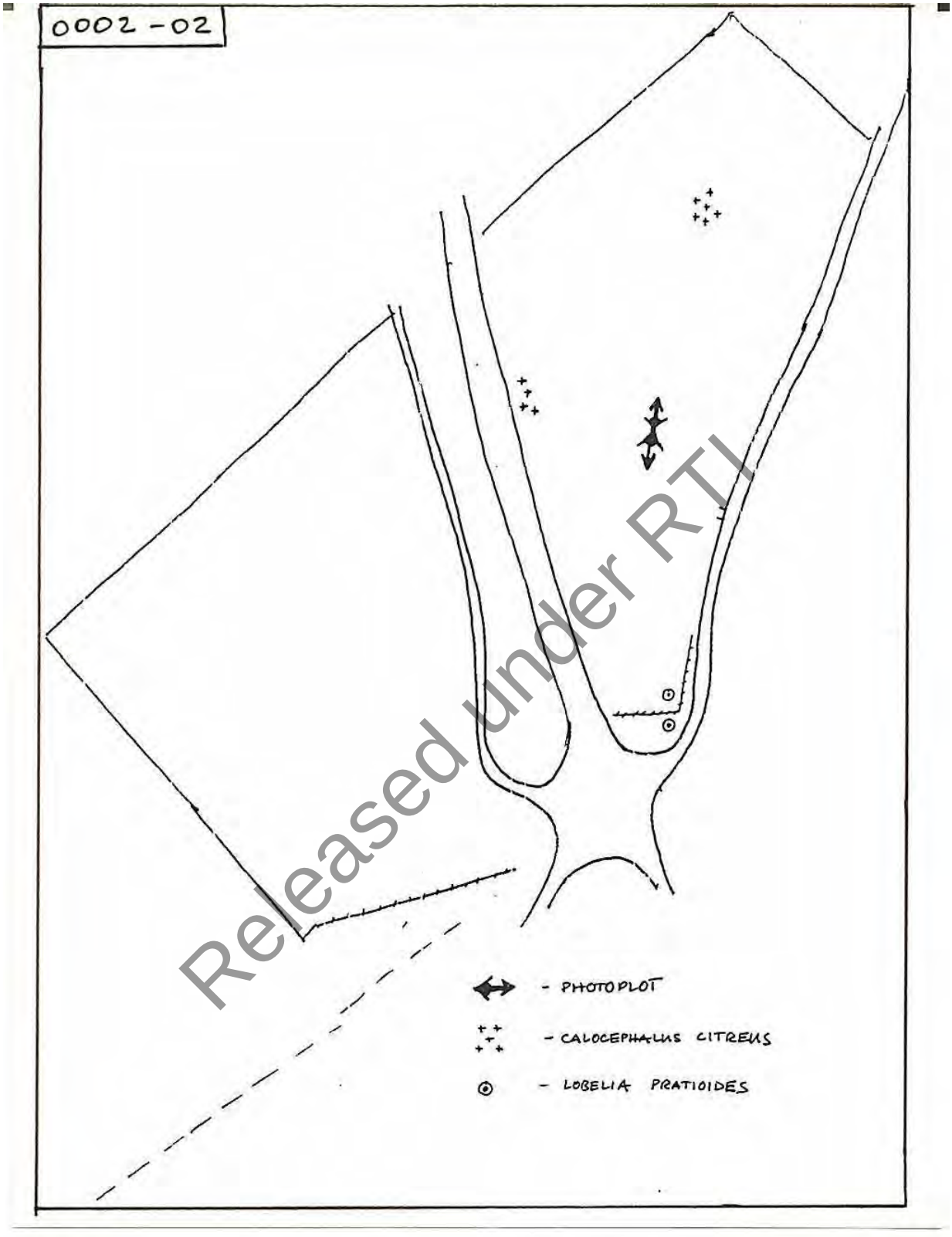
Appendix 1: Mapping from earlier site visits



Threatened Flora AJ North & Assoc 2000



APT01
Calocephalus citreus Transect and Photopoint
21 Nov 2011



APT02
Photopoints and Threatened Flora
21 Nov 2011

From: s36
To: s36
Subject: CM: FW: Milford Plantings
Date: Wednesday, 27 March 2024 11:20:00 AM
Attachments: Out of scope

Hi s36 ,

I paid the maintenance invoice for the Milford offset area and let s36 from Wildseed know. I also advised him not to do any further work until we have a new management plan in place.

It was planned to do some more understory plantings in the next few week with a cost of s38 , it was originally scheduled for Autumn. At present this is not occurring until we have a management plan in place and agreement on the compensatory planting area.

Please advise if you would like this or other work to proceed.

Thanks, s36

s36
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Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36 @pittsh.com.au>
Sent: Monday, February 26, 2024 8:20 PM
To: s36 @stategrowth.tas.gov.au>
Subject: FW: Milford Plantings

Hi s36

In addition to the $6,300 annual maintenance you will notice a further quote to replace understorey planting for s38 . This is necessary work and part of the original agreement. The losses are unfortunate and we are at the mercy of the elements. The winter in question, where the losses occurred (the one before last) was particularly severe for frosts in that area and we don't anticipate that this would occur again in such a short timeframe. The risk of future losses, although slight, does remain and you will note the proposed later planting of Rhagodia until October as a mitigation measure.

Regards

s36

Principal Engineer

Mobile s36 | s36 @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: s36
Sent: Monday, February 26, 2024 8:09 PM
To: s36 @stategrowth.tas.gov.au>
Subject: RE: Milford Plantings

Hi s36

The quote is attached. The second attachment contains some further background and instructions from s36 .

Regards

s36
Principal Engineer

Mobile s36 | s36 @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: s36 @stategrowth.tas.gov.au>
Sent: Monday, February 26, 2024 4:21 PM
To: s36 @pittsh.com.au>
Subject: RE: Milford Plantings

Hi s36 ,

I understand Denise supplied the maintenance plan in early December to s36 . What was the arrangement with wildseed, if it discussed in May it would be from when I was away and s36 was in charge. Can you please resupply the quote and some background. Is the maintenance work as per the plan you prepared?.

Good to hear that he has had access to the property and that the trees are still alive.

Cheers, s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001

Email: s36 @stategrowth.tas.gov.au / MB: s36
www.stategrowth.tas.gov.au

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From: s36
To: s36 ; McIntyre, Denise
Cc: s36
Subject: FW: Tasmania Golf Club - Road Project
Date: Wednesday, 3 April 2024 4:31:37 PM

Hi s36

As per below and noting that after next week I'll be on leave for 6 weeks could you please action the following and co-ordinate with Denise on progressing them over the coming weeks:

1. s35 [redacted]

Happy to discuss.

Regards

s36 [redacted]
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
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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: s36
Sent: Monday, March 18, 2024 4:52 PM
To: John Milbourne <president@tasmaniagolfclub.com.au>; McIntyre, Denise <Denise.McIntyre@stategrowth.tas.gov.au>
Cc: s36 <secretary@tasmaniagolfclub.com.au>; Ben Hayes <Captain@tasmaniagolfclub.com.au>; s36 <treasurer@tasmaniagolfclub.com.au>
Subject: RE: Tasmania Golf Club - Road Project

Hi John

Apologies for the delay in responding and see below response to your dot points.

1. We have only recently (11 March 2024) received the relevant documents from Simmons Wolhagen and will be in contact once we have completed our review.
2. Unfortunately, with the election being called and now being under caretaker conventions we are unable to issue any public communications until a new government is sworn in.
3. We have requested further advice from s36 on the further impacts arising from the

Midway Point Causeway duplication and expect to received advice this month.

4. Happy to consider temporary improvements at the driveway entrance and will have our designers investigate options and come back to as to what might be possible.

Regards

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
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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: John Milbourne <president@tasmaniagolfclub.com.au>
Sent: Sunday, March 10, 2024 9:51 AM
To: McIntyre, Denise <s36 @stategrowth.tas.gov.au>; s36 @stategrowth.tas.gov.au>
Cc: s36 <secretary@tasmaniagolfclub.com.au>; Ben Hayes <Captain@tasmaniagolfclub.com.au>; s36 <treasurer@tasmaniagolfclub.com.au>
Subject: Fw: Tasmania Golf Club - Road Project

You don't often get email from president@tasmaniagolfclub.com.au. Learn why this is important

Hi Denise,

I don't have acknowledgment or response to my email (9 Feb 2024) below. Your advice would be appreciated.

Cheers
John

------ Forwarded Message ------
From "John Milbourne" <president@tasmaniagolfclub.com.au>
To "McIntyre, Denise" <Denise.McIntyre@stategrowth.tas.gov.au>; "s36 tategrowth.tas.gov.au>
Cc s36 " <secretary@tasmaniagolfclub.com.au>; "s36 " <treasurer@tasmaniagolfclub.com.au>
Date 9/02/2024 11:10:14 AM
Subject Tasmania Golf Club - Road Project

Hi Denise,

A few things for your consideration:

1. I assume you have now received from Simmons Wolfhagen copies of the Course Impact Report by s36 and a proposed overarching draft agreement as it

applies to the Golf Club and the project. Would you please confirm they have been received?

2. In light of discussion at our last meeting regarding the development of a communications strategy, it may be timely to provide a media release on the status of the project? This would be of assistance to us in the recruitment of members given in the past we have heard comments like: "*I would join up at Tasmania Golf Club this year but are concerned about the effects of the road project*". I would welcome the opportunity to discuss this further.
3. Has there been any progress regarding engagement of s36 (Contour Golf Design) to assess the impacts on us of the proposed further land acquisitions resulting from the environmental issues with Milford and the development of the Midway Point causeway stage of the project?
4. Prior to any hint of the Road Project, the Club wrote to Government regarding safety issues involving motor vehicles leaving the club and entering from the Sorell direction (turning across oncoming traffic). This was a significant issue and at the time and the Club met with officials from Main Roads (see email attached from s36 - Department of State Growth 27 Feb 2018) who looked a range of options, none of which were implemented. The issues were deferred to the implementation of the Road Project. With the increased traffic volumes and continued delays in the Road Project, the risk of serious accident has gotten worse. I seek your consideration of temporary arrangements to mitigate against the risk, ideas that readily come to mind include reduced speed limits and/or traffic lights active during peak times.

Look forward to hearing back?

Regards
John Milbourne
PRESIDENT
Tasmania Golf Club

1.

From: s36
To: s36
Cc: s36
Subject: RE: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Thursday, 18 April 2024 3:08:20 PM
Attachments: image001.png
T-P.HB19197-ENV-rep-002-Rev01-Realignment.pdf

Hi s36 and s36

Attached please find the completed report on the realignment. I have highlighted in red below where we have addressed your comments. I understand that you will need to review this internally and potentially discuss with s36, however it would be good if we could get this to Canberra asap.

Regards

s36
Principal Engineer

Mobile s36 | s36 @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: s36 @stategrowth.tas.gov.au>
Sent: Monday, March 25, 2024 9:09 AM
To: s36 @pittsh.com.au>
Cc: s36 @stategrowth.tas.gov.au>
Subject: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805

Hi s36,

Please see below and attached.

To add to the notes can we please add additional requirements to the standard 176 specification to demonstrate to the regulator and the landowner how important we see this issue. This should include:

- Specific requirements for the run-off and sedimentation control measures that must be implemented some of which we may consider implementing ahead of the contractor commencing works. We already have extensive monitoring and auditing of controls in 176. I have added the section on Sediment basins from 177 to Section 4.4.2 of the report. The basins might be hard to fit in but possibly a narrow long one may work against the Milford boundary
- Superintendent or Principal's Representative (preferably an independent specialist) inspection and reporting regime for the run-off and sedimentation control measures including at least twice weekly inspections and inspection prior to and post significant rain events. Section 4.4.3 of report
- Contractual provisions for imposition of significant penalties on non-compliance with the environmental requirements. Last paragraph of 4.4.3

I was wondering if we should use the Vic Roads Environmental Management Specification 177 (major) instead of 176 (Minor) for everything that can be implanted?. Addressed above

Thanks, s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36
Sent: Monday, March 18, 2024 4:13 PM
To: s36 @pittsh.com.au>
Subject: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805

Hi s36

Thank you for the information and associated documentation in relation to the redesign and EPBC issues. s36 and I have reviewed everything and have the following comments for your consideration. As a general comment the information presented needs to cover all aspects that are occurring as a result of the project.

There are some issues that do not seem to be covered that need to be addressed including:

- Pittwater road access – during the DCCEEW site visit s36 advised that if an alternate access off Pittwater Road was not provided she would use and direct vehicles through the existing access road off Pittwater road which goes through the Orchid habitat. As a result DCCEEW advised that this is a secondary impact that needs to be addressed. The Department is addressing this by providing the planned alternate access and closing off the existing access located on Pittwater Road. Can this be added to the documentation as an potential impact that has now been mitigated. Section 4.2
- Taswater relocations impacts and mitigation, is this covered? Section 3.1 of report
- TasNetwork relocation impacts and mitigation, is this covered? Section 3.1 of report
- Tasmania Golf Course impacts due to redesign – tree removal, s36 previously did an assessment report on this. All impacts should be reflected on a map showing the impact footprint. This map and details of all impacts should be provided to NBES for inclusion in their assessment. s36 added some comments in relation to the Habitat Impact Assessment. The report is good but will need to be updated to ensure all impacts have been covered Plan in Appendix C of report, Golf Course NVA Appendix D also Cection 3.3 of report
- The impact footprint should be overlayed against the referral area plan submitted to DCCEEW. Any variation to the referral area requires formal approval from DCCEEW – like we did with the tie in section. Appendix C

In regard to the information submitted, please note the following aspects that need to be amended:

- Present the draft submission information listed in the email as a memo/report attached
- Amendments to the layout map (Impact Footprint) – Ensure the map is clear and only shows information relevant to the EPBC assessment, similar to this previous map attached so the changes and impacts are clear to any audience. This would need to include, original property boundary and access track (including the new access onto Pittwater road on the corner), new proposed property boundary and access track. I understood that the new property boundary would be inside the new Watermain access track. Removal of unnecessary design information, highlighting works area and roadside conservation site, Taswater and TasNetwork issues (if relevant). Figure 1 and Appendix A. RCS shown in appendix G, all Tasnetworks and Taswater in the road reserve, so not relevant
    - It is important to show on these maps that all works will be in State Growth land and therefore we do not need landowner consent for works on management going forward.
- Pittwater road drainage information – confirmation that this has been discussed and agreed with Clarence City Council Appendix E
- Golf Course implications for further impact – further highlight the environmental impacts that would

happen with further encroachment and the highway safety aspects from a sub-standard design. Please remove any emotion from arguments and emphasis on aesthetic. Please focus on potential safety and environmental impacts. Section 3.4

- Management Actions –
  - s39 [redacted] s39 [redacted]
  - s39 [redacted] s39 [redacted]
  - Rehabilitation – expand this item as this will form the Roadside Conservation area. Please include a map of the future RCS for visibility to DCCEEW. The RCS will need a management plan. Can NBES prepare this includes key information on weed management, replanting of species, management outcomes, key responsibilities, reporting etc. Appendix G

Thanks, s36

s36 [redacted]
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: sven.meyer@stategrowth.tas.gov.au / MB: 0428 577 767
www.stategrowth.tas.gov.au

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pitt&sherry

EPBC Act Referral 202085

Realignment of the Original Design Adjacent to the Milford Property

Prepared for

Department of State Growth

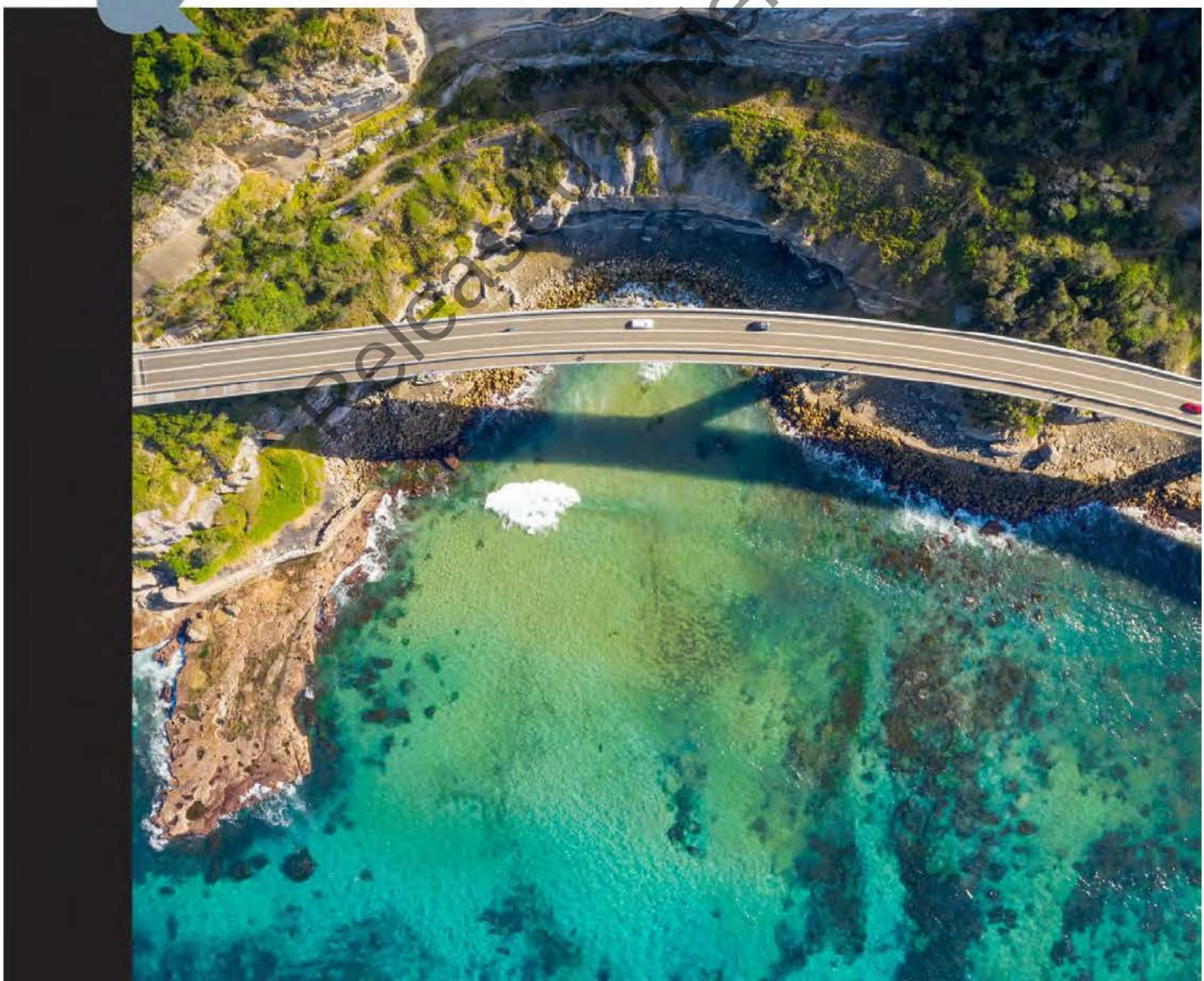
Client representative

s36

Date

18 April 2024

Rev00



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Appendices

Prepared by — s36	s36	[redacted]	
Reviewed by — s36	s36		**Date —** 19/04/2024
Authorised by — s36	s36		**Date —** 19/04/2024

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
00	Issue to Department of State Growth	s36	s36	s36	19/04/2024

Executive Summary

[redacted]

In September 2020 the Department of State Growth submitted a referral under the [redacted] Tasman Highway between the Hobart Airport Interchange and the Midway Point Causeway. Preliminary Documentation was submitted in February 2022. Following assessment of the Preliminary Documentation, the Department of Climate Change, Energy, the Environment and Water advised that without substantial avoidance of directs impacts to threatened orchid species on the Milford property an offset would be required.

The Department has actively pursued the offset over the past two years but has not been able to reach a mutually acceptable position with the owner of Milford on the location and size of the offset or how it would be managed into the future. Accordingly, the Department of State Growth has decided to modify the highway design so that direct impacts on the orchids are avoided.

The realignment moves the highway to the north by up to 10 metres over a length of approximately 480 metres in the vicinity of Pittwater Road and reduces the width of the strip of land acquired from the Milford property by up to 14 metres. Additional land is to be acquired from the Tasmania Golf Club on the northern side of the highway to accommodate the realignment.

A revised Orchid Habitat Significant Impact Assessment has been prepared for the realignment and is included in Appendix B. A range of Management actions have been proposed to mitigate indirect impacts under the realignment. Thes include activities during the preconstruction, construction, and post construction phases. The roadside adjacent to Milford will be incorporated into the Department of State Growth Roadside Conservation Program recognising its proximity to priority orchid habitat and the importance of a high standard of management to reduce the risk of any adverse impacts to that habitat.

1. Current Status of the EPBC Assessment

In February 2022 the Department of State Growth submitted Preliminary Document [redacted] ate Change Energy, the Environment and Water (DCCEEW) seeking approval under th [redacted] Biodiversity Conservation Act (EPBC) for the upgrading of the Tasman Highway between the Airport Interchange and the Midway Point Causeway. Following receipt of the Preliminary Documentation, DCCEEW responded by email on 16 March 2022 ([redacted], *Department of Agriculture, Water and Environment to* [redacted], *Pitt & Sherry).* In that email DCCEEW advised that it was "satisfied that most Department comments have been resolved" and additionally noted some outstanding matters. The most important outstanding matter related to the requirement for an offset and the particulars of that requirement are reproduced below.

As now reflected in the documentation, the department will consider all areas currently identified as 'core habitat' and 'primary potential habitat' as habitat for the critically endangered Milford Leek-orchid and Sagg Spider-orchid in line with the broadening extent of species occupation in recent annual surveys. As noted in the department's further comments, the direct, indirect and residual impacts to habitat areas and individuals will need to be updated in line with this reclassification, including the consideration of the need for offsets.
Residual impacts are defined as the impacts that remain after avoidance and mitigation measures. For assessments under the EPBC Act, offsets are required if residual impacts are considered significant. Avoidance and mitigation measures are the primary strategies for managing the potential significant impact of a proposed action, and offsets will not be considered until all reasonable avoidance and mitigation measures are considered, or acceptable reasons are provided as to why avoidance or mitigation of impacts cannot be reasonably achieved
According to the EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (December 2013) (attached to this email for your reference), an action is likely to have a significant impact on a critically endangered species if there is a real chance or possibility that it will adversely affect habitat critical to the survival of a species or reduce the area of occupancy of the species. Given the critically endangered Milford Leek-orchid and Sagg Spider-orchid are unlikely to occur anywhere else other than the Milford property, all habitat can be considered critical to the survival of the species.
Considering the information on impacts which is now available, the department's view is that (without substantial avoidance of direct impacts) the action will have a residual significant impact on these species given that:

- *the action will directly impact on approximately 0.40% of the known range of the Milford Leek-orchid and 0.37% of Sagg Spider-orchid habitat, and indirectly impact 0.31% of the known range of Milford Leek-orchid and 0.24% of Sagg Spider-orchid habitat*
- *the Minister's delegate has already decided that the action is a significant impact (as per the referral decision); and*
- *there has not been a substantive reduction (for example though avoidance) of impacts to the species.*

Therefore, unless there is a new proposed substantial avoidance of impacts, offsets will be required in order for the proposal to meet the department's offset policy.

Following this advice further investigations were carried out by Pitt and Sherry and North Barker to determine the potential and scope for a suitable offset to be established on the Milford property. It was determined that it was possible to establish an offset on the Milford property, however the following constraints emerged following consideration of how the offset might be implemented and managed.

i. The Department of State Growth and the owner of Milford have been unable to reach agreement on the location and size of the offset or how it would be managed by the Department, on behalf of the owner, into the future.
ii. There have been Legal and Administrative complexities, that are outside the Department's normal operating parameters, that are associated with the Department managing an offset area on private property.
iii. The Department has become increasingly concerned at the length of time to resolve these matters and with Planning and Design completed and funding committed, community and political expectations are that the project should be advanced.

In response, a revised design has been prepared that avoids direct impact on orchid habitat. The background to the decision on the original alignment is summarised below followed by a description of the revised alignment.

2. Background to the Original Decision on the Alignment

Five options for upgrading the highway between the Airport and the Midway Point C[redacted]ese were described in Section 11 of the Preliminary Documentation Report that has bee[redacted] (T-P.HB19197-ENV-REP-001-Rev02, 24/02/2022). The selected option (Option 5) was endorsed by all directly impacted property owners (Tasmania Golf Club, Milford, and Hobart International Airport) as the best solution, subject to obtaining Statutory Approvals including those under Local Government Planning, the EPBC Act and Commonwealth approval for acquisition of some airport land. The advice from North Barker contained in the July 2020 Significant Impact Assessment (Appendix H of the February 2022 Preliminary Documentation) was that, based on the relatively small areas impacted (direct and indirect impacts totalling less than 1.4% of critical orchid habitat) the proposed action did not represent a significant impact. The new highway requires a road reservation width of approximately 65 metres through this area compared with the existing width of approximately 30 metres. Limiting impact on Milford results in a greater impact on the Golf course, and vice versa. The stated position of the Golf Club was that it accepted the need for the highway to be upgraded but it needed to preserve the playing characteristics of the course, including separation of playing areas and traffic based on contemporary safety guidelines and the Club also sought to retain as much of existing tree cover as possible. In summary it was considered at the time that the proposed alignment was a best fit compromise that balanced the differing uses, objectives and values of the adjacent properties.

3. Scope of Realignment

3.1 Description of realignment

The revised alignment moves the highway approximately 10 metres to the north in the vicinity of Pittwater Road, narrows the highway shoulders by 1 metre and replaces part of the earthworks embankment adjacent to Milford with a retaining wall. A plan of the realignment which extends over a length of approximately 480 metres is included in Appendix A with an extract in the vicinity of Pittwater Road included in Figure 1 below. The realignment is achieved by introducing a tighter radius curve at Pittwater Road whilst still complying with the 80 km/h design speed. The blue lines below and in Appendix A show the original position of the carriageway control lines and the red lines show the revised position of the carriageway control lines. These changes will move the previously designed new property line for Milford approximately 14 metres to the north in the vicinity of Pittwater Road. Direct impacts on orchid habitat are avoided and indirect impacts are substantially reduced.

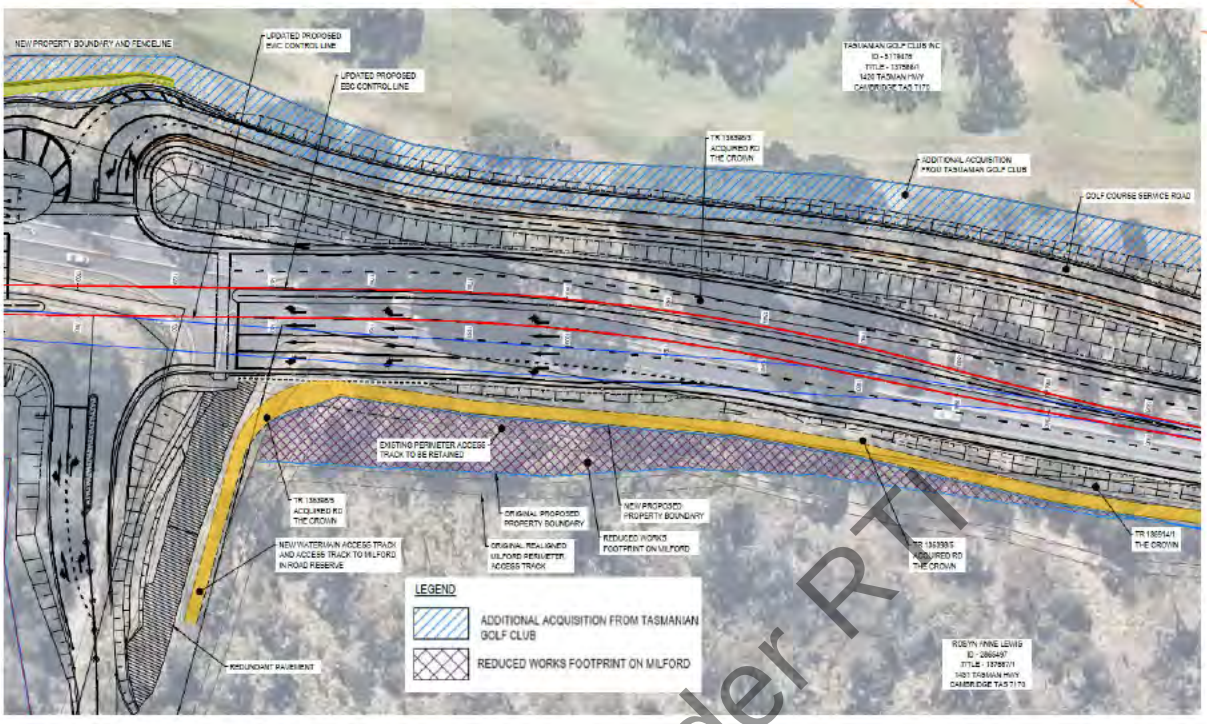

Figure 1 Realignment in vicinity of Pittwater Road

3.2 Change in impacts - Milford

The change in impacts on Milford is demonstrated by reference to Figure 2 (Impact of Original Design) and Figure 3 (Impact of Realignment) below. The purple cross hatching in Figure 1 above shows the reduced works footprint which is the area of land that will be returned to Milford.

Figure 4 below shows the extent of indirect impacts on the habitat east of the existing Milford highway access. These impacts are unchanged from the original design.

Tables 1 and 2 below summarise the change in impacts resulting from the realignment.

A revised Orchid Habitat Significant Impact Assessment reflecting the change in the design is included in Appendix B.

Service relocations associated with the realignment including TasWater and TasNetworks are contained within the road reserve and do not impact on orchid habitat.

The overall change in project impact is shown in the plan in Appendix C.

Figure 2 Impact to Orchid Habitat at Pittwater Road (Original Design)

Figure 3 Impact to Orchid Habitat Pittwater Road - Realignment

Figure 4 Impact to Orchid Habitat – East of Highway Access (Unchanged)

Table 1 Change in Impact by Site

[redacted]

Site	Area Critical Orchid Habitat m²	Original Design		Realignment	
		Direct Impact m²	Indirect Impact m²	Direct Impact m²	Indirect Impact m²
Pittwater Rd	172441	777	410	0	202
East Milford access	18569	571	841	0	83
Total	191010	1348	1251	0	285

Table 2 Change in Impact by Species

Species	Total Area Critical Habitat m²	Original Design			Realignment		
		Direct Impact %	Indirect Impact %	Total Impact %	Direct Impact %	Indirect Impact %	Total Impact %
Prasophyllum milfordense	172441	0.45	0.24	0.69	0	0.12	0.12
Caladenia saggicola	191010	0.71	0.65	1.39	0	0.15	0.15
Caladenia caudata	191010	0.71	0.65	1.39	0	0.15	0.15

3.3 Change in impact Golf Club

Additional land is required from the Tasmania Golf Club for the realignment and this is shown as blue cross hatching in Figure 1. Within this additional land is an area of *Eucalyptus viminalis- E.globulus* coastal forest and woodland (DVC) occupying 0.27 Ha. No threatened flora species listed under either the Tasmanian Threatened Species Act or the EPBC Act will be impacted directly by the realignment.

3.4 Limitations of realignment

There are practical and safety considerations that limit the extent of encroachment of the new highway into the Golf Course. The existing 16th fairway is parallel to the existing highway and does not meet current guidelines for separation of the playing area from traffic. Clearly any extension of the new highway into the Golf Course needs to recognise the greater clearances between playing areas and traffic which are contained in current standards and exceed the clearances to which the Golf Course was originally built. Contour Golf Design Group Pty. Ltd. were engaged to provide advice on requisite clearances to the proposed new highway boundary and the playing areas of the Golf Course. Contour Golf's advice is based on guidelines published by the Society of Australian Golf Course Architects (SAGCA). Contour Golf advised that a clearance of 80 metres was required from the direction of play of the relocated 16th fairway and the highway boundary. This advice recognised that the tee shot is played steeply downhill, and the prevailing winds are from the northwest – both factors that increase the potential for golf balls to reach the highway. Additionally, oncoming traffic faces towards the direction of play increasing the severity of any potential incidents between errant golf balls and traffic. The new highway design consolidates three existing accesses (Barilla Bay, Pittwater Road and Tasmania Golf Club) into

a single access at Pittwater Road that will be controlled by traffic signals. This cons [redacted] both the safety and capacity of the new highway. It also involves construction of a new s [redacted] immediately to the north of the highway i.e. placing Golf Course traffic closer to the [redacted] c.

The original design of the new highway and Golf Course service road resulted in m [redacted] sting 16th fairway and the highway being removed. Currently, most sections of the cours [redacted] y and, notwithstanding the guidelines on separation distances, tree cover does provide an additional layer of protection from errant gold balls.

It is noteworthy that the Society of Australian Golf Course Architects (SAGCA) advise that "it is simply impractical to survey the limitless possibilities of errant gold balls hit by golfers of diverse skill levels on varied golf terrains with elevation changes in widely different wind conditions…".

Accordingly, the decision was taken to set the new boundary at 90 metres from the direction of play of the proposed new 16th fairway to provide for the planting of a generous area of new trees.

The revised alignment now encroaches an additional 10 metres into the Golf Course and reduces the width of the proposed tree planting by this amount. This is a concession that the Golf Club has agreed to in the interests of progressing the project and enabling the Golf Course modification works to begin. The realignment introduces a slight reverse curve into the highway which, whilst still compliant with the 80 km/h design standard, is slightly sub optimal. Further extension of the design into the Golf Course is not considered to be viable for the following reasons:

i. The safety aspects of adequate separation of playing areas of the Golf Course and traffic.
ii. The amenity values of the Golf Course.
iii. Meeting the 80 km/h design standard.
iv. Property acquisition from Barilla Bay Oysters on the northern side of the highway west of the Golf Course
v. Access difficulties due to steep grades where the new service road joins into the existing Golf Club access road.
vi. The proposed new 16th fairway cannot be moved further to the north due to the proximity to the 17th fairway and to the north of the 17th fairway is the relocated Golf Course water storage dam which occupies all available land up to the limit of the threatened ecological community *Subtropical and temperate coastal saltmarsh* listed as Vulnerable under the EPBCA.

4. Management Actions to Mitigate Indirect Impacts Under the Proposed Realignment

4.1 Pittwater Road drainage

Drainage along Pittwater Road has been identified as a facilitated impact by DCCEEW and it is proposed to mitigate this impact by removing the gravel hardstands that can be a source of silt laden water entering the Milford property. The proposed mitigation is described in Appendix E. Clarence City Council, the owner of Pittwater Road endorsed these improvements in an email dated 19th July 2022. A copy is also provided in Appendix E.

4.2 Pittwater Road access

The Department of State Growth has now agreed to provide the new access into Milford from Pittwater Road approximately 1.4 kilometres south of the Tasman Highway. This new access will pass through the farmland portion of the property, is in accordance with the owner's wishes, and will eliminate the need for any day to day traffic to pass

through areas of orchid habitat. The absence of agreement on this access when DC [redacted] Department representatives and the owner of Milford on 27th April 2022 had been a [redacted]

4.3 Construction Phase

The following actions which are substantially in accordance with Appendix M (T-HB19197-ENV-REP-001-Orchid Management Plan-Rev02) of the Preliminary Documentation will be implemented. Note that these actions have been modified from Appendix M recognising that no works are envisaged on the Milford property outside of the acquired road reserve.

Table 3 Construction Actions

No.	Management Actions	Frequency	Responsibility
Preconstruction Phase			
1.1	Prepare Management Report specific to the Roadside Conservation Area	Prior to commencing work	Project Ecologist
1.2	Install temporary exclusion fencing [1] on new boundary noting that permanent fence cannot be constructed until tree clearing has been completed	Prior to commencing work	Project Environmental Officer
1.3	Identify all trees on Milford where the tree protection zone extends into the road reserve and engage a qualified arborist to assess the potential impact on the tree and determine whether the tree can be retained with mitigation measures or whether it should be removed	Prior to commencing work	Project Environmental Officer
1.4	Clear and legible signage every 50m stating "*Threatened Flora Exclusion Zone*" or similar	Prior to commencing work	Project Environmental Officer
1.5	Sediment fencing to be constructed and maintained where there is potential for construction water runoff to enter the orchid habitat areas	Prior to commencing work	Project Environmental Officer
1.6	All site personnel, including contractors, will complete a project induction that clearly explains the importance of values on Milford and importance to the Project to ensure the Milford property site is an exclusion zone to be protected from all impacts.	Prior to commencing work	Project Environmental Officer
1.7	The Construction Environmental Management Plan shall nominate all stockpile locations, laydown areas, storage sites, site office locations and parking areas. These shall not be permitted on the southern side of the highway along the Milford frontage.	Prior to commencing work	Project Environmental Officer and Construction Manager
Construction Phase			
2.1	Conduct regular monitoring of all exclusion fencing, including signage and record on the weekly environmental inspection checklist. Fence maintenance to be conducted if damaged or not functional	Daily during any vegetation clearance works Weekly thereafter	Project Environmental Officer and Construction Manger

2.2	Trees to be felled will be directed towards the road (under appropriate traffic control) to minimise damage to retained vegetation	Daily during tree fe clearance works	[redacted] tal ction
2.3	Install a new boundary fence ensuring no environmental impact to orchid habitat under supervision of Project Ecologist	Once	tal ction Manager
2.4	Machinery operating in this area will be subject to appropriate hygiene standards for construction machinery.	At all times	Construction Manager
2.5	Monitoring of the adequacy of sediment and water controls as prescribed and immediate maintenance as required will be undertaken. Any impacts to be rectified and controls to be upgraded to address deficiencies. All incidents to be reported to Project Manager, including management measures required and/or implemented.	Twice per week, with additional inspections within: • one hour of commencement of a rain event during working hours • every four hours for periods of continuous rain during working hours • within 12 hours of a rain event outside working hours	Project Environmental Officer and Construction Manager
2.6	Monitor and treat infestations of weeds in the RCS. Map and record all infestations and their treatment.	Every three months	Project Ecologist and Construction Manager
2.7	Monitor for evidence of water runoff and / or sedimentation that could impact habitat within the RCS or within Milford.	Every three months or within 24 hrs of major rain event (50 mm in a 24 hour period)	Project Environmental Officer and Construction Manager
2.8	Prepare Management Report specific to the RCS	Annually	Project Ecologist
Postconstruction - Defects Liability Period			
3.1	Rehabilitate any construction areas not required for operations. Any stockpiled material is to be removed and topsoil spread across the area. This is to be seeded with a native grass mix using species indigenous to the area.	Within one month of construction completion	Project Environmental Officer and Construction Manager
3.2	Monitor and treat weeds in the RCS	Every six months	Project Ecologist and Construction Manager
3.3	Prepare Management Report specific to the RCS	Annual	Project Ecologist
Post construction – After Defects Liability Period			
4.1	Management (following actions 3.1-3.4) of new roadside adjacent to orchid habitat will be handed over to and incorporated into the State Growth RCS Program	Annual	Project Environmental Officer

In addition to the above activities, all works must comply with the Department's Standard Specification for Environmental

Management. This specification mandates the minimum requirements to be met by [redacted] Water Quality, Air Quality, Erosion and Sediment Control, Contaminated Soils and Materia[redacted] and Reporting. A copy is included in Appendix F. Additional requirements that will be ac[redacted]luded below.

4.4 Additional specification requirements

The following additional requirements over and above those mandated in the Environmental Management Specification will be included.

4.4.1 Project Environmental Officer

The Project Environmental Officer shall:

i. Be a suitably experienced and skilled environmental management professional and shall prepare the Contractor's Environmental Management Plan and manage and monitor all environmental issues and environmental treatments implemented during construction.

ii. Have the environmental management requirements of the Contract as their sole responsibility.

iii. Have a minimum of five years experience in environmental management, with a minimum of two years environmental management experience in a road construction environment;

iv. Have demonstrated competence and suitable experience in environmental management in a construction environment with high environmental risks and/or complex environmental issues;

v. Be eligible for membership with the Environment Institute of Australia and New Zealand (EIANZ), Engineers Australia or other appropriate affiliation;

4.4.2 Erosion and sediment control

Sedimentation basins shall be utilised as the primary sediment control for the works along the Milford boundary unless the Contractor can demonstrate to the Superintendent's satisfaction that the implementation of a sedimentation basin is not technically feasible for the works.

Where sedimentation basins are proposed as control measures, basins shall be designed to contain flows from a rainfall event having an Average Recurrence Interval of not less than two years and six hours duration when allowing for a 30% reduction in capacity as a result of sediment accumulation.

Sedimentation basins shall be modelled and sized to manage rainfall intensities and soil characteristics specific to the region and for any material that is imported to the site. The sizing and modelling of sedimentation basin(s) shall consider the expected works and associated area of disturbance within catchment area(s) within the site.

The sizing and modelling of temporary sedimentation basins shall be undertaken using recognised 'best practice' modelling techniques or '*VicRoads Temporary Sedimentation Basin Design Tool*'.

Spillways shall be designed for an event having an Average Recurrence Interval of five years

Sedimentation basins shall be cleaned out whenever the accumulated sediment has reduced the capacity of the basin by 30% or more, or whenever the sediment has built up to a point where it is less than 500 mm below the spillway crest, whichever occurs earlier.

Along

4.4.3 Environmental audits and surveillance

The Contractor shall arrange an audit of the Environmental Management Plan prior [redacted] s.

The environmental audit shall be undertaken by an environmental auditor that is inc [redacted] specialist in the employment of the Contractor is not acceptable) and has no involve [redacted] Contractor's EMP for the works under this Contract.

The Contractor's Environmental Management Plan shall be audited to ensure compliance with the Specification and Management Actions listed in section 4.2 above and to verify that the EMP will be sufficient to protect the beneficial uses.

The Superintendent will arrange surveillance and audits to verify the effectiveness of the Environmental Management Plan and compliance with this Specification and the Management Actions listed in section 4.2 above.

The Contractor shall co-operate with any reasonable requests by the Superintendent or from relevant environmental agencies to undertake environmental audits and or surveillance activities of the Contract.

All non-conformances arising from an audit shall be addressed by the Contractor. The Contractor shall take immediate action to address any significant environmental non-conformance identified by an audit.

If the Contractor does not take action to address a non-conformance, the Superintendent may invoke cost penalties under the Contractor or may act to resolve the non-conformance and the cost of such action shall be deducted from moneys due or becoming due to the Contractor.

4.5 Ongoing Roadside Management

The roadside adjacent to Milford will be incorporated into the Department of State Growth Roadside Conservation Program recognising its proximity to priority orchid habitat and the importance of a high standard of management to reduce the risk of any adverse impacts to that habitat. This will include creation of a Roadside Conservation Area that will be included in the RCS Access database where all site detail and management works are documented, and Management reports prepared annually for three years and then in line with the RCS program every 5 years thereafter. Annual reporting of management actions will also be prepared in line with the reporting regime for the RCS program. This describes works conducted and prescribes works for the forthcoming year.

Most vegetation management works in this section of the roadside will be conducted by a qualified bushland management contractor. Standard roadside maintenance works will be limited to operational safety matters relating to maintenance of the road, shoulder and road furniture such as safety barriers and culvert outlets.

- The site will be subject to 6 monthly inspections for weeds and other impacts such as sedimentation, flood discharge impacts and rubbish dumping. Any identified issues will be reported and made good
- All weeds recorded and treated will be mapped and reported
- Any likely threatening processes that may impact on the adjacent orchid habitat will be identified, reported and monitored. Recommendations will be included in the management report to address any such issues
- Annual reporting will include documentation of management actions and prescription of actions for the next 12 month period.

An outline management plan for the Roadside Conservation Area is provided in Appendix G, noting that there are elements of this plan that cannot be developed until the Conservation area is established.

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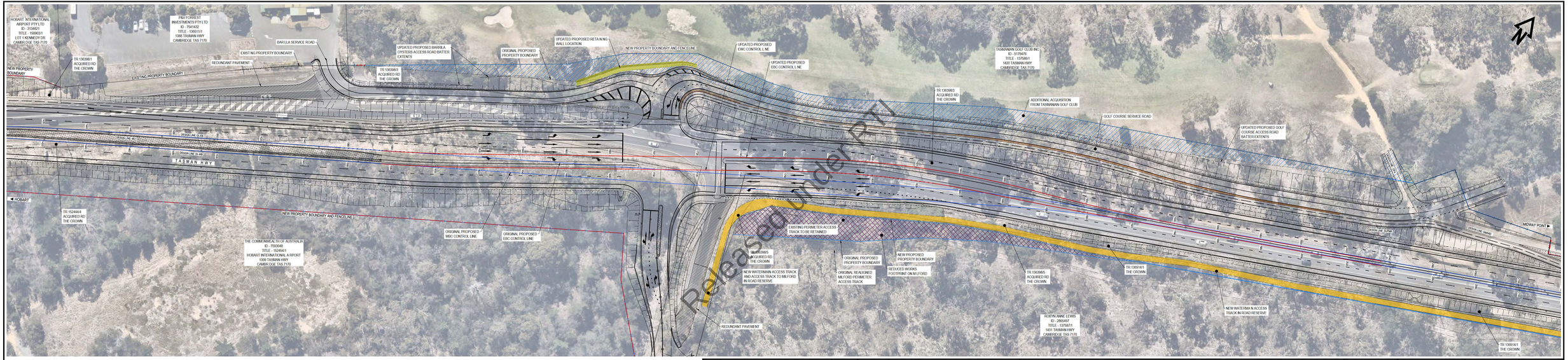
Plan of Realignment

Appendix A



LEGEND

- ADDITIONAL ACQUISITION FROM TASMANIAN GOLF CLUB
- REDUCED WORKS FOOTPRINT ON MILFORD

No.	Amendment Description	Initials	Date
Roll Plan	This sheet may be prepared using colour and may be incomplete if copied.		

SCALES

10 0 10 20 30 40

SCALE IN METRES - 1:500

Co-ordinate System: Height Datum:

pltt&sherry

Tasmanian Government

DESIGNED

REVIEWED

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS

NEW ALIGNMENT ROLL PLAN

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-P10.dwg	18-Apr-24, 11:09 AM	P10

REGISTRATION NUMBER
A0113.028

REVISION

pitt&sherry

Orchid Habitat Significant Impact Assessment

Appendix B

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Revised EPBC Footprint

Appendix C

No.	Amendment Description	Initials	Date

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

SCALES
1:5000m (A3)
50 0 50 100 150 200
SCALE IN METRES - 1:5000

Co-ordinate System: MGA ZONE 55 | Height Datum: A.H.D.

pitt&sherry

DESIGNED T.T.
REVIEWED R.M.

Department of State Growth

TASMAN HIGHWAY (A0113)
AIRPORT INTERCHANGE TO MIDWAY POINT CAUSEWAY
ROADWORKS

VARIED EPBC FOOTPRINT

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
3148	HB19197-P102	17-Apr-24, 10:03 AM	P104

REGISTRATION NUMBER
A0113.028

REVISION -

pitt&sherry

Golf Course Natural Values Assessment

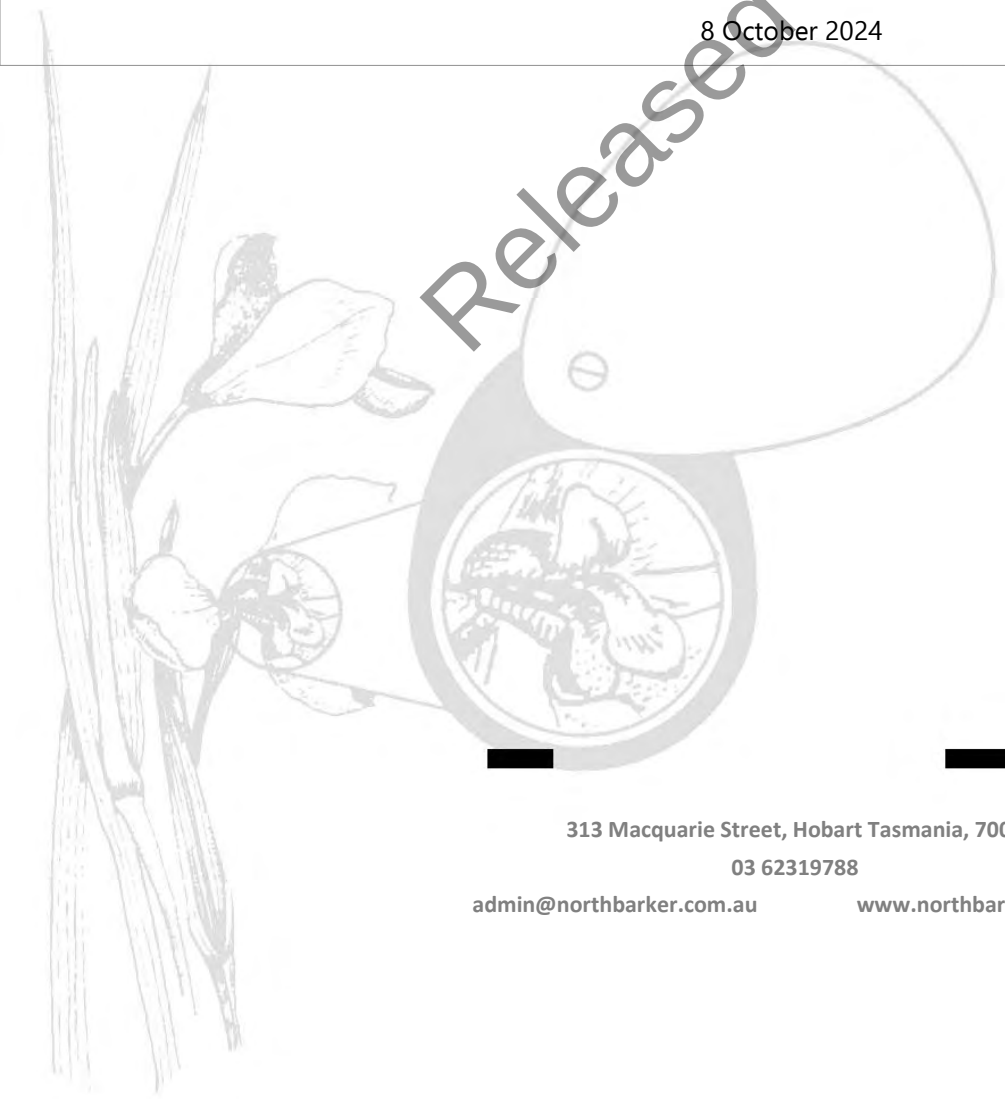
Appendix D

Tasman Highway Southeast Tasmania Transport Solution (SETS)
Tasmania Golf Club
changes to design

Natural Values Implications

For Pitt & Sherry obo Department of State Growth
PAS150

8 October 2024



[redacted] [redacted]

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Contributors:

Project Management: Andrew North

Mapping: s36

Photos: s36

File Control

Version	Date	Author	Comment
V 1.0	04/04/2024	A North	Response to Council RFI
V1.1	08/04/2024	A North	Response to review by s36

Contents

1 Introduction

1.1 Background

The Department of State Growth (DSG) is proposing to duplicate the Tasman Highway between Hobart Airport Interchange and Pitt Water Bluff, which forms one stage in the Southeast Tasmania Traffic Solutions Project (SETS). SETS aims to help maintain the liveability of Sorell and the southern beaches by improving travel time reliability and safety through a more efficient and safer road network.

The widened highway corridor necessitates changes in the layout of infrastructure of the Tasmania Golf Club course.

A planning permit with Clarence City Council is in place for these works (PDPLANPMTD-2021/017986).

DSG are proposing a minor amendment (PDPLIMPLN-2023/040386) to the design that arise largely as a consequence of further changes proposed for the highway alignment that are intended to avoid any direct impact to habitat for threatened orchid species located within the Milford property on the south side of the Tasman Highway. The proposal to Council included a report describing the natural values along the north side of the Tasman Highway extending into the additional footprint area.

- *Tasman Highway Road, South-East Tasmania Transport Solution (SETS). Tasmania Golf Club, Natural Values Assessment Summary. North Barker Ecosystem Services 28 September 2023.*

Council have completed a preliminary planning assessment (dated 16 January 2024) which has identified a need for further information:

> d) The NVA summary, dated 28 September 2023 shows trees to be impacted by the proposed boundary realignment. However, no recommendations are provided in terms of level of impact to the vegetation community and the threatened fauna, and no mitigation or protection measures are proposed. Please provide detail to address this matter. It is recommended that the assessment approach under the *Nature Conservation Act 2022* and the Tasmanian (*Threatened) Species Protection Act 1999* be included in the planning report or the updated NVA summary for Council's information.

North Barker Ecosystem Services (NBES) previously completed a natural values assessment for the golf course works in 2021:

- *Tasman Highway. South East Tasmania Transport Solution (SETS). Tasmania Golf Club Natural Values Assessment. North Barker Ecosystem Services 11 June 2021.*

1.2 Purpose

This report makes a comparison between the approved layout and the proposed amendment and at the same time responds to Council's preliminary planning assessment item d) above.

To accommodate a modified road design the property boundary in the approval will be amended for a section of approximately 400 m by being extended up to 10 m at its widest point. The impacts of additional vegetation clearance and tree removal associated with the amended design are addressed separately as they pertain to different planning permit for the highway upgrades (PDPLANPMTD-2021/017782).

2 Biological Values

The site was included in a survey of the northern side of the Tasman Highway undertaken in September 2023 that included the land impacted by the original proposal plus that within the proposed amendment.[1]

2.1 Vegetation

The following native vegetation community is present throughout the proposed amendment:

- *Eucalyptus viminalis- E. globulus* coastal forest and woodland (DVC)

The community is dominated exclusively by *Eucalyptus viminalis* (white gum) that reach heights up to 30 m tall and is consistent with much of the native vegetation of the local surrounding areas including other areas on the golf course, airport land and the nearby Milford property. This woodland has been subject to clearance and degradation associated with the development and uptake of the adjacent golfing fairway. The understorey has been largely excluded through regular slashing. Overall, this DVC community is in moderate-poor ecological condition with no evidence of recruitment. Plate 2 shows how this area of vegetation is limited to ground cover and mature trees only with all other vegetation being removed.

The DVC community comprises a mature overstorey of *E. viminalis* including many large trees exceeding 100 cm DBH. Several large trees recorded within this vegetation community were observed to have potential for hollows that could support threatened fauna habitat.

Eucalyptus viminalis – E. globulus coastal forest and woodland is listed as threatened under the Tasmanian *Nature Conservation Act 2002* (NCA).

Plate 1. DVC west of the Tasman Highway showing mature white gums

[1] North Barker Ecosystem Services 2023

Plate 2. DVC in amendment area is limited to trees with limited understorey

2.2 Threatened Flora

No threatened flora species were recorded or thought likely to occur in the proposed amendment. There are no records of threatened flora from this and adjacent section of vegetation along the northern side of the Tasman Highway even though there have been multiple surveys, other than for one low accuracy (100 m) observation record of small shrub *Eutaxia microphylla* from 1985, collected from somewhere on the Tasmania Golf Club, most likely near clifftops.

Threatened orchids including *Caladenia caudata* (TSPA vulnerable, EPBCA vulnerable), *Caladenia saggicola* (TSPA endangered, EPBCA critically endangered) and *Prasophyllum milfordense* (TSPA endangered, EPBCA critically endangered) have all been recorded at the adjacent Milford property. There are historic records of just one (*C. caudata*) from the Tasmania Golf Club. There is no evidence of, nor is the habitat likely to be suitable for, any of these species in the amendment area.

2.3 Threatened Fauna and Threatened Fauna Habitat

Large mature white gum *Eucalyptus viminalis* trees offer potential habitat for the following threatened woodland bird species:

Tasmanian masked owl (*Tyto novaehollandiae* subsp. *castanops*)

Tasmanian masked owl (*Tyto novaehollandiae* subsp. *castanops* (TSPA endangered, EPBCA vulnerable)) has been observed at the adjacent Milford property and across the broader landscape[2]. The Forest Practices Authority (FPA) technical note for identifying masked owl habitat considers any tree with a large hollow (>15 cm diameter) as potential habitat. Trees with a DBH > 100 cm are considered to have the greatest likelihood to support hollows within the size ranged favoured by masked owls[3].

Trees were assessed from the ground and conditions of their potential to provide habitat noted.

[2] Department of Natural Resources and Environment (2023)
[3] Forest Practices Authority (2014)

Blue-winged parrot (*Neophema chrysostoma*)

The white-gums contained within the study area offer potential nesting habitat for the blue-winged parrot (*Neophema chrysostoma* (EPBCA vulnerable)). The blue-winged parrot migrates to and from Tasmania after breeding each year, leaving in March to April and returning in August to October. Blue-winged parrots nest in tree hollows, preferably with a vertical opening[4]. It is considered likely that the DVC bushland across the golf course and adjacent Milford property provides potential habitat for the blue-winged parrot.

Other hollow nesting birds including eastern rosella and galas have been observed in our surveys to be utilising trees each side of the highway.

Swift parrot (*Lathamus discolor*)

The study area is within the potential breeding range of the swift parrot (*Lathamus discolor* (TSPA endangered, EPBCA critically endangered)). The study area is not within a delineated swift parrot important breeding area (SPIBA), but it is close to both the Wielangta and Meehan Range SPIBAs.

Similar to the blue-winged parrot, the mature white gums located in the DVC community at the golf course offer tree hollows that could support swift parrot breeding. However, considering the higher quality nearby and the absence of local patches of *Eucalyptus globulus* and *E.* ovata, which are the primary foraging resources for the swift parrot, it is considered unlikely that swift parrots would choose to utilise the habitat within the study area for breeding.

Although the study area may provide habitat as part of a home range of other threatened vertebrate fauna, there are no site-specific features that are of importance for these species.

Plate 3. Mature white gum (*Eucalyptus viminalis*)

2.4 Weeds

No declared weeds listed under the *Biosecurity Act 2019* or environmental weeds were recorded in the extension area.

[4] Birdlife Australia (2023)

Figure 1. Significant trees including TPZ's and threatened fauna habitat within the amendment

3 Comparison of Impact

A narrow sliver of land is included in the amendment. The alignment of the boundary in itself has no direct impact on the existing biodiversity values other than it exercising the powers of the *Boundaries Fences Act1908* which allows the removal of vegetation 2 m each side of the fence and of trees at risk of falling on the fence. The boundary adjustment will facilitate the proposed upgrades to the Tasman Highway and associated vegetation clearance. Those works form part of a separate permit PDPLANPMTD-2021/017782 that is addressed separately to this report.

Nevertheless, below we have provided some indication of the likely consequences of the changes.

3.1 Vegetation

There is a narrow sliver of DVC between the Tasman Highway and the existing 16th fairway. Much of the area of DVC that is located north of the Tasman Highway will be impacted by the approved development arising from the boundary adjustment. The additional widening will remove a narrow remnant of the area mapped as this community occupying approximately 0.27 ha.

3.2 Threatened Flora

No threatened flora species listed either under the TSPA or the EPBCA will be impacted directly by the project.

3.3 Threatened Fauna and Threatened Fauna Habitat

Six mature white gums *Eucalyptus viminalis* are located within the extended footprint north of the highway. In addition, the tree protection zones[5] of three others are significantly encroached and may be adversely impacted. It is likely that five of the trees within the extended footprint would have been adversely impacted due to the scale of encroachment into their root zones.

4 Management of Additional Impact

Council's planning assessment report, item d) refers to mitigation of impacts to the DVC and threatened fauna habitat. These impacts, being associated with road widening, are more appropriately considered when reviewing implications to permit PDPLANPMTD-2021/017782.

There are several habitat trees that will remain on or close to the new boundary. Advice from an arborist may inform the likelihood of survivorship of trees where there is likely to be significant encroachment into the tree protection zone. Although we have assumed impact to the new fenceline there may be opportunity to limit excavation around the trunks of trees. The detailed design actually suggests the impacts of the earthworks don't reach all the way to the fence. (Figure 2) which may provide opportunity for some of these trees to survive, notwithstanding limited space to construct retaining walls as proposed for this site.

There is no scope for retaining DVC south of the existing fairway.

[5] The tree protection zone TPZ is a specified area above and below ground at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The TPZ is calculated for each tree by multiplying its DBH by 12, with a minimum TPZ of 2 m and a maximum of 15 m as defined in the *Australian Standard for Protection of trees on development sites*.

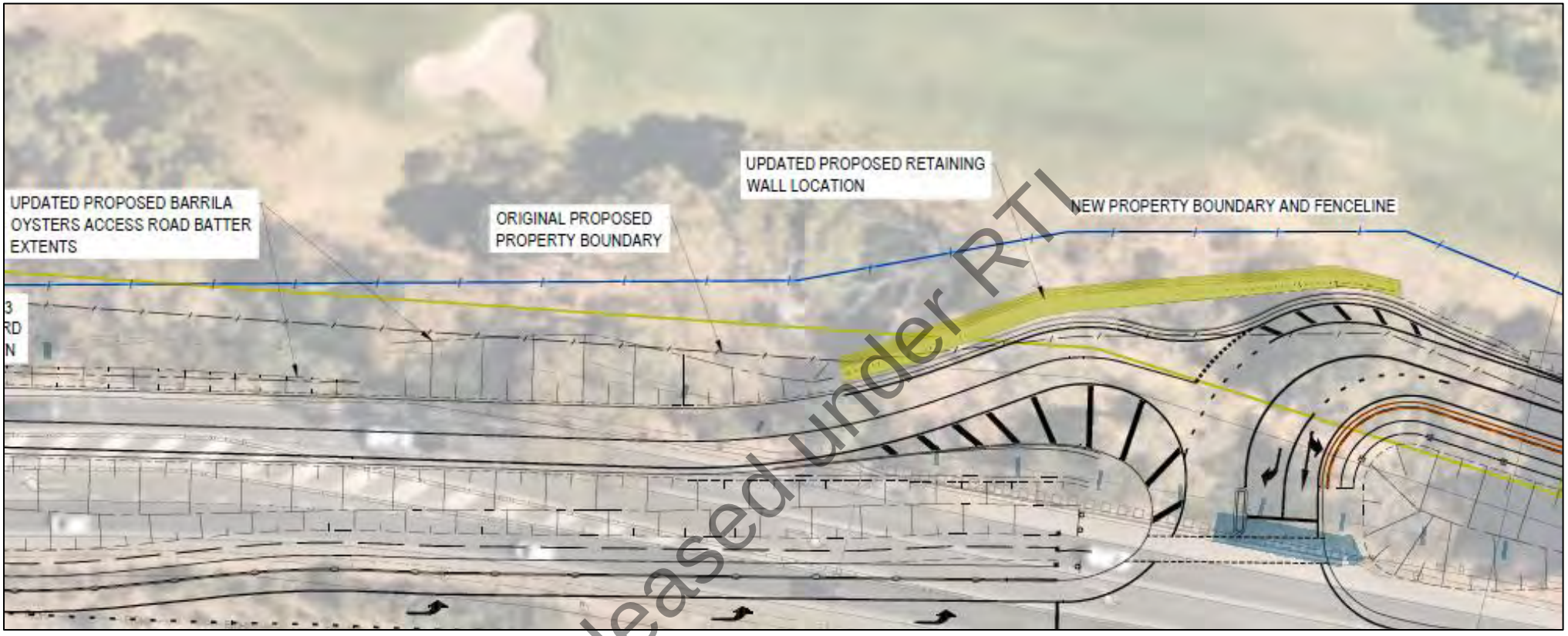


Figure 2: Detail of road design plans showing gap between edge of earthworks and new property boundary fence

.

References

Birdlife Australia (2023). 'Blue-winged Parrot *Neophema chrysostoma*', Working list of Australian birds, Melbourne, Victoria.

Forest Practices Authority (2014), 'Identifying masked owl habitat', Fauna Technical Note No. 17, Forest Practices Authority, Hobart, Tasmania.

North Barker Ecosystem Services (2020). Tasman Highway. Holyman Avenue to Pittwater Road, Natural Values Assessment. 30 September 2020.

North Barker Ecosystem Services (2023). Tasman Highway Southeast Tasmania Transport Solution (SETS) Tasmania Golf Club Natural Values Assessment Summary.

pitt&sherry

Pittwater Road Drainage Improvements

Appendix E

pitt&sherry

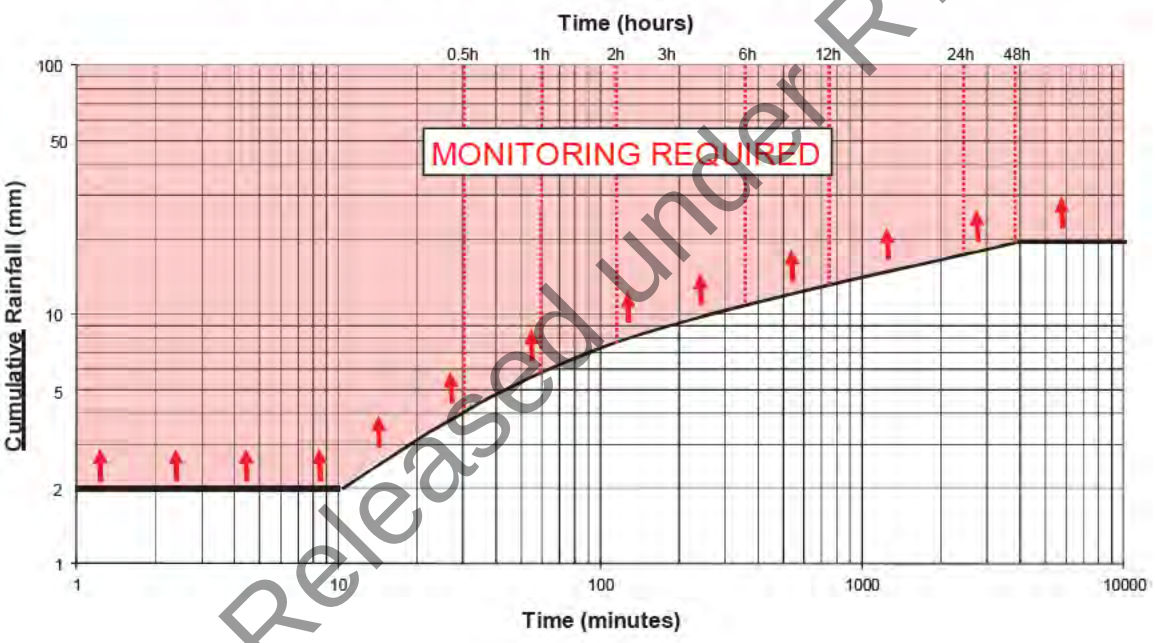
Contract Environmental Management Specification

Appendix F

ATTACHMENT A TO SECTION 176

RAINFALL INTENSITY CHART

RAIN EVENT - MONITORING TRIGGER



pitt&sherry

Management Plan for Roadside Conservation Area

Appendix G

northbarker
ECOSYSTEM SERVICES

Milford Conservation Area (MLF)
Roadside Biological Monitoring and Management Report

18th of April 2024

For Department of State Growth

DSG052

313 Macquarie Street, Hobart Tasmania, 7000
03 62319788
admin@northbarker.com.au www.northbarker.com.au

Preface

This report describes the intended scope of the biological monitoring and management actions that will be carried out on the roadside adjacent to priority orchid habitat on the Milford property. These activities will be facilitated through creation of the Milford Conservation Area which will be established at the conclusion of the Tasman Highway upgrade works between the Hobart Airport Interchange and the Midway Point Causeway. The Conservation Area will be included in the Department of State Growth Roadside Conservation Program (RCS). Site detail from biological monitoring and the management activities will be documented in the RCS database.

This report will be updated when construction has been completed recognising the features of the Conservation Area at that time.

MILFORD CONSERVATION AREA

The Milford Conservation Area will be established once construction of Tasman Highway upgrade is complete. The Conservation Area will be adjacent to Milford property on the southern side of the Tasman Highway opposite the Tasmania Golf Club. The inclusion of this Conservation Area into the Roadside Conservation Program is an acknowledgement of the proximity of the area to priority orchid habitat and the importance of the high standard of management required to reduce the risk of any adverse impacts to that habitat.

At the completion of construction, the area between the road verge and the new property boundary will be spread with topsoil and the area to be seeded with native grass mix using species indigenous to the area (Section 4.3, Item 3.1 of Table 3, EPBC Act Referral 202085: *Realignment of the original design adjacent to the Milford Property* 18/4/2024). This area will be monitored and weeds controlled by the construction contractor under strict specification requirements until the end of the defects liability period. After that period, the new roadside area between Pittwater Road and approximately 220 m east of the Milford driveway will be managed as the Milford Conservation Area under the Department of State Growth Roadside Conservation Program.

The sites within the Conservation Area will be monitored and treated for processes that may threaten priority orchid habitat including weed infestation and rubbish.

Two sites will be set up between the road edge and the new property boundary.

Location

Tasman Highway between Pittwater Road and Midway Point (southern side).

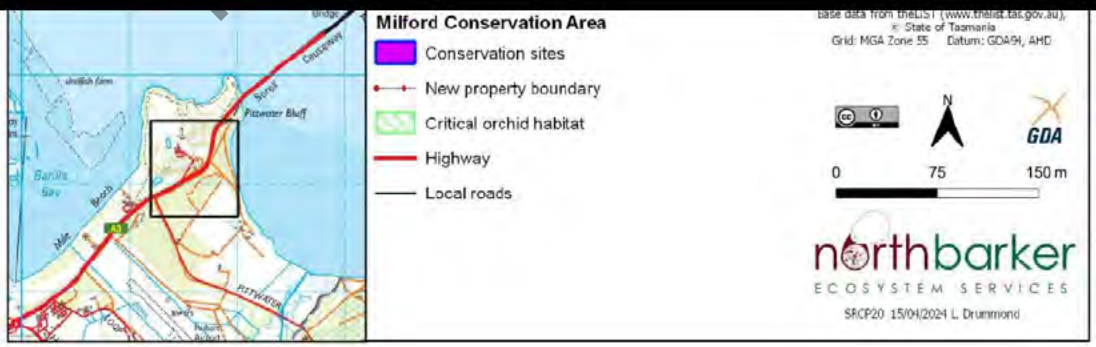
Area History

The area that will become the Milford Conservation Area is currently managed roadside verge (DSG) and native vegetation (private property). The Area is adjacent to priority orchid habitat for three EPBCA listed orchid species; Milford Leek-orchid (*Prasophyllum milfordense*), Sagg Spider-orchid (*Caladenia saggicola*), and Tailed Spider-orchid (*Caladenia caudata*).

The roadside vegetation currently supports an elevated proportion of non-native invasive weeds species which are able to exploit the disturbed roadside environment. Dominant herbaceous weed species include cocksfoot grass (*Dactylis glomerata*), shaking grass (*Briza maxima*), panic veldt grass (*Ehrharta erecta*), fog grass *(Holcus lanatus*), rough catsear (*Hypochoeris radicata*), scarlet pimpernel (*Anagallis arvensis*) and garden freesia (*F. alba* x *F. leichtlinii*). The woody weed bluebell creeper (*Billardiera heterophylla*) is also known from both the roadside verge and within the native vegetation adjacent.

Management of weeds and disturbance elements that facilitate and promote weed growth are key to the establishment of this Conservation Area.

s42


Milford Conservation Area
Conservation sites
New property boundary
Critical orchid habitat
Highway
Local roads
Base data from theLIST (www.thelist.tas.gov.au)
© State of Tasmania
Grid: MGA Zone 55 Datum: GDA94, AHD
N
GDA
0
75
150 m
northbarker
ECOSYSTEM SERVICES
SRCP20 15/04/2024 L Drummond

Conservation Values

Vegetation communities	Scientific name	TSPA	EPBCA
None currently identified in the proposed Milford Conservation Area			

Conservation Sites included in this Conservation Area

Site	Location	Side of the road	Length (m)
Milford site west (MLF01)	Pittwater Road to Milford driveway	RHS	640
Milford site east (MLF02)	Milford driveway towards Sorell Causeway	RHS	220

Individual management plans for each site are provided below.

MLF01
Milford Site West

Location details

Pittwater Road to Milford driveway.

This site will contain TasWater watermain and access track, and stormwater swale at the base of the batter.

Start link	Start chng	End link	End chng	Site length (m)
10	1710	10	2310	640 m

Threatened flora

None identified, noting that the area will be subject to extensive modification due to the construction of the new Highway. The intention of this Roadside Conservation Site is to ensure that roadside maintenance activities in the future do not cause harm to the adjacent orchid habitat.

Vegetation Communities

Vegetation communities	Area	NCA	EPBCA
Rehabilitated postconstruction roadside			

Site Survey History

September & October 2019	Natural Values Assessment	North Barker Ecosystem Services (2020) Tasman Highway, Holyman Avenue to Pittwater Bluff, Natural Values Assessment
September 2020	Natural Values Assessment	North Barker Ecosystem Services (2020) Tasman Highway, Hobart Airport Interchange to Pitt Water Bluff (including associated works on Tasmania Golf Course) Matters of National Environmental Significance, Significant Impact Assessment
February 2022	Orchid assessment	North Barker Ecosystem Services (2022) Tasman Highway Hobart Airport Interchange to Sorell Causeway, Orchid Habitat Impact Assessment and Mitigation Plan
April 2024	Natural Values Implications	North Barker Ecosystem Services (2024) Tasman Highway Southeast Tasmania Transport Solution (SETS) Holyman Avenue to Pittwater Bluff changes to design. Natural Values Implications

This section will be updated to provide a list of biological monitoring surveys and management actions as they are undertaken.

Comment on traffic management

The Conservation Area can be accessed from the proposed new watermain access track between Pittwater Road and the existing Milford access 640 m east of Pittwater Road.

Photo points

Name of photopoint	Easting	Northing	Description	Reason
MLF01 Photopoint 1				
MLF01 Photopoint 2				

Photo points to be set up at commencement of site management.

INSERT PHOTO
Photopoint 1 dd/mm/yyyy

INSERT PHOTO
Photopoint dd/mm/yyyy

Threatened flora

Monitoring counts and commentary of any threatened flora will be provided. Previous records of threatened flora populations also provided where applicable.

Threats

This section provides a list of threats to conservation values identified during biological surveys. It informs the management recommendations below. Anticipated threats are provided here and will be updated at commencement as a roadside conservation site.

Threat type	Threat	Detail
Woody weeds	Infestation of adjacent native habitat	
Grassy weeds	Infestation of adjacent native habitat	
Rubbish		
Soil erosion	Degradation of adjacent native habitat	
Failed rehabilitation plantings	Erosion, water run off	Assess success of rehabilitation plantings

Notes and photos to be provided.

Management recommendations

Based on the threats observed during biological monitoring and any previous recorded threats, management actions are recommended. The below table describes works conducted and prescribes works for the forthcoming year.

Initial assessments of the weed presence and success of seeded native grass in stabilising the site will be made post defects liability period. Planting of alternative species including ground covers and low shrubs may be recommended. Plantings will be selected from a list of local, common, well-performing species (Appendix 1) based on site assessments and availability. Species selection will need be site-specific and take into account zones within this site eg batter, stormwater swale, TasWater access track, fence line interface with native vegetation.

Threat type	Detail	Threshold	Response	Action taken	Planned action
Woody weeds	Eg bluebell creeper	Presence	Cut and paste		Monitor
Grassy weed	Eg cocksfoot, panic veldt grass	Presence	Spot spray or pull.		Monitor
Rubbish	Roadside rubbish	Presence	Collect and remove		Monitor
Soil erosion	Any	Presence	Liaise with DSG		Monitor
Rehabilitation failure	Assess success of rehabilitation plantings	TBC	Replace losses, consider alternative plantings		Monitor

Biological Monitoring

Biological monitoring will be undertaken annually for three years, and every five years thereafter. The below table is an example of an initial set up biological monitoring event.

In addition to annual biological monitoring undertaken by an ecologist, treatment and mapping of weeds and any other threatening processes will be undertaken every six months for three years. After three years, regular threat inspections and management will be undertaken annually and biological monitoring and reports undertaken every five years.

Next biological monitoring	TBA
Time (season)	Anytime (no threatened flora survey time constraints)
Activities	Record threats Assess revegetation health and progress Establish photo points Establish site Establish site signage

State Growth Maintenance

Prescribed mowing and Spraying Management:

- **Slashing:** Type C: 150mm, reduced width 1.2m
- **Spraying:** No spray
- **Sapling Cut:** No restriction.
- **Sightline issues:** N/A.

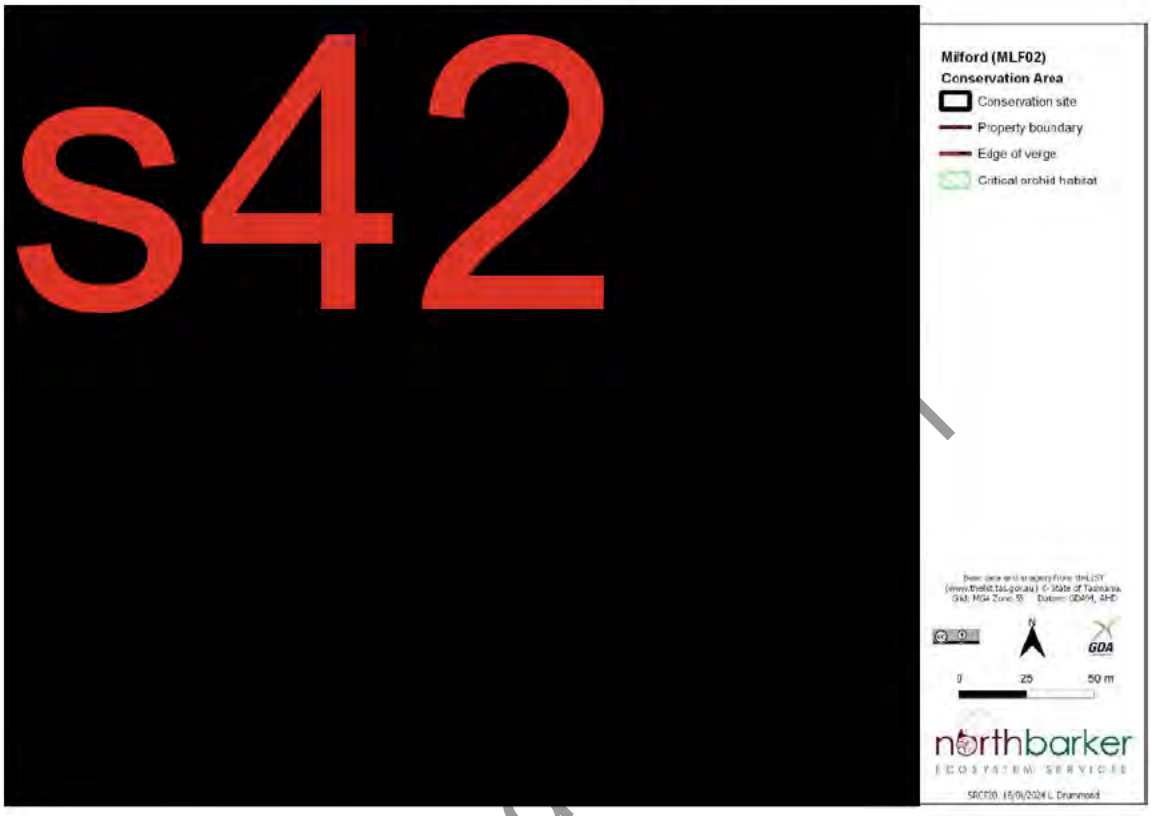
Observed roadside management:

N/A

Recommended changes to State Growth maintenance:

N/A

MLF02
Milford Site East



Location details

Milford driveway towards Sorell Causeway.

Approximately 220 m in length adjacent to the priority orchid habitat within adjacent native vegetation

Start link	Start chng	End link	End chng	Site length (m)
10	2320	10	2540	220

Threatened flora

None identified, noting that the area will be subject to extensive modification due to the construction of the new Highway. The intention of this Roadside Conservation Site is to ensure that roadside maintenance activities in the future do not cause harm to the adjacent orchid habitat.

Vegetation Communities

Vegetation communities	Area	NCA	EPBCA
Rehabilitated postconstruction roadside			

Site Survey History

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Comment on traffic management

The Conservation Area can be accessed from the proposed new watermain access track between Pittwater Road and the existing Milford access 640 m east of Pittwater Road.

Photo points

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MLF01 Photopoint 1				
MLF01 Photopoint 2				

Photo points to be set up at commencement of site management.

INSERT PHOTO
Photopoint 1 dd/mm/yyyy

INSERT PHOTO
Photopoint dd/mm/yyyy

Threatened flora

Monitoring counts and commentary of any threatened flora will be provided. Previous records of threatened flora populations also provided where applicable.

Threats

This section provides a list of threats to conservation values identified during biological surveys. It informs the management recommendations below. Anticipated threats are provided here and will be updated at commencement as a roadside conservation site.

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Grassy weeds	Infestation of adjacent native habitat	
Rubbish		
Soil erosion	Degradation of adjacent native habitat	
Failed rehabilitation plantings	Erosion, water run off	Assess success of rehabilitation plantings

Notes and photos to be provided.

Management recommendations

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Initial assessments of the weed presence and success of seeded native grass in stabilising the site will be made post defects liability period. Planting of alternative species including ground covers and low shrubs may be recommended. Plantings will be selected from a list of local, common, well-performing species (Appendix 1) and selections will be based on site assessments and availability.

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Woody weeds	Eg bluebell creeper	Presence	Cut and paste		Monitor
Grassy weed	Eg cocksfoot, panic veldt grass	Presence	Spot spray or pull.		Monitor
Rubbish	Roadside rubbish	Presence	Collect and remove		Monitor
Soil erosion	Any	Presence	Liaise with DSG		Monitor
Rehabilitation failure	Assess success of rehabilitation plantings	TBC	Replace losses, consider alternative plantings		Monitor

Biological Monitoring

Biological monitoring will be undertaken annually for three years and every five years thereafter. The below table is an example of an initial set up biological monitoring event.

In addition to annual biological monitoring undertaken by an ecologist, treatment and mapping of weeds and any other threatening processes will be undertaken every six months for three years. After three years, regular threat inspections and management will be undertaken annually and biological monitoring and reports undertaken every five years.

Next biological monitoring	TBA
Time (season)	Anytime (no threatened flora survey time constraints
Activities	Record threats Assess revegetation health and progress Establish photo points Establish site Establish site signage

State Growth Maintenance

Prescribed mowing and Spraying Management:

- **Slashing:** Type C: 150mm, reduced width 1.2m
- **Spraying:** No spray
- **Sapling Cut:** No restriction.
- **Sightline issues:** N/A.

Observed roadside management:

N/A

Recommended changes to State Growth maintenance:

N/A

Appendix A

List of species appropriate for revegetation of Milford Conservation Area roadside reserves

Species	**common name**
Acaena novae-zelandiae	Buzzy
Austrostipa flavescens	Yellow Spear Grass
Bossiaea cinerea	Showy Bossiaea
Carpobrotus rossii	Pigface
Cynoglossum australe	Coastal Hounds tongue
Daviesia sejugata	Leafy Spikey Bitterpea
Dianella brevicaulis	Short Stem Flax Lily
Ficinia nodosa	Knobby Club Rush
Indigofera australis	Native Indigo
Kennedia prostrata	Running Postman
Lomandra longifolia	Sagg
Poa poiformis	Coastal Tussock
Rhagodia candolleana	Coastal Saltbush
Tetragonia implexicoma	Bower Spinach

pitt&sherry

[redacted]

Realignment of the Original Design Adjacent to the Milford
Property

ty Ltd
4 309

Phone 1300 748 874
info@pittsh.com.au
pittsh.com.au

Located nationally —
Melbourne
Sydney
Brisbane
Hobart
Launceston
Newcastle
Devonport

From: s36
To: s36
Subject: Tasmania Golf Club Access
Date: Monday, 22 April 2024 7:38:55 AM

Hi s36

Summary of Discussion with Tasmania Golf Club about safety of Current Access

s36 (DSG) and s36 (Pitt & Sherry) met with John Milbourne (President and Ben Hayes (Club Captain) to discuss the Golf Club's concerns about the current access.
It was noted that the highway upgrade is at least two years away from completion given the current status of the EPBC referral (EPBC approval best case 6 months, calling tenders and construction 18 months).

s39 [redacted]

s36 and s36 advised that s39 [redacted]

[redacted]

s39 [redacted]

David Conley
Principal Engineer

Mobile s36 [redacted] | s36 [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: s36
To: s36
Subject: Tasman Highway - Airport Interchange to Midway Point Causeway - February Invoice
Date: Tuesday, 23 April 2024 4:48:56 PM
Attachments: 3100B-6-37 - P.19.0406 - Draft invoice PIP023417.pdf
April 2024 Forecast - Copy.xlsx
HB19197 April 2024 Report.docx

Hi s36

Attached for your approval please find April invoice, report and forecast.

Regards

s36
Principal Engineer

Mobile s36 | s36 @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

pitt&sherry

Pro forma Tax Invoice

Pitt & Sherry (Operations) Pty Ltd
Level 4, 113 Cimitiere Street
LAUNCESTON TAS 7250
AUS
Tel: 1300 748 874
Em: info@pittsh.com.au
ABN: 67140184309

Bill To:

Department of State Growth
4 Salamanca Place
HOBART TAS 7000
AUS
Tel:
Em:
ABN: 36388980563

Invoice number:	**PIP023417**
Invoice date:	23/04/2024
Payment terms:	14DAYS
Due date:	07/05/2024
Currency:	AUD
Customer reference:	3100B-6-37
Customer account:	C08439

SUMMARY OF CHARGES PAYABLE ON THIS INVOICE **NET AMOUNT**

Professional services for the period to 19 April 2024

P.19.0406.013 - SETS Project Management to 31 March 2023	**Time and material**	**1,197.48**
P.19.0406.020 - ADJ9 - Ongoing EPBC Approval Costs	**Time and material**	**7,059.66**
P.19.0406.023 - Amendments to Planning Permits	**Fixed-price**	**16,183.53**

Details on next page

PAYABLE ON THIS INVOICE

Currency	Net amount	GST amount	Total
AUD	24,440.67	2,444.07	**26,884.74**

Due date : 07/05/2024

Out of scope

Interest will be charged on overdue accounts

pitt&sherry

Details + T/S

Description	Resource	Quantity	Unit price	Net amount
P.19.0406.013 - SETS Project Management to 31 March 2023				
Hours / Time & Materials				
SETS Project Management				
25/03/2024 Project Adminstration	s36	s38		
10/04/2024 Golf Course access				
11/04/2024 Golf Corse access				
17/04/2024 Golf Course mtg				
19/04/2024 summary of meeting				
Subtotal				**1,197.48**

	Previous claims	New charges
Charges for P.19.0406.013	**24,163.51**	**1,197.48**

P.19.0406.020 - ADJ9 - Ongoing EPBC Approval Costs				
Hours / Time & Materials				
Ongoing EPBC Approval Costs				
29/02/2024 Review NVA impact	s36	s38		
25/03/2024 EPBC Submission				
26/03/2024 EPBC submission				
04/04/2024 Review NB reports				
05/04/2024 Update EPBC				
10/04/2024 advice for mgt plan for RCS				
15/04/2024 report to DCCEEW				
16/04/2024 Report to DCCEEW				
16/04/2024 working through daves mark ups print and send for review				
17/04/2024 Report to DCCEEW				
17/04/2024 reviewed mark ups from dave				
18/04/2024 Report				
18/04/2024 minor mark ups				
Subtotal				**7,059.66**

	Previous claims	New charges
Charges for P.19.0406.020	**12,158.98**	**7,059.66**

P.19.0406.023 - Amendments to Planning Permits					
Milestones / Fixed Price	**Contracted Amt**	**Claims**	**CTD**	**Claim**	**This claim $**
Preliminary Planning Advice	s38				
Update Highway Drawings					
Revise Planning Reports					
Subtotal					
** CTD = Claim to date*					

	Previous claims	New charges
Charges for P.19.0406.023	**7,910.71**	**16,183.53**

Department of State Growth Invoice Report

Department Project No: 2220-3-128
Project description SETS - Airport Interchange to Causeway 1 HB19197
Progress Claim: No. 51
Period:

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Project Management	$144,872	$144,872		$144,872	100.00%	$144,872	
DSG Reporting and Stakeholder Management	$70,800	$70,800		$70,800	100.00%	$70,800	
Geotechnical Investigations	$129,025	$129,025		$129,025	100.00%	$129,025	
Concept Design	$24,592	$24,592		$24,592	100.00%	$24,592	
Environmental Investigations	$96,795	$96,795		$96,795	100.00%	$96,795	
Land Use Planning	$18,306	$18,305		$18,305	100.00%	$18,306	
Reports	$38,628	$38,628		$38,628	100.00%	$38,628	
Stakeholder Engagement	$99,126	$99,126		$99,126	100.00%	$99,126	
Constructability Reviews	$31,223	$10,928		$10,928	35.00%	$10,928	
Preliminary Design	$216,494	$216,494		$216,494	100.00%	$216,494	
Detailed Design	$349,066	$349,066		$349,066	100.00%	$349,066	
RFT	$9,528	$4,764		$4,764	0.00%	$9,528	
Post Tender P50/P90	$1,544	$0		$0	0.00%	$1,544	
Land Acquisitions	$43,929	$43,928		$43,927	100.00%	$43,929	
Survey	$57,225	$57,225		$57,225	100.00%	$57,225	
Road Safety Audits	$12,664	$12,664		$12,664	100.00%	$12,664	Draft inv PIP002668
Independent QS Estimate	$21,204	$0		$0	0.00%	$0	

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Variations (Change Orders)							
CO1: Concept Design of Golf Course Modifications	$21,500	$21,500		$21,500	100%	$21,500	
CO2: Presentation to Golf Club Members	$4,945	$4,945		$4,945	100%	$4,945	
CO2: Ongoing Advice	$8,600	$6,235		$6,235	73%	$8,600	
CO3: Golf course design	$94,600	$94,600		$94,600	100%	$94,600	
CO3: Civil Design of Dam	$39,600	$39,600		$39,600	100%	$39,600	
CO3: Environmental Assessment	$3,494	$3,494		$3,494	100%	$3,494	
CO3: Geotechnical investigation	$5,812	$5,812		$5,812	100%	$5,812	
CO3: Development Application	$7,712	$7,712		$7,712	100%	$7,712	
CO3: Specification and Tender Documents	$3,764	$0		$0	0%	$3,764	
CO3: Project Management	$11,612	$11,612		$11,612	100%	$11,612	
P.19.0406.005 - 3100B-6-37							
1.Environmental managment	$29,483	$29,483		$29,483	100%	$29,483	$107,199
2.Golf Club negotiation	$16,238	$16,238		$16,238	100%	$16,238	
3. Airport and Commomnwealth negotiation	$21,158	$21,158		$21,158	100%	$21,158	
4. DSG Project management	$33,040	$33,040		$33,040	100%	$33,040	
5. Amend PSCPW report	$7,280	$7,280		$7,280	100%	$7,280	
P.19.0406.006 - 3100B-6-42 EPBC Controlled Action Response	$46,430	$72,888		$72,888	157%	$72,888	
P.19.0406.006.001 - 3100B-6-42 ADJ 1 EPBC Controlled Action Response	$52,000	$39,139		$39,139	100%	$39,139	
P.19.0406.007 - 3100B-6-37 ADJ1 - Respond to CCC RFIs on DA	$41,400	$63,545		$63,545	100%	$63,545	
P.19.0406.007.001 - 3100B-6-37 ADJ - Additional DA costs	$10,000	$19,034		$19,034	100%	$19,034	
P.19.0406.007.002 - 3100B-6- 37-ADJ 03 Planning Appeal & Tribunal Hearing Costs	$49,520					$24,760	
P.19.0406.008 -3100B-6-37 ADJ2 - Additional Design Tasks	**$77,976**	**$64,791**		**$64,791**			
Shared path lights	$8,325	$8,325		$8,325	100%	$8,325	
Golf course dam	$16,610	$16,610		$16,610	100%	$16,610	
Golf course toilet at practice area	$7,485	$7,485		$7,485	100%	$7,485	
Milford access road	$24,171	$24,171		$24,171	100%	$24,171	
Milford compensatory planting area	$7,904	$3,900		$3,900	49%	$7,904	
Specialist advice contour golf (earthworks volumes)	$581			$0		$581	
Specialist advice contour golf (specification, timing , general advice)	$12,900	$4,300		$4,300	33%	$12,900	
P.19.0406.009 - 3100B-6-46 SETS Project Management	$62,896	$72,685		$72,685	100%	$72,685	
P.19.0406.010 - 3100B-6-46 ADJ 1 Golf Course Dam Approval fee	$1,036	$1,036	$ -	$1,036	100%	$1,036	
P.19.0406.011 - 3100B-6-46 ADJ 2 Bird Strike Risk Assessment	$14,518	$14,518		$14,518	100%	$14,518	
P.19.0406.012 Forest Practices Plan	$4,837	$4,837		$4,837	100%	$4,837	
p.19.0406.015 3100B-6-37 ADJ 05 Milford Compensatory Planting	$31,894	$31,894		$31,894	100%	$31,894	
DESIGN COMPLETION 3100B-6-37 ADJ 06	**$209,563**	**$100,935**		**$109,192**		$209,563	
P.19.0406.013 3100B-6-37 ADJ 06 SETS Project Management - May 2023	$41,125	$32,102	$ 1,197	$33,299	81%	$41,125	Includes $7938.26 paid in March Invoice that should be allocated to P.19.0406.023 3100B-6-37 ADJ 11
P.19.0406.014 3100B-6-37 ADJ 06 EPBC Additional	$41,870	$68,833	$ 7,059.66	$75,893	181%	$66,110	
P.19.0406.016 3100B-6-37 ADJ 06 Design Completion	$65,239			$0	0%	$65,239	
P.19.0406.017 3100B-6-37 ADJ 06 Construction phase services	$61,330			$0	0%	$61,330	
P.19.0406.018 3100B-6-37 ADJ 07 Hazardous Testing at Tasmania Golf Club	$16,679	$14,906		$14,906		$14,906	
P.19.0406.019 3100B-6-37 ADJ 08 Milford Stakeholder Engagement Support	$10,000	$8,124		$8,124		$10,000	
P.19.0406.020 3100B-6-37 - ADJ 09 - Ongoing EPBC Approval Costs	$89,722	$12,159		$12,159		$89,722	
P.19.0406.021 3100B-6-37 - ADJ 09 - Options to Reduce Impact on Milford	$27,970	$38,074		$38,074		$27,970	
P.19.0406.022 3100B-6-37 - ADJ 10 - Realignment at Pittwater Road (Detailed Design)	$119,293			$0		$119,293	
P.19.0406.023 3100B-6-37 - ADJ 11 Amendments to Development Application	$27,587	$7,911	$ 16,184	$24,095		$27,587	
TOTALS	**$2,567,181**	**$2,186,397**	**$24,440.67**	**$2,210,836**		**$2,577,955**	

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date

Tasmania

SETS
Tasman Highway – Airport Interchange to Midway Point Causeway

pitt&sherry

Status Report for period ending: 19 April 2024

Job. No.2220-3-128

1 Project Health Chart

	If this box is selected please shade the tick box green.	If this box is selected please shade the tick box yellow.	If this box is selected please shade the tick box red.
Scope Definition	s39		
Delivery / Timing			
Input Information			
Project Changes & Cost			

2 Progress

Activities Completed Last Month
Submission to DCCEEW on realignment
Planning permits amendments – 85% complete

Current & Future Activities Next Month
Complete amendments to Planning Permits

2

3 Critical Risks, Opportunities & Issues

Risk / Issue	Action
s39	

[redacted]

4 Outstanding Information

Information requirement	From Who	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

5 Awaiting Client Action

Decisions, Approvals and Escalation Items	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

Contract 2220-3-128.

Tasman Highway – Airport Interchange to Midway Point Causeway

Monthly Report to 19 April 2024

1. Project Details

Key dates including acceptance of proposal and dates for all deliverables stated in the project brief.

Item	Date At Project Agreement	Anticipated/Actual Date Achieved	Comment
Project Agreement	11 July 2019	11 July 2019	Complete
Feature Survey	27 November 2019	9 December	Complete
Concept Design incl Options Analysis	3 September 2019	22 November	Complete
Environmental Investigation	6 February 2020		DSG has forecast EPBC Approval date at January 2026 whilst remaining hopeful of an earlier resolution. Once Preliminary Documentation is acceptable to DCCEEW there is a minimum 4 month timeframe to Approval
Geotechnical investigation	1 December 2019	20 April 2020	Complete
PPR Submission	31 October 2019	6 December 2019	Complete
PPR Approval	31December 2019	January 2020	Complete
Preliminary Design	24 March 2020	21 May 2020	Complete
Detailed Design	2 July 2020	28 February 2021	Complete
RFT Documentation	2 July 2020		Amendments to documentation on hold pending final agreement with s36 [redacted] on scope of works and approved EPBC

Stakeholder Engagement	Ongoing		
Submission of Development Application	18 March 2020	2 April 2021	Approved 01/03/2022 with commencement required within 2 years. Extension of time required for Highway Permit. Extension has been obtained for Golf Course Permit Revised Permits to be submitted to account for realignment
PSCPW Report and Hearing (3-month notice required)	21 April 2020	30 April 2021	Project approved by PSCPW
EPBC Approval		Refer above – unlikely before early 2025	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Golf Course Agreement		December 2024	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Airport land acquisition		December 2024	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Call tenders	To be confirmed		To be confirmed (subject to approvals) -Early 2025 at best

2. Progress

Detailed design completed. Outstanding items to be resolved/completed before highway tenders can be called

i. EPBC resolution

ii. Licence for works to be carried out on the Golf course

iii. Commonwealth land - lease then agreement for purchase, noting ideally Tripartite Deed can be finalised and Lease becomes redundant

iv. Additional items including Milford access, drawing changes resulting from extension of underground power to Pittwater Road and other changes due to the passage of time between completion of final design and calling tenders

v. Realignment design

3. Risk Assessment, Opportunities and Issues

Key risk/issue are now

i. Acquisition of Commonwealth land – Lease and purchase to be progressed simultaneously – timeframe remains uncertain.

ii. EPBC referral time.

4. Stakeholder Engagement Issues

Golf club – discussions at project level on hold.

s36 – Currently at Senior Management level with the Department

Airport accept resumption of land west of Pittwater Road, subject to HIAPL Board approval and Commonwealth approval. Discussions ongoing with key airport personnel.

5. Service Authorities / Utilities

Taswater – 375 mm watermain to Sorell. Design completed for relocation of 400 metres of main ch 1370 – 1825 and associated road crossings. Design fully approved.

Telstra – multiple services including Fibre Optic cable in Tasman Highway corridor – preliminary design received

Tasnetworks – HV, LV, streetlighting. Tasnetworks design finalised

6. Financial

a. Project Costs

ITEM	COST EST P50	COST EST P90	COMMENT
Outturn Cost – indicative only	s38		

b. Design Fee Cash Flow

Month Year	Forecast Expenditure	Actual Expenditure	Forecast Cum	Actual Cum
Jul-19	25671	25671		25671
Aug-19	59778	38137		63808
Sep-19	93049	77255		155168
Oct-19	131879	64198		205261
Nov-19	68482	121523		326784

Dec-19	115568	117869		444654
Jan-20	76528	135514		580168
Feb-20	163905	68392		648560
Mar-20	152498	156361		804921
Apr-20	134674	94127		899049
May-20	129290	110428		1009478
Jun-20	133625	65451		1074929
Jul-20	78529	114874		1189803
Aug-20	1544	87267		1277069
Sep-20		85190		1362260
Oct-20		42839		1405100
Nov-20		26289		1431094
Dec-20		13620		1444714
Jan-21		31548		1476262
Feb-21		51989		1528251
Mar 21		31745		1559995
Apr 21		40637		1600632
May 21		28511		1629143
Jun 21		30351		1659494
Jul 21		40294		1699788
Aug 21	28000	58349		1758138
Sep 21	28000	21065		1780239
Oct 21	28000	18051		1798293
Nov 21	28000	33009		1831301
Dec 21	28000	5754		1837055
Jan 22		1918		1838975
Feb 22		14968		1853941
Mar 22		19083		1873025
Apr 2022		10489		1883514

May 2022		5269		1888783
June 2022		17026		1905809
July 2022		12607		1918056
August 2022		2144		1920200
September 2022		11885		1932085
October 2022	14187	20555		1953000
November 2022	51499	48586		2001586
December 2022	14187	5481		2007070
January 2023	23839	4177		2011246
February 2023	16104	9931		202177
March 2023	16104	7683		2028859
April 2023	41509	9438		2038297
May 2023	31437	21041		2059338
June 2023	3900	23401		2082738
July 2023	21098	21098	2101692	2101691
August 2023	10438	26298	2127989	2127989
September 2023	17224	6361	2174041	2134351
October 2023	17733	447	2191774	2134797
November 2023	18224	9323	2209997	2144120
December 2023	18224	14835	2228221	2158955
January 2024	13224	5679	2241445	2164636
February 2024	21477	9569	2262922	2174204
March 2024	21477	12192	2284400	2186396
April 2024	41307	24441	2325706	2210836
May 2024	36183		2361890	
June 2024	21746		2383636	
2024/25	36320		2419956	
2025/26	30000		2451286	

7. Additional Information (as required)

N/A

From: s36
To: s36
Subject: RE: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Wednesday, 24 April 2024 4:29:00 PM
Attachments: 2020-8805_Tasman Hwy_Orchid Habitat Impact Assessment_20240301 - KG comments.pdf
image001.png
T-P.HB19197-ENV-rep-002-Rev01-Realignment-DSG comments.pdf

Hi s36

We have reviewed the report and would like a few minor changes made before its good to go, please see comments in attachment and as per below:

Comments concerning Milford are:

- Construction actions (Table 3, p10 of the p&s report) states, " Identify all trees on Milford where the tree protection zone extends into the road reserve and engage a qualified arborist to assess the potential impact on the tree and determine whether the tree can be retained with mitigation measures or whether it should be removed". s39 [redacted]

-

- s39 [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

Other Comments:

- s39 [redacted]
- [redacted]
- [redacted]
- [redacted]

Thanks, s36

s36 [redacted]
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36
To: s36
Subject: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Thursday, 2 May 2024 5:40:51 PM
Attachments: image004.png
image005.png
Duplicate

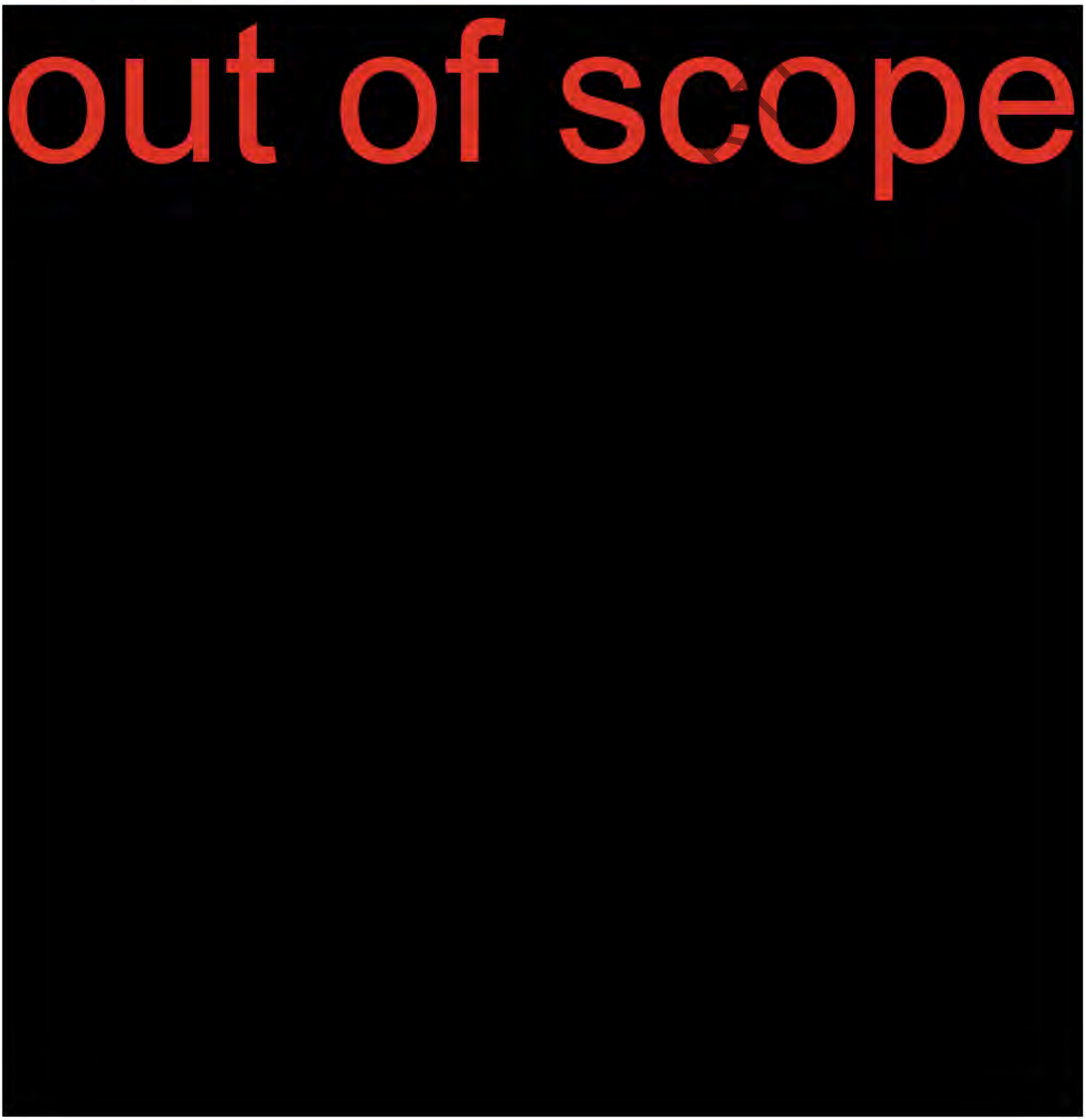
Hi s36 and s36

Refer attached NVA prepared as part of the submission to CCC on the Planning permit amendments as a result of the realignment. I am not sure if you have seen this, however it does address a number of issues around the white gums that you had raised s36 and I intend to now include it in our submission to DCCEEW. Please review and provide any comments.

Regards

Regards

s36
Principal Engineer
Mobile s36 | s36 @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



Please refer comments below and in attached. Can you please amend and if possible return to me by mid next week. Also please review my highlighted statement in blue below. s35 [redacted]

Regards

s36 [redacted]
Principal Engineer

Mobile s36 [redacted] | s36 [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: s36
To: s36
Subject: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Friday, 3 May 2024 1:31:23 PM
Attachments: image003.png
Duplicate

Hi s36 and s36

Revised Orchid Habitat Impact assessment amended by North Barker to address your comments, for final review.

Regards

s36
Principal Engineer

Mobile s36 | s36 @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: Andrew North s36 @northbarker.com.au>
Sent: Thursday, May 2, 2024 7:13 PM
To: s36 @pittsh.com.au>
Subject: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805

Hi s36
Attached are updated Orchid impact report and responses to s36 comments

Cheers

Andrew North

Duplicate

From: s36
To: s36
Subject: FW: RESPONSE FOR ACTION: Tasman Highway Upgrade - Airport Interchange to Midway Point Causeway - EPBC 2020/8805
Date: Friday, 3 May 2024 1:47:19 PM
Attachments: image003.png
Duplicate

Hi s36 and s36

Attached please find revised Golf Course NVA reflecting your comments, for final review.
Just for clarity there will now be 3 North Barker Reports in the submission to DCCEEW.

i. Orchid Habitat Significant Impact Assessment (Appendix B of the overall submission)
ii. Golf Course NVA (reflecting the realignment) – Appendix D of the overall submission
iii. Highway NVA (reflecting the realignment) – Not previously in the submission and now to be included, sent to you on Thursday 2 May

Items ii and iii are also to be included in the submission to Clarence City Council on the Planning Permit Amendment. It is necessary to obtain landowner consent for the amendment to be submitted. That will mean a discussion with s36 . s36 will be in touch with you to clarify how that will be done.

s36, s39
Could you please clarify.

Regards

s36
Principal Engineer

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

out of scope

From: s36
To: s36 Andrew North
Cc: s36
Subject: RE: MNES update
Date: Tuesday, 21 May 2024 1:46:39 PM
Attachments: image001.png
2020-8805 - Assessment - PDV2 - Further department comments - response.docx
FW Offset requirements for Preliminary Documentation Tasman Highway Upgrade Hobart Airport to Sorell Causeway (EPBC 20208805) SECOFFICIAL.msg

---

Hi s36 and s36

s39

Duplicate

s39

Otherwise, I note the letter to the DSG on 9 May 2022 from DCCEEW states:

" *Given the critically endangered Milford Leek-orchid and Sagg Spider-orchid are unlikely to occur anywhere else other than the Milford property, all habitat is considered critical to the survival of the Milford Leek-orchid and Sagg Spider-orchid.* "

s39

Cheers,

s36

out of scope

From: s36 s36 @northbarker.com.au>
Sent: Friday, May 17, 2024 2:01 PM
To: s36 @stategrowth.tas.gov.au>
Cc: s36 @stategrowth.tas.gov.au>; s36 @pittsh.com.au>; s36 @pittsh.com.au>
Subject: MNES update

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi s36

Following our discussion I have responded to the record of the outlying orchid. To simplify your review I've used track changes.

Cheers Andy

s36
Director / Principal Ecologist

s36
Work days: Tue-Fri

313 Macquarie St, Hobart, TAS. 7000
www.northbarker.com.au

We pay our respects to all Palawa people across Lutruwita / Tasmania, their elders past and present, and their young people. We acknowledge their long and continuing history of sustainable land management.

Reference	DAWE comments 17 January 2021	Proponent Response
Appendix I Orchid Habitat Impact Assessment and Mitigation Plan Summary Section (page iii) and Section 1.5.2 Service Track	Included in the summary of indirect impacts to critical orchid habitat the plan states: "*The realignment of the service track and associated vegetation clearance will impact on some of the orchid habitat in the far northwest corner*". The location and works associated with the service track realignment are further clarified in Section 1.5.2. The department understands the Milford property is zoned Bushfire Prone and must maintain a fire trail compliant with Planning Directive 5.1 Bushfire-Prone Areas Code (see https://www.planning.tas.gov.au/__data/assets/pdf_file/0006/582225/Planning_Directive_5.1_-_Bushfire-Prone_Areas_Code_-_effective_1_September_2017.PDF). Additionally, Milford property is zoned an Emergency Response Zone legally requiring service access for Hobart Airport and air services. Please provide a detailed description of actions required to maintain fire and service trail compliance. For example, location of access point, gate, easement and works associated with fire trail reconstruction such as widening, clearing and passing bays. Otherwise, please clarify if this required service track is the same as that mentioned in Appendix I or provide justification for why the described track upgrades are not required in relation to the referred action.	This service track is the same as that referred to in Appendix I, and its potential impacts are included in Appendix I.
General – **New survey orchid data,** *relevant across PD documentation*	All waypoints for recent 2021 survey orchid survey data for the two critically endangered Milford Leek-orchid (*Prasophyllum milfordense)* and Sagg Spider-orchid (*Caladenia saggicola*) are available through Tasmanian Natural Values Atlas. This data demonstrates the extent of orchid sightings have increased in the Milford property, notably with sightings for individuals extending closer to the footprint of works. Given the recent survey results, please reconsider the current representation of core habitat to align with new survey records. Additionally, given the two critically endangered Milford Leek-orchid and Sagg Spider-orchid are unlikely to occur anywhere else other than the Milford property, basing estimates on known-recent records only (in the absence of appropriate disturbance regime of burning or slashing along the northern boundary) is an underestimation of potential habitat availability and of the significance of these areas to these species. Therefore, please include all areas of suitable vegetation composition and structure of *Eucalyptus viminalis – E. globulus* coastal forest habitat in core habitat, irrespective of the categorisation of 'primary' or 'secondary potential habitat'.	The original stratification of habitat aimed to provide greater understanding of the most important habitat areas. However, based on new records provided in November 2021, Appendix I has re-stratified habitat into two categories: • core habitat (which includes critical habitat and primary potential habitat under the previous assessment); and • secondary potential habitat. It should be noted that the character of vegetation closer to existing highway differs and it is less suitable for orchids, not least due to heavy infestation of weeds and other long-term edge effects

	Please update the direct, indirect and residual impacts to individuals and redefined core habitat areas. If it is concluded that residual significant impacts on the threatened orchid species are likely (or it cannot be satisfactorily demonstrated that residual significant impacts are not likely) offsets should be considered, as per the EPBC Act Offsets Policy and Offsets Assessments Guide.	Appendix I has been updated to reflect the above assessment. Residual impacts are considered to be minimal, based on management proposed in Appendix M
Appendix I Orchid Habitat Impact Assessment and Mitigation Plan – General	The department understands that there is a current Milford Fire Management Plan prepared for the Department of Primary Industry and Water which manages orchid preservation. Please clarify how this current management plan ties into the included Orchid Habitat Impact Assessment and Mitigation Plan. Please demonstrate that the Orchid Habitat Impact Assessment and Mitigation Plan has the agreement of the landholder to be implemented effectively on the Milford Property.	It is understood that current management practices on the Milford property favours slashing for burning over burning, due to the proximity to Hobart Airport. The proposed action would not impact the ability of the landowner to manage vegetation using either method. Regarding agreement with the landowner, the Orchid Habitat Management Plan focusses on managing impacts within the new road reserve, through weed management, stormwater management and other measures. The Department is seeking agreement with the landholder.
Appendix I Orchid Habitat Impact Assessment and Mitigation Plan Section 1.6.4 Vegetation Clearance	The department notes that Section 1.6.4 of the Orchid Habitat Impact Assessment and Mitigation plan states “A dense screen of this shrubby section persists closer to the highway which maintains shelter from the highway and potentially reduces exposure to desiccating winds. Much of this will be cleared for the roadworks. The importance of the potential screening function that this shrub band provides for the orchid habitat is theoretical and not proven. There is however opportunity to allow the resprouting shrubs to mature to ensure the screening effect is retained. Although this may be counterproductive by reducing the habitat suitability of that area”. Please clarify if this opportunity to allow resprouting shrubs will be implemented as a measure under the mitigation plan and, if so, the impacts associated with carrying out this measure.	Appendix M has been updated to include monitoring of any impacts from removal of this shrubbery. Should measures required to address any impacts, these measures would be developed by an appropriately qualified ecologist, considering any potential impacts on these orchid species.

From: s36
Sent: Tuesday, 21 May 2024 10:06 AM
To: s36
Subject: FW: Offset requirements for Preliminary Documentation: Tasman Highway Upgrade Hobart Airport to Sorell Causeway (EPBC 2020/8805) [SEC=OFFICIAL]
Attachments: 2020-8805-Assessment-Offset requirements for Preliminary Documentation.pdf; Attachment A-2020-8805-Assessment-PD request and Attachment A.pdf; Attachment B-Significant Impact Guidelines 1.1 – Matters of National Environmental Significance.pdf

Hi See attached letter, confirming all habitat is considered critical

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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: s36
Sent: Monday, May 9, 2022 4:52 PM
To: McIntyre, Denise <Denise.McIntyre@stategrowth.tas.gov.au>
Cc: s36 @stategrowth.tas.gov.au>; s36 @stategrowth.tas.gov.au>; s36 @stategrowth.tas.gov.au>; s36 @pittsh.com.au>; s36 @pittsh.com.au>; s36 @stategrowth.tas.gov.au>
Subject: FW: Offset requirements for Preliminary Documentation: Tasman Highway Upgrade Hobart Airport to Sorell Causeway (EPBC 2020/8805) [SEC=OFFICIAL]

Hi Denise,

I asked DAWE to confirm their EPBC requirements that they discussed to us during the meeting on the 28th April. This letter confirms the following:

- All habitat has now been classified as critical
- DAWE have determined that there is a residual significant impact and so offsets are required.

Regards

s36

Programming and Delivery Branch
State Roads | Department of State Growth
4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Phone: s36 | s36 | email: s36 @stategrowth.tas.gov.au
Web: www.stategrowth.tas.gov.au

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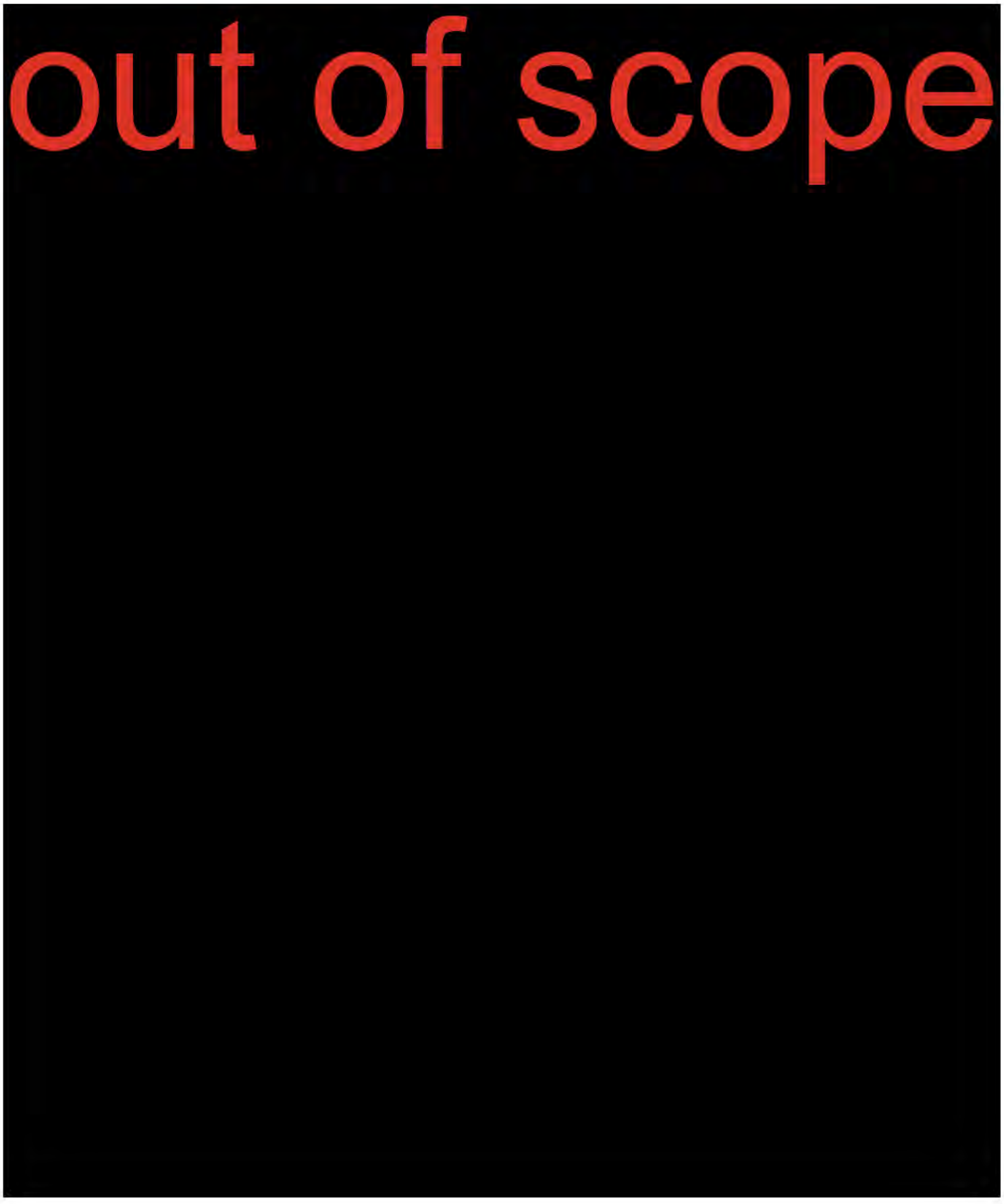
	Mon	Tues	Wed	Thurs	Fri
Normal week	WFH	In office	In office	In office	WFH



Australian Government
Department of Agriculture, Water and the Environment

EPBC Ref: 2020/8805

Denise McIntyre
A/g General Manager State Roads
Department of State Growth
4 Salamanca Place
HOBART TAS 7000

Dear Ms McIntyre

Tasman Highway Upgrade Hobart Airport to Sorell Causeway, near Hobart, Tasmania.

I am writing to you in relation to your proposal to upgrade a 2 km section of the Tasman Highway between Hobart International Airport and the Sorell Causeway, approximately 15 km east of Hobart, Tasmania.

This proposal is currently under assessment by preliminary documentation. As outlined in the request for additional information dated 17 February 2021 (Attachment A), the preliminary documentation must include an assessment of potential impacts (including direct, indirect, facilitated and cumulative impacts) that may occur as a result of all elements and project phases of the proposed action (such as construction and post-construction), on the Milford Leek-orchid (*Prasophyllum milfordense*), Sagg Spider-orchid (*Caladenia saggicola*) and Tailed Spider-orchid (*Caladenia caudata*).

Further to this impact assessment, residual impacts on the above species must be described. Residual impacts are defined as the impacts likely to occur as a result of the proposed action in its entirety, after proposed avoidance and mitigation measures are considered. For assessments under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), offsets are required if residual impacts are considered significant. Avoidance and mitigation measures are the primary strategies for managing the potential significant impact of a proposed action, and offsets will not be considered until all reasonable avoidance and mitigation measures are considered, or acceptable reasons are provided as to why avoidance or mitigation of impacts cannot be reasonably achieved.

According to the EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (December 2013) (Attachment B), an action is likely to have a significant impact on a critically endangered species if there is a real chance or possibility that it will adversely affect habitat critical to the survival of a species or reduce the area of occupancy of the species. Given the critically endangered Milford Leek-orchid and Sagg Spider-orchid are unlikely to occur anywhere else other than the Milford property, all habitat is considered critical to the survival of the Milford Leek-orchid and Sagg Spider-orchid.

Considering the information on impacts currently available to the department, the department's view is that the action will have a residual significant impact on the Milford Leek-orchid and Sagg Spider-orchid. Therefore, unless there is a new proposed substantial avoidance of impacts,

offsets will be required for the proposal to meet the department's offset policy and preliminary documentation requirements.

An offset is defined as measures that compensate for the residual adverse impacts of an action on the environment. Offsets must directly contribute to the ongoing viability of the species and deliver an overall conservation outcome that improves or maintains the viability of the protected matter. The department's EPBC Act Environmental Offsets Policy (October 2012) is available at: www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy.

The original request for additional information (Attachment A) further outlines the information required to progress the assessment, including the need for offsets under section 5. Once this information request is satisfied the preliminary documentation can be published for public comment.

Yours sincerely

s36

Director
Victoria & Tasmania Assessments Section
Environment Assessments (Vic, Tas) and Post Approvals Branch

9 May 2022

Australian Government
Department of Agriculture, Water and the Environment

EPBC Ref: 2020/8805

Ms Denise McIntyre
A/g General Manager State Roads
Department of State Growth
4 Salamanca Place
HOBART TAS 7000

Dear Ms McIntyre

Additional information required for preliminary documentation.
Tasman Highway Upgrade Hobart Airport to Sorell Causeway, near Hobart, Tasmania

I am writing to you in relation to your proposal to upgrade a 2 km section of the Tasman Highway between Hobart International Airport and the Sorell Causeway and undertake works in the Tasmanian Golf Club, approximately 15 km east of Hobart, Tasmania.

On 8 February 2021, a delegate of the Minister for the Environment decided that the the proposed action is a controlled action and that it will be assessed by preliminary documentation. Further information will be required to be able to assess the relevant impacts of the proposed action.

Details outlining the further information required are at Attachment A. Please advise the department prior to submission of the preliminary documentation so that an invoice can be raised to cover Stage 2 of the assessment. Payment of the Stage 2 fee is required prior to the department commencing its review of the preliminary documentation.

Details on the assessment process and the responsibilities of the proponent are set out in our fact sheet EPBC Act — Environment Assessment process (see attached). Further information is available from the department's website at http://www.environment.gov.au/epbc.

If you have any questions about the referral process or this decision, please contact the project manager, s36 by email to s36 @awe.gov.au, or telephone s36 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

s36

Acting Director
Victoria and Tasmania Assessments Section
Environment Assessments (Vic, Tas) and Post Approvals Branch

17 February 2021

REQUEST FOR ADDITIONAL INFORMATION
ASSESSMENT BY PRELIMINARY DOCUMENTATION

Tasman Highway Upgrade Hobart Airport to Sorell Causeway, near Hobart, Tasmania (EPBC 2020/8805)

The proposed action to upgrade a 2 km section of the Tasman Highway between Hobart International Airport and the Sorell Causeway and undertake works in the Tasmanian Golf Club, approximately 15 km east of Hobart, Tasmania, has been determined likely to have a significant impact on listed threatened species and communities (sections 18 and 18A) protected under Part 3 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). It was also determined that the proposed action will be assessed by preliminary documentation.

The preliminary documentation should be sufficient to allow the minister (or delegate) to make an informed decision on whether or not to approve, under Part 9 of the EPBC Act, the taking of the action for the purposes of each controlling provision. The preliminary documentation should be provided as one document with attachments and in a format that is objective, clear and succinct. It must contain sufficient information to avoid the need to search out previous or supplementary reports and be written so that any conclusions reached can be independently assessed.

Where appropriate, the documentation must be supported by:

- the best available scientific literature
- relevant maps, plans, diagrams (clearly annotated, in colour and of high resolution) and technical information
- details on relevant uncertainties, including whether impacts are unknown, unpredictable or irreversible, as well as acceptability of the relevant impacts to Matters of National Environmental Significance (MNES)
- references or other descriptive detail in relation to the information provided, including how recent the various pieces of information are.

The documentation must avoid passive language and use active, clear commitments like ‘must’ and ‘will’ where appropriate. The additional information must include a copy of these guidelines and a table indicating where the information fulfilling the guidelines is included in the preliminary documentation. The preliminary documentation must address the matters set out below.

1. DESCRIPTION OF THE ACTION

Provide a description including location, boundaries, and size (in hectares) of all components of the action. Include the anticipated timing and duration (including start and completion dates) of each component of the project. Examples of components that must be described include but are not limited to are vegetation clearing, earthworks and installation of pipelines or other utilities.

2. DESCRIPTION OF THE ENVIRONMENT AND MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

Specific matters this section must address include, but are not limited to, information that clarifies the Milford Leek-orchid *Prasophyllum milfordense*), Sagg Spider-orchid (*Caladenia saggicola*) and Tailed Spider-orchid (*Caladenia caudata*) population distributions and habitat present on and adjacent to the project site. This must include:

a. a copy of all available Milford Leek-orchid, Sagg Spider-orchid, and Tailed Spider-orchid survey reports and records from within 1 km of the action

b. a detailed assessment of the potential habitat value (for the Milford Leek-orchid, Sagg Spider-orchid, and Tailed Spider-orchid) of the land that may be directly or indirectly impacted by the action. This must include, but not be limited to, assessment of habitat including as it relates to soil, vegetation, ground and surface water, and life-history requirements of the orchid species' including for pollination and reproduction.

Please use the most up-to-date information available and attach all relevant ecological surveys referenced in the referral and preliminary documentation as supporting documents.

Note: It is the proponent's responsibility to be aware of any changes to species and ecological community distributions and the information available in the SPRAT Database. The proponent must ensure that a recent Protected Matters Search Tool has been generated and considered before finalising the draft preliminary documentation.

3. RELEVANT IMPACTS

The preliminary documentation must include an assessment of potential impacts (including direct, indirect, facilitated and cumulative impacts) that may occur as a result of all elements and project phases of the proposed action (such as construction and post-construction) on the MNES addressed at Section 2.

Consideration of impacts must not be confined to the immediate area of the proposed action but must also consider the potential of the proposed action to impact on adjacent areas that are likely to contain populations of, or habitat for, MNES.

All impacts, including direct, indirect, and consequential, on the above listed threatened species and ecological community and/or their habitat must be assessed in accordance with relevant departmental policies and guidelines.

For all threatened species and MNES likely to be impacted, this must include, but not be limited to:

c. an assessment of any direct loss of habitat and/or individuals as a result of the proposed action

d. an assessment of any potential indirect impacts resulting from the proposed action, including but not limited to any changes to habitat quality resulting from changes to hydrology and the introduction and/or spread of weeds

e. an assessment of potential facilitated impacts as a result of the proposed action

f. an assessment of the likely duration of all potential impacts as a result of the proposed action

g. an assessment of whether impacts are likely to be repeated, for example as part of maintenance or upkeep

h. a discussion of whether any impacts are likely to be unknown, unpredictable, or irreversible.

Full justification of all discussions and conclusions based on the best available information, including relevant conservation advices, recovery plans, threat abatement plans, and guidance documents must be included if applicable. Departmental documents regarding listed threatened species can be found at: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

4. PROPOSED AVOIDANCE AND MITIGATION MEASURES

In relation to the impacts of the proposed action on MNES, the preliminary documentation must include a detailed description of the avoidance and mitigation measures proposed, including but not limited to:

a. a statement of the objectives

b. the policy basis for the measures

c. the party responsible for implementing and funding each measure

d. and locations and timing of each measure

e. the ongoing management and monitoring plans

f. details of any measures to minimise weed introduction and spread, including discussion of what extent such measures will reduce the threats posed by edge effects and weed incursion

g. maps that illustrate the location of any proposed construction exclusion zones or buffer zones, and details on how these areas will be excluded or protected

h. an assessment of the expected or predicted effectiveness of the measures proposed.

The preliminary documentation must include a detailed monitoring and adaptive management plan that sets out the proposed approach to monitoring and responding to any impacts to the Milford Leek-orchid, Sagg Spider-orchid and Tailed Spider-orchid as a result of construction of the proposal. This must include, but not be limited to:

a. baseline species and habitat assessment

b. key species and habitat attributes that will be monitored during and following construction, including justification for selection of attributes

c. trigger points for actions to prevent further impacts or changes to habitat attributes if detected

d. actions to be taken in response to identified changes in species or habitat attributes.

5. RESIDUAL IMPACTS/PROPOSED OFFSETS

Describe the residual impacts on MNES that are likely to occur as a result of the proposed action in its entirety, after proposed avoidance and/or mitigation measures are considered. If applicable, this should include the reasons why avoidance or mitigation of impacts cannot be reasonably achieved.

If residual impacts are likely to be significant, provide details of an offset package to compensate for residual impacts to MNES. This should consist of an offset proposal (Offset strategy) and key commitments and management actions for delivering and implementing the proposed offset (an Offset management plan). The Offset strategy and Offset management plan should be a standalone document.

Offsets must directly contribute to the ongoing viability of the species and ecological communities and deliver an overall conservation outcome that improves or maintains the viability of the protected matter, as compared to what is likely to have occurred if neither the action nor the offset had taken place. The offset proposal should demonstrate how the conservation outcome will be delivered for the protected matter.

The proposed offset must meet the requirements of the department's *EPBC Act Environmental Offsets Policy* (October 2012). The department's *Offset Assessment Guide* may be used as a guide to estimate the area of offset required to adequately compensate for the residual impacts of the project. These documents are available at: www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy Offsets required by the state can contribute to offset obligations under the EPBC Act if those offsets also meet the requirements of the *EPBC Act Environmental Offsets Policy*.

A project officer within the department will assess the proposed offset based on the information provided in the offsets proposal using the offsets assessment guide. Please note, in all cases targets and criteria should be specific and measurable.

An Offset strategy must include:

a. a description of the offset site(s) including location, size, condition and environmental values

b. details of the surveys undertaken in accordance with the survey guidelines used to confirm the presence of the protected matter at the offset site

c. details of the quality of the offset site and habitat characteristics for the protected matter

d. details of on-going threats to the protected matter at the offset site

e. a comparison of the environmental values as compared to the impact site

f. justification

An Offset management plan must include:

a. the specific environmental outcomes to be achieved

b. details on how the offset will be secured, managed and monitored to meet these environmental outcomes, including: i. management actions, performance targets, monitoring methodology and review criteria

   i. management actions, performance targets, monitoring methodology and review criteria

   ii. responsibility and timing for implementation of actions.

6. OTHER APPROVALS AND CONDITIONS

The preliminary documentation must include information on any other requirements for approval or conditions that apply, or that you reasonably believe are likely to apply, to the proposed action.

This must include:

a. a description of any approval obtained or required to be obtained from a state or Commonwealth agency or authority (other than an approval under the EPBC Act)

b. any conditions that apply to the proposed action

c. a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the proposed action.

7. SOCIAL AND ECONOMIC

The preliminary documentation must address the economic and social impacts (both positive and negative) of the proposed action. This may include:

a. details of public consultation activities and their outcomes

b. projected costs and benefits of the proposed action, including the basis for their estimation.

8. ENVIRONMENTAL RECORD OF PERSON PROPOSING TO TAKE THE ACTION

Please provide the following information, including details of any proceedings under a Commonwealth, state or territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

a. the person proposing to take the action

b. for an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework should be described.

9. CONCLUSION

The preliminary documentation must provide an overall conclusion as to the environmental acceptability of the proposal, including discussion on compliance with the principles of Ecologically Sustainable Development (ESD) and the objects and requirements of the EPBC Act. To assist you, the *National Strategy for Ecologically Sustainable Development* (1992) is available on the following web site: https://www.environment.gov.au/about-us/esd/publications/national-esd-strategy.

You may wish to include a statement as to whether or not the controlled action should be approved and may recommend conditions pertaining to an approval. This should include justification for undertaking the proposed action in the manner proposed. The measures proposed or required by way of offset for any unavoidable impacts on MNES and the relative degree of compensation, should be restated here.

10. INFORMATION SOURCES

The preliminary documentation must state for the information provided, the following:

a. the source and currency (date) of the information

b. how the reliability of the information was tested

c. the uncertainties (if any) in the information

d. any guidelines, plans and/or policies considered.

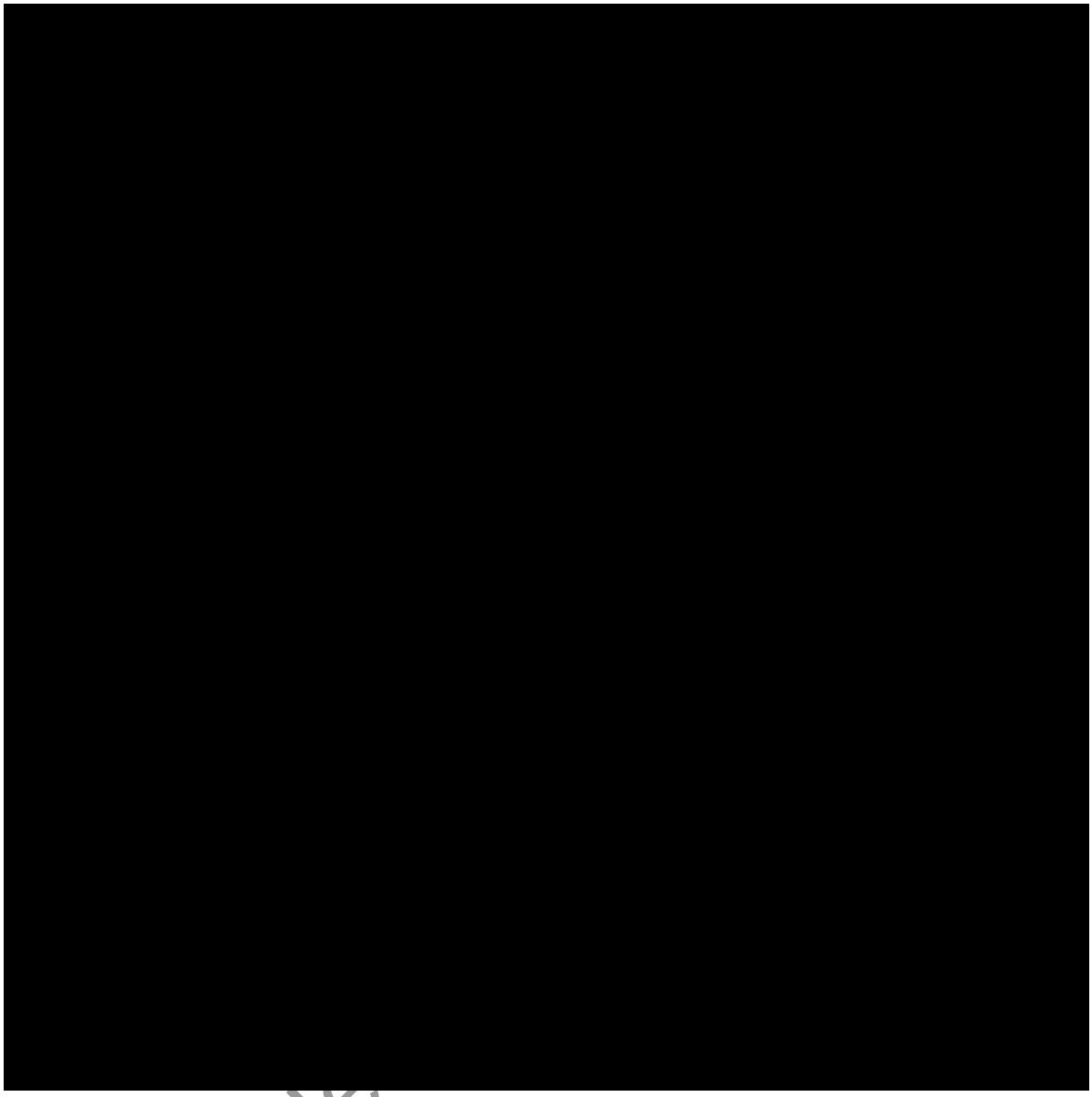
From: s36
To: s36
Cc: s36
Subject: RE: MNES update
Date: Tuesday, 21 May 2024 4:54:54 PM
Attachments: image002.png
image004.png
image001.png
Duplicate

Hi s36

The original mapping in the NVA (Sept 2020) included the referral along with the MNES significant impact assessment dated 14/09/2020 distinguished habitats as potential habitat and core habitat and stated that "Critical habitat would be habitat associated with supporting the core population."

The PD guidelines required more detailed assessment of the habitat to determine what constituted critical habitat.

We undertook closer inspection of the habitat and classified it into three classes, selecting two as critical habitat in the Orchid Impact Assessment and Mitigation Plan (2021).



The Orchid Impact Assessment and Mitigation Plan (2021) has been reviewed by DCCEEW and I had understood that it had been accepted. (see attached email from s36) . In that she says:

"As now reflected in the documentation, the department will consider all areas currently identified as 'core habitat' and 'primary potential habitat' as habitat for the critically endangered Milford Leek-orchid and Sagg Spider-orchid in line with the broadening extent of species occupation in recent annual surveys. As noted in the department's further comments, the direct, indirect and residual impacts to habitat areas and individuals will need to be updated in line with this reclassification, including the consideration of the need for offsets. "

More tellingly she also states:

Considering the information on impacts which is now available, the department's view is that (without substantial avoidance of direct impacts) the action will have a residual significant impact on these species given that:

- the action will directly impact on approximately 0.40% of the known range of the Milford Leek-orchid and 0.37% of Sagg Spider-orchid habitat, and indirectly impact 0.31% of the known range of Milford Leek-orchid and 0.24% of Sagg Spider-orchid habitat
- the Minister's delegate has already decided that the action is a significant impact (as per the referral decision); and
- there has not been a substantive reduction (for example though avoidance) of impacts to the species.

Therefore unless there is a new proposed substantial avoidance of impacts, offsets will be required in order for the proposal to meet the department's offset policy.

The adjustment to the highway desisgn constitutes a "new proposed substantial avoidance of impacts" justifying a claim that the proposal no longer requires offsets. The presence of an outlying plant in my opinion does not change our nuanced classification of habitat into three classes.

It further provides justification for emphasising that indirect impacts may have an adverse impact ot orchid habitat suitability but do not entirely render it unsuitable.

Kind regards s36

s36 [redacted]

From: s36
To: s36 ; s36
Cc: s36
Subject: RE: MNES update
Date: Thursday, 23 May 2024 11:26:13 AM
Attachments: image002.png
image005.png
image007.png
Duplicate

Hi s36

Thanks for the context!

I've made some minor comments in tracked changes for your consideration. Could you please review and finalise the report.

If any comments need clarification I'm happy to chat

Cheers,

s36
Environment & Development Approvals
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Phone: s36
Email: s36 @stategrowth.tas.gov.au
www.stategrowth.tas.gov.au

I work flexibly Monday – Thursday and may not always be in the office, but you can contact me via phone or Teams.

Courage to make a difference through
TEAMWORK | INTEGRITY | RESPECT | EXCELLENCE

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: s36
To: s36
Subject: Tasman Highway - Airport Interchange to Midway Point Causeway - February Invoice
Date: Wednesday, 29 May 2024 8:20:46 AM
Attachments: 3100B-6-37 - P.19.0406 - Draft Invoice PIP023820.pdf
HB19197 May 2024 Report.docx
May 2024 Forecast.xlsx

Hi s36

Attached for your approval please find May invoice, report and forecast.

Regards

s36
Principal Engineer

Mobile s36 | s36 @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

pitt&sherry

Pro forma Tax Invoice

Pitt & Sherry (Operations) Pty Ltd
Level 4, 113 Cimitiere Street
LAUNCESTON TAS 7250
AUS
Tel: 1300 748 874
Em: info@pittsh.com.au
ABN: 67140184309

Bill To:

Department of State Growth
4 Salamanca Place
HOBART TAS 7000
AUS
Tel:
Em:
ABN: 36388980563

Invoice number:	**PIP023820**
Invoice date:	24/05/2024
Payment terms:	14DAYS
Due date:	07/06/2024
Currency:	AUD
Customer reference:	3100B-6-37
Customer account:	C08439

SUMMARY OF CHARGES PAYABLE ON THIS INVOICE **NET AMOUNT**

Professional services for the period to 24 May 2024

P.19.0406.013 - SETS Project Management to 31 March 2023	**Time and material**	**2,510.19**
P.19.0406.023 - Amendments to Planning Permits	**Fixed-price**	**444.81**

Details on next page

PAYABLE ON THIS INVOICE

Currency	Net amount	GST amount	Total
AUD	2,955.00	295.50	**3,250.50**

Due date : 07/06/2024

Out of scope

Interest will be charged on overdue accounts

pitt&sherry

Details + T/S

Description	Resource	Quantity	Unit price	Net amount
P.19.0406.013 - SETS Project Management to 31 March 2023				
Hours / Time & Materials				
SETS Project Management				
23/04/2024 Project Management	s36	s38		
23/04/2024 Project management				
24/04/2024 Review/update outstanding tasks				
30/04/2024 respond to DSG comments on report				
01/05/2024 respond to DSG comments				
03/05/2024 Clarify, amend NVAs				
07/05/2024 Review of State Growth request for one assessment doc for Golf Course				
Subtotal				**2,510.19**

	Previous claims	New charges
Charges for P.19.0406.013	**25,360.99**	**2,510.19**

P.19.0406.023 - Amendments to Planning Permits

Milestones / Fixed Price	Contracted Amt	Claims	CTD	Claim	This claim $
Update Highway Drawings	2965.42	85%	100%	15%	444.81
Subtotal					**444.81**

** CTD = Claim to date*

	Previous claims	New charges
Charges for P.19.0406.023	**24,094.24**	**444.81**

Tasmania

SETS
Tasman Highway – Airport Interchange to Midway Point Causeway

pitt&sherry

Status Report for period ending: 24 May 2024

Job. No.2220-3-128

1 Project Health Chart

	If this box is selected please shade the tick box green.	If this box is selected please shade the tick box yellow.	If this box is selected please shade the tick box red.
Scope Definition	s39		
Delivery / Timing			
Input Information			
Project Changes & Cost			

2 Progress

Activities Completed Last Month
Submission to DCCEEW on realignment
Planning permits amendments – 90% complete

Current & Future Activities Next Month
Complete submission to DCCEEW

2

3 Critical Risks, Opportunities & Issues

Risk / Issue	Action
s39	

[redacted]

4 Outstanding Information

Information requirement	From Who	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

5 Awaiting Client Action

Decisions, Approvals and Escalation Items	Date req'd	Urgency (low, medium or Urgent – shade cell accordingly)

Contract 2220-3-128.

Tasman Highway – Airport Interchange to Midway Point Causeway

Monthly Report to 24 May 2024

1. Project Details

Key dates including acceptance of proposal and dates for all deliverables stated in the project brief.

Item	Date At Project Agreement	Anticipated/Actual Date Achieved	Comment
Project Agreement	11 July 2019	11 July 2019	Complete
Feature Survey	27 November 2019	9 December	Complete
Concept Design incl Options Analysis	3 September 2019	22 November	Complete
Environmental Investigation	6 February 2020		DSG has forecast EPBC Approval date at January 2026 whilst remaining hopeful of an earlier resolution. Once Preliminary Documentation is acceptable to DCCEEW there is a minimum 4 month timeframe to Approval
Geotechnical investigation	1 December 2019	20 April 2020	Complete
PPR Submission	31 October 2019	6 December 2019	Complete
PPR Approval	31December 2019	January 2020	Complete
Preliminary Design	24 March 2020	21 May 2020	Complete
Detailed Design	2 July 2020	28 February 2021	Complete
RFT Documentation	2 July 2020		Amendments to documentation on hold pending final agreement with s36 [redacted] on scope of works and approved EPBC

Stakeholder Engagement	Ongoing		
Submission of Development Application	18 March 2020	2 April 2021	Approved 01/03/2022 with commencement required within 2 years. Extension of time required for Highway Permit. Extension has been obtained for Golf Course Permit Revised Permits to be submitted to account for realignment
PSCPW Report and Hearing (3-month notice required)	21 April 2020	30 April 2021	Project approved by PSCPW
EPBC Approval		Refer above – unlikely before early 2025	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Golf Course Agreement		December 2024	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Airport land acquisition		December 2024	BEST GUESS ONLY AS FINALISATION DATE OUTSIDE THE CONTROL OF PITT & SHERRY
Call tenders	To be confirmed		To be confirmed (subject to approvals) -Early 2025 at best

2. Progress

Detailed design completed. Outstanding items to be resolved/completed before highway tenders can be called

i. EPBC resolution

ii. Licence for works to be carried out on the Golf course

iii. Commonwealth land - lease then agreement for purchase, noting ideally Tripartite Deed can be finalised and Lease becomes redundant

iv. Additional items including Milford access, drawing changes resulting from extension of underground power to Pittwater Road and other changes due to the passage of time between completion of final design and calling tenders

v. Realignment design

3. Risk Assessment, Opportunities and Issues

Key risk/issue are now

i. Acquisition of Commonwealth land – Lease and purchase to be progressed simultaneously – timeframe remains uncertain.

ii. EPBC referral time.

4. Stakeholder Engagement Issues

Golf club – discussions at project level on hold.

s36 – Currently at Senior Management level with the Department

Airport accept resumption of land west of Pittwater Road, subject to HIAPL Board approval and Commonwealth approval. Discussions ongoing with key airport personnel.

5. Service Authorities / Utilities

Taswater – 375 mm watermain to Sorell. Design completed for relocation of 400 metres of main ch 1370 – 1825 and associated road crossings. Design fully approved.

Telstra – multiple services including Fibre Optic cable in Tasman Highway corridor – preliminary design received

Tasnetworks – HV, LV, streetlighting. Tasnetworks design finalised

6. Financial

a. Project Costs

ITEM	COST EST P50	COST EST P90	COMMENT
Outturn Cost – indicative only	s38		

b. Design Fee Cash Flow

Month Year	Forecast Expenditure	Actual Expenditure	Forecast Cum	Actual Cum
Jul-19	25671	25671		25671
Aug-19	59778	38137		63808
Sep-19	93049	77255		155168
Oct-19	131879	64198		205261
Nov-19	68482	121523		326784

Dec-19	115568	117869		444654
Jan-20	76528	135514		580168
Feb-20	163905	68392		648560
Mar-20	152498	156361		804921
Apr-20	134674	94127		899049
May-20	129290	110428		1009478
Jun-20	133625	65451		1074929
Jul-20	78529	114874		1189803
Aug-20	1544	87267		1277069
Sep-20		85190		1362260
Oct-20		42839		1405100
Nov-20		26289		1431094
Dec-20		13620		1444714
Jan-21		31548		1476262
Feb-21		51989		1528251
Mar 21		31745		1559995
Apr 21		40637		1600632
May 21		28511		1629143
Jun 21		30351		1659494
Jul 21		40294		1699788
Aug 21	28000	58349		1758138
Sep 21	28000	21065		1780239
Oct 21	28000	18051		1798293
Nov 21	28000	33009		1831301
Dec 21	28000	5754		1837055
Jan 22		1918		1838975
Feb 22		14968		1853941
Mar 22		19083		1873025
Apr 2022		10489		1883514

May 2022		5269		1888783
June 2022		17026		1905809
July 2022		12607		1918056
August 2022		2144		1920200
September 2022		11885		1932085
October 2022	14187	20555		1953000
November 2022	51499	48586		2001586
December 2022	14187	5481		2007070
January 2023	23839	4177		2011246
February 2023	16104	9931		202177
March 2023	16104	7683		2028859
April 2023	41509	9438		2038297
May 2023	31437	21041		2059338
June 2023	3900	23401		2082738
July 2023	21098	21098	2101692	2101691
August 2023	10438	26298	2127989	2127989
September 2023	17224	6361	2174041	2134351
October 2023	17733	447	2191774	2134797
November 2023	18224	9323	2209997	2144120
December 2023	18224	14835	2228221	2158955
January 2024	13224	5679	2241445	2164636
February 2024	21477	9569	2262922	2174204
March 2024	21477	12192	2284400	2186396
April 2024	41307	24441	2325706	2210837
May 2024	36183	2955	2361890	2213791
June 2024	21746		2383636	
2024/25	36320		2419956	
2025/26	30000		2451286	

7. Additional Information (as required)

N/A

Department of State Growth Invoice Report

Department Project No: 2220-3-128
Project description SETS - Airport Interchange to Causeway 1 HB19197
Progress Claim: No. 51
Period:

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Project Management	$144,872	$144,872		$144,872	100.00%	$144,872	
DSG Reporting and Stakeholder Management	$70,800	$70,800		$70,800	100.00%	$70,800	
Geotechnical Investigations	$129,025	$129,025		$129,025	100.00%	$129,025	
Concept Design	$24,592	$24,592		$24,592	100.00%	$24,592	
Environmental Investigations	$96,795	$96,795		$96,795	100.00%	$96,795	
Land Use Planning	$18,306	$18,305		$18,305	100.00%	$18,306	
Reports	$38,628	$38,628		$38,628	100.00%	$38,628	
Stakeholder Engagement	$99,126	$99,126		$99,126	100.00%	$99,126	
Constructability Reviews	$31,223	$10,928		$10,928	35.00%	$10,928	
Preliminary Design	$216,494	$216,494		$216,494	100.00%	$216,494	
Detailed Design	$349,066	$349,066		$349,066	100.00%	$349,066	
RFT	$9,528	$4,764		$4,764	0.00%	$9,528	
Post Tender P50/P90	$1,544	$0		$0	0.00%	$1,544	
Land Acquisitions	$43,929	$43,928		$43,927	100.00%	$43,929	
Survey	$57,225	$57,225		$57,225	100.00%	$57,225	
Road Safety Audits	$12,664	$12,664		$12,664	100.00%	$12,664	Draft inv PIP002668
Independent QS Estimate	$21,204	$0		$0	0.00%	$0	

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date
Variations (Change Orders)							
CO1: Concept Design of Golf Course Modifications	$21,500	$21,500		$21,500	100%	$21,500	
CO2: Presentation to Golf Club Members	$4,945	$4,945		$4,945	100%	$4,945	
CO2: Ongoing Advice	$8,600	$6,235		$6,235	73%	$8,600	
CO3: Golf course design	$94,600	$94,600		$94,600	100%	$94,600	
CO3: Civil Design of Dam	$39,600	$39,600		$39,600	100%	$39,600	
CO3: Environmental Assessment	$3,494	$3,494		$3,494	100%	$3,494	
CO3: Geotechnical investigation	$5,812	$5,812		$5,812	100%	$5,812	
CO3: Development Application	$7,712	$7,712		$7,712	100%	$7,712	
CO3: Specification and Tender Documents	$3,764	$0		$0	0%	$3,764	
CO3: Project Management	$11,612	$11,612		$11,612	100%	$11,612	
P.19.0406.005 - 3100B-6-37							
1.Environmental managment	$29,483	$29,483		$29,483	100%	$29,483	$107,199
2.Golf Club negotiation	$16,238	$16,238		$16,238	100%	$16,238	
3. Airport and Commomnwealth negotiation	$21,158	$21,158		$21,158	100%	$21,158	
4. DSG Project management	$33,040	$33,040		$33,040	100%	$33,040	
5. Amend PSCPW report	$7,280	$7,280		$7,280	100%	$7,280	
P.19.0406.006 - 3100B-6-42 EPBC Controlled Action Response	$46,430	$72,888		$72,888	157%	$72,888	
P.19.0406.006.001 - 3100B-6-42 ADJ 1 EPBC Controlled Action Response	$52,000	$39,139		$39,139	100%	$39,139	
P.19.0406.007 - 3100B-6-37 ADJ1 - Respond to CCC RFIs on DA	$41,400	$63,545		$63,545	100%	$63,545	
P.19.0406.007.001 - 3100B-6-37 ADJ - Additional DA costs	$10,000	$19,034		$19,034	100%	$19,034	
P.19.0406.007.002 - 3100B-6- 37-ADJ 03 Planning Appeal & Tribunal Hearing Costs	$49,520					$24,760	
P.19.0406.008 -3100B-6-37 ADJ2 - Additional Design Tasks	**$77,976**	**$64,791**		**$64,791**			
Shared path lights	$8,325	$8,325		$8,325	100%	$8,325	
Golf course dam	$16,610	$16,610		$16,610	100%	$16,610	
Golf course toilet at practice area	$7,485	$7,485		$7,485	100%	$7,485	
Milford access road	$24,171	$24,171		$24,171	100%	$24,171	
Milford compensatory planting area	$7,904	$3,900		$3,900	49%	$7,904	
Specialist advice contour golf (earthworks volumes)	$581			$0		$581	
Specialist advice contour golf (specification, timing , general advice)	$12,900	$4,300		$4,300	33%	$12,900	
P.19.0406.009 - 3100B-6-46 SETS Project Management	$62,896	$72,685		$72,685	100%	$72,685	
P.19.0406.010 - 3100B-6-46 ADJ 1 Golf Course Dam Approval fee	$1,036	$1,036	$ -	$1,036	100%	$1,036	
P.19.0406.011 - 3100B-6-46 ADJ 2 Bird Strike Risk Assessment	$14,518	$14,518		$14,518	100%	$14,518	
P.19.0406.012 Forest Practices Plan	$4,837	$4,837		$4,837	100%	$4,837	
p.19.0406.015 3100B-6-37 ADJ 05 Milford Compensatory Planting	$31,894	$31,894		$31,894	100%	$31,894	
DESIGN COMPLETION 3100B-6-37 ADJ 06	**$209,563**	**102,132.48**		**104,642.67**		$209,563	
P.19.0406.013 3100B-6-37 ADJ 06 SETS Project Management - May 2023	$41,125	$33,299	$ 2,510	$35,810	87%	$41,125	Includes $7938.26 paid in March Invoice that should be allocated to P.19.0406.023 3100B-6-37 ADJ 11
P.19.0406.014 3100B-6-37 ADJ 06 EPBC Additional	$41,870	$68,833		$68,833	164%	$66,110	
P.19.0406.016 3100B-6-37 ADJ 06 Design Completion	$65,239			$0	0%	$65,239	
P.19.0406.017 3100B-6-37 ADJ 06 Construction phase services	$61,330			$0	0%	$61,330	
P.19.0406.018 3100B-6-37 ADJ 07 Hazardous Testing at Tasmania Golf Club	$16,679	$14,906		$14,906		$14,906	
P.19.0406.019 3100B-6-37 ADJ 08 Milford Stakeholder Engagement Support	$10,000	$8,124		$8,124		$10,000	
P.19.0406.020 3100B-6-37 - ADJ 09 - Ongoing EPBC Approval Costs	$89,722	$19,219		$19,219		$89,722	
P.19.0406.021 3100B-6-37 - ADJ 09 - Options to Reduce Impact on Milford	$27,970	$38,074		$38,074		$27,970	
P.19.0406.022 3100B-6-37 - ADJ 10 - Realignment at Pittwater Road (Detailed Design)	$119,293			$0		$119,293	
P.19.0406.023 3100B-6-37 - ADJ 11 Amendments to Development Application	$27,587	$24,095	$ 445	$24,539		$27,587	
TOTALS	**$2,567,181**	**$2,210,837.30**	**$2,955.00**	**$2,213,791**		**$2,577,955**	

Project Component	Budget	Previous Claims	Current Claim	Total Claims To Date	% Work completed to date	Forecast at Completion	Status / Comments on Progress to date

From: s36
To: s36
Cc: s36
Subject: Tasman Highway - Revised EPBC Submission
Date: Monday, 3 June 2024 8:26:10 AM
Attachments: Duplicate

Hi s36

Attached please find the revised EPBC submission on the realignment. This incorporates the updated Orchid Habitat Significant Impact Assessment, Tasman Highway Natural Values Implications of Revised Design, Golf Course Natural Values Implications of revised Design (all from North Barker). I have also revised the main report to reflect the changes to the North Barker Documents and comments from yourself and s36
You already have the planning Permit Amendment Report from s36, but it does not have the latest Natural Values Implications reports for highway and Golf Club. I have asked s36 to amend that report and send it through to you.

s36
Principal Engineer

s36 | s36@pittsh.com.au | Connect on LinkedIn

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PO Box 94 Hobart Tasmania 7001 | Phone +61 3 6210 1466

pittsh.com.au

From: s36
To: s36
Cc: s36
Subject: RE: Tasman Highway - Revised EPBC Submission
Date: Friday, 7 June 2024 3:57:00 PM
Attachments: Tasman Highway-Hobart Airport to Midway Point Causeway EPBC Act Referral 2020-8805-Realignment of original design- DSG comments.PDF

Hi s36

s36 and Denise met with s36 and discussed the realignment and revised EPBC submission, there is general consensus that we are ok to proceed. In association with the work P & S have been doing JMG have developed a planning application and design for the alternative access to Milford (I will provide all of this info in a separate email so you understand what is occurring).
s35

As a result there are a few more minor edits to be (see attached) once these are done we can submit.

Thanks, s36

s36
State Roads | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Email: s36 @stategrowth.tas.gov.au / MB: s36
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.

pitt&sherry

EPBC Act Referral 2020-8805

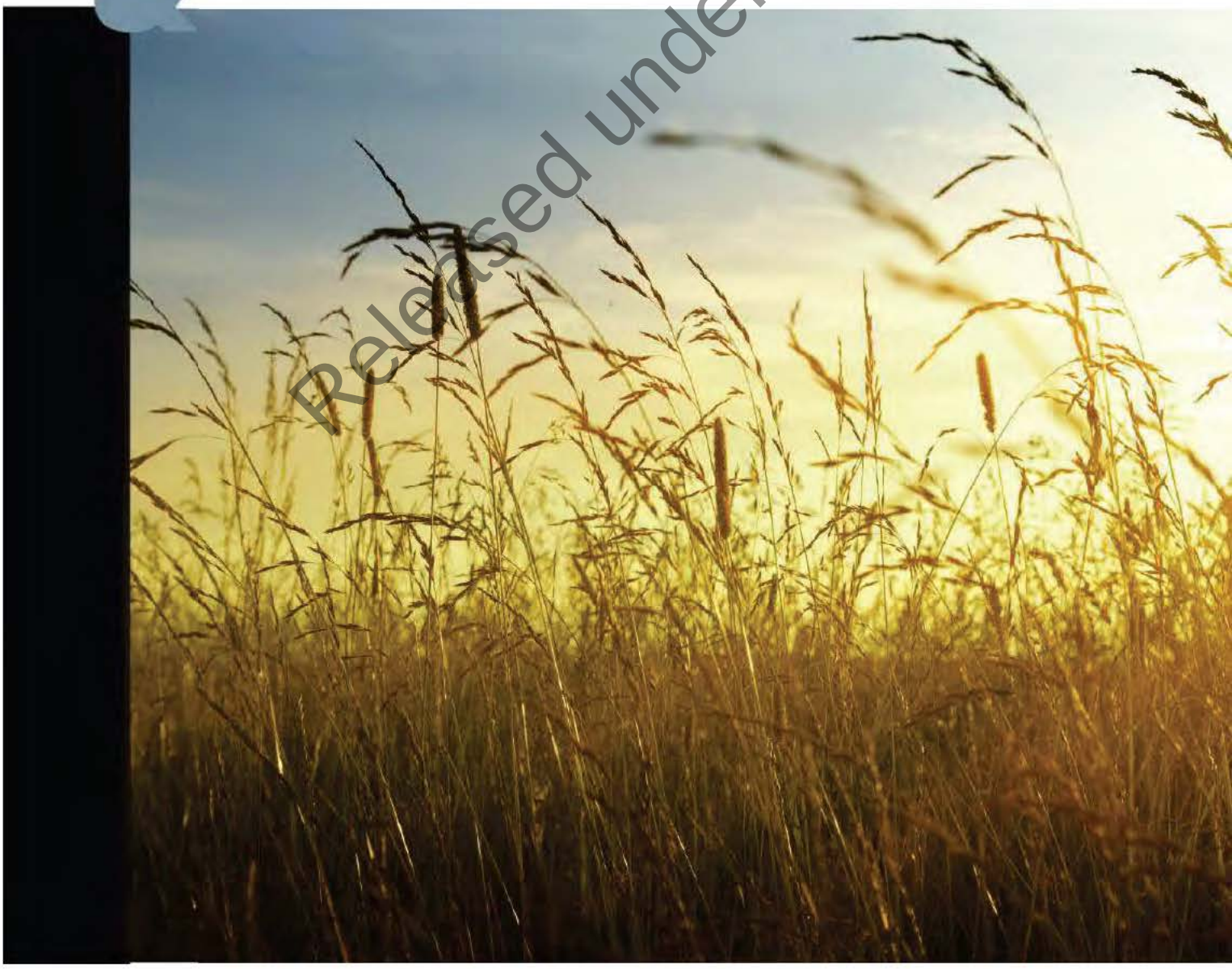
Realignment of the Original Design Adjacent to the Milford Property

Prepared for
Department of State Growth

Client representative
s36

Date
3 June 2024

Rev00



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Appendix E — Golf Course Natural Values Implications of Revised Design
Appendix F — Pittwater Road Drainage Improvements
Appendix G — Contract Environmental Management Specification
Appendix H — Milford Conservation Area Roadside Biological Monitoring and Management Report

[redacted]

Prepared by — [redacted]	[redacted]	**Date** — 12/04/2024
Reviewed by — [redacted]	[redacted]	**Date** — 19/04/2024
Authorised by — [redacted]	[redacted]	**Date** — 19/04/2024

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
01	Issue to Department of State Growth	[redacted]	[redacted]	[redacted]	19/04/2024
02	Amended following review and clarification of orchid records	[redacted]	[redacted]	[redacted]	04/06/2024

Executive Summary

In September 2020 the Department of State Growth submitted a referral under the EPBC Act (EPBC 2020-8805) for upgrading of the Tasman Highway between the Hobart Airport Interchange and the Midway Point Causeway. Preliminary Documentation was submitted in February 2022. Following assessment of the Preliminary Documentation, the Department of Climate Change, Energy, the Environment and Water advised that without substantial avoidance of directs impacts to threatened orchid species on the Milford property an offset would be required.

The Department has actively pursued the offset over the past two years but has not been able to reach a mutually acceptable position with the owner of Milford on the location and size of the offset or how it would be managed into the future. Accordingly, the Department of State Growth has decided to modify the highway design so that direct impacts on the orchids are avoided.

The realignment moves the highway to the north by up to 10 metres over a length of approximately 480 metres in the vicinity of Pittwater Road and reduces the width of the strip of land acquired from the Milford property by up to 14 metres. Additional land is to be acquired from the Tasmania Golf Club on the northern side of the highway to accommodate the realignment.

A revised Orchid Habitat Significant Impact Assessment has been prepared for the realignment and is included in Appendix B. A range of Management actions have been proposed to mitigate indirect impacts under the realignment. Thes include activities during the preconstruction, construction, and post construction phases. The roadside adjacent to Milford will be nominated as the Milford Conservation Area and incorporated into the Department of State Growth Roadside Conservation Program recognising its proximity to priority orchid habitat and the importance of a high standard of management to reduce the risk of any adverse impacts to that habitat.

Summary of Comments on 34.1 Tasman Highway-Hobart Airport to Midway Point.pdf

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Number: 1 Author: s36 Subject: Sticky Note Date: 5/06/2024 11:48:41 AM

Like the works on the golf course, the new driveway is a facilitated impact from the development.

The driveway forms part of the larger action, as the action are codependent (the driveway would not be built without the highway), they are to be developed by the same proponent, under the same contract with the same funding source, at the same time and the are geographically linked.. Importantly, impacts on Part 3 matters can only be assessed through consideration of the driveway, as the driveway has been designed as the primary access to Milford and in order to redirect day to day traffic away from orchid habitat.

s35

1. Current Status of the EPBC Assessm[redacted]

In February 2022 the Department of State Growth submitted Preliminary Document[redacted]limate Change Energy, the Environment and Water (DCCEEW) seeking approval under th[redacted]d Biodiversity Conservation Act (EPBC) for the upgrading of the Tasman Highway between the Airport Interchange and the Midway Point Causeway (EPBC 2020-8805). Following receipt of the Preliminary Documentation, DCCEEW responded by email on 16 March 2022 (*Renee Stainer, Assessments Officer, Department of Agriculture, Water and Environment to Matthew Davis, Environmental Scientist, Pitt & Sherry).* In that email DCCEEW advised that it was "satisfied that most Department comments have been resolved" and additionally noted some outstanding matters. The most important outstanding matter related to the requirement for an offset and the particulars of that requirement are reproduced below.

As now reflected in the documentation, the department will consider all areas currently identified as 'core habitat' and 'primary potential habitat' as habitat for the critically endangered Milford Leek-orchid and Sagg Spider-orchid in line with the broadening extent of species occupation in recent annual surveys. As noted in the department's further comments, the direct, indirect and residual impacts to habitat areas and individuals will need to be updated in line with this reclassification, including the consideration of the need for offsets.
Residual impacts are defined as the impacts that remain after avoidance and mitigation measures. For assessments under the EPBC Act, offsets are required if residual impacts are considered significant. Avoidance and mitigation measures are the primary strategies for managing the potential significant impact of a proposed action, and offsets will not be considered until all reasonable avoidance and mitigation measures are considered, or acceptable reasons are provided as to why avoidance or mitigation of impacts cannot be reasonably achieved
According to the EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (December 2013) (attached to this email for your reference), an action is likely to have a significant impact on a critically endangered species if there is a real chance or possibility that it will adversely affect habitat critical to the survival of a species or reduce the area of occupancy of the species. Given the critically endangered Milford Leek-orchid and Sagg Spider-orchid are unlikely to occur anywhere else other than the Milford property, all habitat can be considered critical to the survival of the species.
Considering the information on impacts which is now available, the department's view is that (without substantial avoidance of direct impacts) the action will have a residual significant impact on these species given that:

- *the action will directly impact on approximately 0.40% of the known range of the Milford Leek-orchid and 0.37% of Sagg Spider-orchid habitat, and indirectly impact 0.31% of the known range of Milford Leek-orchid and 0.24% of Sagg Spider-orchid habitat*
- *the Minister's delegate has already decided that the action is a significant impact (as per the referral decision); and*
- *there has not been a substantive reduction (for example though avoidance) of impacts to the species.*

Therefore, unless there is a new proposed substantial avoidance of impacts, offsets will be required in order for the proposal to meet the department's offset policy.

Following this advice further investigations were carried out by Pitt and Sherry and North Barker to determine the potential and scope for a suitable offset to be established on the Milford property. It was determined that it was possible to establish an offset on the Milford property, however the following constraints emerged following consideration of how the offset might be implemented and managed.

i. The Department of State Growth and the owner of Milford have been unable to reach agreement on the location and size of the offset or how it would be managed by the Department, on behalf of the owner, into the future.
ii. There have been Legal and Administrative complexities, that are outside the Department's normal operating parameters, that are associated with the Department managing an offset area on private property.
iii. The Department has become increasingly concerned at the length of time to resolve these matters and with Planning and Design completed and funding committed, community and political expectations are that the project should be advanced.

In response, a revised design has been prepared that avoids direct impact on orchid habitat. The background to the decision on the original alignment is summarised below followed by a description of the revised alignment.

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2. Background to the Original Decision o[redacted]ent

Five options for upgrading the highway between the Airport and the Midway Point C[redacted] These were described in Section 11 of the Preliminary Documentation Report that has bee[redacted] (T-P.HB19197-ENV-REP-001-Rev02, 24/02/2022). The selected option (Option 5) was endorsed by all directly impacted property owners (Tasmania Golf Club, Milford, and Hobart International Airport) as the best solution, subject to obtaining Statutory Approvals including those under Local Government Planning, the EPBC Act and Commonwealth approval for acquisition of some airport land. The advice from North Barker contained in the July 2020 Significant Impact Assessment (Appendix H of the February 2022 Preliminary Documentation) was that, based on the relatively small areas impacted (direct and indirect impacts totalling less than 1.4% of critical orchid habitat) the proposed action did not represent a significant impact. The new highway requires a road reservation width of approximately 65 metres through this area compared with the existing width of approximately 30 metres. Limiting impact on Milford results in a greater impact on the Golf course, and vice versa. The stated position of the Golf Club was that it accepted the need for the highway to be upgraded but it needed to preserve the playing characteristics of the course, including separation of playing areas and traffic based on contemporary safety guidelines and the Club also sought to retain as much of existing tree cover as possible. In summary it was considered at the time that the proposed alignment was a best fit compromise that balanced the differing uses, objectives and values of the adjacent properties.

3. Scope of Realignment

3.1 Description of realignment

The revised alignment moves the highway approximately 10 metres to the north in the vicinity of Pittwater Road, narrows the highway shoulders by 1 metre and replaces part of the earthworks embankment adjacent to Milford with a retaining wall. A plan of the realignment, which extends over a length of approximately 480 metres, is included in Appendix A with an extract in the vicinity of Pittwater Road included in Figure 1 below. The realignment is achieved by introducing a tighter radius curve at Pittwater Road whilst still complying with the 80 km/h design speed. The blue lines below and in Appendix A show the original position of the carriageway control lines and the red lines show the revised position of the carriageway control lines. These changes will move the previously designed new property line for Milford approximately 14 metres to the north in the vicinity of Pittwater Road. Direct impacts on orchid habitat are avoided and indirect impacts are substantially reduced.

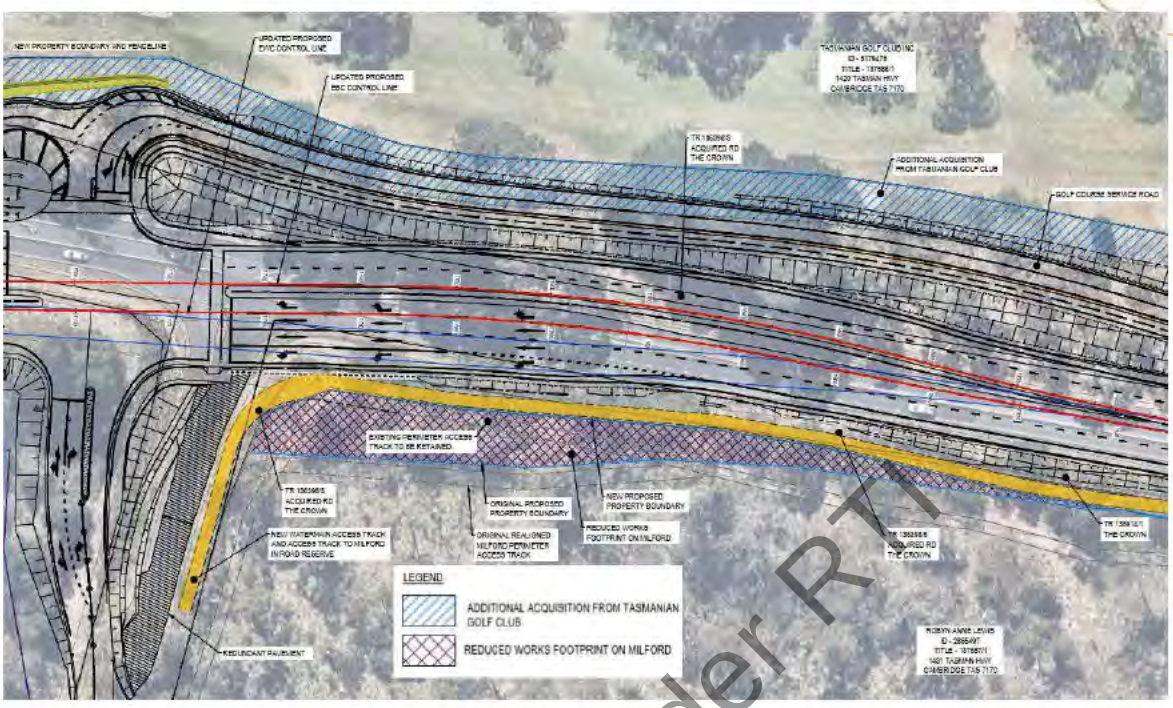

Figure 1 Realignment in vicinity of Pittwater Road

A Natural Values Implications Report that assesses the impacts of the highway realignment is provided in Appendix D. The report states that "*The realignment of the development will reduce the scale of vegetation clearance south of the Tasman Highway, in the vicinity of Pittwater Road, thus avoiding the most significant natural values associated with habitat for threatened orchids on the Milford property*" and "*…the amended design provides increased buffer from the known records of orchids and the footprint is entirely outside the critical orchid habitat…*"

3.2 Change in impacts - Milford

The change in impacts on Milford is demonstrated by reference to Figure 2 (Impact of Original Design) and Figure 3 (Impact of Realignment) below. The purple cross hatching in Figure 1 above shows the reduced works footprint which is the area of land that will be returned to Milford.

Figure 4 below shows the extent of indirect impacts on the habitat east of the existing Milford highway access. These impacts are unchanged from the original design.

Tables 1 below summarise the change in impacts resulting from the realignment.

A revised Orchid Habitat Significant Impact Assessment reflecting the change in the design is included in Appendix B.

Service relocations associated with the realignment including TasWater and TasNetworks are contained within the road reserve and do not impact on orchid habitat.

The overall change in project impact is shown in the plan in Appendix C.

Figure 2 Impact to Orchid Habitat at Pittwater Road (Original Design)

Figure 3 Impact to Orchid Habitat Pittwater Road - Realignment

Figure 4 Impact to Orchid Habitat – East of Highway Access (Unchanged)

Table 1 Change in Impact to Critical Orchid Habitat

Species	Total Area Critical Habitat Ha	Original Design		Realignment	
		Impact Ha	Nearest Plant to Footprint	Impact Ha	Nearest Plant to Footprint
Prasophyllum milfordense	17.24	0.078	3 plants in footprint	0	15 m from watermain
Caladenia saggicola	19.10	0.078	32 metres from access road	0	47 m from watermain
Caladenia caudata	19.10	0.078	55 metres	0	55 m

3.3 Change in impact Golf Club

Additional land is required from the Tasmania Golf Club for the realignment. This is shown as blue cross hatching in Figure 1. A report addressing the Natural Values Implications of the redesign is provided in Appendix E. Within this additional land is an area of *Eucalyptus viminalis- E.globulus* coastal forest and woodland (DVC) occupying 0.27 Ha. Six mature *Eucalyptus viminalis* (white gum) are located in this 0.27 Ha and the tree protection zones of two others are significantly encroached and may be adversely impacted. The report in Appendix E advises that five of these trees are likely to have been adversely impacted under the original design. The net result is that three additional trees on the Golf Course may be impacted as a result of the realignment. Offsetting this is the retention of three trees on the Milford property that were impacted by the original design but are now outside the works footprint as detailed in Appendix D. Accordingly, there is no net loss of mature white gums as a result of the realignment.

The report in Appendix E advises that no threatened flora species listed under either the Tasmanian Threatened Species Act or the EPBC Act will be impacted directly by the realignment.

3.4 Limitations of realignment

There are practical and safety considerations that limit the extent of encroachment of the new highway into the Golf Course. The existing 16th fairway is parallel to the existing highway and does not meet current guidelines for separation of the playing area from traffic. Clearly any extension of the new highway into the Golf Course needs to recognise the greater clearances between playing areas and traffic which are contained in current standards and exceed the clearances to which the Golf Course was originally built. Contour Golf Design Group Pty. Ltd. were engaged to provide advice on requisite clearances to the proposed new highway boundary and the playing areas of the Golf Course. Contour Golf's advice is based on guidelines published by the Society of Australian Golf Course Architects (SAGCA). Contour Golf advised that a clearance of 80 metres was required from the direction of play of the relocated 16th fairway and the highway boundary. This advice recognised that the tee shot is played steeply downhill, and the prevailing winds are from the northwest – both factors that increase the potential for golf balls to reach the highway. Additionally, oncoming traffic faces towards the direction of play increasing the severity of any potential incidents between errant golf balls and traffic. The new highway design consolidates three existing accesses (Barilla Bay, Pittwater Road and Tasmania Golf Club) into a single access at Pittwater Road that will be controlled by traffic signals. This consolidation of accesses improves both the safety and capacity of the new highway. It also involves construction of a new service road to the Golf Course immediately to the north of the highway i.e. placing Golf Course traffic closer to the 16th fairway than highway traffic.

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To balance, this is the retention...

s35 [redacted]

The original design of the new highway and Golf Course service road resulted in most of the trees between the existing 16th fairway and the highway being removed. Currently, most sections of the cours [redacted] way and, notwithstanding the guidelines on separation distances, tree cover does provide an [redacted] from errant gold balls.

It is noteworthy that the Society of Australian Golf Course Architects (SAGCA) advis [redacted] al to survey the limitless possibilities of errant gold balls hit by golfers of diverse skill levels on varied golf terrains with elevation changes in widely different wind conditions…".

Accordingly, the decision was taken to set the new boundary at 90 metres from the direction of play of the proposed new 16th fairway to provide for the planting of a generous area of new trees.

The revised alignment now encroaches an additional 10 metres into the Golf Course and reduces the width of the proposed tree planting by this amount. This is a concession that the Golf Club has agreed to in the interests of progressing the project and enabling the Golf Course modification works to begin. The realignment introduces a slight reverse curve into the highway which, whilst still compliant with the 80 km/h design standard, is slightly sub optimal. Further extension of the design into the Golf Course is not considered to be viable for the following reasons:

i. The safety aspects of adequate separation of playing areas of the Golf Course and traffic.
ii. The amenity values of the Golf Course.
iii. Meeting the 80 km/h design standard.
iv. Property acquisition from Barilla Bay Oysters on the northern side of the highway west of the Golf Course
v. Access difficulties due to steep grades where the new service road joins into the existing Golf Club access road.
vi. The proposed new 16th fairway cannot be moved further to the north due to the proximity to the 17th fairway and to the north of the 17th fairway is the relocated Golf Course water storage dam which occupies all available land up to the limit of the threatened ecological community *Subtropical and temperate coastal saltmarsh* listed as Vulnerable under the EPBCA.

4. Management Actions to Mitigate Indirect Impacts Under the Proposed Realignment

4.1 Pittwater Road drainage

Drainage along Pittwater Road has been identified as a facilitated impact by DCCEEW and it is proposed to mitigate this impact by removing the gravel hardstands that can be a source of silt laden water entering the Milford property. The proposed mitigation is described in Appendix F. Clarence City Council, the owner of Pittwater Road endorsed these improvements in an email dated 19th July 2022. A copy is also provided in Appendix F.

4.2 Pittwater Road access

The Department of State Growth has now agreed to provide the new access into Milford from Pittwater Road

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approximately 1.4 kilometres south of the Tasman Highway. This new access will pass through the farmland portion of the property[1] in accordance with the owner's wishes[2] and will eliminate the need for any day to day traffic to pass through areas of orchid habitat. The absence of agreement on this access when DCCEEW officers met on site with Department representatives and the owner of Milford on 27th April 2022 had been an area of concern.[3]

4.3 Construction Phase

The following actions which are substantially in accordance with Appendix M (T-HB19197-ENV-REP-001-Orchid Management Plan-Rev02) of the Preliminary Documentation will be implemented. Note that these actions have been modified from Appendix M recognising that no works are envisaged on the Milford property outside of the acquired road reserve.

Table 2 Construction Actions

No.	Management Actions	Frequency	Responsibility
Preconstruction Phase			
1.1	Prepare Management Report[4] specific to the Milford Conservation Area	Prior to commencing work	Project Ecologist
1.2	Install temporary exclusion fencing on new boundary noting that permanent fence cannot be constructed until tree clearing has been completed	Prior to commencing work	Project Environmental Officer
1.3	Clear and legible signage every 50m stating "*Threatened Flora Exclusion Zone*" or similar	Prior to commencing work	Project Environmental Officer
1.4	Sediment fencing to be constructed and maintained where there is potential for construction water runoff to enter the orchid habitat areas	Prior to commencing work	Project Environmental Officer
1.5	All site personnel, including contractors, will complete a project induction that clearly explains the importance of values on Milford and importance to the Project to ensure the Milford property site is an exclusion zone to be protected from all impacts.	Prior to commencing work	Project Environmental Officer
1.6	The Construction Environmental Management Plan shall nominate all stockpile locations, laydown areas, storage sites, site office locations and parking areas. These shall not be permitted on the southern side of the highway along the Milford frontage.	Prior to commencing work	Project Environmental Officer and Construction Manager
Construction Phase			
2.1	Conduct regular monitoring of all exclusion fencing, including signage and record on the weekly environmental inspection checklist. Fence maintenance to be conducted if damaged or not functional	Daily during any vegetation clearance works Weekly thereafter	Project Environmental Officer and Construction Manger
2.2	Trees to be felled will be directed towards the road (under appropriate traffic control) to minimise damage to retained vegetation	Daily during tree felling clearance works	Project Environmental Officer and Construction Manger

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Number: 4 Author: s36 Subject: Sticky Note Date: 3/06/2024 12:06:46 PM
s35 [redacted]

2.3	Install a new boundary fence ensuring no environmental impact to orchid habitat under supervision of Project Ecologist	Once	Project Environmental [redacted] truction
2.4	Machinery operating in this area will be subject to appropriate hygiene standards for construction machinery.	At all times	[redacted] nager
2.5	Monitoring of the adequacy of sediment and water controls as prescribed and immediate maintenance as required will be undertaken. Any impacts to be rectified and controls to be upgraded to address deficiencies. All incidents to be reported to Project Manager, including management measures required and/or implemented.	Twice per week, with additional inspections within: • one hour of commencement of a rain event during working hours • every four hours for periods of continuous rain during working hours • within 12 hours of a rain event outside working hours	Project Environmental Officer and Construction Manager
2.6	Monitor and treat infestations of weeds in the RCS. Map and record all infestations and their treatment.	Every three months	Project Ecologist and Construction Manager
2.7	Monitor for evidence of water runoff and / or sedimentation that could impact habitat within the RCS or within Milford.	Every three months or within 24 hrs of major rain event (50 mm in a 24 hour period)	Project Environmental Officer and Construction Manager
2.8	Prepare Management Report specific to the RCS	Annually	Project Ecologist
Postconstruction - Defects Liability Period			
3.1	Rehabilitate any construction areas not required for operations. Any stockpiled material is to be removed and topsoil spread across the area. This is to be seeded with a native grass mix using species indigenous to the area.	Within one month of construction completion	Project Environmental Officer and Construction Manager
3.2	Monitor and treat weeds in the RCS	Every six months	Project Ecologist and Construction Manager
3.3	Prepare Management Report specific to the RCS	Annual	Project Ecologist
Post construction – After Defects Liability Period			
4.1	Management (following actions 3.1-3.4) of new roadside adjacent to orchid habitat will be handed over to and incorporated into the State Growth RCS Program	Annual	Project Environmental Officer

In addition to the above activities, all works must comply with the Department's Standard Specification for Environmental Management. This specification mandates the minimum requirements to be met by the Contractor with respect to Water Quality, Air Quality, Erosion and Sediment Control, Contaminated Soils and Materials, Fauna and Flora Protection and Reporting. A copy is included in Appendix G. Additional requirements that will be added to this specification are included below.

4.4 Additional specification requirements

The following additional requirements over and above those mandated in the Enviro [redacted] ification will be included.

4.4.1 Project Environmental Officer

The Project Environmental Officer shall:

i. Be a suitably experienced and skilled environmental management professional and shall prepare the Contractor's Environmental Management Plan and manage and monitor all environmental issues and environmental treatments implemented during construction.

ii. Have the environmental management requirements of the Contract as their sole responsibility.

iii. Have a minimum of five years experience in environmental management, with a minimum of two years environmental management experience in a road construction environment;

iv. Have demonstrated competence and suitable experience in environmental management in a construction environment with high environmental risks and/or complex environmental issues;

v. Be eligible for membership with the Environment Institute of Australia and New Zealand (EIANZ), Engineers Australia or other appropriate affiliation;

4.4.2 Erosion and sediment control

Sedimentation basins shall be utilised as the primary sediment control for the works along the Milford boundary unless the Contractor can demonstrate to the Superintendent's satisfaction that the implementation of a sedimentation basin is not technically feasible for the works. Where sedimentation basins are proposed as control measures, basins shall be designed to contain flows from a rainfall event having an Average Recurrence Interval of not less than two years and six hours duration when allowing for a 30% reduction in capacity as a result of sediment accumulation.

Sedimentation basins shall be modelled and sized to manage rainfall intensities and soil characteristics specific to the region and for any material that is imported to the site. The sizing and modelling of sedimentation basin(s) shall consider the expected works and associated area of disturbance within catchment area(s) within the site.

The sizing and modelling of temporary sedimentation basins shall be undertaken using recognised 'best practice' modelling techniques or '*VicRoads Temporary Sedimentation Basin Design Tool*'.

Spillways shall be designed for an event having an Average Recurrence Interval of five years

Sedimentation basins shall be cleaned out whenever the accumulated sediment has reduced the capacity of the basin by 30% or more, or whenever the sediment has built up to a point where it is less than 500 mm below the spillway crest, whichever occurs earlier.

4.4.3 Environmental audits and surveillance

The Contractor shall arrange an audit of the Environmental Management Plan prior to the commencement of Works.

The environmental audit shall be undertaken by an environmental auditor that is independent of the Contractor (a specialist in the employment of the Contractor is not acceptable) and has no involvement in the development of the Contractor's EMP for the works under this Contract.

The Contractor's Environmental Management Plan shall be audited to ensure compliance with the Specification and Management Actions listed in section 4.2 above and to verify that the EMP will be sufficient to protect the beneficial uses.

The Superintendent will arrange surveillance and audits to verify the effectiveness of the Environmental Management Plan and compliance with this Specification and the Management Actions listed in s

The Contractor shall co-operate with any reasonable requests by the Superintende ental agencies to undertake environmental audits and or surveillance activities of the Co

All non-conformances arising from an audit shall be addressed by the Contractor. The Contractor shall take immediate action to address any significant environmental non-conformance identified by an audit.

If the Contractor does not take action to address a non-conformance, the Superintendent may invoke cost penalties under the Contractor or may act to resolve the non-conformance and the cost of such action shall be deducted from moneys due or becoming due to the Contractor.

4.5 Ongoing Roadside Management

The roadside adjacent to Milford will be incorporated into the Department of State Growth Roadside Conservation (RCS) Program recognising its proximity to priority orchid habitat and the importance of a high standard of management to reduce the risk of any adverse impacts to that habitat. This will include creation of the Milford Conservation Area which will be included in the Department of State Growth's Roadside Conservation Program (RCS). This includes a database where all site detail and management works are documented, and reports prepared annually for three years and then in line with the RCS program every 5 years thereafter. Annual reporting of management actions will also be prepared in line with the reporting regime for the RCS program. This describes works conducted and prescribes works for the forthcoming year.

Most vegetation management works in this section of the roadside will be conducted by a qualified bushland management contractor. Standard roadside maintenance works will be limited to operational safety matters relating to maintenance of the road, shoulder and road furniture such as safety barriers and culvert outlets.

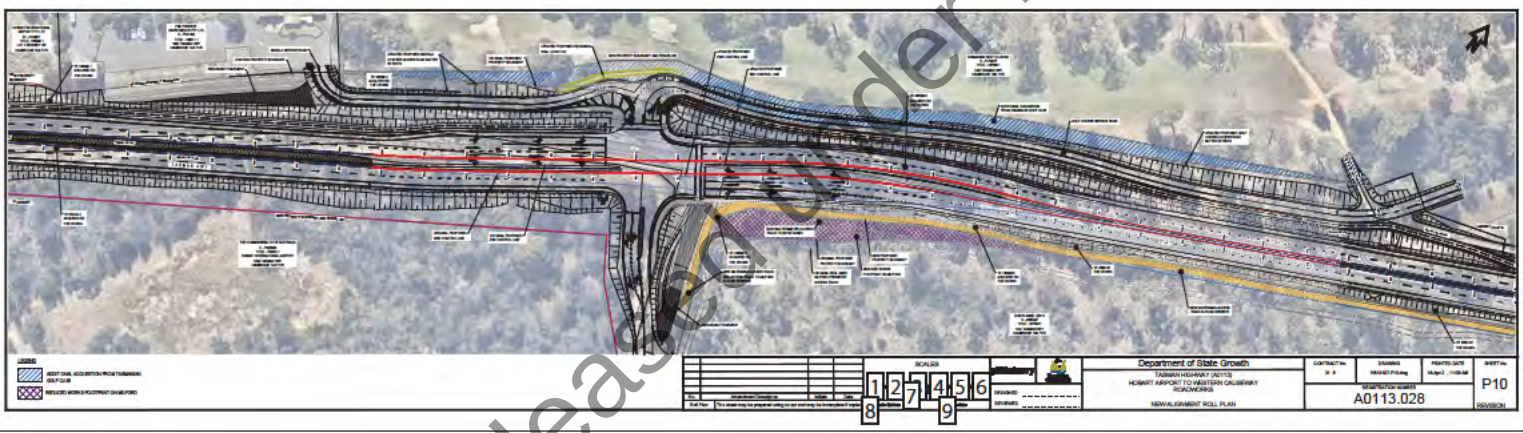
- The site will be subject to 6 monthly inspections for weeds and other impacts such as sedimentation, flood discharge impacts and rubbish dumping. Any identified issues will be reported and made good
- All weeds recorded and treated will be mapped and reported
- Any likely threatening processes that may impact on the adjacent orchid habitat will be identified, reported and monitored. Recommendations will be included in the management report to address any such issues
- Annual reporting will include documentation of management actions and prescription of actions for the next 12 month period.

An outline management plan for the Conservation Area is provided in Appendix H, noting that there are elements of this plan that cannot be developed until the Conservation area is established.

pitt&sherry

Plan of Realignment

Appendix A



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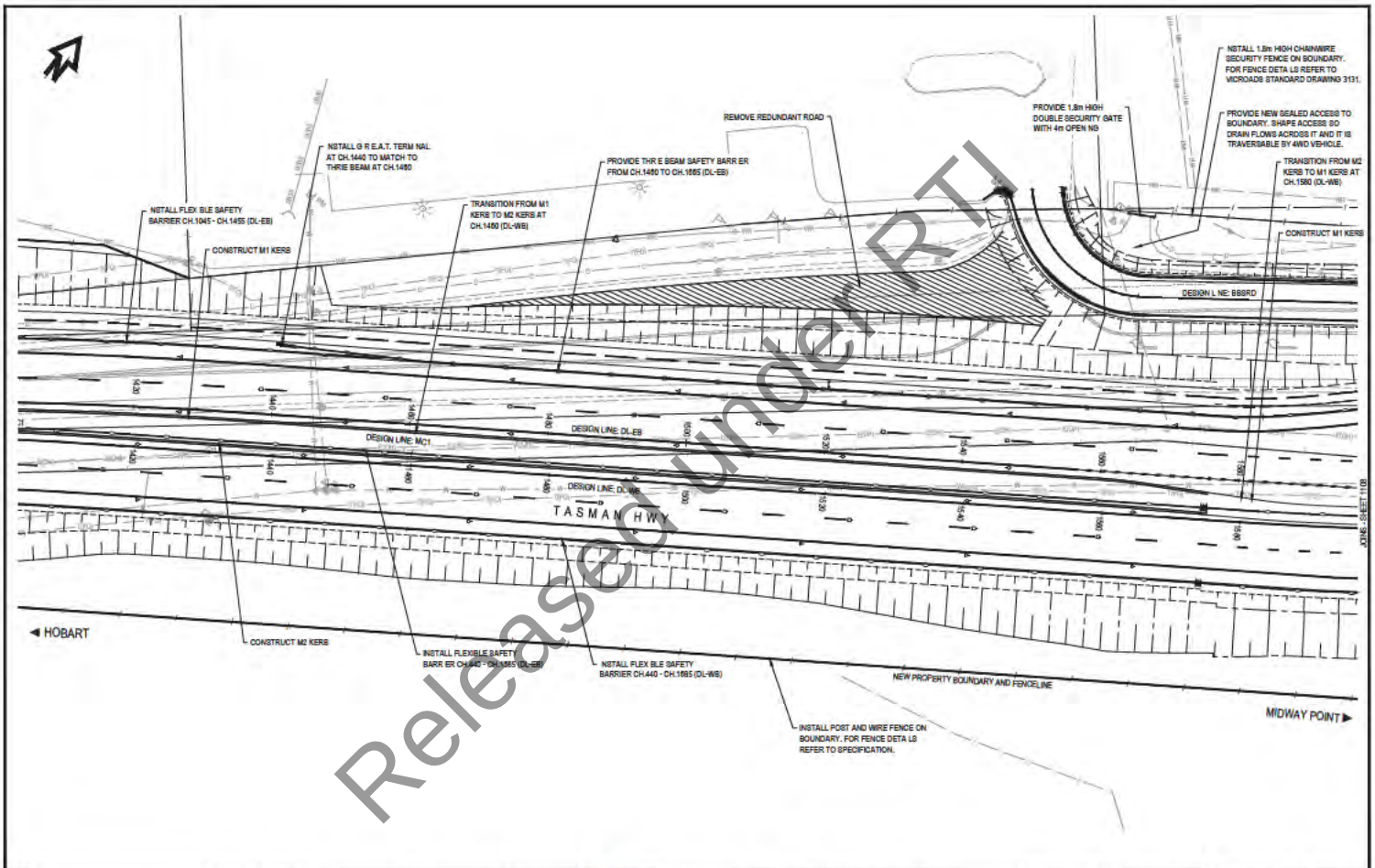

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DESIGNED
REVIEWED

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS
CONCEPT FOR DA
GENERAL ARRANGEMENT - DRG 7

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
	H219197-P1107	20-Mar-24, 9:39 AM	1107
REGISTRATION NUMBER			REVISION A

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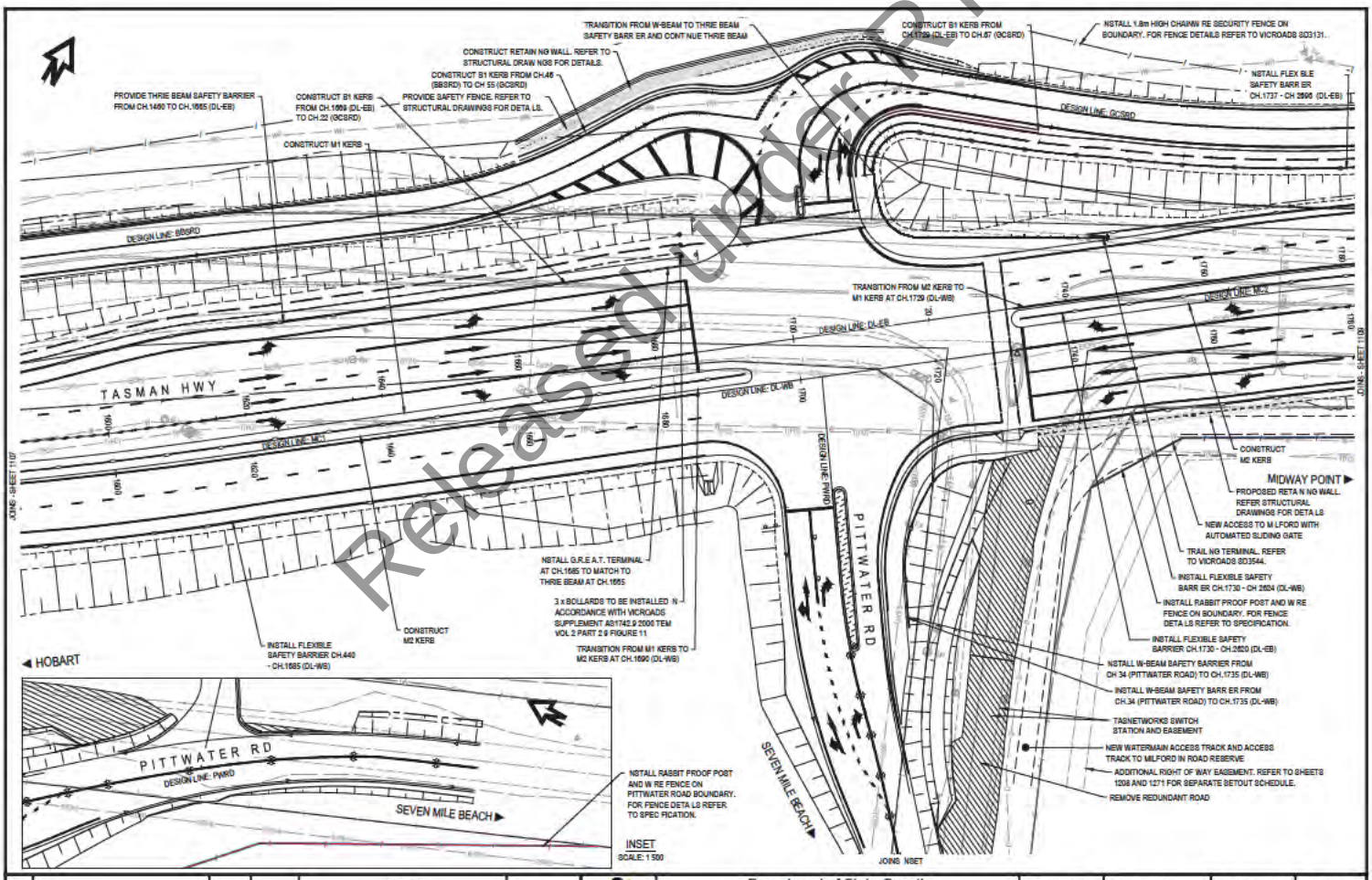

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DESIGNED .....
REVIEWED .....

Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS
CONCEPT FOR DA
GENERAL ARRANGEMENT - DRG S

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
	HB19197-P1108	17-Apr-24, 11:22 AM	1108
REGISTRATION NUMBER			REVISION A

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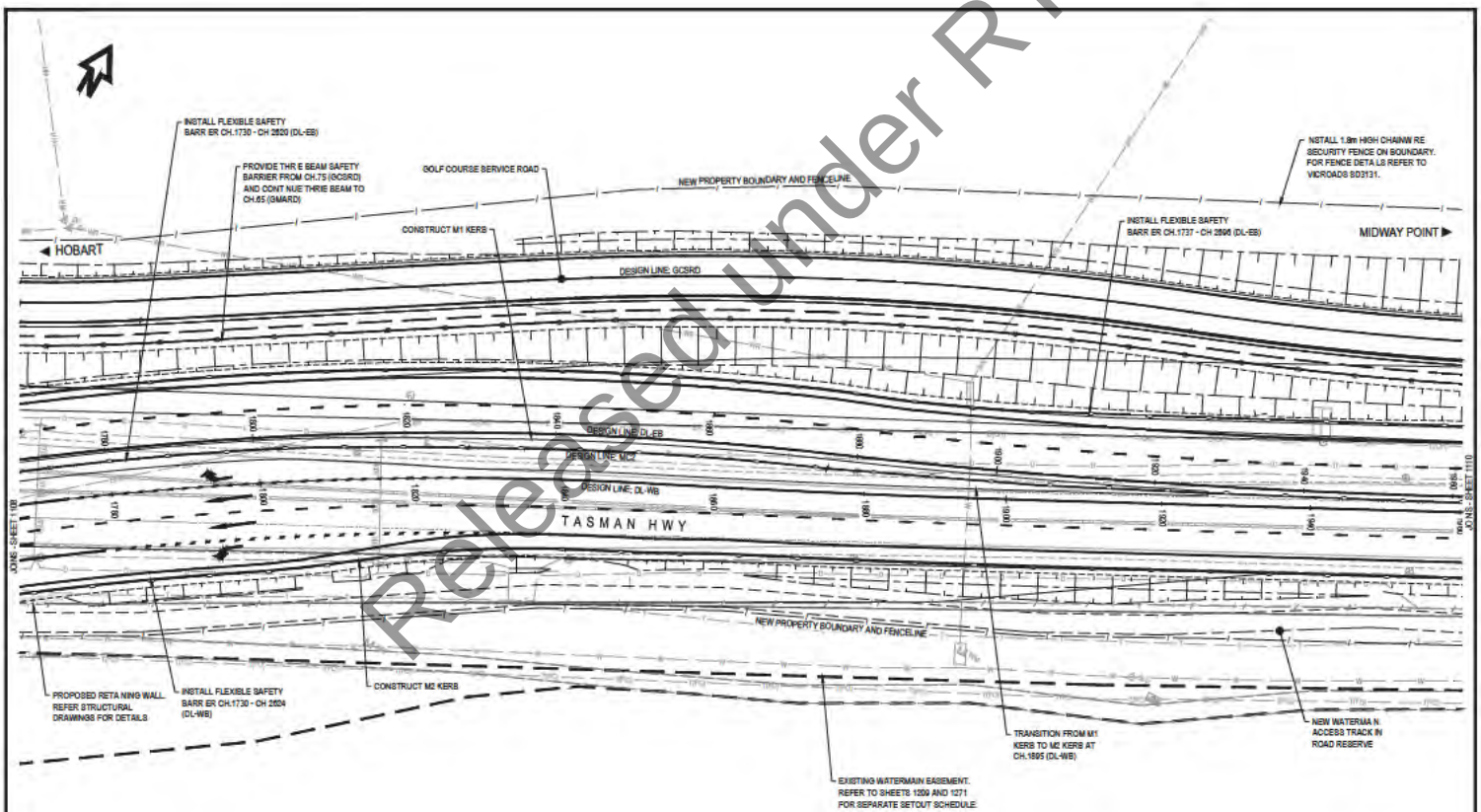

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Department of State Growth

TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS
CONCEPT FOR DA
GENERAL ARRANGEMENT - DRG 9

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
	HB19197-P1109	20-Mar-24, 9:35 AM	1109

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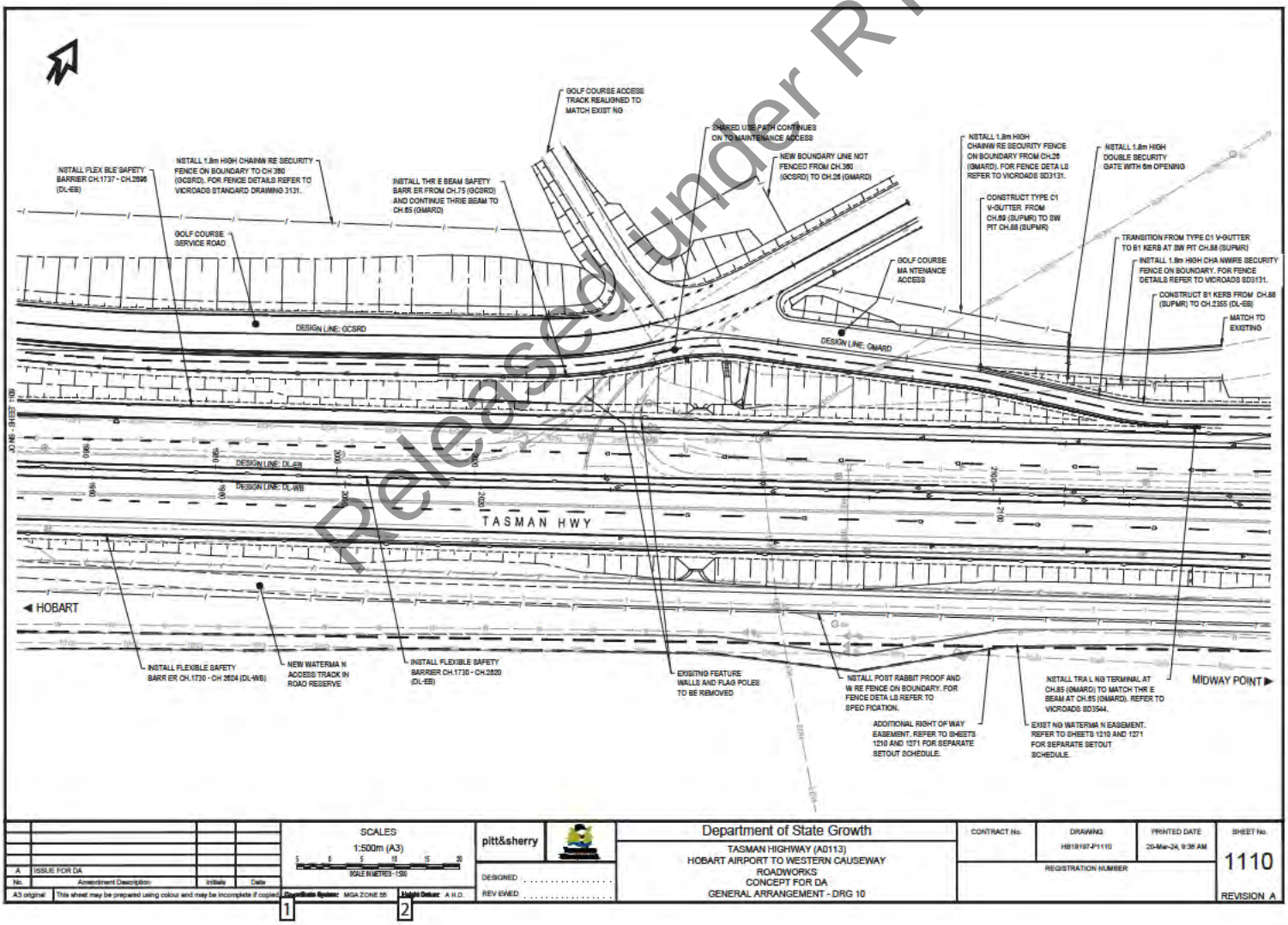

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TASMAN HIGHWAY (A0113)
HOBART AIRPORT TO WESTERN CAUSEWAY
ROADWORKS
CONCEPT FOR DA
GENERAL ARRANGEMENT - DRG 10

CONTRACT No.	DRAWING	PRINTED DATE	SHEET No.
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REGISTRATION NUMBER			REVISION A

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Orchid Habitat Significant Impact Assessment

Appendix B

northbarker
ECOSYSTEM SERVICES

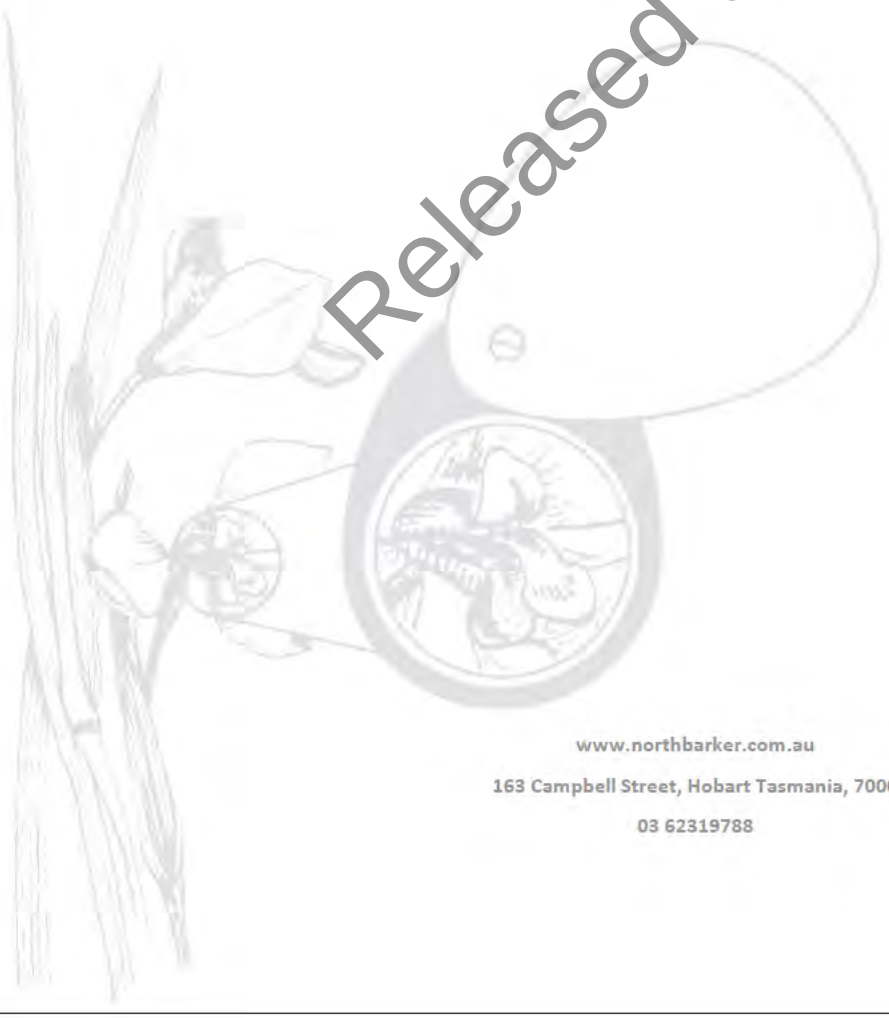
Tasman Highway

Hobart Airport Interchange to Sorell Causeway

Orchid Habitat Significant Impact Assessment

For Department of State Growth

29 May 2024
PAS150



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Review	s36 [redacted] Department of State Growth	06/03/2024
V1.0	Andrew North	02/05/2024
V1.1	Andrew North	17/05/2024
Review	s36 [redacted]	13/05/2024
V1.2	Andrew North	29/05/2024

Summary

Road upgrades to the Tasman Highway on Segment of 1 of the South East Traffic Solution will necessitate some vegetation clearance in close proximity to populations of three threatened orchid species (*Prasophyllum milfordense* - Milford leek orchid, *Caladenia saggicola* - sagg spider-orchid and *Caladenia caudata* - tailed spider orchid.

No direct impacts to individual plants are expected to occur.

The original design included minor direct impact to critical habitat where the widening extended into the Milford property.

Design modification to the alignment has shifted the extent of earthworks by approximately 10 m and in so doing avoided any direct impact to critical habitat.

Indirect impacts to critical orchid habitat are minor and not significant. Increased water runoff from the enlarged road surface is largely now directed via drains and culverts away from the orchid habitat down Pittwater Road. This also is an improvement on the previous design. Any inflow into Milford is expected to infiltrate into the soil before reaching orchid habitat. Soil contaminants are not expected to extend into the orchid habitat.

The new design avoids the need to realign the service track thus avoiding any additional vegetation clearance that previously would have impacted some of the orchid habitat in the far northwest corner. Weed infestations are already an issue. Increased water infiltration and ground disturbance associated with the development may favour habitat suitability on the roadside for weeds.

Indirect impacts can be minimised through the implementation of a high standard of management practises through the construction period and for the period after works are complete. Vegetation clearance works will remove some of the worst infestations close to the roadside which have recently been colonised by highly invasive ground cover species such as panic veldt grass.

Clear orchid habitat protection and weed management prescriptions will be developed and implemented in construction documentation and post construction through a roadside reserve management plan. This will prescribe monitoring of potential impacts and management of threats, notably existing weed infestations. It will also include a monitoring regime that will identify and respond to any future threats to orchids and their habitat.

The implementation of a management regime within the road reserve adjoining the orchid habitat on the Milford property will potentially result in an improved outcome to the current situation. This is because it provides an opportunity to tackle some existing serious weed threats in the road reserve that are a source of infestation into habitat on Milford and ensures a higher standard of roadside maintenance than is currently in place.

Significant Impact Assessment for each of the three listed orchid species confirms that the action will not result in a significant impact to any species.

CONTENTS

FIGURES

1 Threatened Orchids

1.1 Background

The Department of State Growth is proposing to upgrade the Tasman Highway between Hobart Airport Interchange and the Arthur Highway at Sorell in a five-stage project called the South East Traffic Solution (SETS). Segment 1 of the project starts immediately east of the Airport Interchange and extends for 2.7 kilometres. This stage has been referred under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. EPBCA 2020-8805.

It was determined by the Commonwealth that the project is controlled action specifically for impacts to three species:

> the proposed action is likely to have significant impacts on the critically endangered Milford Leek-orchid (*Prasophyllum milfordense*) and the critically endangered Sagg Spider-orchid (*Caladenia saggicola*). Significant impacts to the vulnerable Tailed Spider-orchid (*Caladenia caudata*) cannot be ruled out.[1]

Species	Status EPBCA	Comment
Prasophyllum milfordense Milford leek orchid	Critically endangered	Development is adjacent to the only known population.
Caladenia saggicola sagg spider-orchid	Critically endangered	Development is adjacent to largest of only two known populations.
Caladenia caudata Tailed spider orchid	Vulnerable	Development is adjacent to one of 48 populations recorded in Tasmania[2].

An MNES Significant Impact Assessment report[3] was prepared to support the referral which defined 'core' and 'potential' habitat for the three threatened orchids. As part of the additional information requested by DCCEEW, the report was updated to incorporate the findings of the later surveys conducted in 2020 and 2021. The report also included reclassification of orchid habitat as 'core', 'primary potential habitat' and 'secondary potential habitat'. Subsequent assessment by DCCEEW categorised all areas of 'core' and 'primary potential habitat' as critical habitat[4] he latter report[5] included a thorough assessment of the edge effects associated with the project and provided mitigation options for reducing the residual impacts of the project.

DCCEEW determined that even with mitigation there were sufficient residual impacts that would require offsetting.

This report reassesses potential impacts to the three listed orchid species following a redesign that specifically aims to demonstrate substantial avoidance of direct and indirect impacts to orchid critical habitat. It also takes advantage of more recent survey data from 2022. There is no data from 2023 due to a weather induced dormancy of plants. Dry and warm winter conditions in 2023 are likely cause of failed flowering of plants of all three species. The

[1] Referral letter dated 8 February 2021
[2] Threatened Species and Marine Section (2014). Listing Statement for *Caladenia caudata* (tailed spider-orchid). Department of Primary Industries, Parks, Water and Environment, Tasmania DPIPWE
[3] North Barker Ecosystem Services (30 September 2020)
[4] Email from Assessment Officer DAWE to Pitt & Sherry (16/03/2024)
[5] North Barker Ecosystem services (18 February 2022)

exceptionally favourable conditions for 2021 and 2022 have provided opportunity to reliably map the full extent of the populations.[6]

Information on the populations and habitat extent are taken from the previous work[7].

1.2 Orchid Habitat

1.2.1 Critical Habitat

The *Significant Impact Guidelines* refer to 'habitat critical to the survival of a species'. Critical Habitat is rarely well defined and has only been formally prescribed on the Register of Critical Habitat[8] under the EPBC Act for five species and does not include any of the three being considered here. The *Threatened Tasmania Orchids Flora* Recovery Plan[9] defines critical habitat thus:

> "Habitat critical to the survival of a species is defined as specific areas within and beyond a species' current distribution range containing biological and ecological characteristics essential to the continued existence of the species. Therefore, habitat critical to the survival of a particular species includes all areas deemed important to that species' survival or recovery, whether the species currently resides in those areas, historically resided in those areas, or may successfully recruit there in the future." pg 8

For *Prasophyllum milfordense* and *Caladenia saggicola*, critical habitat is defined (Figures 1-2)[10]. Critical habitat includes, with one exception[11], all areas of reliable records accumulated annually since 2018 and extending back to 1994. It also includes vegetation with similar attributes in vegetation composition and structure in proximity to the known records.

For *Caladenia caudata* the Milford subpopulation is one of 48 identified in the Listing Statement[12]. This subpopulation is not included in the list of priority populations which infer important populations in the Recovery Plan [13] as being an 'important subpopulation':

> "Appendix 2 includes priority subpopulations for species listed on the TSP and EPBC Acts; these subpopulations are considered critical for the survival of the respective species and are therefore considered to be 'important populations'. " p 9

The Recovery Plan then goes on to say:

> "The list of priority subpopulations is by no means complete and it is important to recognise that this list is dynamic and requires revision, as baseline surveys are conducted, as new information becomes available, as the status of threatening processes change, and as negotiations with landowners and managers progress."p9

An important population is a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and / or that are:

1. key source populations either for breeding or dispersal
2. populations that are necessary for maintaining genetic diversity, and / or
3. populations that are near the limit of the species range.

[6] This work is conducted by the Milford Forest Group with assistance from volunteers of the Threatened Plants Tasmania.
[7] North Barker Ecosystem services (18 February 2022)
[8] https://www.environment.gov.au/cgi-bin/sprat/public/publicregisterofcriticalhabitat.pl
[9] Threatened Species Section (2017)
[10] In accordance with email from Assessment Officer DAWE to Pitt & Sherry (16/03/2024)
[11] As single outlier record close to the highway was recorded in Dec 2022. Further consideration of this record is provided in section 1.2.3
[12] Threatened Species Section (2014)
[13] Threatened Species Section (2017) Appendix 2, p 66

There is evident hybridisation between *C. saggicola* and *C. caudata*[14] and the full genetic range of *C. saggicola* are of significance making these plants of *C. caudata* and all hybrids part of an 'important population'. This is consistent with criterion 2 above.

As such the mapped habitat at Milford for *Caladenia caudata* constitutes 'critical habitat' for the species (Figure 3).

[14] "It appears that *Caladenia caudata* can hybridise with other spider orchids (e.g. Milford area), making the identification of individuals difficult" p 3 Caladenia caudata Listing statement; Threatened Species Section (2014).

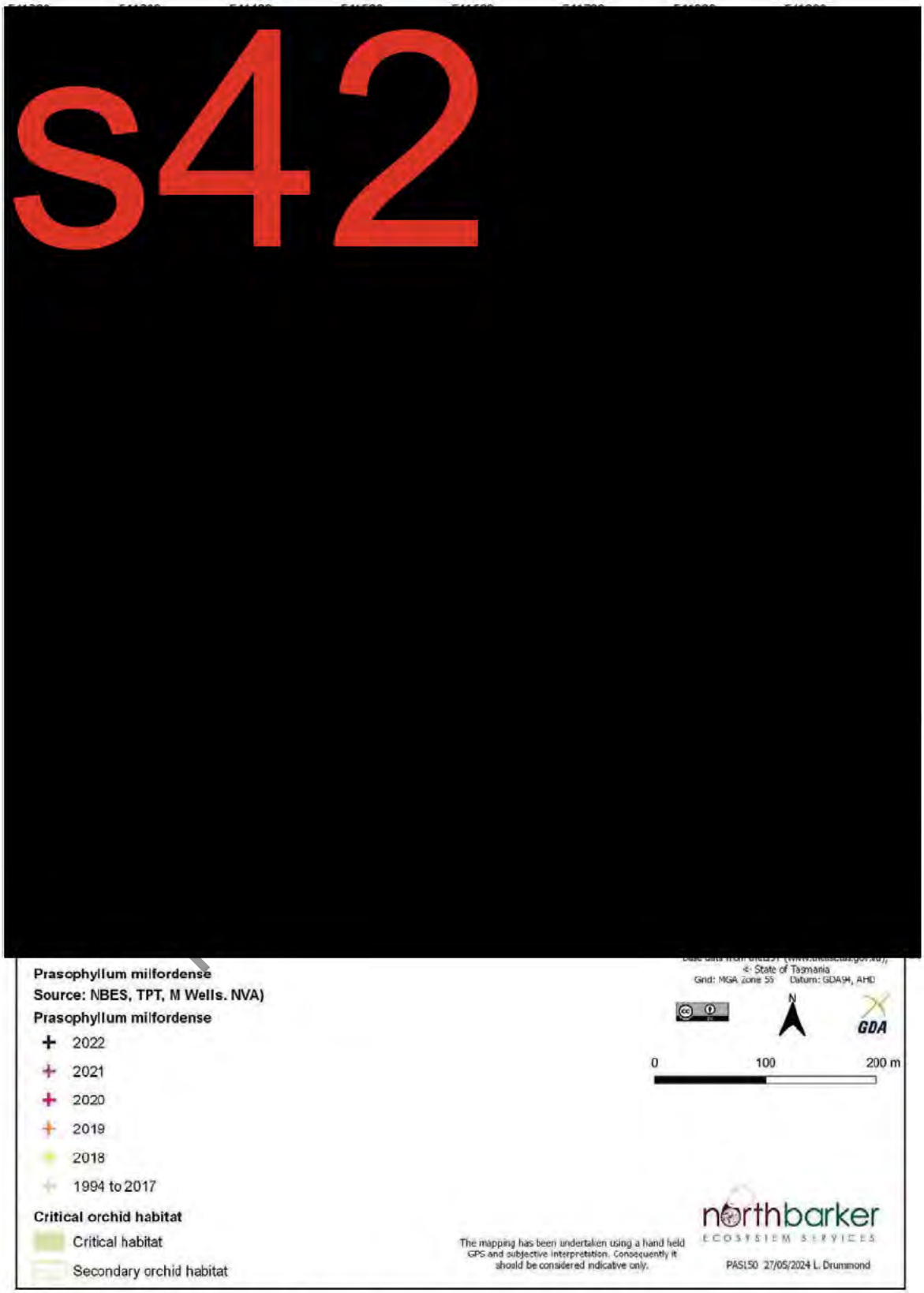

Figure 1: *Prasophyllum milfordense* records and habitat

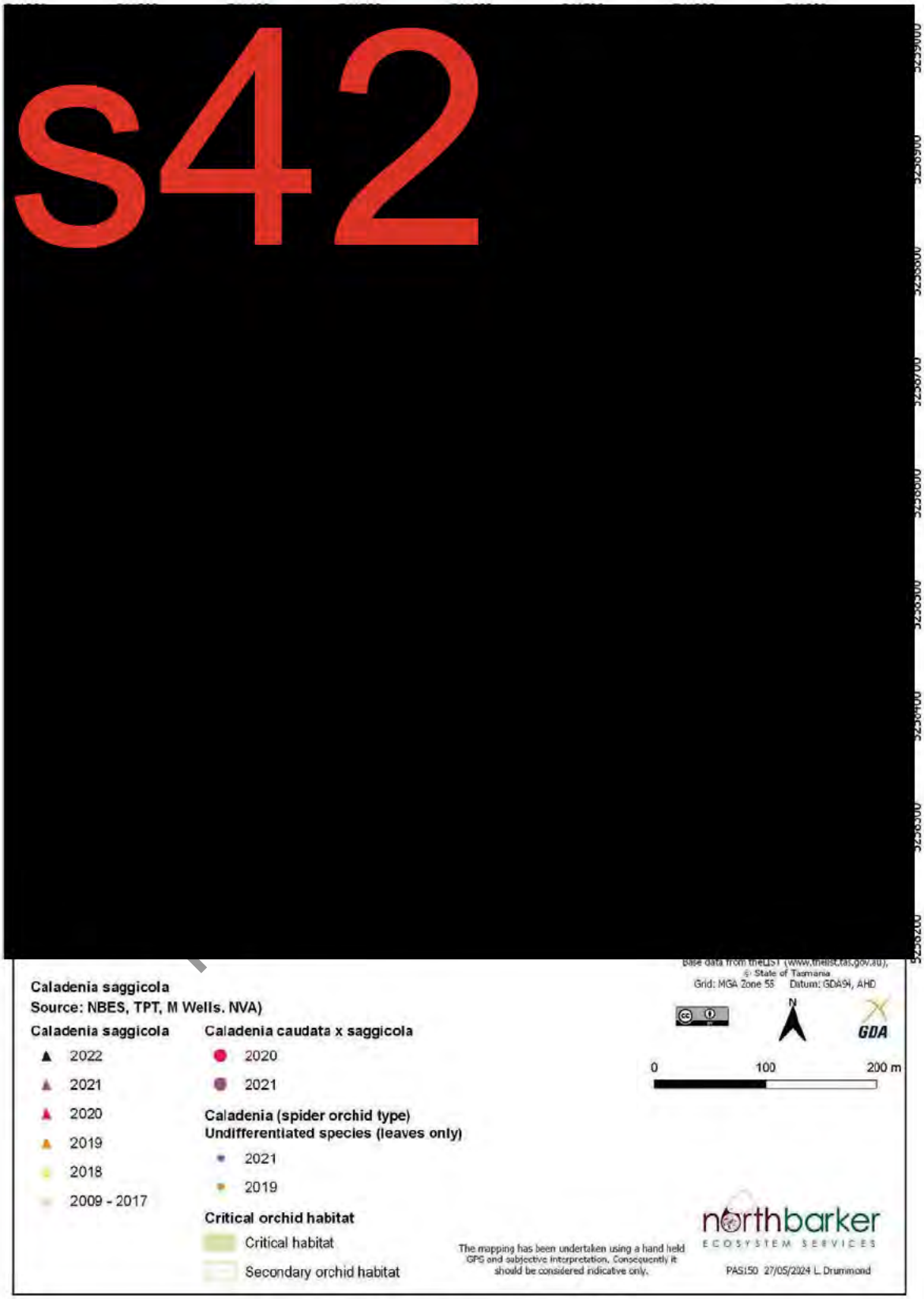

Figure 2: *Caladenia saggicola* records and habitat

Figure 3: *Caladenia caudata* records and habitat

1.2.2 Secondary Potential Habitat

This includes other areas of *E. viminalis* woodland on Milford that has attributes less suited to orchids e.g. dense bracken cover, weedy ground layer. The factors limiting suitability for orchids are considered reversible. It is very unlikely that much of this habitat is currently suitable but through biomass control, weed removal and other related actions it may be possible to enhance habitat suitability, although the circumstances required to make the habitat able to be colonised by orchids is uncertain.

A slither of native vegetation along the north-west of the property is defined as secondary potential habitat. This area is delineated by the Tasman Highway to the north, Pittwater Road to the west and a service track to the south-east. As such, this polygon is isolated from areas of critical habitat which are subject to regular weed management and biomass controls favourable to orchids. The slither is also subject to edge effects from the road, including weed incursion and stormwater run-off.

Secondary potential habitat is not considered critical habitat[15].

1.2.2.1 Outlying *Prasophyllum milfordense* record

Despite annual surveys of the property, no records for threatened orchid species have been located in secondary potential habitat with the exception of a single outlying sighting of *Prasophyllum milfordense* recorded in late 2022 along the northern boundary of the Milford property. This record warrants closer consideration. The record was located with handheld GPS, and has been given an accuracy of 10 m on the Natural Values Atlas. The documented location with a 10 m buffer is shown in Figure 4. Following consultation with one of the listed the recorders[16] it has been confirmed that the location of the record was inside the Milford property, north of the service track and at the point where the track veered closer to the highway. The most likely location is shown on Figure 4 within the hatched area of secondary potential habitat, 5-8 m south of the centroid of the record on the NVA the NVA (well within the realms of acceptable variation for hand held GPS). No further data on this record could be obtained.

Figure 1 shows *Prasophyllum milfordense* recorded as part of the 2022 survey. These specimens are concentrated to pockets where the species has been reliably recorded during annual surveys. The single observation is a visible outlier to historical data, located more than 20 m north from the nearest record, and surrounded by an area that is heavily degraded and infested with weeds. This area is fragmented from critical habitat and a single outlying record is not considered to warrant a change of classification of critical habitat.

1.3 Direct Impacts

1.3.1 Earthworks

This includes the removal of vegetation and topsoil along the corridor required for all earthworks including cuttings, embankments, table drains and culvert outfalls.

The direct footprint of the development avoids impacting known locations of any of the three species.

The proximity of confirmed observation records for threatened orchids from edge of works are listed below noting that these are plotted with hand held GPS (accuracy 5-10 m):

- *Prasophyllum milfordense* - single outlier record (2022), north of service road, likely to be 8-11 m from edge of earthworks and 3-5 m from edge of service track. Next nearest record (2022) is 20 m from edge of earthworks (highway) and 15 m from edge of realigned watermain service track. Other plants are all a further 7 m back from there.

[15] In accordance with email from Assessment Officer DAWE to Pitt & Sherry (16/03/2024)
[16] Peter Stronach, Landcare Tasmania

- *Caladenia saggicola* - single record (2018) 52 m from the edge of earthworks, 47 m from edge of realigned watermain service track.
- *Caladenia caudata* - single record (2019) 55 m from edge of earthworks.
- *Caladenia sp.* (leaves only 2018) 27 m from edge of earthworks and 24 m edge of realigned watermain service track

No critical habitat for *P. milfordense, C. saggicola* or *C. caudata* will be directly impacted, with the amended earthworks being 8 m from the edge of critical habitat at the closest point. This compares with a projected impact of 420 sqm of critical habitat for all three species in the referred design. Compare 5 with 6.

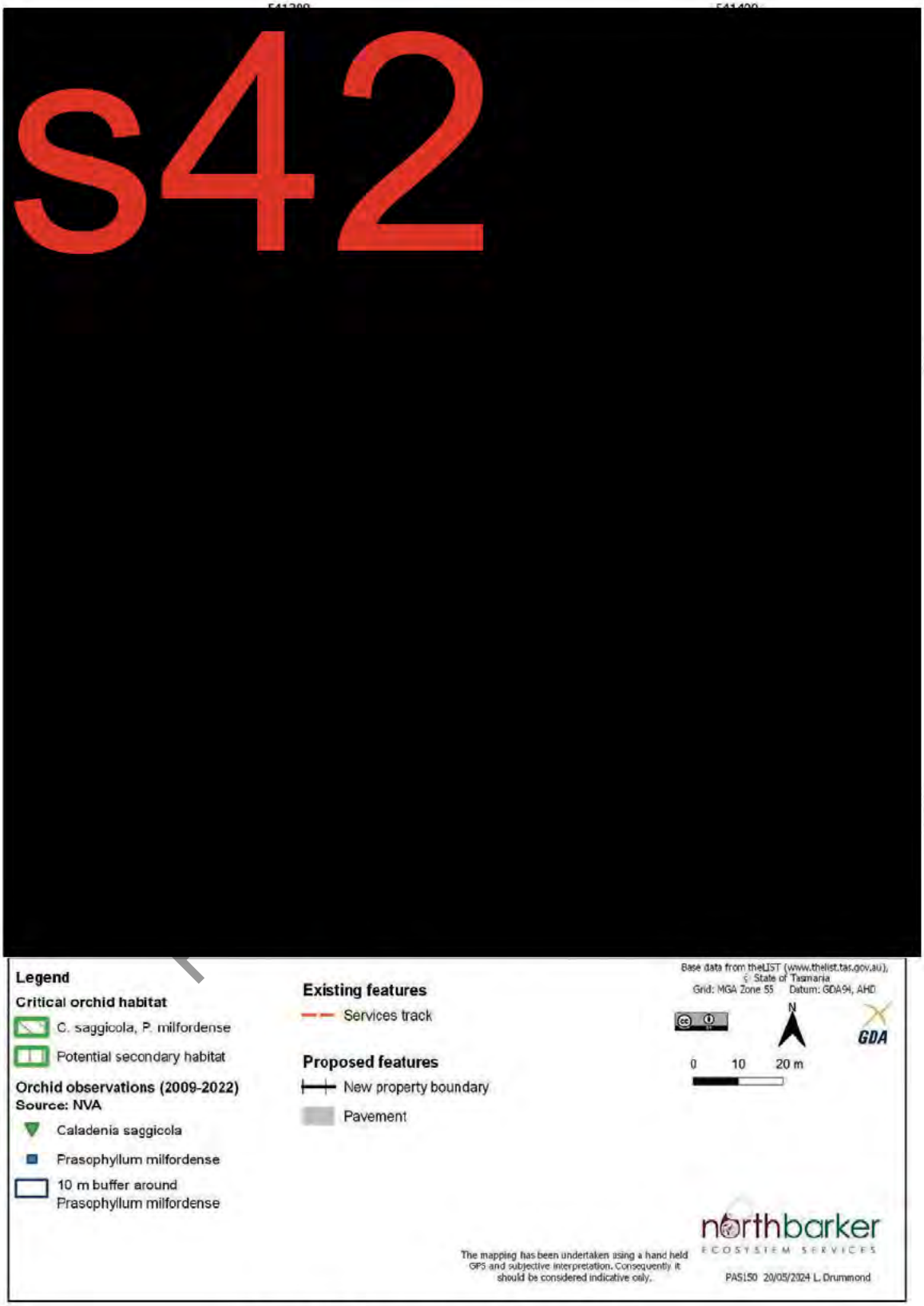

Figure 4: Outlier record of *Prasophyllum milfordense*

1.3.2 Service Track

The existing service track (Plate 4) follows a route roughly parallel to the highway 5-10 m in from the original property boundary. It includes for much of its length a water main and accompanying pits and meters. The previous design (figure 5) included a 90 m section in the northwest corner of the Milford property where the service track would have needed to be realigned through native vegetation to provide ongoing landowner vehicle access within the property.

Plate 1: Typical condition of existing service track

The new design (figure 5) allows for the landowner service track to be retained in its current location. An amended future recommended property boundary would ensure the existing service road remained within Milford ownership.

A new service track will be provided on the highway side of the new property fence to provide access for the water main. At its closest this is more than 4 m outside the critical orchid habitat in contrast to the previous design that affected 350 sqm of critical habitat. The existing landowner service track which follows the edge of the orchid habitat will not need to be moved.

Figures 5, 6 and 7 show detail where the works extend into orchid habitat and the proximity to known orchid records.

Table 1: Direct Impact to critical orchid habitat (hectares)

Species	Critical Habitat	Impact	Impact (Original Design)
Prasophyllum milfordense	**17.24**	**0.00**	0.078
Caladenia saggicola	**19.10**	**0.00**	0.078
Caladenia caudata	**19.10**	**0.00**	0.078

No direct impact is anticipated to habitat for any of the species. This compares with proportionate direct impacts in the previous design of 0.45 % to critical habitat for *Prasophyllum milfordense* and 0.41 % to habitat for *Caladenia saggicola* and *C. caudata*.

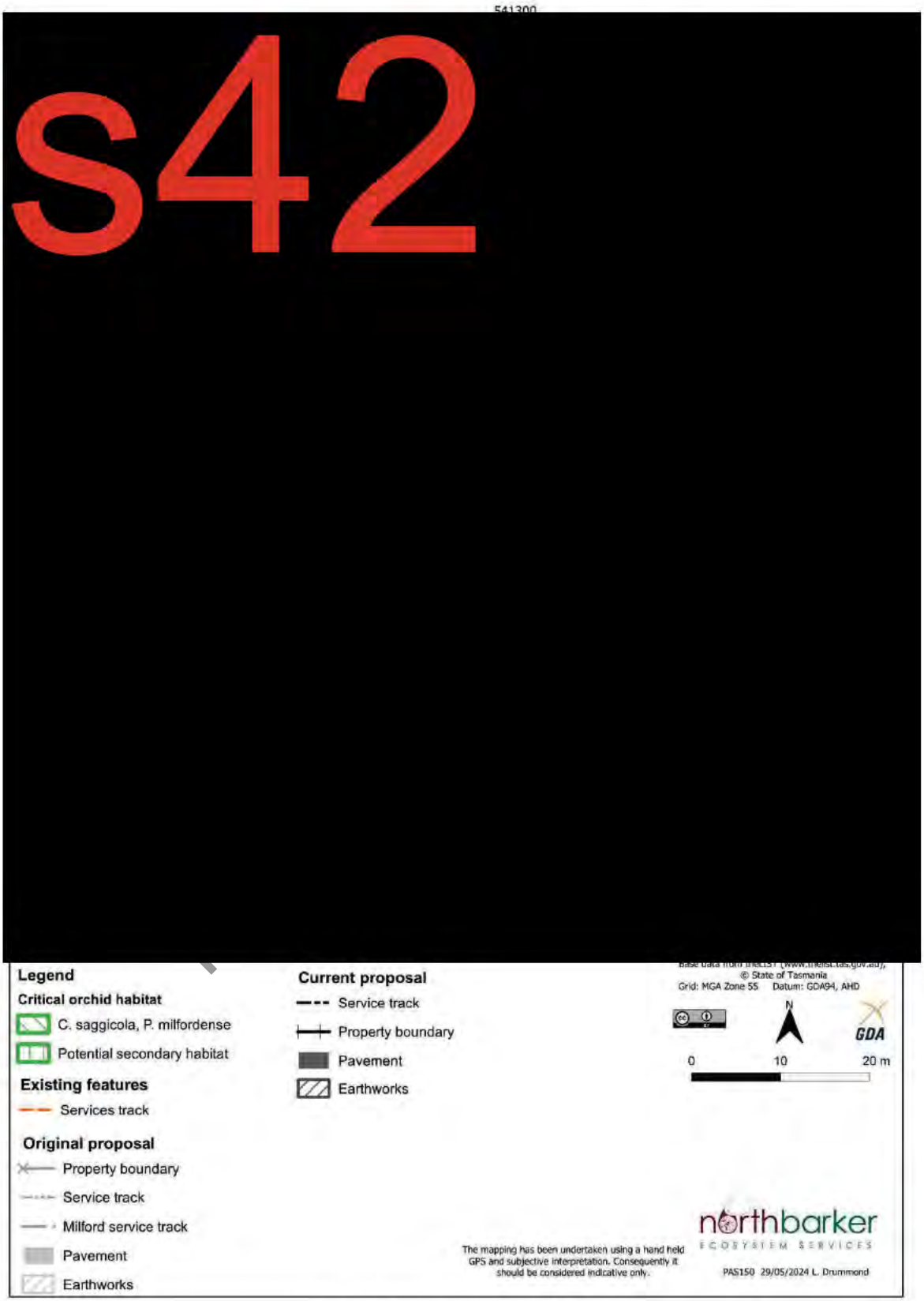

Figure 5: Original and amended design

Figure 6: Impacts to Orchid habitat – Pittwater Road junction (original design)

Figure 7: Impacts to Orchid habitat – west (amended design)

Figure 8: Impacts to Orchid habitat (east of Milford access) - unchanged

1.4 Indirect Impacts

This includes changes to habitat suitability outside the immediate footprint of the development resulting from changes in vegetation structure and site conditions. Facilitated impacts considered here include alterations to stormwater management, modifications to forest structure that may affect habitat suitability, changes to site use in orchid habitat and the introduction or spread of weeds. The spread of weeds may be affected by other impacts listed here. For example, increase in water runoff may improve suitability for invasive weeds.

1.4.1 Soil contamination

Increased nutrient and dissolved chemical loads into orchid habitat could adversely impact on the sensitive mycorrhizal associations reducing the suitability of the habitat for orchids. Increased nutrients can also benefit faster and denser growing weeds which could smother the site and reduce its suitability for orchids. Roadsides are known to have elevated nutrient loads resulting from runoff of soluble contaminants such as trace metals and hydrocarbons which increase in concentration in line with increases in traffic volumes[17]. It is possible contaminants are also carried in dust.

Soil analysis of the roadside has been undertaken using two transects extending for 50 m from the highway south into Milford. This is included in the Field Assessment of Potential Contaminants report (Appendix L of the Preliminary Documentation report). At both locations there were elevated levels of contaminants at the road edge which decreased to background levels 5-10 m from the road. Spikes in levels were also recorded downslope of a vehicle access track. The soil analysis extrapolates a likely 12.1 m impact buffer based on this analysis and assuming a 21 % increase in stormwater runoff. The stormwater study suggests slightly higher increases (22 % and 26 %). A conservative response to this would be to model a disturbance buffer from edge of earthworks embankment as 13 m.

Notably, the single outlying *Prasophyllum milfordense* record would fall within the 13 m buffer from the edge of development under the status quo scenario. This not only provides greater confidence that the conservative buffer adopted for this assessment captures all downstream impacts but also recognises that such impacts, while not considered favourable to orchids, do not make site conditions unsuitable for the species. Table 2 summarises the calculations for Indirect Impacts.

Table 2: Indirect Impact to critical orchid habitat (hectares)

Species	Critical Habitat	Impact	Impact (Original Design)
Prasophyllum milfordense	**17.24**	**0.020**	0.041
Caladenia saggicola	**19.10**	**0.028**	0.049
Caladenia caudata	**19.10**	**0.028**	0.049

The proportionate indirect impact to critical habitat of *Prasophyllum milfordense* is 0.11 %.

The proportionate indirect impact to critical habitat of *Caladenia saggicola* and *C. caudata* is 0.15 %.

Overall, the reduction in impact to critical habitat (both direct and indirect impacts) is summarised in Table 3. These equate to a marked improvement by reducing the extent of encroachment into orchid habitat by nearly 6- fold for *P. milfordense* and by over 4.5-fold for *C. saggicola* and *C. caudata*.

[17] Wong,T. Breen, P. & Lloyd, S. (2000); Department of Environment and Swan River trust (2005); AusRoads (2021).

Table 3: Total Impact to critical orchid habitat (hectares)

Species	Critical Habitat	Impact (new design)	%	Impact (Original Design)	%
Prasophyllum milfordense	**17.24**	**0.020**	**0.11**	0.119	0.69
Caladenia saggicola	**19.10**	**0.028**	**0.15**	0.127	0.66
Caladenia caudata	**19.10**	**0.028**	**0.15**	0.127	0.66

1.4.2 Stormwater

The new road layout duplicates the current two lanes to four. It also involves an amended drainage plan with new larger format culverts to ensure water can pass under the highway in flood events. The increased hard surface will result in higher water flows during rain events. This could potentially impact on run off into the habitat for orchids which may alter the habitat suitability. Marked increase in moisture availability could also favour more aggressive plant species, both native and introduced, that could reduce habitat suitability for orchids. Runoff from the golf course on the north side of the highway can carry increased nutrients. Runoff from road surface can also carry trace metals and hydrocarbons dissolved in the water. Collectively these inputs could adversely impact on the delicate mycorrhizal associations in the soil which are so critical to viability of the orchids, especially for germination.

A stormwater Discharge Analysis report (Appendix J of the Preliminary Documentation report) describes the current and altered stormwater discharge regime. The current regime includes four culverts emptying into the southern side of the highway. Water from the two western most culverts discharges into a table drain which directs water down the side of Pitt Water Road. From there it pools in a shallow hardened roadside pull off approximately 100m down Pittwater Road. This appears likely to overflow into the adjacent Milford property, although the stormwater discharge report (page 12) concludes that "it is likely that most of the stormwater that flows into the eastern side of Pitt Water Road will not reach Location B due to existing berms and drains along the roadside." Location B is a natural depression with orchids located in close proximity.

Two other culverts currently discharge into the southern roadside from where water percolates into the adjoining bushland. These discharge points are all identified in **Error! Reference source not found.**.

The locations of the new culverts discharge points are comparable to the current ones. The stormwater discharge modelling (Table 4) suggests there will be an annual increase in runoff of 22% and 26% at the two modelled locations where the drainage flows in the vicinity of the critical habitat area for threatened orchids.

Analysis of the water flow into critical orchid habitat based on modelled infiltration rates suggest that any increased runoff will infiltrate into the natural surface. Consequently, moisture availability within the critical orchid habitat is likely to remain unchanged with any excess water runoff being readily taken up in the soil well before any water reaches the critical habitat for orchids.

The current water flow based on our own site assessment and interpretation of stormwater discharge report and road design cross sections is represented in Figure 9. This shows that runoff from the road and input from the broader catchment adjacent to the critical orchid habitat (Infiltration System B in Stormwater Discharge report) is directed down Pittwater Road. Our interpretation of runoff elsewhere from the highway (Infiltration System A) is that little runoff extends beyond the existing service track and that much is directed away from critical orchid habitat.

Our interpretation of water flows from the new design (Figure 10) is that drainage of the broader catchment and some of the highway surface will continue to be discharged down Pittwater Road. In major storm events this water will then overflow into the Milford (as currently happens) where it is likely, based on inflation rates analysis in Stormwater Discharge report, that the water will continue to percolate through the sand on the service track without dispersing into the critical orchid habitat beyond.

The latest design ensures south flowing surface runoff will continue to be picked up in a table drain and discharged into Pittwater Road. The increased runoff, predominantly from 2 west bound lanes will be allowed to discharge in a southerly direction. The infiltration rates analysis in Stormwater Discharge report suggests the water will continue to percolate through the sand and so not impact on the critical orchid habitat. The anticipated higher flows into the pull off 110 m down Pittwater Road could also be managed through removal of impervious hard stand and reinstatement of sandy substrate to better ensure seepage into the ground and reduce risk of infill into Milford.

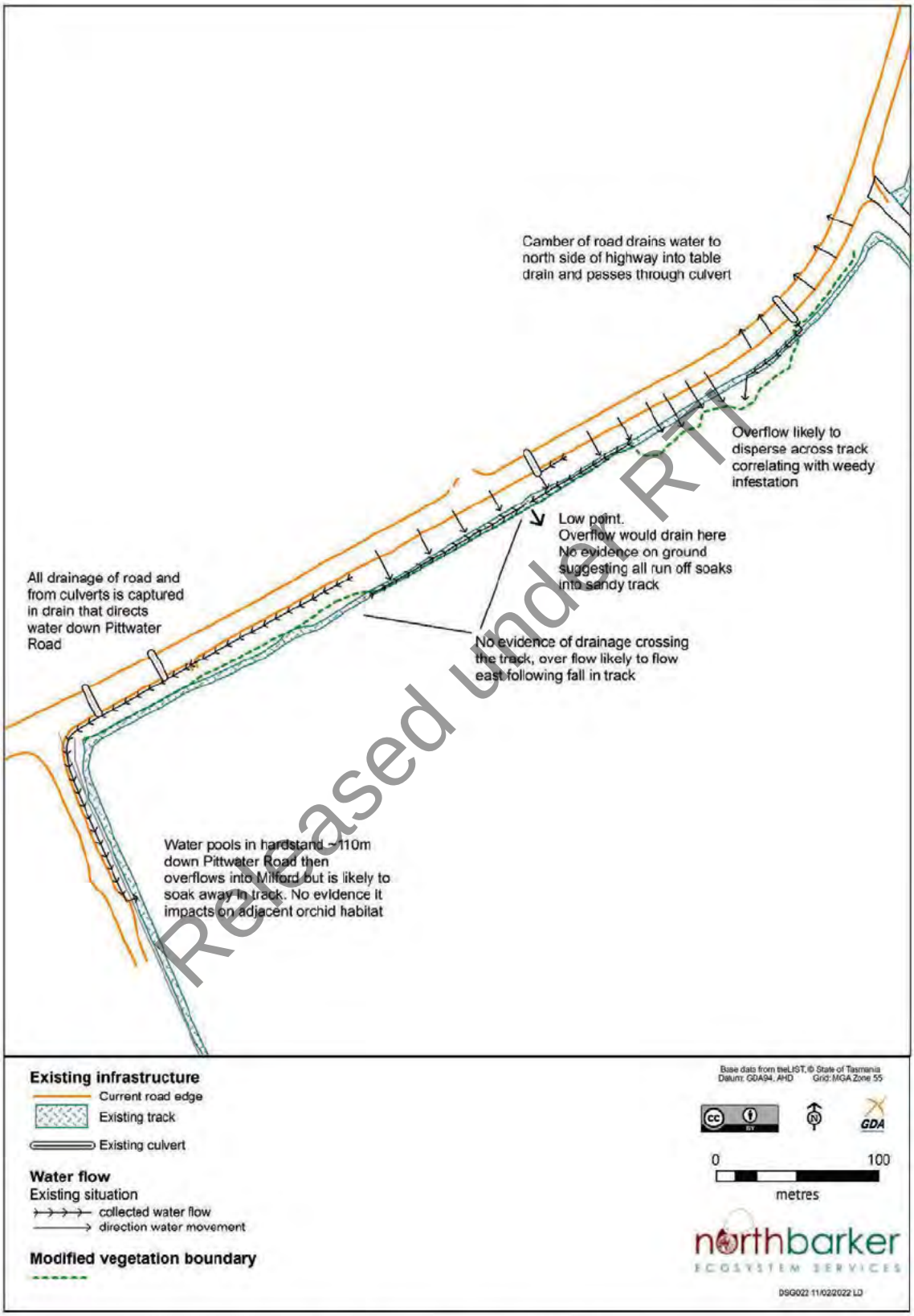

Figure 9: Stormwater – existing highway

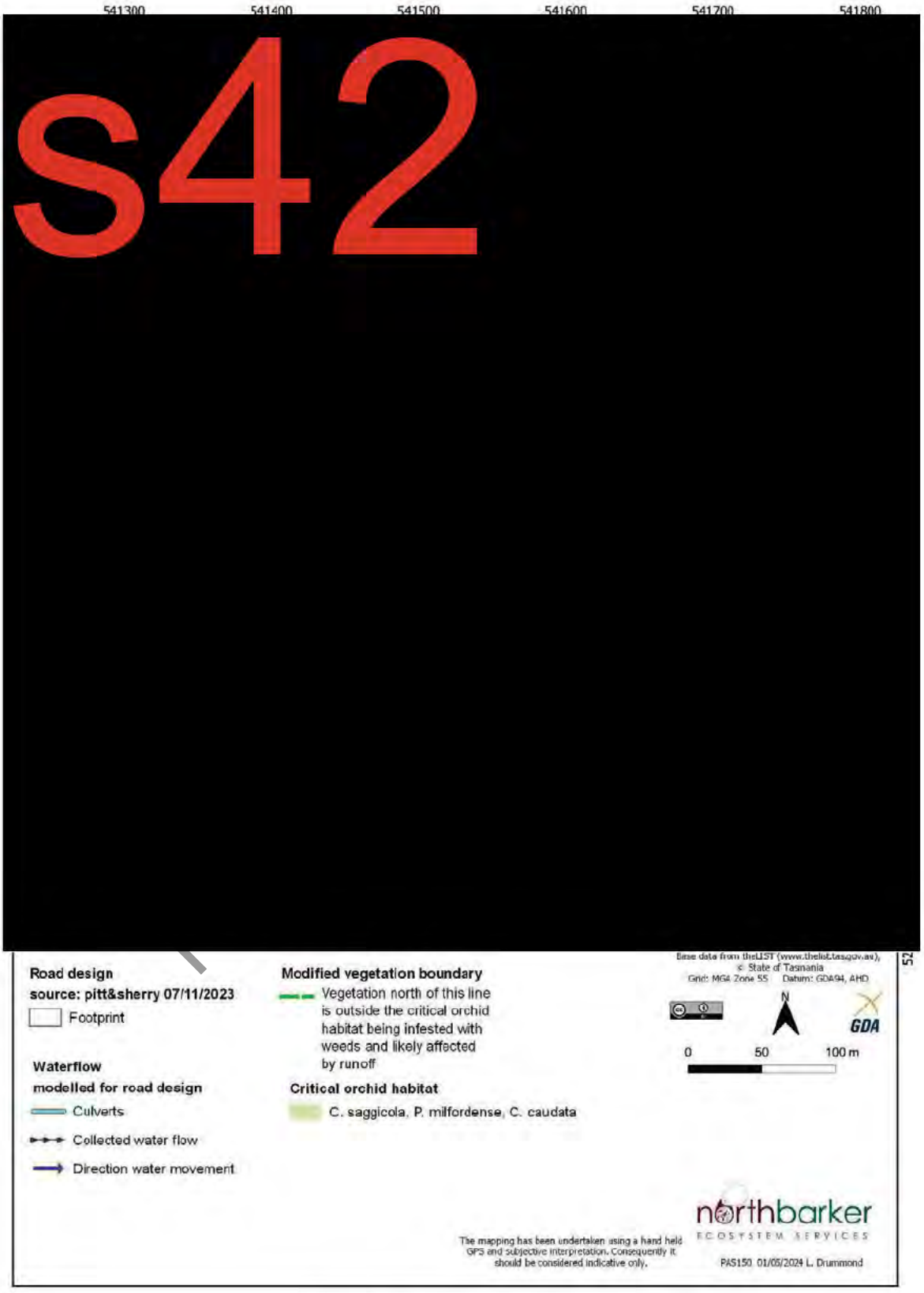

Figure 10: Stormwater – new highway

1.4.3 Weed Infestation

Not atypically, the roadside vegetation supports an elevated proportion of non-native weeds species which are able to exploit the disturbed roadside environment. Elements of disturbance include:

- runoff supplying excess moisture, nutrients and other contaminants (refer 2.3.1 and 2.3.2);
- road dusts carrying nutrient load through chemicals from bitumen surface and tyres;
- ground disturbance and weed spread from roadside slashing;
- removal of competition from herbicide treatment of road edge and around guide posts; and
- introduction of weeds seed from passing vehicles.

The road edge supports a typical range of invasive roadside weeds including cocksfoot grass (*Dactylis glomerata*), shaking grass (*Briza maxima*), panic veldt grass (*Ehrharta erecta*), fog grass (*Holcus lanatus*), rough catsear (*Hypochaeris radicata*) and scarlet pimpernel (*Anagallis arvensis*). For the most part the weed infestation is confined to the section between the highway and the fence, although to lesser extent these weeds are present in most sections up the edge of the sandy service track. The track forms a discernible boundary to the weed infestation extent. Plate 2 shows the distinct difference of the grass composition each side of the service track that runs parallel to the highway. There are sections between the fence and service track which remain dominated by native species, especially where the ground is slightly elevated. Here orchids are prominent although they do not include any of the three threatened species. (MNES). The conditions created by the track are suitable for several *Pterostylis, Thelymitra, Acianthus* and *Corybas* species.

There is an area of low-lying ground where the weed infested section is much wider (Figure 10). It is likely that any excess runoff from the existing central culvert flows to this low point creating conditions favourable to weedy grasses (Plate 3).

There are four species of weeds (Plate 4) which are gradually increasing in extent which are all likely to have been introduced into the roadside and have extended their occupancy into the adjacent bushland. Their spread is less a function of ground conditions but more a natural colonisation. All are recognised environmental weeds which potentially threaten the integrity of the orchid habitat in the medium to long term.

The implications to weed infestation resulting from the project include the establishment of new earthworks prime for weed colonisation. These works also provide an opportunity as a significant portion of the current weed infested vegetation will be removed as part of the construction works. The management of the new roadside during and following completion of works will be critical to the scale of consequential weed infestations.

1.4.4 Vegetation clearance

The northwest corner of the property is distinguished by a dense shrub layer to 5 m dominated by hop bush (*Dodonaea viscosa*) and silver wattle (*Acacia dealbata*). Some of this has been slashed in recent years opening up the ground layer and improving its suitability for orchid habitat as borne out by the discovery of a new location of *Prasophyllum milfordense* in 2020-2022 period. A dense screen of this shrubby section persists closer to the highway which maintains shelter from the highway and potentially reduces exposure to desiccating winds. With the amended design much of this can now be retained. The importance of the potential screening function that this shrub band provides for the orchid habitat is theoretical and not proven.

Plate 2: Service track Milford, Tasman Highway is on the right. Northern side of track (right image) is dominated by introduced grasses (blue green colour signature). Southern side (left image) is dominated by yellow/green shade of native grasses (*Microlaena stipoides*) and retains better quality habitat value for orchids.

Plate 3: Heavy infestations of panic veldt grass (*Ehrharta erecta*). Outfall of culvert (left) in bushland in low lying site (right)

Soursob (*Oxalis pes caprae*)

Garden freesia (*F. alba x F. leichtlinii*)

Panic veldt grass (*Ehrharta erecta)*

Bluebell creeper (*Billardiera heterophylla*)

Plate 4: Four most significant weed threats to threatened orchid habitat

1.5 Facilitated impacts.

Changes to the road surface of Pittwater Road may facilitate changes or increases in accumulation and runoff of stormwater. Informal pull off areas along Pittwater Road are subject to ponding in rain events , the most severe of which can lead to overflow potentially entering the orchid habitat. The closing and rehabilitation of these sites would improve water absorption and reduce the risk of overflow into nearby orchid habitat.

Much of these effects are current and not conceivably increased through the road upgrades other than the closest sites located 59 m and 83 m respectively south of the existing Tasman Highway junction. Nevertheless, the Department of State Growth is investigating closing these plus three other sites located 159 m, 194 m and 376 m south of the junction. The consequence of rehabilitating all of these will potentially result in an improvement of the current situation.

A secondary likely benefit of closing pull-off areas may be to reduce or stop the behaviour of some people to use the site to release unwanted roosters, and for other well meaning citizens

to release grain and other garden and household waste to feed the feral poultry population. The poultry population roams through the Milford site and potentially disturb orchid habitat in the process.

1.6 Cumulative impacts.

The road upgrades associated with this section of the Tasman Highway forms part (Segment 1) of several stages of works, collectively known as the South East Traffic Solution (SETS). None of the other segments include habitat for these threatened orchids and so do not constitute impacts that are cumulative to those taking place here.

2 Significant Impact Assessment

Table 4 reviews each of the Significant Impact Criteria listed in the Significant Impact Guidelines [18]. All three orchids are considered concurrently accepting the overlap of habitat and the recognition that the population of the one vulnerable species (*Caladenia caudata*) is recognised as 'important population' (refer 1.2). The assessment concludes that the revised proposal will not have a significant residual impact on the three listed orchid species.

There will be no direct impacts to individuals of any threatened orchids and no direct impact to critical orchid habitat. Impact to threatened orchids is limited to potential indirect impacts to habitat.

Indirect impacts to threatened orchid habitat are minor and not significant. Increased water runoff from the enlarged road surface is likely to infiltrate into the soil before reaching orchid habitat. Improved drainage management will direct much of the runoff from the core habitat, Soil contaminants are not expected to extend into the orchid habitat.

Existing weed infestations currently impose management challenges. Vegetation clearance works will remove some of the worst weed infestations close to the roadside. Increased water infiltration and ground disturbance associated with the development may favour habitat suitability on the roadside for weeds.

Indirect impacts can be minimised through the implementation of a high standard of management practises during the construction period and through monitoring of potential impacts and management of threats, notably existing weed infestations. Clear orchid habitat protection and weed management prescriptions in construction documentation and post construction roadside reserve management will be developed and implemented. This will prescribe monitoring of potential impacts and management of threats, notably existing weed infestations. It will also include a monitoring regime that will identify and respond to any future threats to orchids and their habitat.

The implementation of these prescriptions will result in an improved outcome than would occur should the project not proceed. This is because it provides an opportunity to tackle some existing serious weed threats to orchid habitat on Milford and to ensure a higher standard of roadside maintenance.

[18] Matters of National Environmental Significance: Significant Impact Guidelines 1.1, Commonwealth of Australia (2013)

Table 4: Summary of Impacts for three listed orchid species

Impact	Species	Extent
Direct Impact Critical Habitat The development footprint (earthworks, watermain service track and fence)	*Caladenia caudata*	0 ha critical habitat – entirely avoided - earthworks 8m from habitat
	Caladenia saggicola	0 ha critical habitat – entirely avoided - earthworks 8m from habitat
	Prasophyllum milfordense	0 ha critical habitat – entirely avoided - earthworks 8m from habitat
Indirect Impact Critical Habitat A disturbance buffer from the edge of the highway that could affect the soil microbiology estimated to be 13 m from the base of the future embankment. This is based on a soil chemistry analysis for contaminants extending in two transects from the roadside and modelled increases in water run-off, cross referenced against evident alterations to species composition, weeds etc	*Caladenia caudata*	0.028 ha The disturbance buffer is 42 m from the nearest confirmed record and 27 m from the nearest *Caladenia* sp. (likely to be *C. caudata*) recorded in 2019.
	Caladenia saggicola	0.028 ha The disturbance buffer is 39 m from the nearest confirmed *C.saggicola* record recorded in 2019 but not relocated in subsequent surveys.
	Prasophyllum milfordense	0.020 ha The disturbance buffer is 7 m from the nearest confirmed record from 2022.
Total Impact Critical Habitat	*Caladenia caudata*	0.028 ha 0.15 % of total (19.1ha)
	Caladenia saggicola	0.028 ha 0.15 % of total (19.1ha)
	Prasophyllum milfordense	0.02 ha 0.12 % of total (17.24 ha).

Table 5: Significant impact criteria with regards to three listed orchid species

Significant Impact Criteria[19] (statements adjusted for critically endangered status)	Likelihood of significant impact	Comments
1. Lead to a long-term decrease in the size of a population	None	No known occurrences of the threatened orchids are likely to be directly impacted. No direct loss of critical habitat is anticipated. The small proportionate indirect impact to habitat is of such small scale as to not lead to any long term decrease in size of the populations. The disturbance to critical habitat on the margins of the population is not likely to lead to a long-term decrease in the size of the population and it is unlikely to increase the population's susceptibility to extinction from localised stochastic events considered a potential threatening process[20]. The extent of impact is not significant
2. Reduce the area of occupancy of the species	None	No known occupied area will be reduced. The potential disturbance to critical habitat on the margins of the population through indirect impacts will reduce the potential area for future occupancy of the species by (at worst) 0.12-0.15 % (1/666-1/833). Existing threatening processes (weed infestation) are likely to have a greater effect should the project not proceed and the intensive management of future infestations from the roadside will not be tackled.
3. Fragment an existing population into two or more populations	None	The development footprint intersects with the northernmost extent of habitat. While this potentially impacts some (though does not directly remove any) critical habitat, it does not fragment the population.
4. Adversely affect habitat critical to the survival of a species	None Improved with mitigation	Although the impact does potentially (indirectly) affect some critical habitat the small extent of impact is not likely to deemed significant. Nevertheless, mitigation measures through habitat management of the roadside reserve through improved drainage management and filtration planting will potentially eliminate any indirect impacts
5. Disrupt the breeding cycle of a population	None	Factors that could impact on the breeding cycle of flora would include impacts to pollinators, mycorrhiza, flowering and seeding. The proposal will have no impact to these processes.

[19] Matters of National Environmental Significance: Significant Impact Guidelines 1.1, Commonwealth of Australia (2013)
[20] Threatened Species Section (2020)

Significant Impact Criteria[19] (statements adjusted for critically endangered status)	Likelihood of significant impact	Comments
		The development footprint avoids the known population location.
6. Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	None Improved with mitigation	Modifications are expected in the area of critical habitat of this specie, albeit very small proportion (up to 0.15%). The scale of impact is not sufficient to lead to a decline. Mitigation measures through habitat management of the roadside reserve through improved drainage management and filtration planting will potentially eliminate any indirect impacts
7. Result in invasive species that are harmful to the species becoming established in the species' habitat	None Improved with mitigation	Weeds are considered harmfully competitive to these species[21]. Construction of this project has a moderate possibility of introducing or spreading harmful weed species into the area. Habitat management of roadside will prescribe weed management measure that will respond to this threat reducing the current risk of infestation. Rehabilitation of informal pull off areas along Pittwater Road may reduce opportunities for people to park to release and feed poultry. A portion of the critical population of all three orchid species is fenced to protect plants from browsing by rabbits. The project will not affect this fenced area which is located more than 200 m to the south of the proposed roadworks.
8. Introduce disease that may cause the species to decline	None	No specific diseases are known to impact this species[22], and the project is unlikely to lead to the introduction of any new diseases.
9. Interfere with the recovery of the species	None Improved with mitigation	Recovery actions identified for these species include surveys, subpopulation size & demographic monitoring, fencing, weed control, provision of suitable fire regime, conservation covenant and management planning [23]. None of these actions are interfered with by this project. Improved boundary fencing and improved management of the adjacent roadside reserve will contribute positively to some of these recovery actions.

[21] Threatened Species Section (2017)
[22] Threatened Species Section (2017)
[23] Threatened Species Section (2017)

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Revised EPBC Footprint

Appendix C

SCALES 1:5000m (A3)	pitt&sherry	Department of State Growth	CONTRACT No. 3148	DRAWING HB19197-P102	PRINTED DATE 17-Apr-24, 10:03 AM	SHEET No. P104
No. / Amendment Description / Initials / Date	DESIGNED T.T.	TASMAN HIGHWAY (A0113) AIRPORT INTERCHANGE TO MIDWAY POINT CAUSEWAY ROADWORKS	REGISTRATION NUMBER A0113.028			REVISION -
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Tasman Highway Natural Values Implications of Revised Design

Appendix D

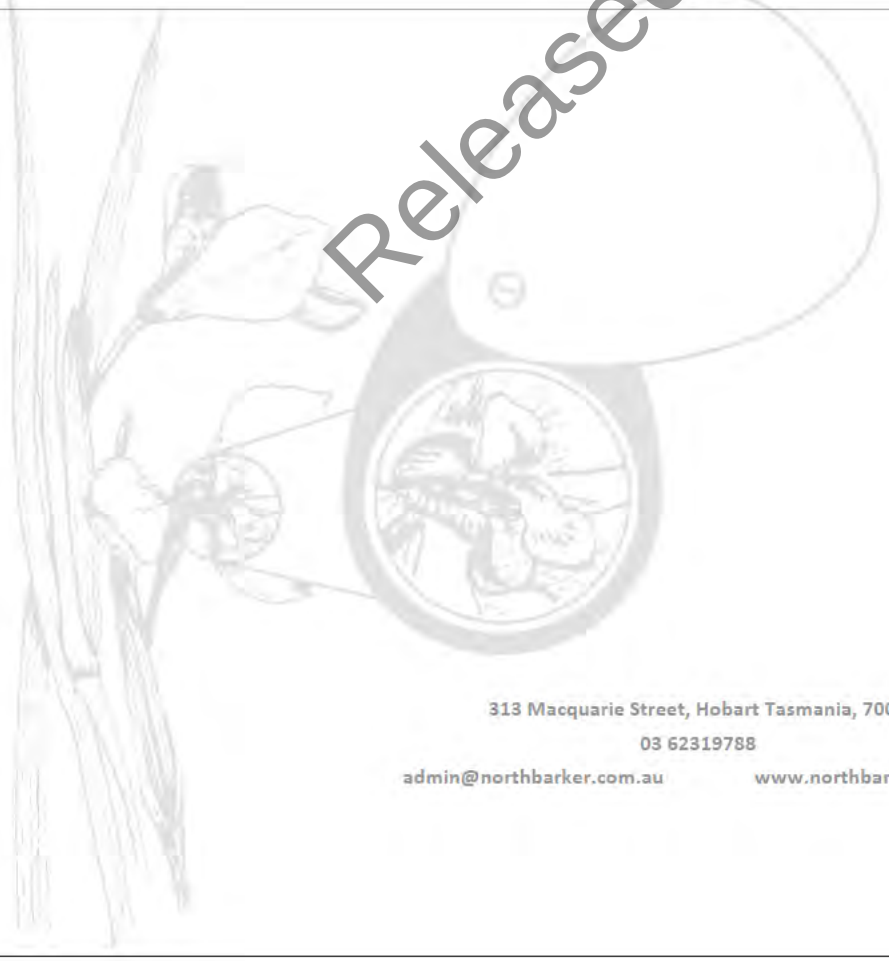
northbarker
ECOSYSTEM SERVICES

Tasman Highway Southeast Tasmania Transport Solution (SETS) Holyman Avenue to Pittwater Bluff changes to design

Natural Values Implications

For Pitt & Sherry obo Department of State Growth
PAS150

08 May 2024



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Mapping: s36

Photos: s36

File Control

Version	Date	Author	Comment
V 1.0	4/4/2024	s36	Response to Council RFI
V1.1	8/4/2024	s36	Response to review by s36
V1.2	2/5/2024	s36	Response to review to s36

Contents

1 Introduction

1.1 Background

The Department of State Growth (DSG) is proposing to duplicate the Tasman Highway between Hobart Airport Interchange and Pitt Water Bluff, which forms one stage in the Southeast Tasmania Traffic Solutions Project (SETS). SETS aims to help maintain the liveability of Sorell and the southern beaches by improving travel time reliability and safety through a more efficient and safer road network.

A planning permit with Clarence City Council is in place for a layout for the project (PDPLANPMTD-2021/017782).

DSG are proposing a minor amendment (PDPLIMPLN-2023/040386) to the design through the partial realignment of approximately 400 m section of the highway opposite Pittwater Road. This is intended to avoid any direct impact to habitat for threatened orchid species located within the Milford property on the south side of the Tasman Highway. This application included a report describing the natural values along the north side of the Tasman Highway extending into the additional footprint area:

- *Tasman Highway Road, South-East Tasmania Transport Solution (SETS), Tasmania Golf Club, Natural Values Assessment Summary. North Barker Ecosystem Services 28 September 2023.*

The report is included in full in as Attachment A. Council have completed a preliminary planning assessment (dated 16 January 2024) which has identified a need for further information:

> c) Concerning condition 7(a), provide an updated NVA 'Tasman Highway Holyman Avenue to Pittwater Bluff' prepared by North Barker, dated 30 September 2020 to show the revised project and the stormwater mitigation measures proposed to minimise any flow into the potential orchid habitat area described in figure 5 of the NVA report.

North Barker Ecosystem Services (NBES) previously completed a natural values assessment for the proposed highway in 2020:

- *Tasman Highway. Holyman Avenue to Pittwater Road, Natural Values Assessment. North Barker Ecosystem Services 30 September 2020.*

1.2 Purpose

The additional land incorporated in the amended layout has been investigated and the findings of the natural values assessment are reported (Attachment A). This report makes a comparison between the approved layout and the proposed amendment and at the same time responds to Council's preliminary planning assessment item c) above.

The additional land includes a portion of the Tasmania Golf Course that incorporates the 16th and 17th fairways and surrounding vegetation north of the Tasman Highway. The reduced development footprint south of the highway on the Milford property relies on the findings from previous surveys (Figure 1).

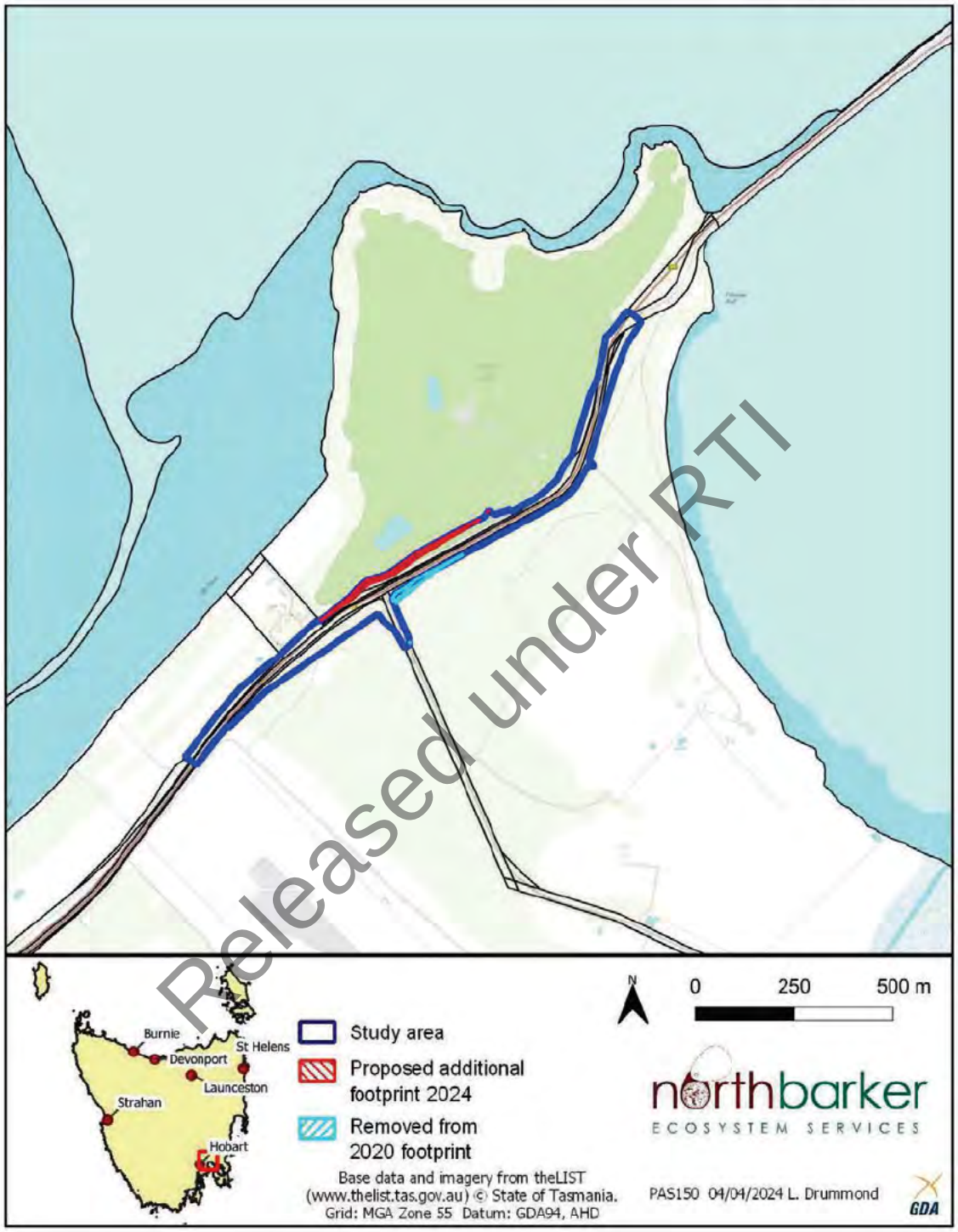

Figure 1. Study area location

2 Biological Values

The original surveys for the project were undertaken between 2018 and 2020. The extension footprint was surveyed by two ecologists on the 18th of September 2023 and was undertaken in accordance with the *Guidelines for Natural Values Surveys- Terrestrial Development Proposals*[1]. The full report is included as Attachment A.

2.1 Vegetation

The following native vegetation communities were recorded in the study area:

- *Eucalyptus viminalis- E. globulus* coastal forest and woodland (DVC)

DVC across the study area is described below. The remainder of the study area comprises the golf course fairway and access tracks and is mapped as the modified land community Extra-urban miscellaneous (FUM). The mapped distribution of vegetation communities within the study area is presented in Figure 4. A list of all flora species recorded is provided in Appendix A.

***Eucalyptus viminalis* – *E. globulus* coastal forest and woodland (DVC)**

The community is dominated exclusively by *Eucalyptus viminalis* (white gum) that reach heights up to 30 m tall and is consistent with much of the native vegetation of the local surrounding areas including other areas on the golf course, airport land and the nearby Milford property. This woodland has been subject to clearance and degradation associated with the development and uptake of the adjacent golfing fairway. The understorey has been largely excluded through regular slashing. Overall, this DVC community is in moderate-poor ecological condition with no evidence of recruitment. Plate 2 shows how this area of vegetation is limited to ground cover and mature trees only with all other vegetation being removed.

The DVC community comprises a mature overstorey of *E. viminalis* including many large trees exceeding 100 cm DBH. Several large trees recorded within this vegetation community were observed to have potential for hollows that could support threatened fauna habitat.

Eucalyptus viminalis – *E. globulus* coastal forest and woodland is listed as threatened under the Tasmanian *Nature Conservation Act 2002* (NCA).

Plate 1. DVC west of the Tasman Highway.

[1] Department of Natural Resources and Environment (2019)

2.2 Threatened Flora

No threatened flora species was observed during field surveys of the study area. Threatened orchids including *Caladenia caudata* (TSPA vulnerable, EPBCA vulnerable), *Caladenia saggicola* (TSPA endangered, EPBCA critically endangered) and *Prasophyllum milfordense* (TSPA endangered, EPBCA critically endangered) have all been recorded at the adjacent Milford property.

No threatened flora species were recorded or thought likely to occur in the proposed amendment. There are no records of threatened flora from this and adjacent section of vegetation along the northern side of the Tasman Highway even though there have been multiple surveys, other than for one low accuracy (100 m) observation record of small shrub *Eutaxia microphylla* from 1985, collected from somewhere on the Tasmania Golf Club, most likely near clifftops.

Threatened orchids including *Caladenia caudata* (TSPA vulnerable, EPBCA vulnerable), *Caladenia saggicola* (TSPA endangered, EPBCA critically endangered) and *Prasophyllum milfordense* (TSPA endangered, EPBCA critically endangered) have all been recorded at the adjacent Milford property. There are historic records of just one (*C. caudata*) from the Tasmania Golf Club. There is no evidence of, nor is the habitat likely to be suitable for, any of these species in the amendment area.

2.3 Threatened Fauna and Threatened Fauna Habitat

Field surveys of the study area identified potential threatened fauna habitat, primarily large white gum trees offer potential habitat for the following threatened woodland bird species:

Tasmanian masked owl (*Tyto novaehollandiae* subsp. *castanops*)

Tasmanian masked owl (*Tyto novaehollandiae* subsp. *castanops* (TSPA endangered, EPBCA vulnerable)) has been observed at the adjacent Milford property and across the broader landscape[2]. The Forest Practices Authority (FPA) technical note for identifying masked owl habitat considers any tree with a large hollow (>15 cm diameter) as potential habitat. Trees with a DBH > 100 cm are considered to have the greatest likelihood to support hollows within the size ranged favoured by masked owls[3].

Trees were assessed from the ground and conditions of their potential to provide habitat noted.

Blue-winged parrot (*Neophema chrysostoma*)

The white-gums contained within the study area offer potential nesting habitat for the blue-winged parrot (*Neophema chrysostoma* (EPBCA vulnerable)). The blue-winged parrot migrates to and from Tasmania after breeding each year, leaving in March to April and returning in August to October. Blue-winged parrots nest in tree hollows, preferably with a vertical opening[4]. It is considered likely that the DVC bushland across the golf course and adjacent Milford property provides potential habitat for the blue-winged parrot.

Other hollow nesting birds including eastern rosella and galas have been observed in our surveys to be utilising trees each side of the highway.

Swift parrot (*Lathamus discolor*)

The study area is within the potential breeding range of the swift parrot (*Lathamus discolor* (TSPA endangered, EPBCA critically endangered)). The study area is not within a delineated swift parrot important breeding area (SPIBA), but it is close to both the Wielangta and Meehan Range SPIBAs.

Similar to the blue-winged parrot, the mature white gums located in the DVC community at the golf course offer tree hollows that could support swift parrot breeding. However, considering the higher quality nearby and the absence of local patches of *Eucalyptus globulus* and *E.* ovata, which are the

[2] Department of Natural Resources and Environment (2023)
[3] Forest Practices Authority (2014)
[4] Birdlife Australia (2023)

primary foraging resources for the swift parrot, it is considered unlikely that swift parrots would choose to utilise the habitat within the study area for breeding.

Although the study area may provide habitat as part of a home range of other threatened vertebrate fauna, there are no site-specific features that are of importance for these species.

Plate 2. Mature white gum (*Eucalyptus viminalis*)

2.4 Weeds

No declared weeds listed under the *Biosecurity Act 2019* or environmental weeds were recorded in the extension area.

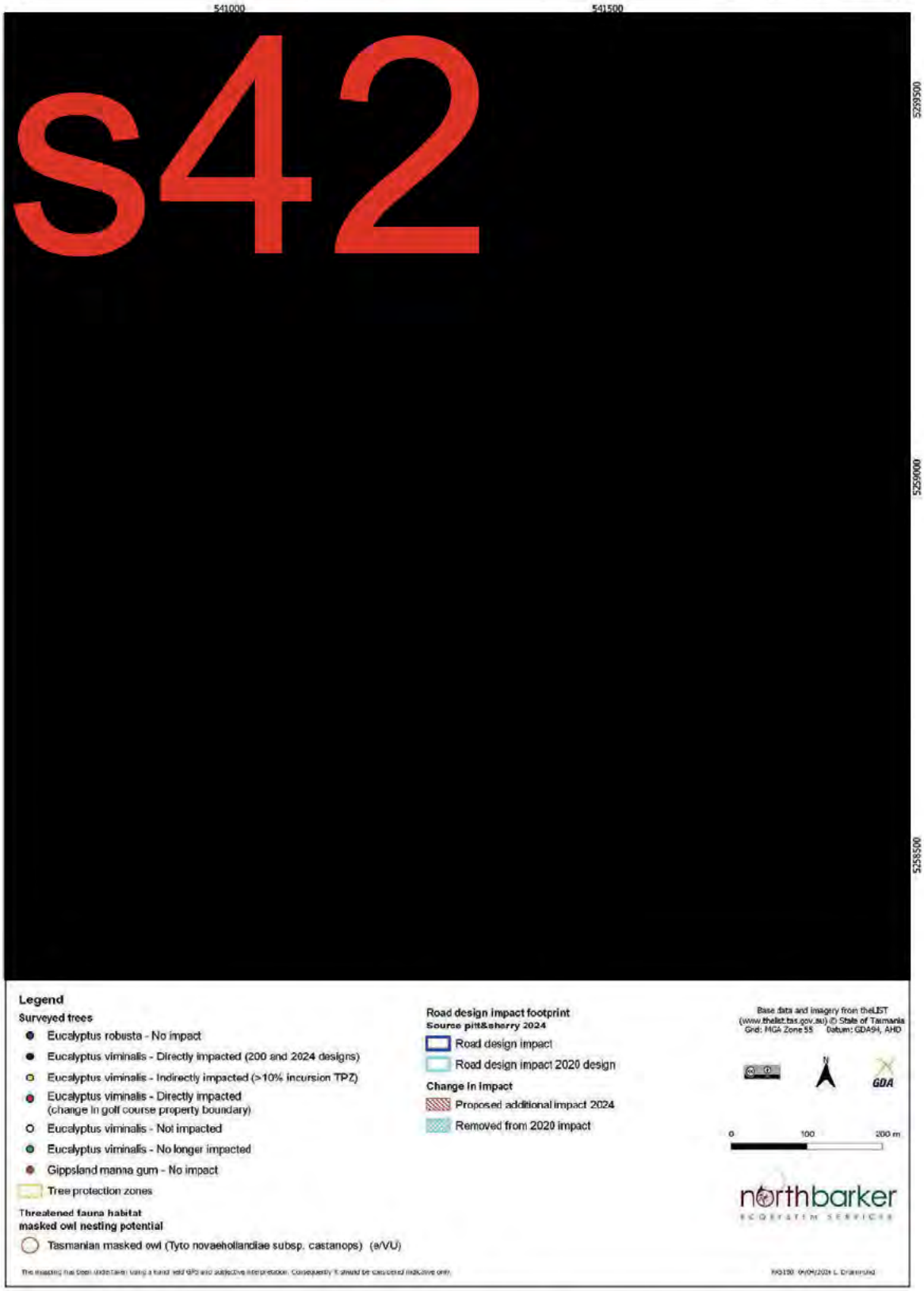

Figure 2. Significant trees including TPZ's and threatened fauna habitat within the project

Figure 3. Significant trees including TPZ's and threatened fauna habitat within the project

3 Comparison of Impact with previous design

The realignment of the development will reduce the scale of vegetation clearance south of the Tasman Highway, in the vicinity of Pittwater Road, thus avoiding the most significant natural values associated with habitat for threatened orchids on the Milford property.

3.1 Vegetation

The native vegetation impacted by the realignment is *Eucalyptus viminalis* - *E. globulus* coastal forest and woodland (DVC) as represented in (Figure 4). DVC is listed as a threatened vegetation community under the NCA. The area avoided on Milford is also DVC but that is generally in better condition than the newly impacted patch. Our vegetation condition assessment (Figure 3, NBES 2020) characterised the northern DVC as 'poor' and the DVC south of the highway as 'excellent'. The amended design will result in an overall reduced impact to DVC especially that classed as being in excellent condition.

Table 1: Extent of *E. viminalis* coastal forest DVC

DVC condition	Increase north of highway	Reduction south of highway	Total impact project
Excellent	-	0.47 ha	0.40 ha
Good	-	0.05 ha	0.55 ha
Poor	0.27 ha	0.05 ha	2.32 ha
Total	0.27 ha	0.57 ha	3.27 ha

3.2 Threatened Flora

No threatened flora species listed either under the TSPA or the EPBCA will be impacted directly by the project.

Three threatened orchid species occur at the Milford property on the south side of the Tasman Highway.

The amended design provides increased buffer from the known records of orchids and the footprint is entirely outside the critical orchid habitat with a buffer of 8 m from edge of earthworks and 4m from service track (Figure 5). The existing landowner service track which follows the edge of the orchid habitat will not need to be moved.

Table 2: Direct Impact to critical orchid habitat (hectares) and proximity to known plants

Species	Critical Habitat	Impact	Impact (Original Design)	Nearest plant to footprint	Nearest plant (original design)
Prasophyllum milfordense Milford leek orchid	**17.24**	**0.00**	0.078	15 m watermain	3 plants in footprint
Caladenia saggicola Sagg spider orchid	**19.10**	**0.00**	0.078	47 m from watermain	32 m from access road
Caladenia caudata Tailed spider orchid	**19.10**	**0.00**	0.078	55 m	55 m

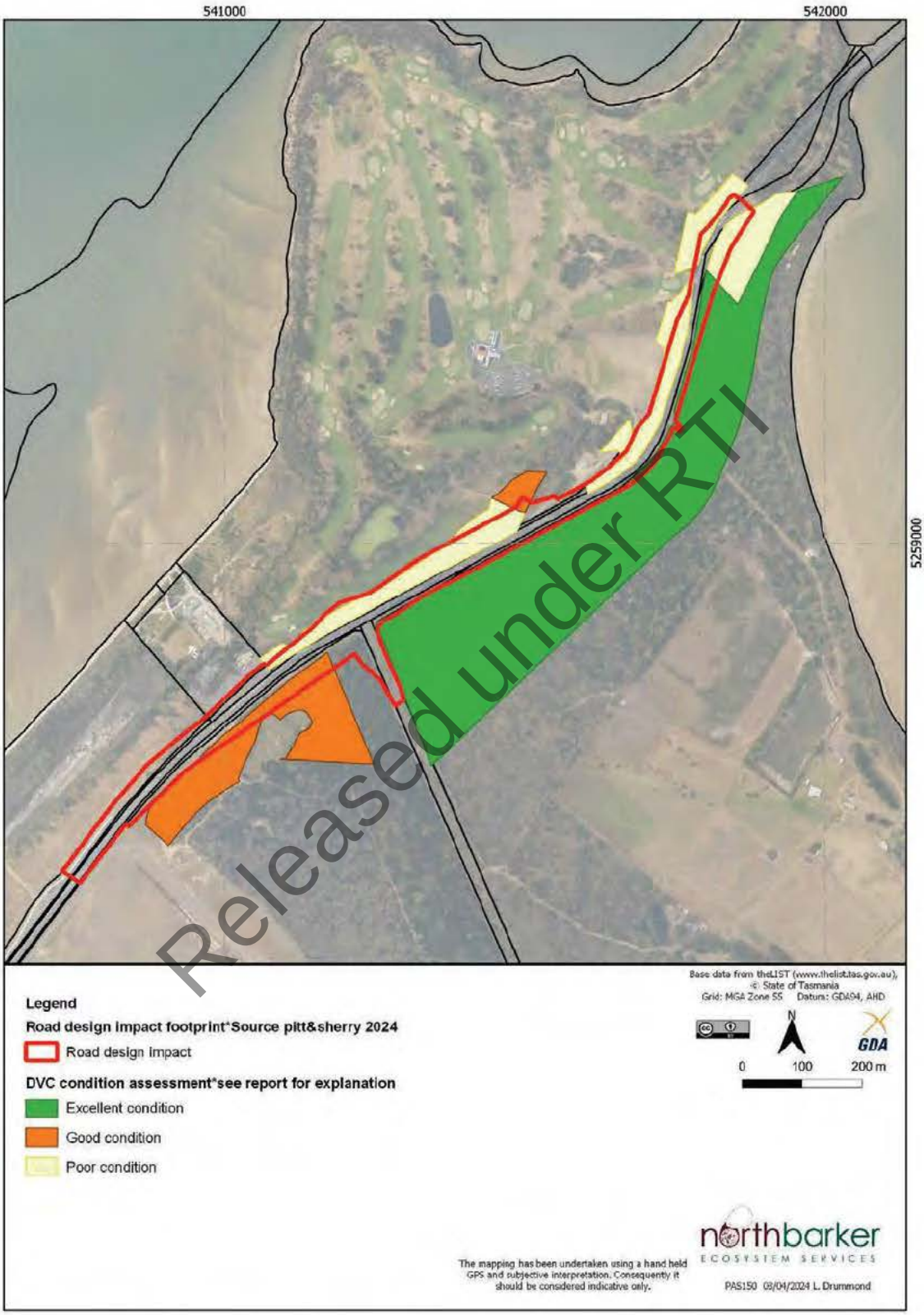

Figure 4: *Eucalyptus viminalis* coastal forest (DVC) in vicinity of project

Figure 5: Improved buffer from known orchid sites and reduced impact to habitat

3.3 Threatened Fauna and Threatened Fauna Habitat

Six mature white gums *Eucalyptus viminalis* are located within the extended footprint north of the highway. In addition, the tree protection zones[5] of two others are significantly encroached and may be adversely impacted. The tree protection zone TPZ is a specified area above and below ground at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The TPZ is calculated for each tree by multiplying its DBH by 12, with a minimum TPZ of 2 m and a maximum of 15 m as defined in the Australian Standard for Protection of trees on development sites.

It is likely that five of the trees within the extended footprint would have been adversely impacted due to the scale of encroachment into their root zones with the previous design. So net change to impact is small, being potentially no more than an additional three trees.

The realignment south of the highway should allow for the retention of three trees that were previously impacted. So overall the net increase to tree losses resulting from the realignment is potentially zero

Changes to impact of trees is summarised in Table 3.

The overall impact to mature white gums is likely to be of the order of 50 trees, noting that several have died during the intervening years between the initial surveys and the current time due to likely climate change related stresses.

The location of significant trees with nesting potential within the area affected by the realignment is mapped in Figure 3.

Noise pollution near habitat trees could risk hollow abandonment if it is in use by the Tasmanian masked owl. However, this risk is considered low due to habitat trees proximity to the Tasman Highway and existing disturbance. It is unlikely that a masked owl would utilise trees in close proximity to the busy highway given the availability of suitable nesting trees in more remote sites nearby.

Table 3: Numbers of Impacted Fauna Habitat Trees

Size class	Extension Area footprint	Extension Area >10 % TPZ	Avoidance Area	Avoidance Area >10 % TPZ
70 cm – 100 cm	2	0	2	0
> 100 cm	4	3	1	2
Total	6	2	4	2

[5] The tree protection zone TPZ is a specified area above and below ground at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The TPZ is calculated for each tree by multiplying its DBH by 12, with a minimum TPZ of 2 m and a maximum of 15 m as defined in the *Australian Standard for Protection of trees on development sites.*

3.4 Planning Assessment Report

Council's planning assessment report, item c refers to consideration of stormwater management. referencing condition 7 (a) of the planning Permit which states:

> (a) The road stormwater drainage plans must provide details of how the stormwater, from Tasman Highway, the Tasmania Golf Club, and the Tasman Highway-Pittwater Road intersection will be managed, to minimise any flow into the potential orchid habitat area described in Figure 5 of the Natural Values Assessment 'Tasman Highway Holyman Avenue to Pittwater Bluff' prepared by North Barker dated 30 September 2020.

The new road layout duplicates the current two lanes to four. It also involves an amended drainage plan with new larger format culverts to ensure water can pass under the highway in flood events. The increased hard surface will result in higher water flows during rain events. This could potentially impact on run off into the habitat for orchids which may alter the habitat suitability. Marked increase in moisture availability could also favour more aggressive plant species, both native and introduced, that could reduce habitat suitability for orchids. Runoff from the golf course on the north side of the highway can carry increased nutrients. Runoff from road surface can also carry trace metals and hydrocarbons dissolved in the water. Collectively these inputs could adversely impact on the delicate mycorrhizal associations in the soil which are so critical to viability of the orchids, especially for germination.

A stormwater Discharge Analysis report (Pitt & Sherry 2021) describes the current and altered stormwater discharge regime. The current regime includes four culverts emptying into the southern side of the highway. Water from the two western most culverts discharges into a table drain which directs water down the side of Pitt Water Road. From there it pools in a shallow hardened roadside pull off approximately 100 m down Pittwater Road. This appears likely to overflow into the adjacent Milford property, although the stormwater discharge report (page 12) concludes that "it is likely that most of the stormwater that flows into the eastern side of Pitt Water Road will not reach Location B due to existing berms and drains along the roadside." Location B is a natural depression with orchids located in close proximity.

Two other culverts currently discharge into the southern roadside from where water percolates into the adjoining bushland. These discharge points are all identified in Figure 6.

The locations of the new culverts discharge points are comparable to the current ones. The stormwater discharge modelling (Pitt & Sherry 2021) suggests there will be an annual increase in runoff of 22% and 26% at the two modelled locations where the drainage flows in the vicinity of the critical habitat area for threatened orchids.

Analysis of the water flow into critical orchid habitat based on modelled infiltration rates suggest that any increased runoff will infiltrate into the natural surface. Consequently, moisture availability within the critical orchid habitat is likely to remain unchanged with any excess water runoff being readily taken up in the soil well before any water reaches the critical habitat for orchids.

The current water flow based on our own site assessment and interpretation of stormwater discharge report and road design cross sections is represented in Figure 6. This shows that runoff from the road and input from the broader catchment adjacent to the critical orchid habitat (Infiltration System B in Stormwater Discharge report) is directed down Pittwater Road. Our interpretation of runoff elsewhere from the highway (Infiltration System A) is that little runoff extends beyond the existing service track and that much is directed away from critical orchid habitat.

Our interpretation of water flows from the new design (Figure 7) is that drainage of the broader catchment and some of the highway surface will continue to be discharged down Pittwater Road. In

major storm events this water will then overflow into the Milford (as currently happens) where it is likely, based on inflation rates analysis in the Stormwater Discharge report, that the water will continue to percolate through the sand on the service track without dispersing into the critical orchid habitat beyond.

The latest design ensures south flowing surface runoff will continue to be picked up in a table drain and discharged into Pittwater Road. The increased runoff, predominantly from 2 west bound lanes will be allowed to discharge in a southerly direction. The infiltration rates analysis in the Stormwater Discharge report suggests the water will continue to percolate through the sand and so not impact on the critical orchid habitat. The anticipated higher flows into the pull off 110 m down Pittwater Road will also be managed through the Department's intention to remove the impervious hard stand and reinstatethe sandy substrate to better ensure seepage into the ground and reduce risk of infill into Milford.

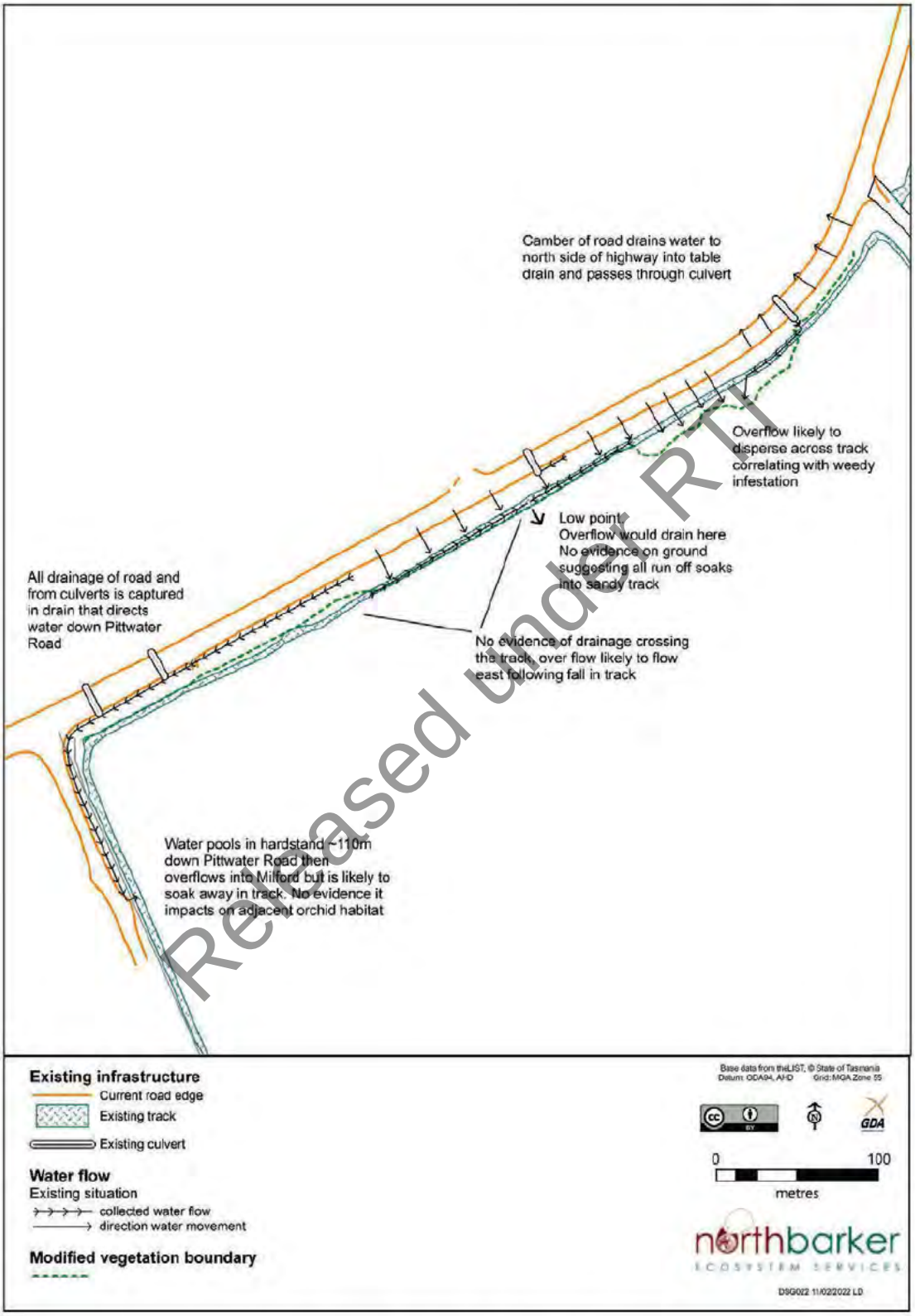

Figure 6: Stormwater – existing highway

Figure 7: Stormwater – new highway

4 References

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Attachment A:

Tasman Highway
Southeast Tasmania Transport Solution (SETS)
Tasmania Golf Club
Natural Values Assessment Summary

North Barker Ecosystem Services

28 September 2023

pitt&sherry

Golf Course Natural Values Implications of Revised Design

Appendix E

northbarker
ECOSYSTEM SERVICES

Tasman Highway Southeast Tasmania Transport Solution (SETS)
Tasmania Golf Club
changes to design

Natural Values Implications

For Pitt & Sherry obo Department of State Growth
PAS150

5 May 2024

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Contributors:

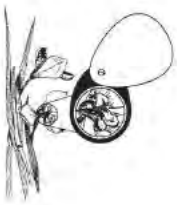
Project Management: s36

Mapping: s36

Photos: s36

File Control

Version	Date	Author	Comment
V 1.0	04/04/2024	s36	Response to Council RFI
V1.1	08/04/2024	s36	Response to review by s36
V1.2	02/05/2024	s36	Response to review by s36 (Dept State Growth)



Contents

1 Introduction

1.1 Background

The Department of State Growth (DSG) is proposing to duplicate the Tasman Highway between Hobart Airport Interchange and Pitt Water Bluff, which forms one stage in the Southeast Tasmania Traffic Solutions Project (SETS). SETS aims to help maintain the liveability of Sorell and the southern beaches by improving travel time reliability and safety through a more efficient and safer road network.

The widened highway corridor necessitates changes in the layout of infrastructure of the Tasmania Golf Club course.

A planning permit with Clarence City Council is in place for these works (PDPLANPMTD-2021/017986).

DSG are proposing a minor amendment (PDPLIMPLN-2023/040386) to the design that arise largely as a consequence of further changes proposed for the highway alignment that are intended to avoid any direct impact to habitat for threatened orchid species located within the Milford property on the south side of the Tasman Highway. The proposal to Council included a report describing the natural values along the north side of the Tasman Highway extending into the additional footprint area.

- *Tasman Highway Road, South-East Tasmania Transport Solution (SETS). Tasmania Golf Club, Natural Values Assessment Summary. North Barker Ecosystem Services 28 September 2023.*

Council have completed a preliminary planning assessment (dated 16 January 2024) which has identified a need for further information:

> d) The NVA summary, dated 28 September 2023 shows trees to be impacted by the proposed boundary realignment. However, no recommendations are provided in terms of level of impact to the vegetation community and the threatened fauna, and no mitigation or protection measures are proposed. Please provide detail to address this matter. It is recommended that the assessment approach under the *Nature Conservation Act 2022* and the Tasmanian (*Threatened) Species Protection Act 1999* be included in the planning report or the updated NVA summary for Council's information.

North Barker Ecosystem Services (NBES) previously completed a natural values assessment for the golf course works in 2021:

- *Tasman Highway. South East Tasmania Transport Solution (SETS). Tasmania Golf Club Natural Values Assessment. North Barker Ecosystem Services 11 June 2021.*

1.2 Purpose

This report makes a comparison between the approved layout and the proposed amendment and at the same time responds to Council's preliminary planning assessment item d) above.

To accommodate a modified road design the property boundary in the approval will be amended for a section of approximately 400 m by being extended up to 10 m at its widest point. The impacts of additional vegetation clearance and tree removal associated with the amended design are addressed separately as they pertain to different planning permit for the highway upgrades (PDPLANPMTD-2021/017782).

2 Biological Values

The site was included in a survey of the northern side of the Tasman Highway undertaken in September 2023 that included the land impacted by the original proposal plus that within the proposed amendment.[1]

2.1 Vegetation

The following native vegetation community is present throughout the proposed amendment:

- *Eucalyptus viminalis- E. globulus* coastal forest and woodland (DVC)

The community is dominated exclusively by *Eucalyptus viminalis* (white gum) that reach heights up to 30 m tall and is consistent with much of the native vegetation of the local surrounding areas including other areas on the golf course, airport land and the nearby Milford property. This woodland has been subject to clearance and degradation associated with the development and uptake of the adjacent golfing fairway. The understorey has been largely excluded through regular slashing. Overall, this DVC community is in moderate-poor ecological condition with no evidence of recruitment. Plate 2 shows how this area of vegetation is limited to ground cover and mature trees only with all other vegetation being removed.

The DVC community comprises a mature overstorey of *E. viminalis* including many large trees exceeding 100 cm DBH. Several large trees recorded within this vegetation community were observed to have potential for hollows that could support threatened fauna habitat.

Eucalyptus viminalis – E. globulus coastal forest and woodland is listed as threatened under the Tasmanian *Nature Conservation Act 2002* (NCA).

Plate 1. DVC west of the Tasman Highway showing mature white gums

[1] North Barker Ecosystem Services 2023

Plate 2. DVC in amendment area is limited to trees with limited understorey

2.2 Threatened Flora

No threatened flora species were recorded or thought likely to occur in the proposed amendment. There are no records of threatened flora from this and adjacent section of vegetation along the northern side of the Tasman Highway even though there have been multiple surveys, other than for one low accuracy (100 m) observation record of small shrub *Eutaxia microphylla* from 1985, collected from somewhere on the Tasmania Golf Club, most likely near clifftops.

Threatened orchids including *Caladenia caudata* (TSPA vulnerable, EPBCA vulnerable), *Caladenia saggicola* (TSPA endangered, EPBCA critically endangered) and *Prasophyllum milfordense* (TSPA endangered, EPBCA critically endangered) have all been recorded at the adjacent Milford property. There are historic records of just one (*C. caudata*) from the Tasmania Golf Club. There is no evidence of, nor is the habitat likely to be suitable for, any of these species in the amendment area.

2.3 Threatened Fauna and Threatened Fauna Habitat

Large mature white gum *Eucalyptus viminalis* trees offer potential habitat for the following threatened woodland bird species:

Tasmanian masked owl (*Tyto novaehollandiae* subsp. *castanops*)

Tasmanian masked owl (*Tyto novaehollandiae* subsp. *castanops* (TSPA endangered, EPBCA vulnerable)) has been observed at the adjacent Milford property and across the broader landscape[2]. The Forest Practices Authority (FPA) technical note for identifying masked owl habitat considers any tree with a large hollow (>15 cm diameter) as potential habitat. Trees with a DBH > 100 cm are considered to have the greatest likelihood to support hollows within the size ranged favoured by masked owls[3].

Trees were assessed from the ground and conditions of their potential to provide habitat noted.

[2] Department of Natural Resources and Environment (2023)
[3] Forest Practices Authority (2014)

Blue-winged parrot (*Neophema chrysostoma*)

The white-gums contained within the study area offer potential nesting habitat for the blue-winged parrot (*Neophema chrysostoma* (EPBCA vulnerable)). The blue-winged parrot migrates to and from Tasmania after breeding each year, leaving in March to April and returning in August to October. Blue-winged parrots nest in tree hollows, preferably with a vertical opening[4]. It is considered likely that the DVC bushland across the golf course and adjacent Milford property provides potential habitat for the blue-winged parrot.

Other hollow nesting birds including eastern rosella and galas have been observed in our surveys to be utilising trees each side of the highway.

Swift parrot (*Lathamus discolor*)

The study area is within the potential breeding range of the swift parrot (*Lathamus discolor* (TSPA endangered, EPBCA critically endangered)). The study area is not within a delineated swift parrot important breeding area (SPIBA), but it is close to both the Wielangta and Meehan Range SPIBAs.

Similar to the blue-winged parrot, the mature white gums located in the DVC community at the golf course offer tree hollows that could support swift parrot breeding. However, considering the higher quality nearby and the absence of local patches of *Eucalyptus globulus* and *E. ovata*, which are the primary foraging resources for the swift parrot, it is considered unlikely that swift parrots would choose to utilise the habitat within the study area for breeding.

Although the study area may provide habitat as part of a home range of other threatened vertebrate fauna, there are no site-specific features that are of importance for these species.

Plate 3. Mature white gum (*Eucalyptus viminalis*)

2.4 Weeds

No declared weeds listed under the *Biosecurity Act 2019* or environmental weeds were recorded in the extension area.

[4] Birdlife Australia (2023)

s42

Figure 1. Significant trees including TPZ's and threatened fauna habitat within the amendment

3 Comparison of Impact

A narrow sliver of land is included in the amendment. The alignment of the boundary in itself has no direct impact on the existing biodiversity values other than it exercising the powers of the *Boundaries Fences Act1908* which allows the removal of vegetation 2 m each side of the fence and of trees at risk of falling on the fence. The boundary adjustment will facilitate the proposed upgrades to the Tasman Highway and associated vegetation clearance. Those works form part of a separate permit PDPLANPMTD-2021/017782 that is addressed separately to this report.

Nevertheless, below we have provided some indication of the likely consequences of the changes.

3.1 Vegetation

There is a narrow sliver of DVC between the Tasman Highway and the existing 16th fairway. Much of the area of DVC that is located north of the Tasman Highway will be impacted by the approved development arising from the boundary adjustment. The additional widening will remove a narrow remnant of the area mapped as this community occupying approximately 0.27 ha.

3.2 Threatened Flora

No threatened flora species listed either under the TSPA or the EPBCA will be impacted directly by the project.

3.3 Threatened Fauna and Threatened Fauna Habitat

Six mature white gums *Eucalyptus viminalis* are located within the extended footprint north of the highway. In addition, the tree protection zones[5] of two others are significantly encroached and may be adversely impacted. It is likely that five of the trees within the extended footprint would have been adversely impacted due to the scale of encroachment into their root zones by the original proposal. So potentially 3 additional trees may be impacted although the fate of three of these are dependent on the scale of root damage and the advice of an arborist to reduce impacts.

4 Management of Additional Impact

Council's planning assessment report, item d) refers to mitigation of impacts to the DVC and threatened fauna habitat. These impacts, being associated with road widening, are more appropriately considered when reviewing implications to permit PDPLANPMTD-2021/017782.

There is no scope for retaining DVC south of the existing fairway to any measurable or viable extent.

There are several habitat trees that will remain on or close to the new boundary. Advice from an arborist may inform the likelihood of survivorship of trees where there is likely to be significant encroachment into the tree protection zone. Although we have assumed impact to the new fenceline there may be opportunity to limit excavation around the trunks of trees. The detailed design actually suggests the impacts of the earthworks don't reach all the way to the fence. (Figure 2) which may provide opportunity for some of these trees to survive, notwithstanding limited space to construct retaining walls as proposed for this site.

A vegetation and clearing management plan should be prepared that includes the following measures:

[5] The tree protection zone TPZ is a specified area above and below ground at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development. The TPZ is calculated for each tree by multiplying its DBH by 12, with a minimum TPZ of 2 m and a maximum of 15 m as defined in the *Australian Standard for Protection of trees on development sites.*

- All tree to be retained in proximity to the development following arborist assessment will be clearly marked on site to avoid inadvertent damage. These trees will also be protected within the Tree Protection Zone to the maximum extent as directed by the arborist.
- Tree felling to be undertaken in accordance with the Department of State Growth "Tree Felling protocol".
- A wildlife rescuer and/or ecologist should be present during all vegetation clearance to act as a spotter.
- The ecologist will advise the contractor on clearance priorities, prioritising the removal of non-habitat trees before habitat trees.
- Undertake vegetation clearance (to the maximum degree practicable) outside of the spring-summer months, in order to limit the likelihood of disrupting nesting activities.
- For clearance that isn't possible outside of the spring-summer months, a pre-clearance survey of nesting birds is recommended.
- If the pre-clearance survey detects suspected/confirmed nesting within a tree hollow, a 'hollow-bearing tree management protocol' should apply. This will allow for any breeding fauna to complete their activities before the tree is removed. It can also pre-empt breeding commencing by closing off any potential hollows outside the breeding season, so they are not in use during tree felling operations.

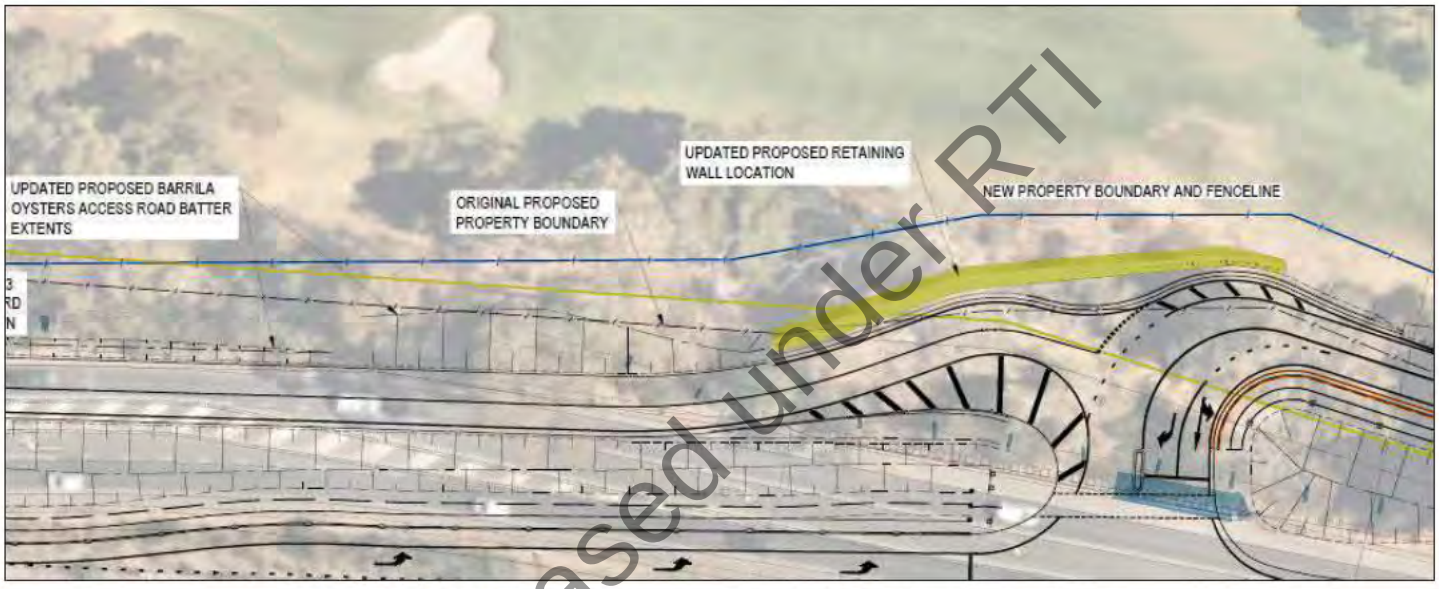


Figure 2: Detail of road design plans showing gap between edge of earthworks and new property boundary fence

References

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Forest Practices Authority (2014), 'Identifying masked owl habitat', Fauna Technical Note No. 17, Forest Practices Authority, Hobart, Tasmania.

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North Barker Ecosystem Services (2023). Tasman Highway Southeast Tasmania Transport Solution (SETS) Tasmania Golf Club Natural Values Assessment Summary.

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Pittwater Road Drainage Improvements

Appendix F

Pittwater Road Drainage Improvements

Background

On the eastern side of Pittwater Road immediately south of the junction with the Tasman Highway are five informal pull off areas. The five areas are surfaced with brown gravel and are subject to ponding water which becomes contaminated with fines from the brown gravel following rains. If the ponding water overflows the pull off areas it represents a potential threat to nearby orchid habitat on the Milford property. This drainage issue has been recognised as a facilitated impact by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) in its assessment under the EPBC Act of the proposed adjacent Tasman Highway upgrade. Under the Act, facilitated impacts must be either mitigated, or addressed through a suitable offset. It is recommended that mitigation treatment be carried out by way of preventing use of the pull off areas and revegetating them.

Description and Location of Pull Off Areas

The five areas are located along a 450 metre section of Pittwater Road on the eastern side immediately south of the junction with the Tasman Highway. The areas are listed below.

Area 1

Location – 59 metres from Tasman Highway Length - 17 metres Width – 2.5 metres Area – 45 m^2 approximately	

Area 2

Location – 83 metres from Tasman Highway Length - 43 metres Width – 5 metres Area – 200 m^2 approximately	

Area 3

Location – 159 metres from Tasman Highway Length - 30 metres Width – 2.5 metres Area – 60 m^2 approximately	

Area 4

Location – 194 metres from Tasman Highway Length - 21 metres Width – 2 metres Area – 40 m^2 approximately	

Area 5

Location – 376 metres from Tasman Highway Length - 63 metres Width – 6.5 metres Area – 350 m^2 approximately	

Proposed Treatment

It is recommended that parking be prohibited in each area by placement of 100 mm x 100 mm treated pine bollards at 2 metre spacing 0.5 metres from the edge of the sealed pavement. This matchers the existing shoulder width along most of Pittwater Road. The recommended length of the bollards is 1.5 metres with 0.5 metres in the ground.

The brown gravel behind the bollards is to be scarified to approximately 150 mm depth and the existing depressions filled in with scarified material. Following scarifying and filling, each area is to be seeded with ryecorn and a mixture of native grasses.

At area 5, where there is an existing access, it is recommended that the bollards be turned in at a 15 m radius to match the access.

The estimated cost of the proposed work is s38 .

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Contract Environmental Management Specification

Appendix G

SECTION 176 - ENVIRONMENTAL MANAGEMENT

This section specifies the minimum environmental management obligations relating to the work to be constructed under this Contract. Additional contract specific requirements may be included in Section 160.

PART A - ENVIRONMENTAL MANAGEMENT

PART B - WATER QUALITY

PART C - AIR QUALITY

PART D - EROSION AND SEDIMENT CONTROL

PART E - CONTAMINATED SOILS AND MATERIALS

PART F - WASTE AND RESOURCE USE

PART G - FUELS AND CHEMICALS

PART H - NOISE

PART I - FLORA AND FAUNA

PART J - CULTURAL HERITAGE

PART K - REPORTING

PART A - ENVIRONMENTAL MANAGEMENT

176.A1 INTRODUCTION

Works under the Contract shall be undertaken so that impacts on the environment are avoided or minimised. The Contractor shall ensure that the environmental objectives and measures outlined in the relevant State and Federal legislation are complied with. Where different objectives are nominated, the more stringent requirement shall be adopted.

The Contractor shall prepare a project specific Environmental Management Plan for the management of activities that impact on the environment in accordance with the requirements of this section.

176.A2 DEFINITIONS

Ancillary Work Area – an area outside the Limit of Works that is used by the Contractor to support the delivery of the project. This may include but is not limited to the establishment of site compounds, borrow areas and temporary sedimentation basins and temporary works.

Contaminated Material – the presence of any chemical substance or waste that exists above the natural background level of the land or water and represents, or potentially represents, an adverse health or environmental impact.

Cultural Heritage – protected objects and protected sites as defined in the *Aboriginal Heritage Act 1975* and heritage areas and places of historic cultural heritage significance as defined in the *Historic Cultural Heritage Act 1995*, including but not limited to, Aboriginal artefacts, scarred trees, burial sites, and historic bridges and buildings.

Environmental Incident – an event which results in or has the potential to result in the environmental requirements in this Contract being breached, and occurs at any location where works under the Contract are performed.

Noise Sensitive Receptors – dwellings that may be affected by construction noise during the day such as aged persons homes, hospitals, schools, kindergartens, libraries and other noise sensitive community buildings.

Rain Event – when rainfall results in an offsite discharge, and/or when onsite construction activities are ceased due to rain, and/or rainfall that is equal to or greater than the Rainfall Intensity Chart attached as Attachment A to this Section 176.

Waterway – means a water resource as defined in the Water Management Act 1999

Watercourse – as defined in the Water Management Act 1999

176.A3 ENVIRONMENTAL MANAGEMENT PLANS

The Contractor shall be responsible for the preparation, implementation and other arrangements associated with the Environmental Management Plan (EMP). The EMP shall include, as a minimum:

(a) a statement of scope, purpose and environmental objectives

(b) a schedule of environmental elements that are expected to be affected by the works under the Contract including an outline of proposed mitigation treatments and proposed timeframes

(c) the identification of work activities and an assessment of their potential impacts and associated risks to onsite and offsite environmental receptors (e.g. community, land uses, watercourses, flora and fauna, cultural heritage, etc.) including times when the Contractor is not on site, including but not limited to matters covered in this specification

(d) processes and responsibilities for -

- the implementation, onsite review and maintenance of EMP and associated controls
- reporting and investigation of environmental incidents or complaints relating to any environmental issue under the Contract
- an adaptive approach for the review and update of the EMP as works progress and/or following non-conformances, complaints, or previously unidentified issues
- after hours response including arrangements for containing environmental damage and attendance on site in the event of an emergency

(e) legal and other requirements - details of approvals, licences and permits necessary to meet statutory requirements and associated conditions

(f) competence, training and awareness - an induction and training plan to ensure that all site personnel (including subcontractors) understand the EMP and are aware how the EMP is to be implemented in relation to the works, including any possible emergency response procedures

(g) operational control – the EMP shall document environmental procedures to manage all identified impacts and environmental protection requirements. These procedures shall include inspection and monitoring

(h) scaled drawings that clearly show the location and extent of environmental controls, modifications to existing control devices and monitoring locations

(i) emergency preparedness and response - an emergency response procedure shall include processes for managing any environmental emergency on-site, such as contacting relevant stakeholders and clean-up of the site

(j) include the following statement regarding responding to an environmental incident,

- Immediate action shall be taken to avoid continuance of the incident (which may include cessation of work), and to minimise the effect of the incident on the environment
- The Superintendent, the Pollution Incidents and Complaints Hotline (Tel. 1800 005 171) and other responsible authorities shall be immediately notified of the incident or, if the incident occurs outside of working hours, by 9am the next working day.
- An incident report shall be submitted to the Superintendent within 7 days of the incident. The incident report shall include photographs where available and cover details of the incident, and the proposed corrective action to avoid a re-occurrence.

(k) nonconformity, environmental incidents and corrective and preventative action procedures

(l) audit - a documented process for audit of the EMP against the contract requirements, including the effectiveness of on-site environmental protection measures.

An independent audit of the Environmental Management Plan shall be completed prior to the commencement of Works.

176.A4 TRAINING

Prior to commencement of works onsite, the Contractor shall ensure that all personnel are informed of the environmental issues and specific risks associated with the project and the required management and mitigation measures to address these risks.

Prior to commencement of works onsite, the Contractor shall ensure that personnel directly involved in the implementation of the EMP and the installation and maintenance of control measures for this contract:

- have demonstrated competence and suitable experience in environmental management in a construction environment; or
- have successfully completed a nationally accredited training course which addresses management practices for erosion and sediment control (Green Card or equivalent).

PART B - WATER QUALITY

176.B1 WATER QUALITY

(a) General

The quality of water in watercourses shall not be detrimentally impacted by runoff from the site.

The quality of ponded water to be dewatered to receiving waterways shall not be greater than 10% above the turbidity of water in the receiving waterways.

*** The pH of ponded water to be dewatered shall be within 1.0 pH unit of the receiving water.

(b) Monitoring

Water quality and rainfall shall be monitored for the parameters identified in Table 176.B1.01 during all stages of construction to ensure that the water quality in the receiving waterways:

- does not vary between the upstream and downstream limits of the works site during the period (where upstream results become the background limits), although a variation between results of no more than twice the measurement uncertainty of the instrument will be allowable; or

The Contractor shall possess equipment on site that is capable of providing instantaneous monitoring of parameters as required in Table 176.B1.01. All equipment associated with monitoring shall be maintained and calibrated in accordance with the manufacturer's or equipment supplier's requirements.

Table 176.B1.01 Construction Monitoring

Parameter	Method
Turbidity - NTU	Measure with on-site meter
Electrical Conductivity (EC) – µS/cm	Measure with on-site meter
pH	Measure with on-site meter
Dissolved oxygen (DO) – mg/L	Measure with on-site meter
Temperature - °C	Measure with on-site meter
Litter (definition, including solid inert waste)	Visual (prevent litter from entering waterways and drainage systems)
Oils and Greases	Visual (No visible free oil or greases)

Monitoring shall be carried out in waterways and/or drainage infrastructure upstream and downstream of the limits of the site for each rain event as follows:

- within one hour of commencement of rain event during working hours
- every four hours for periods of continuous rain during working hours
- within 12 hours of a rain event, outside working hours.

(c) Dewatering

Water quality monitoring shall be undertaken when dewatering ponded water to receiving waterways.

PART C - AIR QUALITY

176.C1 DUST

All work under the Contract shall comply with the following requirements:

- dust generated from road construction activities shall not create a hazard or nuisance to the public, disperse from the site or across roadways, nor interfere with crops and stock or commercial or residential properties or other dust-sensitive receptors
- emissions of visible smoke from construction plant and equipment shall be for periods no greater than ten consecutive seconds
- emissions of odorous substances or particulates shall not create or be likely to create objectionable conditions for the public
- materials of any type shall not be disposed of through burning
- materials that may create a hazard or nuisance dust shall be covered during transport.

PART D - EROSION AND SEDIMENT CONTROL

176.D1 EROSION AND SEDIMENT CONTROL

The Contractor shall minimise the risk of soil erosion and sediment pollution of the site, adjacent land, and waterways.

The erosion and sediment control management plan shall be developed with reference (but not limited) to the:

- Department of State Growth Site Stabilisation and Landscaping Guideline 2018 and the
- International Erosion Control Association *'Best Practice Erosion and Sediment Control' (IECA, 2008).*

Further relevant references are Victorian Environment Protection Authority's publications including:

- Victorian EPA Publication No. 960 *'Doing it Right on Subdivisions'*
- EPA Publication No. 275 *'Construction Techniques for Sediment Pollution Control'*,
- EPA Publication No. 480 *'Environmental Guidelines for Major Construction Sites', and*
- *NSW RTA Guideline for Batter Surface Stabilisation using Vegetation and Erosion and Sedimentation Management Procedures (PN 143P)*.

General

All exposed surfaces shall be free of or treated to minimise erosion.

Erosion and sediment controls shall include:

- minimising the amount of exposed erodible surfaces during construction including the staging of works;
- prompt temporary and/or permanent progressive revegetation of the site as work proceeds (refer Section 720);

***

- prompt covering of exposed surfaces (including batters and stockpiles) that would otherwise remain bare for more than ##28: days. Cover may include soil binder, mulch, erosion control mat or seeding with a grass cover crop (refer Section 720);
- installation, stabilisation and maintenance of catch and diversion drains that segregate water runoff from catchments outside of the construction site from water exposed to the construction site;
- installation and maintenance of erosion and sedimentation controls, established in accordance with International Erosion Control Association *'Best Practice Erosion and Sediment Control' (IECA, 2008)* for the treatment of sediment laden run-off resulting from construction activities;
- adequately control and route runoff within the construction site to the appropriate sedimentation controls; and
- where trees are required to be removed more than two months in advance of any construction works, remove only that part of the tree that is above ground level and where possible allow the roots to remain intact beneath the ground surface to assist with erosion control.

The Contractor shall inspect all erosion and sedimentation control works at least once per week with additional inspections during a rain event as follows:

- within one hour of commencement during working hours
- every four hours for periods of continuous rain during working hours
- within 12 hours of a rain event outside working hours

• when runoff is leaving the site.

Any defects and/or deficiencies in control measures identified by monitoring undertaken shall be rectified immediately and these control measures shall be cleaned, repaired and augmented as required to ensure effective control measures thereafter.

176.D2 STOCKPILES

Where soil is stockpiled on site it shall be located no less than 10 metres from watercourses.

176.D3 MUD ON PUBLIC ROADS

The Contractor shall take all steps necessary to prevent vehicles from trafficking and depositing mud and other debris on the surface of adjacent roads when entering and leaving the site.

PART E - CONTAMINATED SOILS AND MATERIALS

176.E1 CONTAMINATED SOILS AND MATERIALS

Soils or materials shall not be contaminated as a consequence of work under the contract and except as specified elsewhere, contaminated material shall not be incorporated into the works.

PART F - WASTE AND RESOURCE REUSE

176.F1 WASTE AND RESOURCE REUSE

(a) General

The generation of waste materials shall be managed in accordance with the hierarchy, of avoid, reuse, recycle or dispose of waste material. The Contractor shall be responsible for the management of any waste produced in performing the work under the Contract.

Solid inert wastes may be reused when approved by the Superintendent.

The Contractor shall also control the generation of wind blown litter, or litter spread by birds and animals, from disturbed material. This may include limiting the disturbed area or recovering material.

All vehicles transporting waste shall be covered and appropriately licensed.

(b) Monitoring

The Contractor shall monitor the whole site for instances of inappropriate waste management or disposal at intervals of not more every 7 days.

PART G - FUELS AND CHEMICALS

176.G1 FUELS AND CHEMICALS

(a) General

Any leakage or spillage of any fuels or chemicals shall not have detrimental environmental impact.

The Contractor shall include specific procedures to mitigate the effect on the environment from fuels and chemicals, including herbicides and pesticides. Such procedures shall include but not be limited to:

- nominated fuel and chemical storage areas that comply with the requirements under the *Environmental Management and Pollution Control Act 1994*, the *Explosives Act 2012* and all applicable regulations made under those acts.
- the refueling and fluid top up of vehicles and plant shall be undertaken at least 20 metres from any drainage point or watercourses
- provision of readily accessible and maintained spill kits for the purpose of cleaning up chemical, oil and fuel spillages on the Site at all times
- ensuring that personnel trained in the efficient deployment of the spill kits are readily available in the event of spillages
- a contingency plan that shall address the containment, treatment and disposal of any spill.

(b) Monitoring

Fuel and chemical storages and equipment fill areas shall be monitored for compliance at intervals of not more than 7 days.

PART H - NOISE AND VIBRATION

176.H1 NOISE

All work under the Contract shall comply with the following requirements:

- construction vehicles and equipment shall have appropriate measures fitted and be effectively maintained to minimise engine noise
- noisy equipment shall be enclosed where possible
- scheduling noisy work practices (e.g. pile driving) to minimise likelihood of community annoyance; and
- advise local residents in advance when unavoidable out-of-hours work will occur.

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176.H2 VIBRATION

(a) General

All work under the Contract shall be undertaken utilising construction methodologies that will minimise vibration disturbance to the community and avoid damage to buildings and/or structures.

Vibration generated through construction plant and equipment or blasting (Clause 176.H3 – Blasting) shall not de-stabilise the existing ground condition especially if work is carried out in the vicinity of any natural slopes or embankment.

Construction methodologies shall be utilised to ensure that vibration does not exceed the peak vibration criteria in Table 176.H2.01 and/or criteria set by a responsible authority for a specified structure/asset that falls within its responsibility.

(b) Monitoring

Monitoring shall be undertaken to assess the potential vibration impacts on buildings in accordance with German Standard DIN 4150, part 3 - 1999 (Effects of Vibration on Structures).

Peak vibration velocities shall not exceed the criteria in Table 176.H2.01

Table 176.H2.01 Vibration Criteria for Assessing Potential for Damage to Buildings

Type of Structure	Peak Vibration Velocity at foundation (mm/s)
Reinforced or framed structures. Industrial and heavy commercial buildings	20
Unreinforced or light framed structure. Residential or light commercial type buildings	5
Structures that because of their sensitivity to vibration do not correspond to those listed above and are of great intrinsic value (e.g. heritage listed buildings).	3

176.H3 BLASTING

(a) General

The contractor shall undertake blast monitoring to ensure that blasting activities do not pose the potential for damage to surrounding buildings or structures and to minimise disturbance to the community.

The contractor shall ensure that:

- vibration generated by blasting does not exceed the criteria set out in Table 176.H3.01; and
- blasting overpressure does not exceed 133 dBL.

(b) Monitoring

Monitoring of blasting activities shall be undertaken in accordance with Section J.3.2 of AS 2187.2-2006 (Explosives - Storage and use - Use of explosives), at locations relevant to sensitive buildings agreed with the Superintendent.

The peak component particle velocity of predominant pulse shall not exceed the criteria in Table 176.H3.01.

Table 176.H3.01 Transient Ground Vibration Criteria for Assessing Potential for Damage to Buildings

Type of Structure	Peak Vibration Velocity (mm/s)
Reinforced or framed structures Industrial and heavy commercial buildings	50
Unreinforced or light framed structure Residential or light commercial type buildings	15
Structures that because of their sensitivity to vibration do not correspond to those listed above and are of great intrinsic value (e.g. heritage listed buildings).	3

(c) Monitoring Results

Monitoring results of blasting for activities shall be submitted to the Superintendent within 24 hours.

PART I - FLORA AND FAUNA

176.I1 FLORA AND FAUNA

(a) General

All work under the Contract shall comply with the following requirements:

- avoid, minimise and offset (where appropriate) the removal of native vegetation during construction
- avoid injury to fauna or damage to protected vegetation or habitat
- protect significant flora and fauna sites, species or habitat not previously identified.

(b) Permits and Approvals

Permits from relevant authorities shall be obtained prior to disturbance of flora/fauna sites or relocation of native fauna affected by works under the Contract. Works under the Contract shall comply with all permits and approvals and associated conditions.

(c) Protection of Flora and Fauna

Areas of existing vegetation and native fauna habitat identified to be retained, shall be identified as 'No-Go Zones' and protected by temporary fencing and signage. No Signage is to identify the nature of the 'No-Go' zone.

HP Prior to removing any vegetation or habitat, the Contractor shall arrange an on-site inspection with the Superintendent and other relevant authorities to confirm and clearly identify and mark trees, vegetation or habitat to be removed. Any removal shall be consistent with the Contract drawings and any relevant permits and shall fence and sign all sites nominated as No-Go Zones.

Plant, equipment, material or debris shall not be placed or stored within the limit of the root zone of the tree or vegetation to be retained.

(d) Soil Compaction

The Contractor shall avoid trafficking and compacting, or storing materials on soil in all areas that are currently vegetated and those areas to be re-vegetated.

(e) Monitoring

The Contractor shall undertake monitoring of the condition of flora and fauna habitat sites and protective measures at the site every 7 days.

176.I2 WEED PEST AND DISEASE MANAGEMENT

(a) General

Declared weeds (listed under the *Weed Management Act 1999*), prohibited plants (listed under the *Poisons Act 1971*, including poppies) and pests and diseases (also referred to as pathogens) shall not be introduced to the site, spread through the site, or removed from the site (if present) as a consequence of work under the Contract.

The Contractor shall prevent the spread of declared weeds, prohibited plants, pests and diseases within the site and off-site through the implementation of controls that shall include the:

- treatment of declared weeds and prohibited plants prior to the commencement of any ground disturbing activities and in response to their identification through monitoring of the site;

- exclude access to, and disturbance of weed infested areas outside of the construction footprint

- management of declared weeds, prohibited plants listed and soil pathogens potential within imported materials;
- provisions for cleaning plant and equipment at the following times -
  - prior to arrival on Site
  - prior to departure from Site
  - prior to movement within the Site from infested to non-infested areas.

The Contractor is to;

- ensure compliance with the *Weed Management Act 1999* by:
  - applying management practices to ensure declared weeds outside the construction footprint are not further spread
  - ensure that declared weeds listed under the *Weed Management Act 1999* are controlled within the construction footprint during the construction phases and the defects liability period.
- ensure that prohibited plants listed under the *Poisons Act 1971* (including poppies) are controlled during construction and the defects liability period.
- undertake works in accordance with the following manuals;
  - Keeping It Clean – A Tasmanian field hygiene manual to prevent the spread of freshwater pests and pathogens: **http://dpipwe.tas.gov.au/invasivespecies/weeds/weed-hygiene/keeping-it-clean-a-tasmanian-fieldhygiene-manual**
  - Tasmanian Washdown Guidelines for Weed and Disease Control, Ed.1 **www.dpipwe.tas.gov.au/invasive-species/weeds/weedhygiene/washdown-guidelines**
  - Weed and Disease Planning and Hygiene Guidelines 2015 **www.dpipwe.tas.gov.au/Documents/Weed_Management_and_Hygiene_Guidelines.pdf**

(b) Monitoring

The Site shall be monitored for the presence of weeds and pests. At intervals of not more than ##(7 days/ 14 days/ other):

PART J - CULTURAL HERITAGE

176.J1 CULTURAL HERITAGE

(a) General

Cultural heritage sites and areas of cultural significance shall not be damaged, disturbed or otherwise adversely impacted unless an appropriate authorisation has been obtained.

(b) Permits and Approvals

Permits from relevant authorities shall be obtained prior to disturbance of Aboriginal cultural sites and/or cultural heritage sites affected by works under the Contract.

(c) Protection of Cultural Heritage

A 'No-Go Zone' shall be established for identified Cultural Heritage sites that are to be protected during the work under the contract. Temporary fencing of 'No-Go Zones' shall be:

- constructed of, as a minimum, star pickets, single strand of wire at the top and paraweb;
- located at the maximum practical distance from the site with a minimum of 1 m beyond the limit of the Cultural Heritage site; and
- retained in place for the duration of the construction period (until Practical Completion), or until removal of the Cultural Heritage from the site.

Signage shall be installed on the temporary fencing at intervals no less than 20 m apart stating 'Protected Area – No Unauthorised Access'. Any signage must not identify the nature of the 'No-Go' zone.

(d) Discovery of Aboriginal Cultural Heritage

An Unanticipated Discovery Plan is required to ensure appropriate response in the event that an item, site or object of Aboriginal Cultural Heritage is discovered that could not have otherwise been anticipated.

The following is a guide to the most common Aboriginal Cultural Heritage site types in Tasmania and will assist in identifying and managing the unanticipated discovery of Aboriginal Cultural Heritage sites and objects.

Stone Artefact Scatters – A stone artefact is any stone or rock which has been modified by Aboriginal people. Often this is the result of fracturing or 'flaking' fine grained rocks to produce sharp cutting or scrapping implements. The most common stone types utilised by Tasmanian Aboriginal people are silcrete and chert, on account of their availability and excellent tool making properties. However we also find hornfels, chalcedony, spongelite, quartzite and other stone types where locally available.
In Tasmania, stone artefacts are typically recorded as being 'isolated' (i.e. only one) or in a 'scatter' (i.e. two or more within a 50m radius). Stone artefacts are found all over Tasmania, in all landscapes and situations, and are the most basic indicator of Aboriginal occupation.

Shell Middens – Middens are occupational deposits created through an accumulation of debris from human activity. Midden sites can range in size from large mounds to small scatters of shell. The most common shellfish species found in middens in Tasmania are abalone, oyster, mussel, warrener and limpet, however they can also contain other debris such as animal bone, charcoal from campfires and discarded tools made from stone, shell or bone These sites are usually found near waterways and coastal areas.

Rockshelters – Caves and rock overhangs which bear signs of human activity are, for the purpose of the Aboriginal Heritage Register (AHR), collectively called occupied rock shelters.

Aboriginal people utilised these places for shelter, ceremony and other cultural practices, leaving behind occupational deposits such as middens and hearths, tools, or in some cases, rock markings. Rock shelters are usually found where the geology is conducive to the formation of caves and rock overhangs.

Quarries or Stone Procurement Sites – A quarry is a place where material has been extracted from a natural outcrop by Aboriginal people. The two types of quarry recorded on the AHR are stone and ochre; each typically being located wherever suitable ochre for painting and decoration, or stone for tool-making appear. Quarries can be recognised by evidence of human manipulation, and by the debris left behind from processing the material. Quarries can be extensive or discrete, depending on the size and quality of the outcrop, and how often it was utilised and visited.

Rock Marking – Rock marking is the term used in Tasmania to define markings on rocks, which are the result of Aboriginal practices. Rock markings come in two forms; engraving and painting. Engravings are made by removing the surface of a rock through pecking, abrading or grinding, whilst paintings are made by adding pigment or ochre to the surface of a rock.

Burials – Burial sites are highly sensitive places. They can occur anywhere, and have previously been recorded in sand dunes, shell middens and rock shelters

(e) Protection of Values

Areas of nominated archaeological and/or heritage values identified to be retained, shall be identified as 'No-Go Zones' and protected by temporary fencing and signage.

HP ***Prior to removing any vegetation, the Contractor shall arrange an on-site inspection with the Superintendent and other relevant authorities to confirm and clearly identify the areas of nominated archaeological and/or heritage values to be protected and shall fence and sign all No-Go Zones.***

(f) Unanticipated Discovery Plan

The Contractor shall, as a minimum, comply with the following procedures which are provided as a guide to meeting the obligations established under the *Aboriginal Relics Act 1975* and the *Coroners Act 1995* in regard to dealing with unanticipated discoveries of Aboriginal Cultural Heritage such as sites and objects.

The first section details the process to be followed should any Aboriginal Cultural Heritage item, site or object be discovered excluding skeletal remains (burials), while the second section details the process should skeletal remains (burials) be discovered.

Discovery of Cultural Heritage Items

Step 1: Any person who believes they have uncovered Aboriginal Cultural Heritage material should notify all employees or contractors that are working in the immediate area that all earth disturbance works must cease immediately.

Step 2: A temporary 'no-go' or buffer zone of at least 10m x 10m should be implemented to protect the suspected Aboriginal Cultural Heritage site or relics. No unauthorised entry or works will be allowed within this 'no-go' zone until the suspected Aboriginal Cultural Heritage relics have been assessed by a recognised Aboriginal Heritage Practitioner.

Step 3: Aboriginal Heritage Tasmania (AHT) in Hobart (ph 6165 3152) needs to be notified and consulted as soon as possible and informed of the discovery. AHT will then provide further advice in accordance with the *Aboriginal Relics Act 1975*.

Discovery of Skeletal Material

Step 1: Call the Police immediately. Under no circumstances should the suspected skeletal remains be touched or disturbed. The area must now be considered a crime scene. It is a criminal offence to interfere with a crime scene.

Step 2: Any person who believes they have uncovered skeletal material should notify all employees or contractors that are working in the immediate area that all earth disturbance works must cease immediately.

Step 3: A temporary 'no-go' or buffer zone of at least 50m x 50m should be implemented to protect the suspected skeletal remains. No unauthorised entry or works will be allowed within this no-go' zone until the suspected skeletal remains have been assessed by the Police and or Coroner.

Step 4: Should the skeletal remains be determined to be of Aboriginal origin, the Coroner will contact an Aboriginal organisation approved by the Attorney-General, as per the Coroners Act 1995.

(g) Monitoring

'No-Go Zones' are to be monitored at least weekly and immediately prior to and following activities with potential to impact the exclusion area.

PART K - REPORTING

176.K1 REPORTING

(a) General

All environmental monitoring results and all non-conformance reports relating to environmental performance and current status shall be submitted to the Superintendent.

The Contractor shall submit to the Superintendent copies of the data/information listed in Table 176.K1.01. This submission shall include both the data for the latest report and a summary of data collected to date under the Contract.

Table 176.K1.01

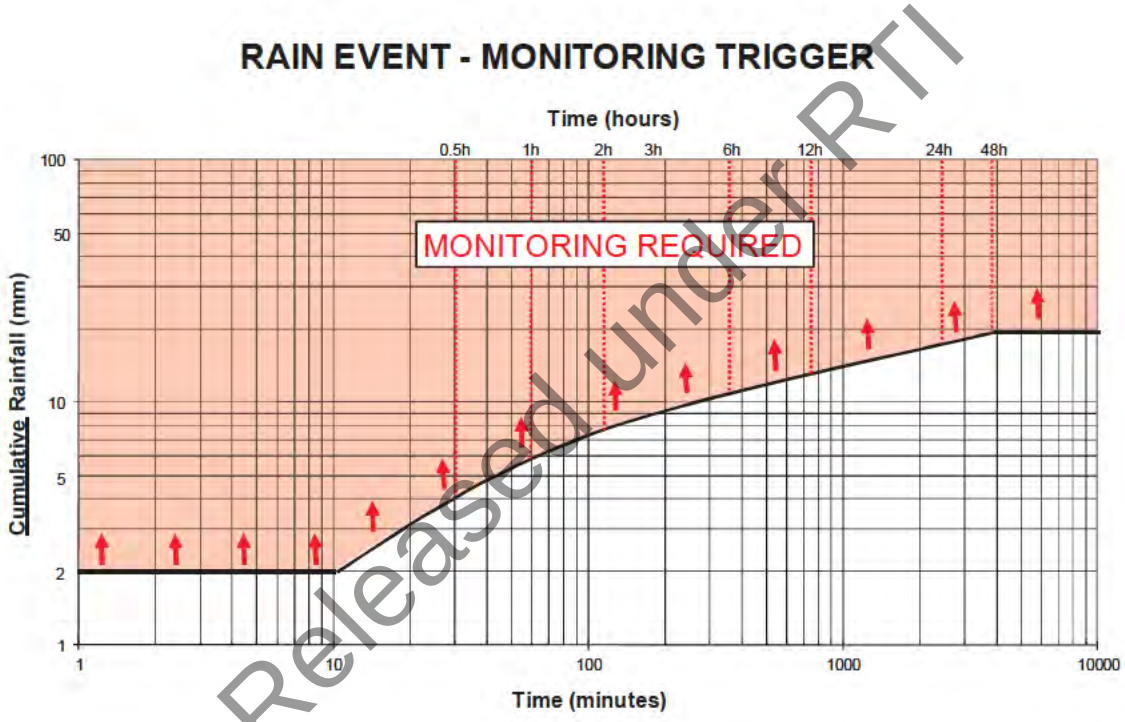
Data / Information	Frequency
Tasmanian Devil Dens	Where the Contractor identifies any potential dens for Tasmanian Devils during works, the Contractor shall notify the Superintendent immediately and seek direction.
Pollution Infringement Notices or Pollution Abatement Notices and/or any notices of prosecution.	Within 24 hours of receipt by the Contractor.
Statutory documents obtained by the Contractor as part of the project (e.g. permits).	Within one week of receipt by the Contractor.
Results of any air quality and water quality monitoring undertaken as part of the project.	##Monthly / At completion of Works / Other:
Itemised fuel (diesel unleaded and LPG) use on-site by contractors and sub-contractors.	##Quarterly / At completion of Works / Other:

(b) Notice of Authority Inspections

The Contractor shall notify the Superintendent immediately should a regulator seek to enter a worksite for any purpose.

ATTACHMENT A TO SECTION 176

RAINFALL INTENSITY CHART



pitt&sherry

Milford Conservation Area

Roadside Biological Monitoring and Mangement Report

Appendix H

Number: 1 Author: s36 Subject: Sticky Note Date: 3/06/2024 12:06:18 PM

s35 [redacted]

Milford Conservation Area (MLF)

Roadside Biological Monitoring and Management Report

18th of April 2024

For Department of State Growth

DSG052

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Preface

This report describes the intended scope of the biological monitoring and management actions that will be carried out on the roadside adjacent to priority orchid habitat on the Milford property. These activities will be facilitated through creation of the Milford Conservation Area which will be established at the conclusion of the Tasman Highway upgrade works between the Hobart Airport Interchange and the Midway Point Causeway. The Conservation Area will be included in the Department of State Growth Roadside Conservation Program (RCS). Site detail from biological monitoring and the management activities will be documented in the RCS database.

This report will be updated when construction has been completed recognising the features of the Conservation Area at that time.

MILFORD CONSERVATION AREA

The Milford Conservation Area will be established once construction of Tasman Highway upgrade is complete. The Conservation Area will be adjacent to Milford property on the southern side of the Tasman Highway opposite the Tasmania Golf Club. The inclusion of this Conservation Area into the Roadside Conservation Program is an acknowledgement of the proximity of the area to priority orchid habitat and the importance of the high standard of management required to reduce the risk of any adverse impacts to that habitat.

At the completion of construction, the area between the road verge and the new property boundary will be spread with topsoil and the area to be seeded with native grass mix using species indigenous to the area (Section 4.3, Item 3.1 of Table 3, EPBC Act Referral 202085: *Realignment of the original design adjacent to the Milford Property* 18/4/2024). This area will be monitored and weeds controlled by the construction contractor under strict specification requirements until the end of the defects liability period. After that period, the new roadside area between Pittwater Road and approximately 220 m east of the Milford driveway will be managed as the Milford Conservation Area under the Department of State Growth Roadside Conservation Program.

The sites within the Conservation Area will be monitored and treated for processes that may threaten priority orchid habitat including weed infestation and rubbish.

Two sites will be set up between the road edge and the new property boundary.

Location

Tasman Highway between Pittwater Road and Midway Point (southern side).

Area History

The area that will become the Milford Conservation Area is currently managed roadside verge (DSG) and native vegetation (private property). The Area is adjacent to priority orchid habitat for three EPBCA listed orchid species; Milford Leek-orchid (*Prasophyllum milfordense*), Sagg Spider-orchid (*Caladenia saggicola*), and Tailed Spider-orchid (*Caladenia caudata*).

The roadside vegetation currently supports an elevated proportion of non-native invasive weeds species which are able to exploit the disturbed roadside environment. Dominant herbaceous weed species include cocksfoot grass (*Dactylis glomerata*), shaking grass (*Briza maxima*), panic veldt grass (*Ehrharta erecta*), fog grass *(Holcus lanatus*), rough catsear (*Hypochoeris radicata*), scarlet pimpernel (*Anagallis arvensis*) and garden freesia (*F. alba* x *F. leichtlinii*). The woody weed bluebell creeper (*Billardiera heterophylla*) is also known from both the roadside verge and within the native vegetation adjacent.

Management of weeds and disturbance elements that facilitate and promote weed growth are key to the establishment of this Conservation Area.

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Milford Conservation Area
Conservation sites
New property boundary
Critical orchid habitat
Highway
Local roads
© State of Tasmania
Grid: MGA Zone 55 Datum: GDA94, AHD
N
GDA
0
75
150 m
northbarker
ECOSYSTEM SERVICES
SROP20 15/04/2024 L Drummond

Conservation Values

Vegetation communities	Scientific name	TSPA	EPBCA
None currently identified in the proposed Milford Conservation Area			

Conservation Sites included in this Conservation Area

Site	Location	Side of the road	Length (m)
Milford site west (MLF01)	Pittwater Road to Milford driveway	RHS	640
Milford site east (MLF02)	Milford driveway towards Sorell Causeway	RHS	220

Individual management plans for each site are provided below.

MLF01
Milford Site West

Location details

Pittwater Road to Milford driveway.

This site will contain TasWater watermain and access track, and stormwater swale at the base of the batter.

Start link	Start chng	End link	End chng	Site length (m)
10	1710	10	2310	640 m

Threatened flora

None identified, noting that the area will be subject to extensive modification due to the construction of the new Highway. The intention of this Roadside Conservation Site is to ensure that roadside maintenance activities in the future do not cause harm to the adjacent orchid habitat.

Vegetation Communities

Vegetation communities	Area	NCA	EPBCA
Rehabilitated postconstruction roadside			

Site Survey History

September & October 2019	Natural Values Assessment	North Barker Ecosystem Services (2020) Tasman Highway, Holyman Avenue to Pittwater Bluff, Natural Values Assessment
September 2020	Natural Values Assessment	North Barker Ecosystem Services (2020) Tasman Highway, Hobart Airport Interchange to Pitt Water Bluff (including associated works on Tasmania Golf Course) Matters of National Environmental Significance, Significant Impact Assessment
February 2022	Orchid assessment	North Barker Ecosystem Services (2022) Tasman Highway Hobart Airport Interchange to Sorell Causeway, Orchid Habitat Impact Assessment and Mitigation Plan
April 2024	Natural Values Implications	North Barker Ecosystem Services (2024) Tasman Highway Southeast Tasmania Transport Solution (SETS) Holyman Avenue to Pittwater Bluff changes to design. Natural Values Implications

This section will be updated to provide a list of biological monitoring surveys and management actions as they are undertaken.

Comment on traffic management

The Conservation Area can be accessed from the proposed new watermain access track between Pittwater Road and the existing Milford access 640 m east of Pittwater Road.

Photo points

Name of photopoint	Easting	Northing	Description	Reason
MLF01 Photopoint 1				
MLF01 Photopoint 2				

Photo points to be set up at commencement of site management.

INSERT PHOTO
Photopoint 1 dd/mm/yyyy

INSERT PHOTO
Photopoint dd/mm/yyyy

Threatened flora

Monitoring counts and commentary of any threatened flora will be provided. Previous records of threatened flora populations also provided where applicable.

Threats

This section provides a list of threats to conservation values identified during biological surveys. It informs the management recommendations below. Anticipated threats are provided here and will be updated at commencement as a roadside conservation site.

Threat type	Threat	Detail
Woody weeds	Infestation of adjacent native habitat	
Grassy weeds	Infestation of adjacent native habitat	
Rubbish		
Soil erosion	Degradation of adjacent native habitat	
Failed rehabilitation plantings	Erosion, water run off	Assess success of rehabilitation plantings

Notes and photos to be provided.