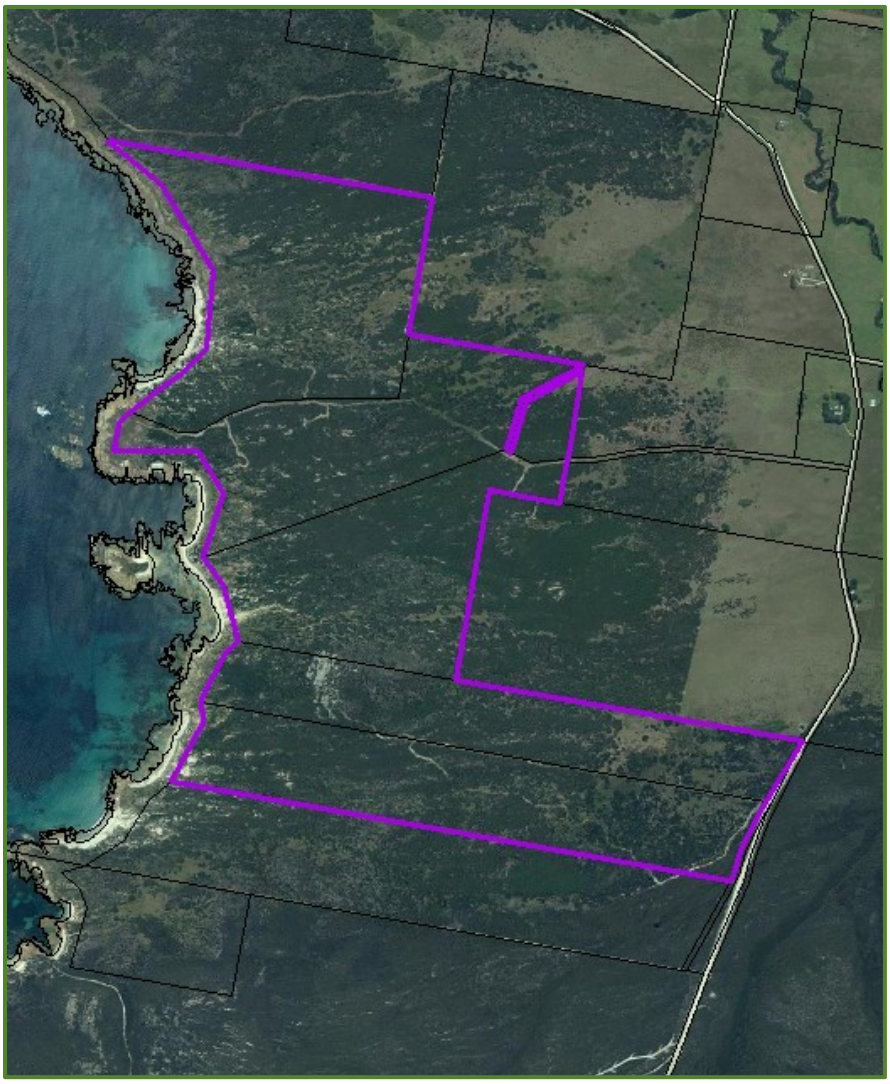
CRITICAL CONSTRAINTS REVIEW OF NATURAL VALUES FOR LIMESTONE BAY TITLES, PALANA, FLINDERS ISLAND, TASMANIA



Environmental Consulting Options Tasmania (ECO*tas*) for Ngarra Limestone Bay Pty Ltd

11 July 2021

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AUTHORSHIP

Report production: Mark Wapstra

Habitat and vegetation mapping: Mark Wapstra

Base data for mapping: LISTmap, Ngarra Limestone Bay Pty Ltd

Digital and aerial photography: Mark Wapstra, GoogleEarth, LISTmap

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COVER ILLUSTRATION

Subject titles.

Please note: the blank pages in this document are deliberate to facilitate double-sided printing.

CONTENTS

SUMMARY

General

Ngarra Limestone Bay Pty Ltd engaged Environmental Consulting Options Tasmania (ECO*tas*) to undertake a natural values assessment (critical constraints analysis) of five titles between Limestone Bay and Palana Road, Flinders Island, Tasmania, primarily to provide an overview of the natural values to inform future land uses to ensure that the identified values are appropriately considered during any further planning under local, State and Commonwealth government approval protocols.

Summary of key findings

Threatened flora

- No plant species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) are known from database information, are likely to occur, within the study area.
- One plant species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) is known from database information from the study area, as follows:
  - *Zygophyllum billardierei* (coast twinleaf) – two point locations.
- The study area is expected to support additional plant species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA)

Threatened fauna

- No fauna species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) and/or the Tasmanian *Threatened Species Protection Act 1995* (TSPA) are known from database information from the study area.
- The study area is not likely to support extensive habitat strongly associated with such species.

Vegetation types

- The study area supports the following TASVEG mapping units:
  - agricultural land (TASVEG code: FAG);
  - regenerating cleared land (TASVEG code: FRG);
  - lichen lithosere (TASVEG code: ORO);
  - coastal grass and herbfield (TASVEG code: GHC);
  - *Melaleuca squarrosa* scrub (TASVEG code: SMR);
  - wet heathland (TASVEG code: SHW);
  - coastal scrub (TASVEG code: SSC);
  - *Eucalyptus nitida* Furneaux forest (TASVEG code: DNF); and
  - *Eucalyptus viminalis – Eucalyptus globulus* coastal forest and woodland (TASVEG code: DVC).

- None of these communities equate to threatened ecological communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
- DVC is listed as threatened on Schedule 3A of the Tasmanian *Nature Conservation Act 2002* but is unlikely to be present due to the absence of any substantial areas of the study area with a eucalypt-dominated canopy.
- Heathland on calcareous substrates is mapped along the western coast and extending into the study area. The extent matches the TASVEG 3.0 mapping of SCL (now altered to SSC on TASVEG 4.0) but does not reflect the granite-dominated geological mapping.

Recommendations

This critical constraints review of natural values has indicated that while the study area supports extensive areas of native vegetation and some known sites of threatened flora, the proposed subdivision and occupation proposal is unlikely to deleteriously significantly impact on natural values at any reasonable scale.

I believe that sufficient information is already available to support a planning application for the administrative act of subdivision. When specific project elements are known, it may be prudent to undertake targeted natural values assessments to further inform specific planning applications. The following specific recommendations are provided:

- on-ground surveys can be focussed on specific proposed development areas but should include sufficient area to ensure minor changes to design to not necessitate a new site assessment (these can be logically undertaken at a later stage e.g. as part of a planning application for a building);
- on-ground surveys should be informed by conceptual designs, and where available, more detailed designs to maximise the opportunity to detect values such as threatened flora and allow practical design to avoid such values;
- there are no seasonal constraints to on-ground surveys related to vegetation classification and mapping (such constraints may apply to threatened flora – see below);
- vegetation mapping should focus on proposed development sites but also aim to clarify the extent of mapped threatened vegetation communities;
- threatened fauna surveys can be limited to assessments of potential habitat (by reference to values such as geology, landform, vegetation structure and composition) and are not seasonally-restricted;
- threatened flora surveys are in two categories: (1) those that can be conducted at any time of the year (perennial species); and (2) seasonally-restricted (generally spring) surveys (annual/ephemeral species) – ideally, any targeted surveys should be conducted between late August through to late November (but this may need to be guided by seasonal conditions);
- natural values assessments should also consider weed and hygiene issues but should not require soil and water sampling (i.e. assessment by reference to symptoms only);
- the report on natural values can be updated in whole or part (or by addenda), by inclusion of revised vegetation mapping, descriptions of vegetation types, lists of vascular flora species, maps and notes on threatened flora populations and potential habitat of threatened fauna, and notes on weed and hygiene issues – this update can be at the whole-of-property level or on an application-by-application basis (depending on the extent and scheduling of on-ground surveys).

PURPOSE, SCOPE, LIMITATIONS AND QUALIFICATIONS OF THE ASSESSMENT

Purpose

Ngarra Limestone Bay Pty Ltd engaged Environmental Consulting Options Tasmania (ECO*tas*) to undertake a natural values assessment (critical constraints analysis) of five titles between Limestone Bay and Palana Road, Flinders Island, Tasmania, primarily to provide an overview of the natural values to inform future land uses to ensure that the identified values are appropriately considered during any further planning under local, State and Commonwealth government approval protocols.

Scope

This report relates to:

- flora and fauna species of conservation significance, including a discussion of listed threatened species (under the Tasmanian *Threatened Species Protection Act 1995* and/or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*) potentially present, and other species of conservation significance/interest;
- vegetation types (forest and non-forest, native and exotic) present, including a discussion of the distribution, condition, extent, composition and conservation significance of each community;
- plant and animal disease management issues;
- weed management issues; and
- a discussion of some of the policy and legislative implications of the identified ecological values.

This report follows the government-produced *Guidelines for Natural Values Surveys – Terrestrial Development Proposals* (DPIPWE 2015) in anticipation that the report (or extracts of it) may be required as part of various approval processes.

The report format should also be applicable to other assessment protocols as required by the Commonwealth Department of Agriculture, Water and the Environment (for any referral/approval that may be required under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*), which is unlikely to be required in this case.

The report also addresses the general provisions of the *Flinders Interim Planning Scheme 2013*, (but also recognising the incoming *Statewide Planning Scheme*).

Limitations

At this stage of review and planning, a site assessment has not been undertaken. This is primarily because engagement occurred well into the peak spring flowering period, meaning any survey undertaken between October and December 2020 would have been potentially critically constrained. Many plant species have ephemeral or seasonal growth or flowering habits, or patchy distributions (at varying scales). Late spring and into summer is usually regarded as the most suitable period to undertake most botanical assessments. While some species have more restricted flowering periods, a discussion of the potential for the site to support these is presented. In this

case, the ideal survey period is dependent on both the type of habitats present and the particular seasonal conditions. Many of the target threatened flora species are perennial and can be identified at any time of the year. However, some are annual/ephemeral herbs and the survey needs to be targeted to maximise the opportunity for detection. It is recommended that a broad overview of the vegetation/habitat types can be undertaken "out-of-season", which can identify particular sites that may require follow-up targeted surveys (it may be that such sites are highly localised and/or totally outside any sites proposed for eventual development).

Any surveys will also be limited to vascular species: species of mosses, lichens and liverworts are not usually recorded. However, a consideration is made of threatened species (vascular and non-vascular) likely to be present (based on habitat information and database records).

Any surveys for threatened fauna will be largely limited to an examination of "potential habitat" (i.e. comparison of on-site habitat features to habitat descriptions for threatened fauna), and detection of tracks, scats and other signs.

Qualifications

Except where otherwise stated, the opinions and interpretations of legislation and policy expressed in this report are made by the author and do not necessarily reflect those of the relevant agency. The client should confirm management prescriptions with the relevant agency before acting on the content of this report. This report and associated documents do not constitute legal advice.

Permit

Any plant material will be collected under a relevant DPIPWE permit (in the name of Mark Wapstra). Any relevant data will be entered into DPIPWE's *Natural Values Atlas* database by the author. Some plant material may be lodged at the Tasmanian Herbarium by the author.

No vertebrate or invertebrate material will be collected.

STUDY AREA

The study area (Figures 1-3) comprises the five private titles located between Limestone Bay and Palana Road, Palana, Flinders Island, Tasmania, with the following cadastral and tenure information:

- PID 3152018; C.T. 174257/1; LPI AAX40 (measured area = 777,800 m^2);
- PID 3152018; C.T. 174257/2; LPI AAX40 (measured area = 629,700 m^2);
- PID 3152018; C.T. 174257/3; LPI AAX40 (measured area = 598,400 m^2);
- PID 9823081; C.T. 175979/1; LPI AAX30 (measured area = 545,600 m^2);
- PID 9823081; C.T. 175979/2; LPI AAX30 (measured area = 669,300 m^2);
- Flinders municipality, zoned as Rural pursuant to the *Flinders Planning Scheme 1994*;
- Flinders municipality, nearly wholly subject to the Flinders Special Area for visual sensitivity pursuant to the *Flinders Planning Scheme 1994*; and
- Furneaux bioregion, according to the IBRA 7 bioregions used by most government agencies).

Note that the overlays may change with the implementation of the *Statewide Planning Scheme* and Local Provisions Schedule, although the key components of the Natural Assets Code are already essentially known.

The study area is bound to the north, east (in part – northern three titles) and south by private titles, and to the east (in part – southern three titles) by Palana Road (opposite which is the Wingaroo Nature Reserve). The western boundary if formed by the Blyth Point Conservation Area (Figure 4).

The topography is variable, dependent on geology and coastal influences. It includes dune systems in the west (generally between ca. 5-30 m a.s.l.), gently undulating terrain in the west (generally between ca. 40-90 m a.s.l.), with granite outcrops in middle (rising to just over 110 m a.s.l.). A minor tributary of Edens Creek passes through the southeast of the study area. Topographic maps also indicate another small dam in the disturbed vegetation in the northeast of northern long narrow title. Examination of topographic maps suggests there may be additional sites with impeded drainage.

Land use is primarily un-managed native vegetation with some primary production associated with the eastern parts of some titles. Informal boundary and internal tracks and some fencing are the only infrastructure elements present.

The geology of the title is mapped at a 1:250,000 scale (Figure 5) as:

- Quaternary-age "limestone" (geocode: Qpl)

  Mapped across most of the study area, especially in the east, with an extension to the coast at Limestone Bay.

- Devonian-age "dominantly adamellite/granite (I-type)" (geocode: Dgaa)

  Mapped across the northwestern portion of the study area and extending across the Blyth Point-She Oak Point-Palana ridgeline.

- Devonian-age "dominantly alkali-feldspar granite (S-type)" (geocode: Dgafs)

  Mapped along the coastline between the southern end of Limestone Bay and to The Dock for about 100-200 m inland within the title. This rock type extends to the Mount Killiecrankie range.

The geology is mentioned because it can have a strong influence on the classification of vegetation and the potential occurrence of threatened flora (and to a lesser extent, threatened fauna). In this case, geology may have a critical influence on the potential presence of a threatened vegetation type known as heathland on calcareous substrates, which is listed as threatened under Schedule 3A on the Tasmanian *Nature Conservation Act 2002* (Community 26). This community, which occurs on North Hummock on Prime Seal Island and on the northern and western coastline of Flinders Island, is associated with outcropping rock and rocky soil derived from Cainozoic limestone or associated shallow sands, with the calcium enriched (highly alkaline) soil surface often hard, broken and rocky, and rapidly draining, and sites where this heathland grows subject to drought due to low rainfall and desiccating winds (DPIPWE 2018). The extent of the mapping of the community is currently derived from the TASVEG mapping of heathland on calcareous substrates (TASVEG code: SCL) but it is known that the mapping is incomplete. Geology will be informally confirmed during site assessment by reference to rock outcrops, regolith and soils.

LISTmap's Geoconservation Sites layer does not indicate any specific geoconservation features for the title and immediate surrounds.

LISTmap's Fire History layer indicates that there are no recorded fire events for the title and immediate surrounds.

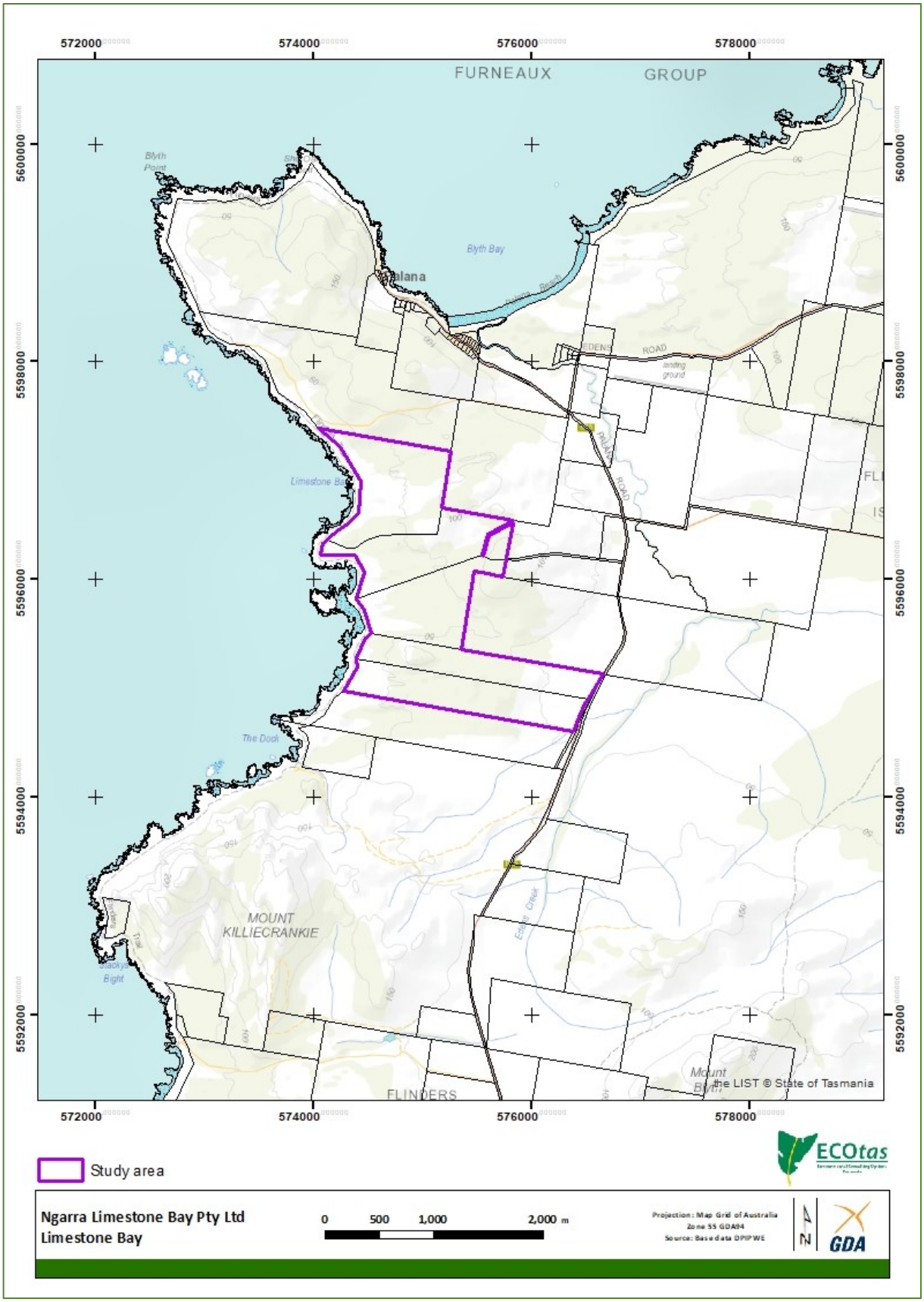

Figure 1. General location of study area

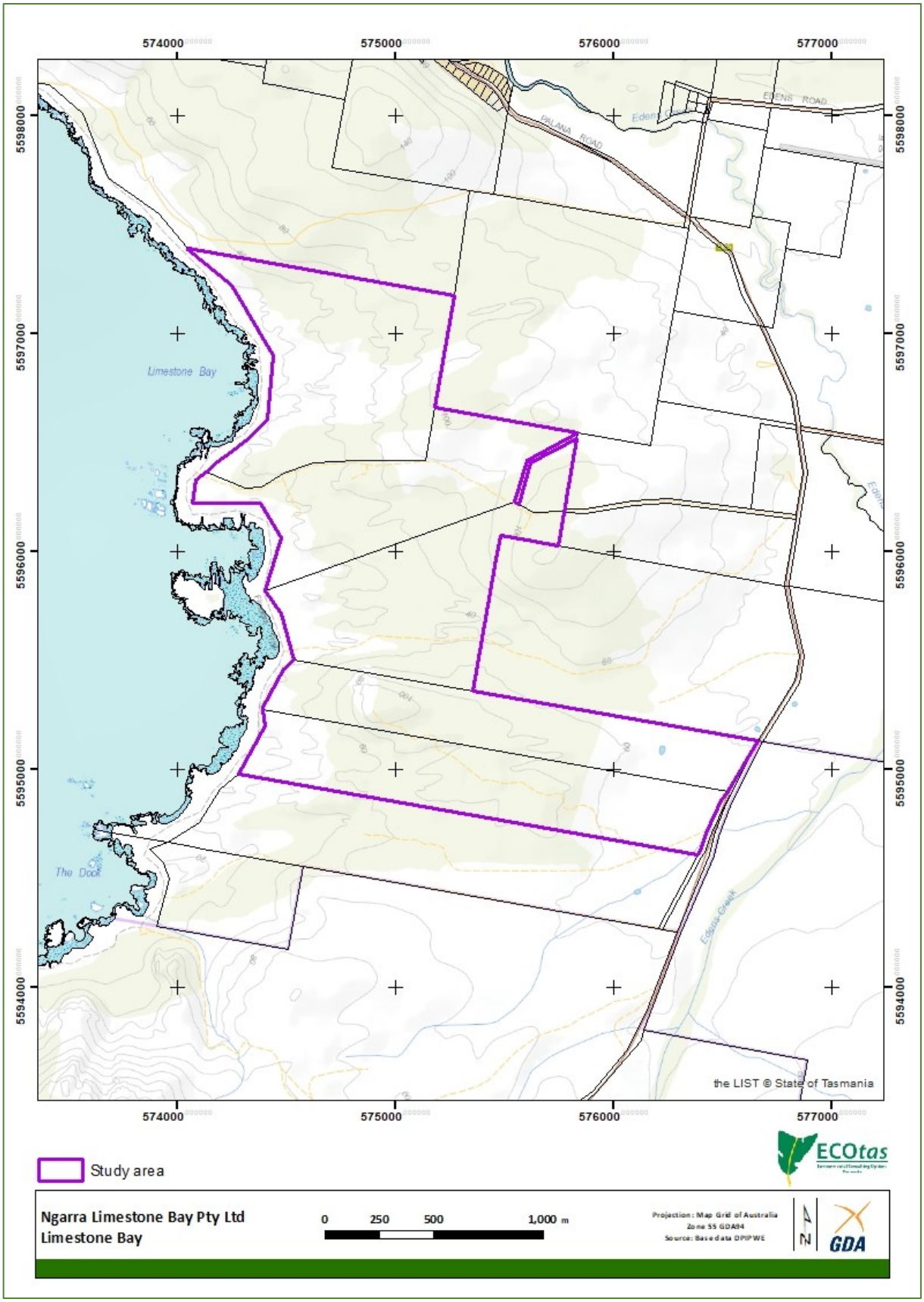

Figure 2. Detailed location of study area showing general topographic and cadastral features

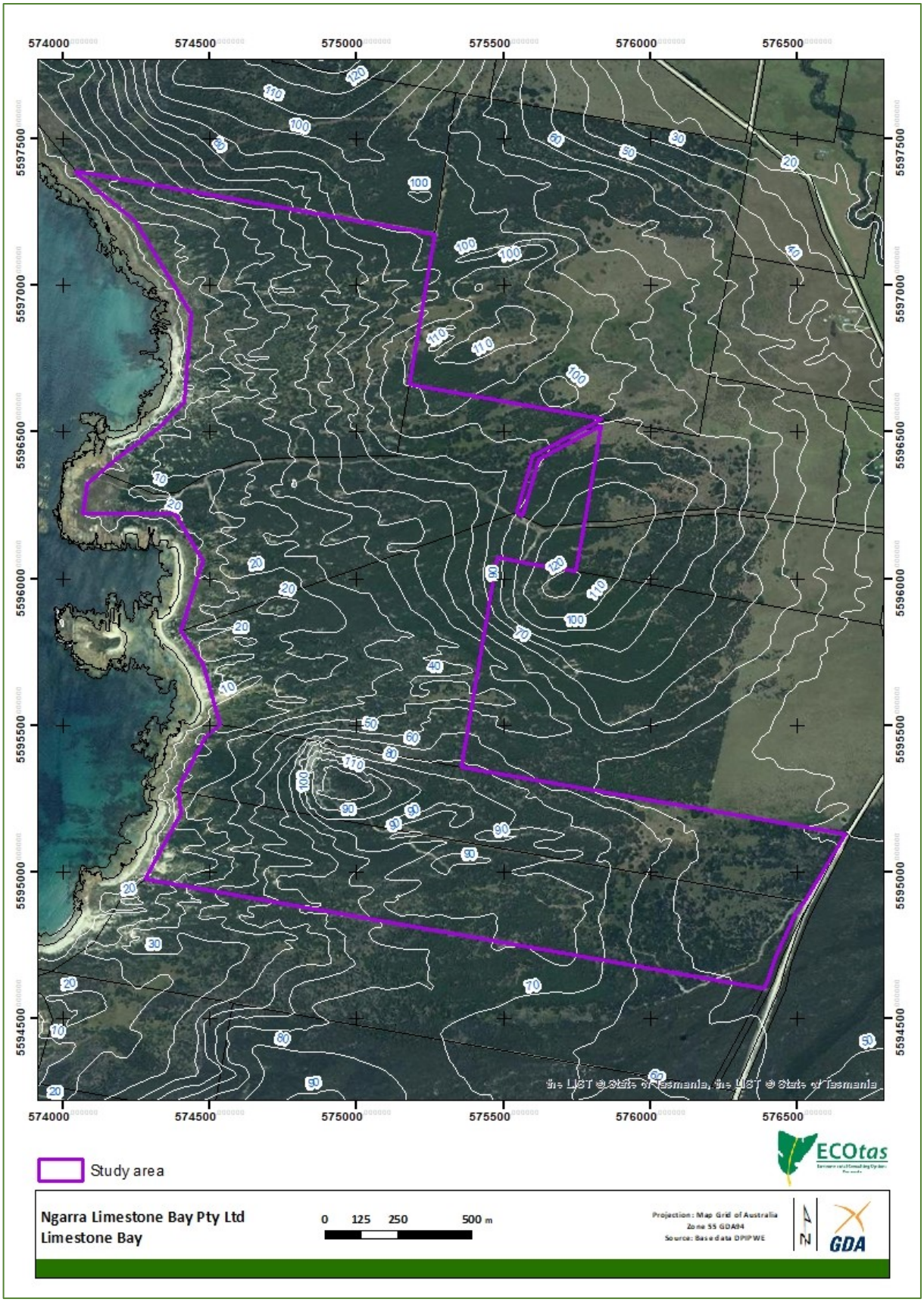

Figure 3a. Detailed location of study area showing recent aerial imagery, cadastral boundaries and contours

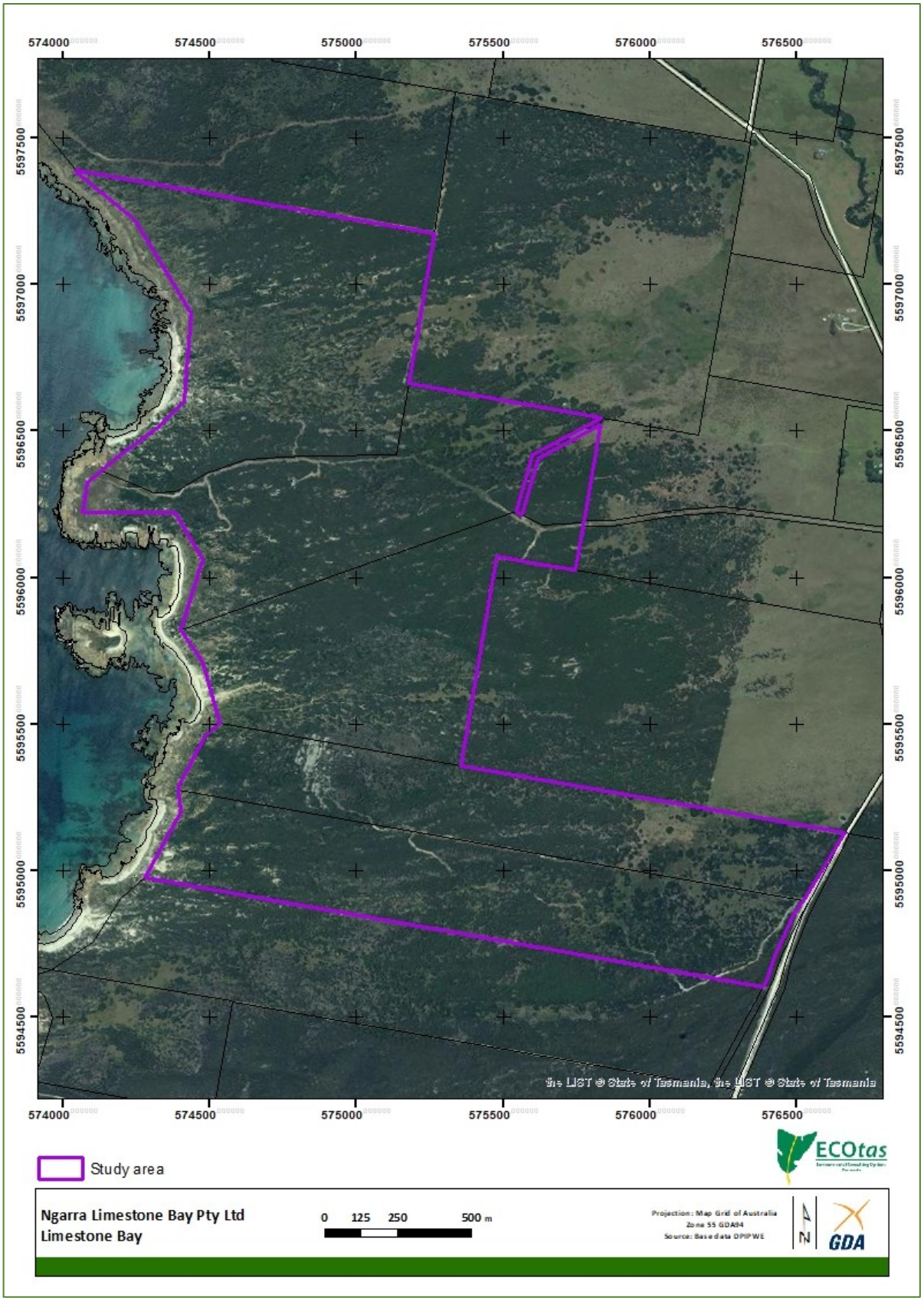

Figure 3b. Detailed location of study area showing recent aerial imagery and cadastral boundaries (contours removed for clarity)

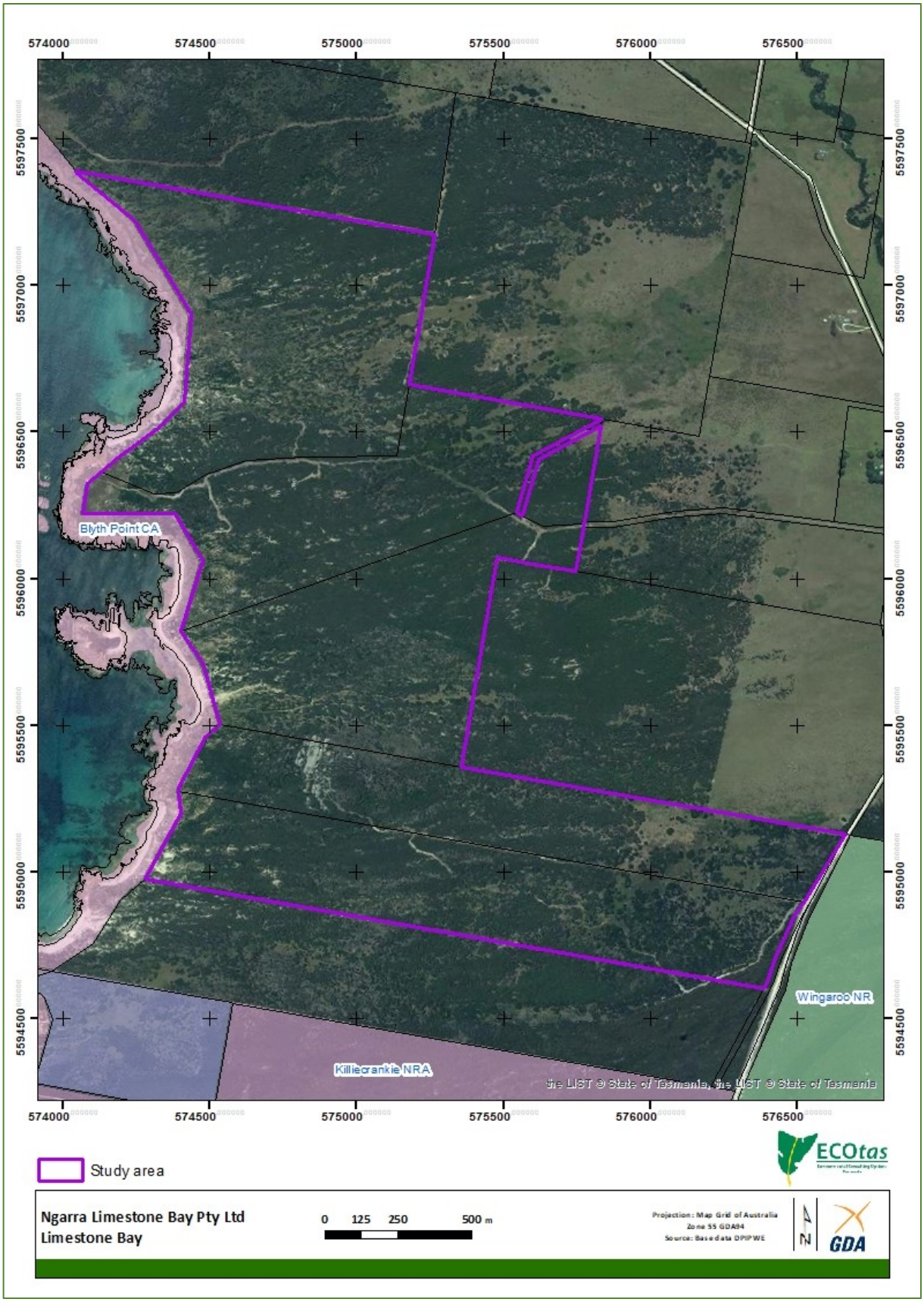

Figure 4. Reserves adjacent to the study area

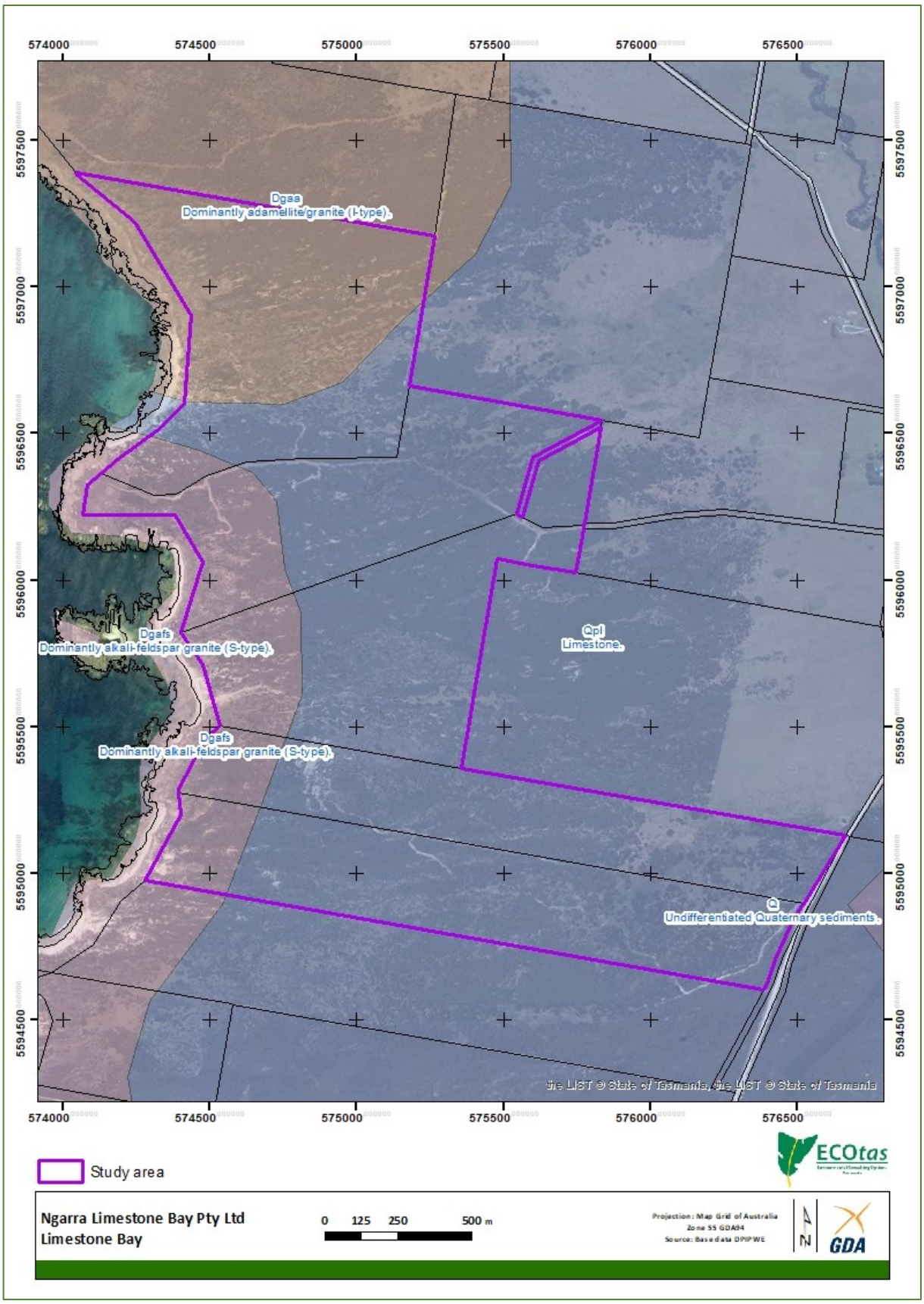

Figure 5. Geology (1:250,000 scale) of the subject titles and surrounds

LAND USE PROPOSAL

The conceptual land use proposal is shown at Figure 6, and specific elements of this have been transferred to a GIS project to overlay on natural values layers such as vegetation types and locations of threatened flora.

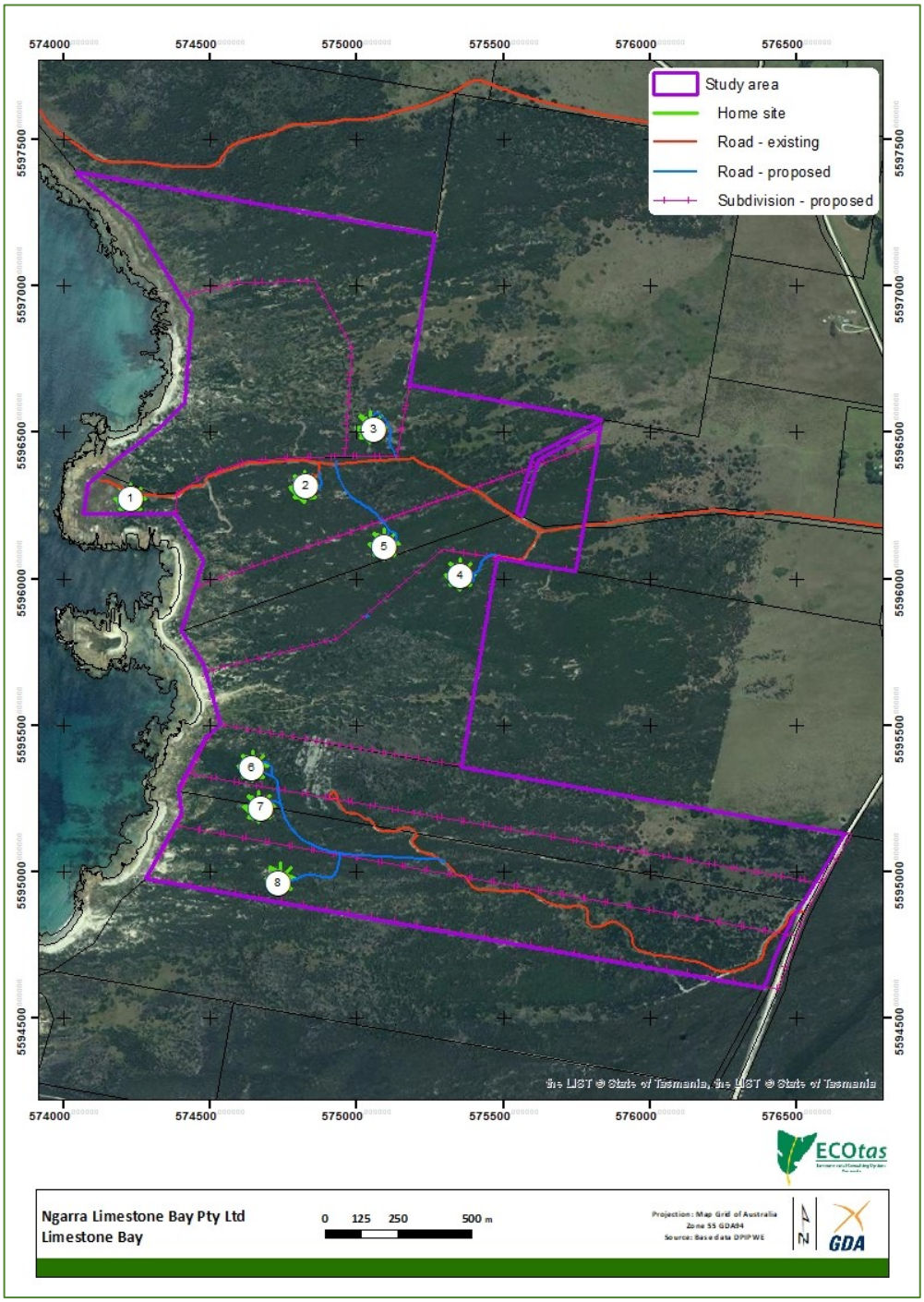

Figure 6. Conceptual subdivision plan [courtesy: Ngarra Limestone Bay Pty Ltd], included herein for indicative purposes only to provide context to the initial review of natural values (based on a GIS shape file provided by client)

METHODS

Nomenclature

All grid references in this report are in GDA94, except where otherwise stated.

Vascular species nomenclature follows de Salas & Baker (2021) for scientific names and Wapstra et al. (2005+) for common names. Fauna species scientific and common names follow the listings in the cited *Natural Values Atlas* report (DPIPWE 2020).

Vegetation classification follows TASVEG 4.0, as described in *From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation (*Kitchener & Harris 2013+).

Preliminary investigation

Available sources of previous reports, threatened flora records, vegetation mapping and other potential environmental values were interrogated. These sources include:

- Tasmanian Department of Primary Industries, Parks, Water & Environment's *Natural Values Atlas* records for threatened flora and fauna (GIS coverage maintained by the author current as at date of report);
- Tasmanian Department of Primary Industries, Parks, Water & Environment's *Natural Values Atlas* report ECOtas_NgarraLimestoneBay for a polygon defining the subject titles (centred on 575151mE 5595610mN), buffered by 5 km, dated 20 Dec. 2020 (DPIPWE 2020) – Appendix C;
- Forest Practices Authority's *Biodiversity Values Database* report, specifically the species' information for grid reference centroid 575151mE 5595610mN (i.e. a point defining the approximate centre of the assessment area), buffered by 5 km and 2 km for threatened fauna and flora records, respectively, hyperlinked species' profiles and predicted range boundary maps, dated 21 Dec. 2020 (FPA 2020) – Appendix D;
- Commonwealth Department of Agriculture, Water and the Environment's *Protected Matters Report* for a polygon defining the subject titles, buffered by 5 km, dated 20 Dec. 2020 (CofA 2020) – Appendix E;
- the TASVEG 4.0 vegetation coverage (as available through GIS coverage and via LISTmap);
- GoogleEarth and LISTmap aerial orthoimagery; and
- other sources listed in tables and text as indicated.

FINDINGS

Vegetation types

Comments on TASVEG mapping

This section, which comments on the existing TASVEG 4.0 mapping (Figure 7) for the study area, is included to highlight the differences between existing mapping and any vegetation mapping produced as a result of ground-truthing to ensure that any parties assessing land use proposals (via this report or updates to this report) do not rely on existing mapping. Note that TASVEG mapping, which was mainly a desktop mapping exercise based on aerial photography, is often substantially different to ground-truthed vegetation mapping, especially at a local scale. An examination of existing vegetation mapping is usually a useful pre-assessment exercise to gain an understanding of the range of habitat types likely to be present and the level of previous botanical surveys.

It is also quite informative to review the changes to TASVEG 3.0 (Figure 8) that were made to create TASVEG 4.0. In many cases, the changes are of little consequence in terms of management implications. However, in the case of the study area, the changes are quite substantial. I am not aware of the veracity of the changes and whether they were informed by any level of ground-truthing or simply updated aerial imagery interpretation. It is also important to note that the incoming *Statewide Planning Scheme* includes a Priority vegetation Area overlay, which was largely informed by a Regional Ecosystem Model, in turn almost wholly reliant on the now out-of-date TASVEG 3.0 vegetation mapping layer.

TASVEG 4.0 maps the study area as (Figure 7):

- agricultural land (TASVEG code: FAG)

  FAG is mapped in a small part of the study area, a small part of a much larger polygon of FAG mapped across adjacent primary production land. TASVEG 3.0 included an additional area of FAG in the northeast of the study area, re-coded to DNF (see below) – that polygon was simply based on the white area shown on a topographic map. TASVEG 3.0 also included additional FAG in the southeast of the study area, where it was mapped with FRG (see below), these polygons re-coded to SHW and SMR i.e. scrub/heathland (see below).

- regenerating cleared land (TASVEG code: FRG)

  FRG is mapped as a small polygon in the southeast of the study area in a mosaic with DVC, GHC, SMR and SHW. TASVEG 3.0 mapped a more extensive area of FRG at this location.

- lichen lithosere (TASVEG code: ORO)

  ORO is mapped as a small area that captures the obvious granite outcrop with bare rock.

- coastal grass and herbfield (TASVEG code: GHC)

  GHC is mapped as a small polygon in the southeast of the study area in a mosaic with DVC, FRG, SMR and SHW. TASVEG 30, replacing a larger polygon of FRG in TASVEG 3.0. GHC is also mapped as two small polygons in the southwest of the study area (previously mapped as SCL & SCA).

- *Melaleuca squarrosa* scrub (TASVEG code: SMR)

  SMR is mapped in the southeast of the study area near Palana Road, previously mapped on TASVEG 3.0 as FAG.

- wet heathland (TASVEG code: SHW)

  A large band of SHW is mapped across the southern part of the study area, part of a much larger polygon extending to the south, southeast and east. TASVEG 3.0 mapped much less SHW in the study area, this previously mapped as SCA.

- coastal scrub (TASVEG code: SSC)

  SSC is mapped across reasonably large parts of the western portion of the study area, extending from the coastline through the Blyth Point Conservation Area into the dune hinterlands, largely matching an aerial photography "signature" of patches of bare soil. Much of what is now mapped as SSC was mapped on TASVEG 3.0 as either SCA (i.e. coastal scrub on alkaline sands) or SCL (i.e. heathland on calcareous substrates). This is a significant change because the mapping of the extent of the vegetation type known as heathland on calcareous substrates, which is listed as threatened under Schedule 3A on the Tasmanian *Nature Conservation Act 2002* (Community 26), is derived from the TASVEG mapping of heathland on calcareous substrates (TASVEG code: SCL) – see Figure 9. The previous mapping of SCL much better reflected the potential occurrence of the threatened vegetation community but the broader mapping of SSC (i.e. a much more generic scrub community) masks the potential importance of parts of the study area that may support the threatened vegetation community.

- *Eucalyptus nitida* Furneaux forest (TASVEG code: DNF)

  DNF is mapped extensively across much of the northern part of the study area. Interestingly, it was not mapped at all in TASVEG 3.0, all such areas mapped as SCA & FAG. Aerial imagery appears to indicate very little eucalypt-dominated forest or woodland within the study area.

- *Eucalyptus viminalis – Eucalyptus globulus* coastal forest and woodland (TASVEG code: DVC)

  DVC is mapped as a polygon in the central part of the study area where it straddles the study area and the title to the northeast (Figure 9). TASVEG 3.0 also mapped the same patch. As with DNF, there appears to be little obvious evidence of eucalypt-dominated forest or woodland in this location (or indeed over much of the study area).

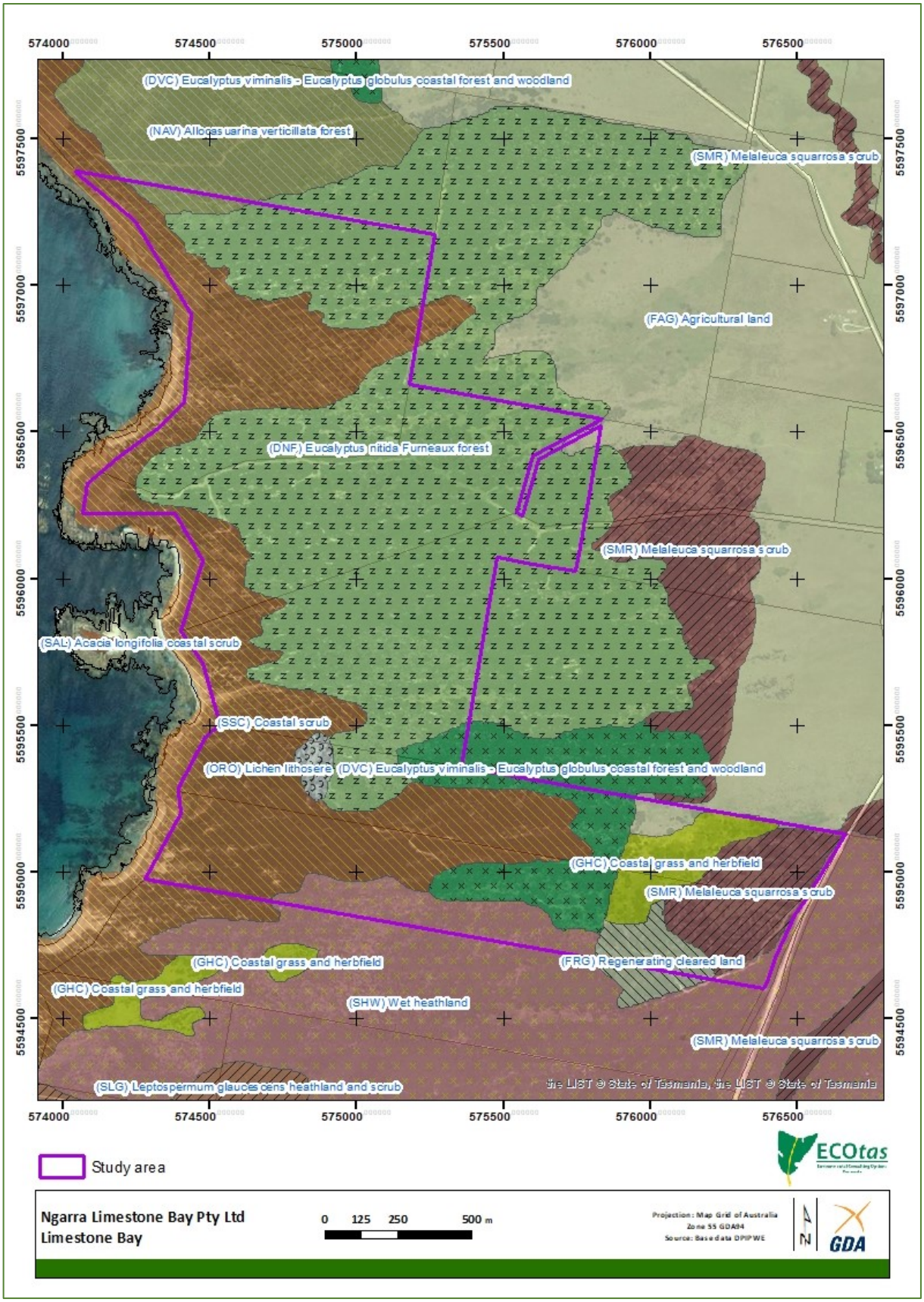

Figure 7. Existing TASVEG 4.0 vegetation mapping for study area and surrounds

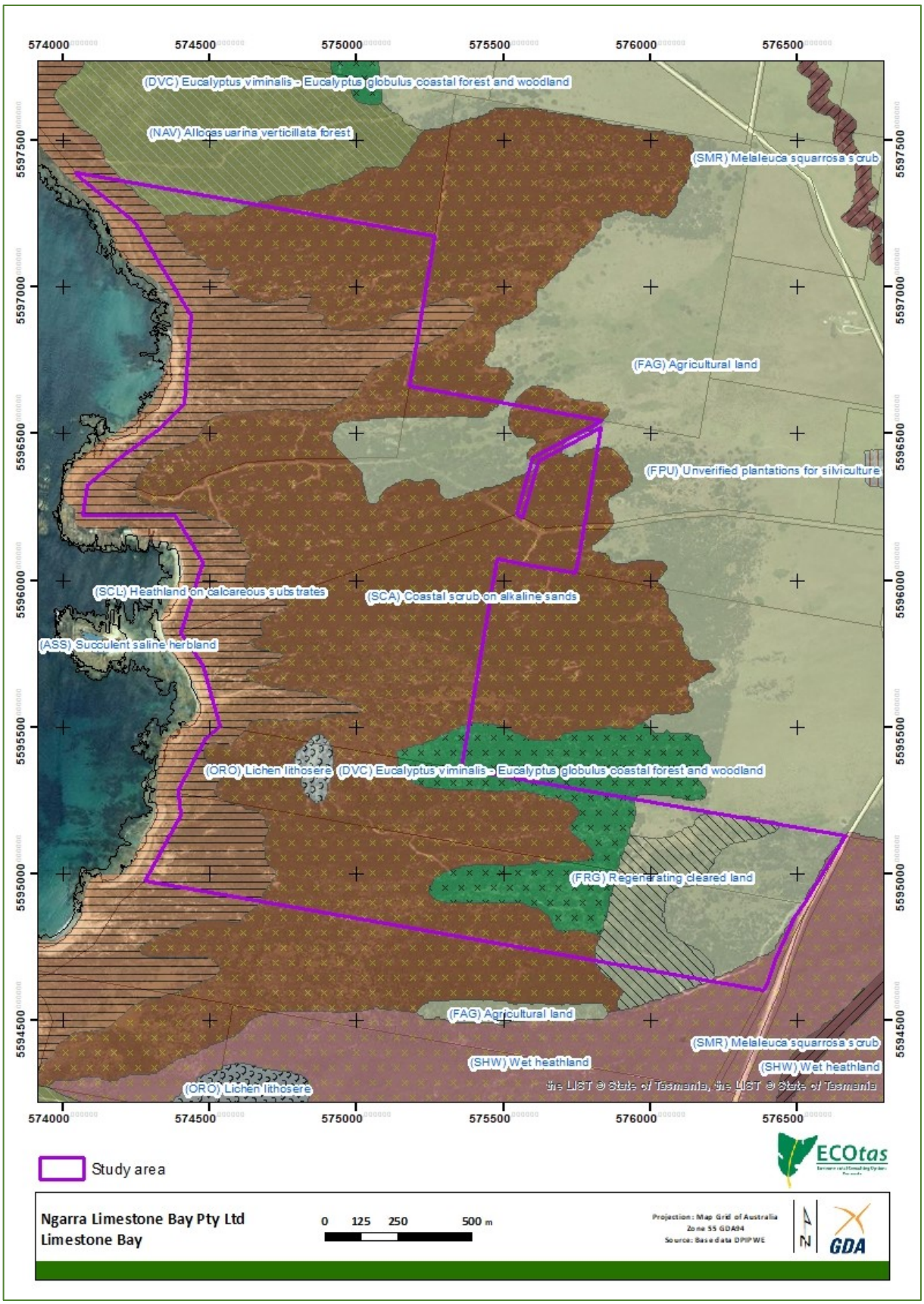

Figure 8. Existing TASVEG 3.0 vegetation mapping for study area and surrounds

Figure 9. Threatened vegetation types within study area and surrounds
[source: LISTmap, 11 Jul. 2021; 23 = *Eucalyptus viminalis – Eucalyptus globulus* coastal forest and woodland (TASVEG code: DVC); 26 = heathland on calcareous substrates)

Vegetation types in the context of the conceptual plan

TASVEG 4.0 vegetation mapping has been compared to the conceptual plan showing project elements to indicate the potential impact on different vegetation types (Table 1).

Table 1. Vegetation mapping units present compared to project elements

[conservation status: NCA – as per Schedule 3A of the Tasmanian *Nature Conservation Act 2002*, using units described by Kitchener & Harris (2013+), relating to TASVEG mapping units (DPIPWE 2020); EPBCA – as per the listing of ecological communities on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, relating to communities as described under that Act, but with equivalencies to TASVEG units]

Site	Current TASVEG 4.0 vegetation mapping	Comments	Implications
BUILDING 1	coastal scrub (TASVEG code: SSC) [status: not threatened]	Aerial imagery suggests that this site is much more likely to occur within some form of coastal scrub (TASVEG code: SSC). While close to the coast and the mapped extent of heathland on calcareous substrates (i.e. the listed threatened community), aerial imagery suggests it is doubtful if this site is within this community. Images and videos supplied by the client confirm this.	Limited – suggest site survey to clarify communities (during building application phase of planning)
BUILDING 2	*Eucalyptus nitida* Furneaux forest (TASVEG code: DNF) [status: not threatened]	Aerial imagery suggests that this site is much more likely to occur within some form of coastal scrub (TASVEG code: SSC) or *Allocasuarina verticillata* forest (TASVEG code: NAV). Images and videos supplied by the client confirm this.	Limited – suggest site survey to clarify communities (during building application phase of planning)
BUILDING 3	*Eucalyptus nitida* Furneaux forest (TASVEG code: DNF) [status: not threatened]	Aerial imagery suggests that this site is much more likely to occur within some form of coastal scrub (TASVEG code: SSC) or *Allocasuarina verticillata* forest (TASVEG code: NAV) or a mosaic of SSC/NAV or possibly some for of regenerating cleared land (TASVEG code: FRG). Images and videos supplied by the client confirm this.	Limited – suggest site survey to clarify communities (during building application phase of planning)
BUILDING 4	*Eucalyptus nitida* Furneaux forest (TASVEG code: DNF) [status: not threatened]	Aerial imagery suggests that this site is much more likely to occur within some form of coastal scrub (TASVEG code: SSC) or *Allocasuarina verticillata* forest (TASVEG code: NAV).	Limited – suggest site survey to clarify communities (during building application phase of planning)
BUILDING 5	*Eucalyptus nitida* Furneaux forest (TASVEG code: DNF) [status: not threatened]	Aerial imagery suggests that this site is much more likely to occur within some form of coastal scrub (TASVEG code: SSC) or *Allocasuarina verticillata* forest (TASVEG code: NAV).	Limited – suggest site survey to clarify communities (during building application phase of planning)

Site	Current TASVEG 4.0 vegetation mapping	Comments	Implications
BUILDING 6	coastal scrub (TASVEG code: SSC) [status: not threatened]	This mapping is likely to be correct. While close to the coast and the mapped extent of heathland on calcareous substrates (i.e. the listed threatened community), aerial imagery suggests it is doubtful if this site is within this community.	Limited – suggest site survey to clarify communities (during building application phase of planning)
BUILDING 7	coastal scrub (TASVEG code: SSC) [status: not threatened]	Aerial imagery suggests that this site is much more likely to occur within some form of coastal scrub (TASVEG code: SSC) or *Allocasuarina verticillata* forest (TASVEG code: NAV). While close to the coast and the mapped extent of heathland on calcareous substrates (i.e. the listed threatened community), aerial imagery suggests it is doubtful if this site is within this community.	Limited – suggest site survey to clarify communities (during building application phase of planning)
BUILDING 8	coastal scrub (TASVEG code: SSC) & wet heathland (TASVEG code: SHW) [status: not threatened]	Aerial imagery suggests that this site is much more likely to occur within some form of coastal scrub (TASVEG code: SSC) or *Allocasuarina verticillata* forest (TASVEG code: NAV).	Limited – suggest site survey to clarify communities (during building application phase of planning)
ROADS	various	Existing tracks and proposed tracks are through various vegetation types but none are likely to be of particular conservation significance.	Limited – suggest site survey to clarify communities (during building application phase of planning)

Conservation significance of identified vegetation types

Existing vegetation mapping indicates that the study area does not support any threatened ecological communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA). Available information indicates that this is likely to be the case i.e. there should be no implications under this Act with respect to vegetation communities.

Existing vegetation mapping indicates that the study area supports two vegetation communities listed as threatened on Schedule 3A of the Tasmanian *Nature Conservation Act 2002*.

There is a relatively large polygon of *Eucalyptus viminalis – Eucalyptus globulus* coastal forest and woodland (TASVEG code: DVC) mapped across parts of the central east of the study area. Aerial imagery seems to indicate that limited parts of the study area (including the area mapped as DVC) supports a eucalypt-dominated canopy. This means that it is unlikely that DVC is present. Even if present, it is likely to be highly localised and as such, practical to avoid. At present, an existing track passes through the notional area of DVC – even if this were DVC and the track required upgrading, there would be limited implications.

Of greater note is the relatively extensive area of the coastline and hinterlands mapped as heathland on calcareous substrates. While aerial imagery indicates some correlation of the mapping with areas of bare ground (often associated with the threatened community), geology mapping clearly indicates a strong granitic influence not a limestone influence. This means that while there

may be pockets of calcareous substrate present, it is doubtful if large areas are likely to classifiable as heathland on calcareous substrates. Field assessment will be needed to clarify this.

Initial recommendation – vegetation mapping

Based on available information, it is seriously doubtful if the study area supports vegetation types formally classified as threatened under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* or the Tasmanian *Nature Conservation Act 2002*, with reasonable speculation that current mapping of such communities is largely erroneous. At a project level, it is highly unlikely that any project sites will impact on any such communities.

Ground-truthing of selected parts of the study area may be prudent, although I do not believe this will be critical to the planning approval for the administrative act of subdivision itself. It would be interesting to ground-truth the actual extent of currently mapped threatened vegetation types to inform longer-term land management decisions.

Threatened flora

Known locations of threatened flora

No flora species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) are known from database information from the study area (Figure 10, Appendix A). Potential habitat for such specie sis likely to be limited.

Database information indicates two previous point locations of *Zygophyllum billardierei* (coast twinleaf), a sub-shrub listed as rare (Schedule 5) on the Tasmanian *Threatened Species Protection Act 1995* (TSPA), from the study area (Figure 10, Appendix A). Neither of these sites is associated with any of the conceptual project elements.

Initial recommendation – threatened flora

The analysis of the potential for the study area to support threatened flora (Appendix A) indicates a moderate to high likelihood of such species. However, a whole-of-property survey is not considered warranted. While of academic interest (simply to know what is there), a more targeted approach is considered acceptable. This would include existing tracks and other disturbed sites (where several species of threatened flora can proliferate) and the conceptual locations of project elements. I have undertaken this type of targeted survey previously on other such large project area and found it to be a useful method of guiding site-level planning. This is because I do not expect any "show-stoppers". I expect species to be either highly localised and therefore reasonably practical to micro-site around or locally abundant and therefore impractical (but unnecessary) to avoid (there may be some technical permit requirements only).

Ground-truthing of selected parts of the study area may be prudent, although I do not believe this will be critical to the planning approval for the administrative act of subdivision itself. Targeted surveys for threatened flora could be undertaken at the level of individual development applications.

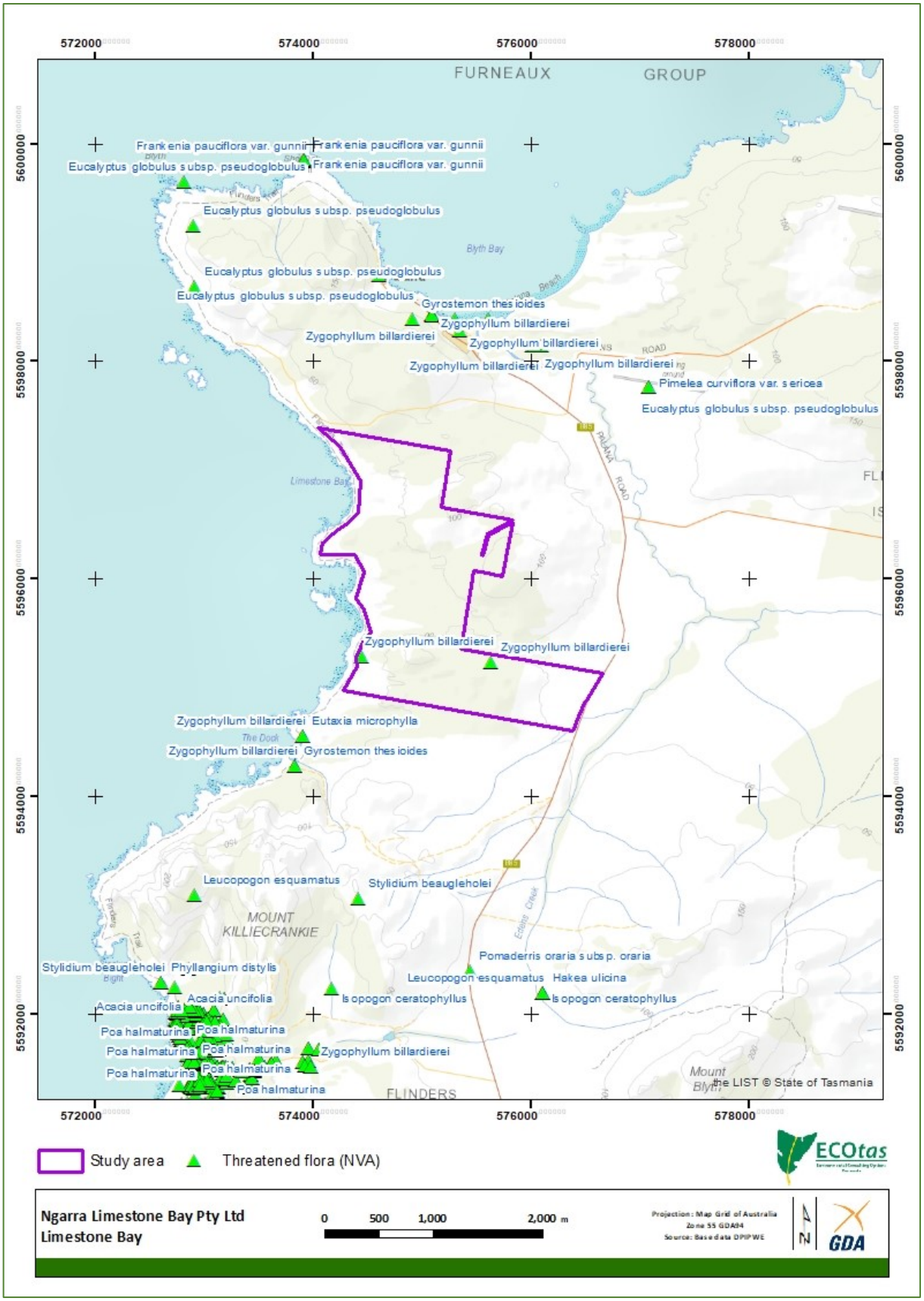

Figure 10a. Distribution of threatened flora close to the study area (overview)

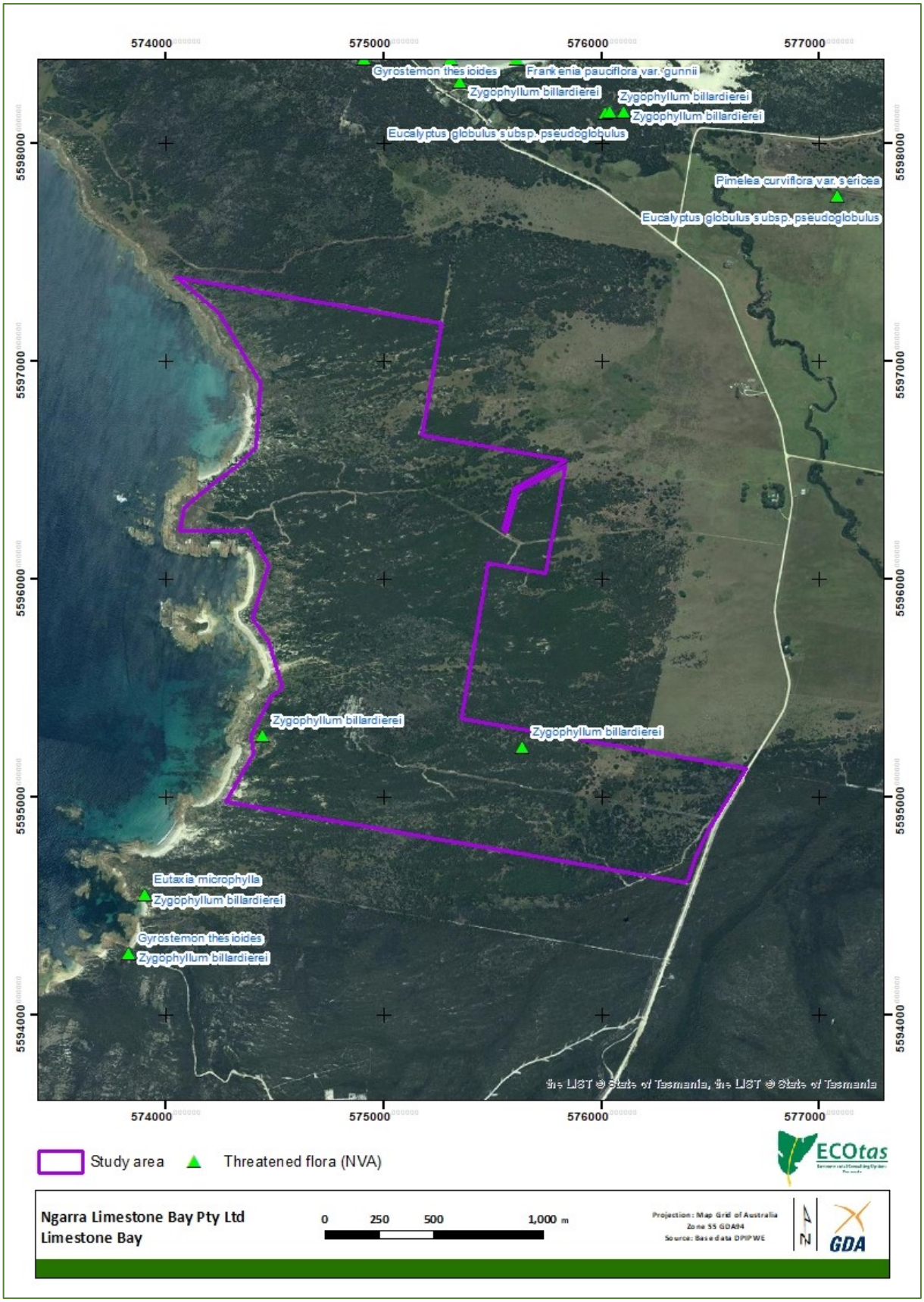

Figure 10b. Distribution of threatened flora close to the study area (closer)

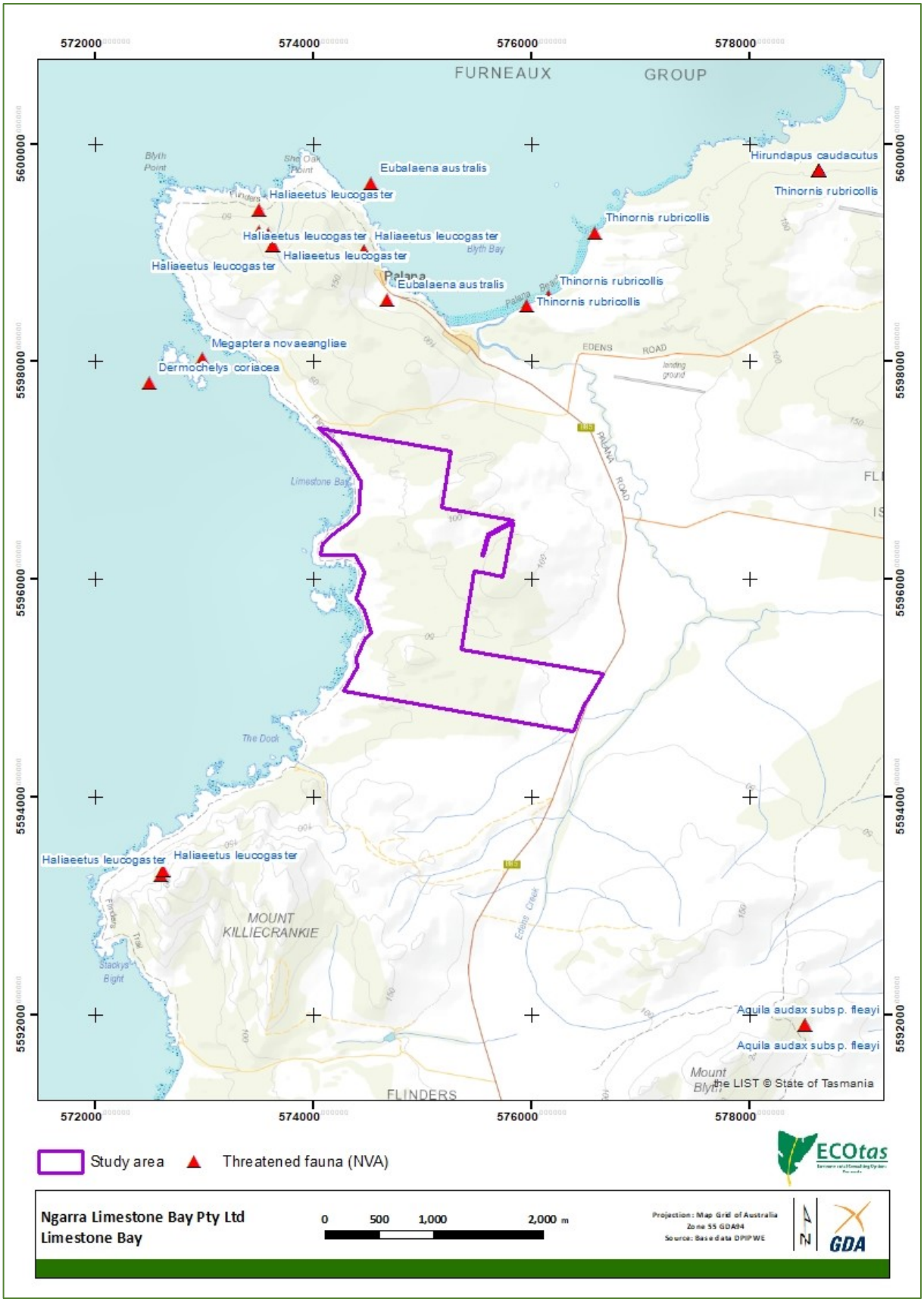

Figure 11. Distribution of threatened fauna close to the study area (overview)

Threatened fauna

Known locations of threatened fauna

No fauna species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) and/or the Tasmanian *Threatened Species Protection Act 1995* (TSPA) are known from database information from the study area (Figure 11, Appendix D).

Initial recommendation – threatened fauna

The analysis of the potential for the study area to support threatened fauna (Appendix B) indicates a low likelihood of such species. A whole-of-property survey is not considered warranted.

Ground-truthing of selected parts of the study area may be prudent (to map out particular habitat types), although I do not believe this will be critical to the planning approval for the administrative act of subdivision itself. Targeted surveys for threatened fauna could be undertaken at the level of individual development applications.

Other natural values

Weed species

No plant species classified as declared weeds within the meaning of the Tasmanian *Weed Management Act 1999* are known from the title. The main species of concern in this part of the State are *Lycium ferocissimum* (african boxthorn), which can proliferate in disturbed area, and possibly some non-declared species such as *Coprosma repens* (mirrorbush). Until a site assessment determine the extent of weeds, it is difficult to anticipate the level of management that may be warranted. However, it is highly unlikely that a complex weed management plan will be required. It is more likely that a targeted approach to weed management will be appropriate followed by owner-occupation as the most appropriate long-term management option, where vigilance and immediate control are practical.

Several planning manuals provide guidance on appropriate management actions, which can be referred to develop site-specific prescriptions for any proposed works in the study area. These manuals include:

- Allan, K. & Gartenstein, S. (2010). *Keeping It Clean: A Tasmanian Field Hygiene Manual to Prevent the Spread of Freshwater Pests and Pathogens*. NRM South, Hobart;
- Rudman T. (2005). *Interim* Phytophthora cinnamomi *Management Guidelines*. Nature Conservation Report 05/7, Biodiversity Conservation Branch, Department of Primary Industries, Water & Environment, Hobart;
- Rudman, T., Tucker, D. & French, D. (2004). *Washdown Procedures for Weed and Disease Control*. Edition 1. Department of Primary Industries, Water & Environment, Hobart; and
- DPIPWE (2015). *Weed and Disease Planning and Hygiene Guidelines – Preventing the Spread of Weeds and Diseases in Tasmania*. Department of Primary Industries, Parks, Water & Environment, Hobart.

Rootrot pathogen, *Phytophthora cinnamomi*

Phytophthora cinnamomi (PC) is widespread in lowland areas of Tasmania, across all land tenures. However, disease will not develop when soils are too cold or too dry. For these reasons, PC is not a threat to susceptible plant species that grow at altitudes higher than about 700 m or where annual rainfall is less than about 600 mm (e.g. Midlands and Derwent Valley). Furthermore, disease is unlikely to develop beneath a dense canopy of vegetation because shading cools the soils to below the optimum temperature for the pathogen. A continuous canopy of vegetation taller than about 2 m is sufficient to suppress disease. Hence PC is not considered a threat to susceptible plant species growing in wet sclerophyll forests, rainforests (except disturbed rainforests on infertile soils) and scrub e.g. teatree scrub (Rudman 2005; FPA 2009).

Most of the vegetation types present within the study area are unlikely to be particularly susceptible to PC, especially those that occur on deeper well-drained dune sands. The main areas of concern may be pockets of coastal heathland and scrub and possibly patches of wet heathland. Site assessment will be needed to assess the level of risk related to PC but it is likely to be low and of limited management constraint.

Chytrid fungus and other freshwater pathogens

Native freshwater species and habitat are under threat from freshwater pests and pathogens including *Batrachochytrium dendrobatidis* (chytrid frog disease), *Mucor amphibiorum* (platypus mucor disease) and the freshwater algal pest *Didymosphenia geminata* (didymo) (Allan & Gartenstein 2010). Freshwater pests and pathogens are spread to new areas when contaminated water, mud, gravel, soil and plant material or infected animals are moved between sites. Contaminated materials and animals are commonly transported on boots, equipment, vehicles tyres and during road construction and maintenance activities. Once a pest pathogen is present in a water system it is usually impossible to eradicate. The manual *Keeping it Clean - A Tasmanian Field Hygiene Manual to Prevent the Spread of Freshwater Pests and Pathogens* (Allan & Gartenstein 2010) provides information on how to prevent the spread of freshwater pests and pathogens in Tasmanian waterways wetlands, swamps and boggy areas.

While the broader study area supports limited habitats suitable for amphibian species, small-scale development outside habitats with impede drainage and routine property management should not require particular actions in relation to chytrid (and other freshwater pathogens).

Additional "Matters of National Environmental Significance" – Threatened Ecological Communities

CofA (2020) indicates that the following threatened ecological communities listed on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) may occur, or are likely to occur, within the area:

- Giant Kelp Marine Forests of South East Australia [Endangered]
- Subtropical and Temperate Coastal Saltmarsh [Vulnerable]
- Tasmanian Forests and Woodlands dominated by Black Gum or Brookers Gum *(Eucalyptus ovata* / E*. brookeriana*) [Critically Endangered]

Existing vegetation mapping (Figures 7 & 8) indicates that none of these communities are present within or adjacent to the study area. An initial review indicates that these communities are highly unlikely to be present.

DISCUSSION

Summary of key findings

Threatened flora

- No plant species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) are known from database information, are likely to occur, within the study area.
- One plant species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA) is known from database information from the study area, as follows:
  - *Zygophyllum billardierei* (coast twinleaf) – two point locations.
- The study area is expected to support additional plant species listed as threatened on the Tasmanian *Threatened Species Protection Act 1995* (TSPA)

Threatened fauna

- No fauna species listed as threatened on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) and/or the Tasmanian *Threatened Species Protection Act 1995* (TSPA) are known from database information from the study area.
- The study area is not likely to support extensive habitat strongly associated with such species.

Vegetation types

- The study area supports the following TASVEG mapping units:
  - agricultural land (TASVEG code: FAG);
  - regenerating cleared land (TASVEG code: FRG);
  - lichen lithosere (TASVEG code: ORO);
  - coastal grass and herbfield (TASVEG code: GHC);
  - Melaleuca squarrosa scrub (TASVEG code: SMR);
  - wet heathland (TASVEG code: SHW);
  - coastal scrub (TASVEG code: SSC);
  - *Eucalyptus nitida* Furneaux forest (TASVEG code: DNF); and
  - *Eucalyptus viminalis – Eucalyptus globulus* coastal forest and woodland (TASVEG code: DVC).
- None of these communities equate to threatened ecological communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
- DVC is listed as threatened on Schedule 3A of the Tasmanian *Nature Conservation Act 2002* but is unlikely to be present due to the absence of any substantial areas of the study area with a eucalypt-dominated canopy.
- Heathland on calcareous substrates is mapped along the western coast and extending into the study area. The extent matches the TASVEG 3.0 mapping of SCL (now altered to SSC on TASVEG 4.0) but does not reflect the granite-dominated geological mapping.

Legislative and policy implications

Some commentary is provided below with respect to the key threatened species, vegetation management and other relevant legislation. Note that there may be other relevant policy instruments in addition to those discussed. The following information does not constitute legal advice and it is recommended that independent advice is sought from the relevant agency/authority.

Tasmanian *Threatened Species Protection Act 1995*

Threatened flora and fauna on this Act are managed under Section 51, as follows:

> 51. Offences relating to listed taxa
>
> (1) Subject to subsections (2) and (3), a person must not knowingly, without a permit –
>
> (a) take, keep, trade in or process any specimen of a listed taxon of flora or fauna; or
>
> (b) disturb any specimen of a listed taxon of flora or fauna found on land subject to an interim protection order; or
>
> (c) disturb any specimen of a listed taxon of flora or fauna contrary to a land management agreement; or
>
> (d) disturb any specimen of a listed taxon of flora or fauna that is subject to a conservation covenant entered into under Part 5 of the *Nature Conservation Act 2002*; or
>
> (e) abandon or release any specimen of a listed taxon of flora or fauna into the wild.
>
> (2) A person may take, keep or process, without a permit, a specimen of a listed taxon of flora in a domestic garden.
>
> (3) A person acting in accordance with a certified forest practices plan or a public authority management agreement may take, without a permit, a specimen of a listed taxon of flora or fauna, unless the Secretary, by notice in writing, requires the person to obtain a permit.
>
> (4) A person undertaking dam works in accordance with a Division 3 permit issued under the *Water Management Act 1999* may take, without a permit, a specimen of a listed taxon of flora or fauna.

The simplest interpretation of this is that any activity that results in a specimen (i.e. individual) of listed flora or fauna being "knowingly taken" would require a permit to be issued through Conservation Assessments (DPIPWE) through a formal application process. Note that the Act does not make reference to "potential habitat" such that activities that result in loss of/disturbance to potential habitat (but not known sites) – which mainly refers to threatened fauna – would not require a permit.

The degree of application of this Act will only be known once surveys have been undertaken to determine the extent of threatened flora and whether any such species, if present, will be impacted by development.

Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*

Under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* 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.

Matters of national environmental significance considered under the EPBCA include:

- listed threatened species and communities
- listed migratory species;
- Ramsar wetlands of international importance;
- Commonwealth marine environment;
- world heritage properties;
- national heritage places;
- the Great Barrier Reef Marine Park;
- nuclear actions; and
- a water resource, in relation to coal seam gas development and large coal mining development.

The Commonwealth Department of Agriculture, Water and the Environment provides a policy statement titled *Matters of National Environmental Significance: Significant Impact Guidelines 1.1* (CofA 2013, herein the *Guidelines*), which provides overarching guidance on determining whether an action is likely to have a significant impact on a matter protected under the EPBCA.

The *Guidelines* define a **significant impact** as:

> *"…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"*

and note that:

> *"…all of these factors [need to be considered] when determining whether an action is likely to have a significant impact on matters of national environmental significance".*

The *Guidelines* provide advice on when a significant impact may be 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".*

The *Guidelines* provide a set of Significant Impact Criteria (CofA 2013), which are "intended to assist…in determining whether the impacts of [the] proposed action on any matter of national environmental significance are likely to be significant impacts". It is noted that 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…[and]…not intended to be exhaustive or definitive".

Listed ecological communities

The study area is not known to support any such communities.

Threatened flora

The study area is not known to (and is considered unlikely to) support populations of EPBCA-listed flora, nor significant potential habitat of such species.

Threatened fauna

The study area is not known to (and is considered unlikely to) support populations of EPBCA-listed flora, nor significant potential habitat of such species.

The *Guidelines* consider a "significant impact" to comprise loss that is likely to 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 (unlikely); 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 threatened species becoming established in the threatened species' habitat; introduce disease that may cause the species to decline; or interfere substantially with the recovery of the species.

With respect to any EPBCA-listed species that may be present, it is difficult to anticipate a scenario in which a referral to the Commonwealth Department of Agriculture, Water and the Environment would be become necessary at the scale of the land use within the subject title. This would need to be reviewed if a more intensive land use was proposed that would deleteriously impact on potential/known habitat of listed species.

Tasmanian *Forest Practices Act 1985* and associated *Forest Practices Regulations 2017*

The *Regulations* provide the following relevant circumstances in which a Forest Practices Plan is not required, the main one being for "small-scale" activities, as follows:

> 4. Circumstances in which forest practices plan, &c., not required
>
> For the purpose of section 17(6) of the Act, the following circumstances are prescribed:
>
> (a) the harvesting of timber or the clearing of trees, with the consent of the owner of the land, if the land is not vulnerable land and –
>
> (i) the volume of timber harvested or trees cleared is less than 100 tonnes for each area of applicable land per year; or
>
> (ii) the total area of land on which the harvesting or clearing occurs is less than one hectare for each area of applicable land per year –
>
> whichever is the lesser;
>
> (b) the clearing of trees or native vegetation, with the consent of the owner of the land, to provide a reasonable buffer for existing infrastructure if the clearing is necessary to maintain the infrastructure or for public safety;
>
> (c) the clearing of trees or native vegetation regrowth, with the consent of the owner of the land, from an area of previously cleared and converted land;

There may be other limited exemptions relevant to the property. It is important to read the above exemptions with the relevant definitions of terms. A critical term under the *Regulations* is "vulnerable land", which is defined as:

> vulnerable land means land that –
>
> (a) is within a streamside reserve or a machinery exclusion zone within the meaning of the *Forest Practices Code*; or
>
> (b) has a slope of more than the landslide threshold slope angles within the meaning of the *Forest Practices Code*; or
>
> (c) is within the High or Very High Soil Erodibility Class within the meaning of the *Forest Practices Code*; or

(d) consists of, or contains, a threatened native vegetation community; or (e) is inhabited by a threatened species within the meaning of the *Threatened Species Protection Act 1995*; or

(f) contains vulnerable karst soil within the meaning of the *Forest Practices Code*; or

(g) contains an area of trees reserved from the harvesting of timber or the clearing of trees under a forest practices plan where the period specified in the plan has expired.

A relevant exemption is as follows:

(j) the harvesting of timber or the clearing of trees on any land, or the clearance and conversion of a threatened native vegetation community on any land, for the purpose of enabling –

(i) the construction of a building within the meaning of the *Land Use Planning and Approvals Act 1993* or of a group of such buildings; or

(ii) the carrying out of any associated development –

if the construction of the buildings or carrying out of the associated development is authorised by a permit issued under that Act.

On this basis, the proposed developments that involve a building and associated development that are subject to a planning permit under the relevant planning scheme will not require an FPP. The requirement for an FPP for other activities should be reviewed carefully (and/or advice sought from the Forest Practices Authority).

Tasmanian *Nature Conservation Act 2002*

Schedule 3A of the Act lists vegetation types classified as threatened within Tasmania. The study area is mapped as supporting two such vegetation types, although the extent (or even the presence) of these requires confirmation. The administrative/regulatory mechanism managing threatened communities is through either the Tasmanian *Forest Practices Act 1985* (and associated *Forest Practices Regulations 2017*) or the local planning scheme, depending on the zone and code provisions.

Tasmanian *Land Use Planning and Approvals Act 1993* (*Flinders Planning Scheme 1994*)

Most of the study area is subject to the "Flinders Special Area" overlay coded as "Visually Sensitive". The treatment of areas subject to this overlay is covered, in the main, by Part 7 Special Area Provisions of the *Scheme*.

The only provision I am aware of in relation to natural values in the Rural zone is 5.8.3 Subdivision Standards and specifically (c) before accepting an application under Clause 5.9.3(b) Council may require the applicant to submit a Development Plan for the land to which the application relates. The Development Plan should show that: (iii) development will not cause significant adverse impact on the natural environment, flora and fauna, coastal waters, watercourses or skylines.

Recommendations

This critical constraints review of natural values has indicated that while the study area supports extensive areas of native vegetation and some known sites of threatened flora, the proposed subdivision and occupation proposal is unlikely to deleteriously significantly impact on natural values at any reasonable scale.

I believe that sufficient information is already available to support a planning application for the administrative act of subdivision. When specific project elements are known, it may be prudent to undertake targeted natural values assessments to further inform specific planning applications. The following specific recommendations are provided:

- on-ground surveys can be focussed on specific proposed development areas but should include sufficient area to ensure minor changes to design to not necessitate a new site assessment (these can be logically undertaken at a later stage e.g. as part of a planning application for a building);
- on-ground surveys should be informed by conceptual designs, and where available, more detailed designs to maximise the opportunity to detect values such as threatened flora and allow practical design to avoid such values;
- there are no seasonal constraints to on-ground surveys related to vegetation classification and mapping (such constraints may apply to threatened flora – see below);
- vegetation mapping should focus on proposed development sites but also aim to clarify the extent of mapped threatened vegetation communities;
- threatened fauna surveys can be limited to assessments of potential habitat (by reference to values such as geology, landform, vegetation structure and composition) and are not seasonally-restricted;
- threatened flora surveys are in two categories: (1) those that can be conducted at any time of the year (perennial species); and (2) seasonally-restricted (generally spring) surveys (annual/ephemeral species) – ideally, any targeted surveys should be conducted between late August through to late November (but this may need to be guided by seasonal conditions);
- natural values assessments should also consider weed and hygiene issues but should not require soil and water sampling (i.e. assessment by reference to symptoms only);
- the report on natural values can be updated in whole or part (or by addenda), by inclusion of revised vegetation mapping, descriptions of vegetation types, lists of vascular flora species, maps and notes on threatened flora populations and potential habitat of threatened fauna, and notes on weed and hygiene issues – this update can be at the whole-of-property level or on an application-by-application basis (depending on the extent and scheduling of on-ground surveys).

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APPENDIX A. Analysis of database records of threatened flora

Table A1 provides a listing of threatened flora from within 5,000 m of the study area (nominal buffer width usually used to discuss the potential of a particular study area to support various species listed in databases), with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded.

Table A1. Threatened flora records from within 5,000 m of boundary of the study area

Species listed below are listed as rare (r), vulnerable (v), endangered (e), or extinct (x) on the Tasmanian *Threatened Species Protection Act 1995* (TSPA); vulnerable (VU), endangered (EN), critically endangered (CR) or extinct (EX) on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA). Information below is sourced from DPIPWE's *Natural Values Atlas* (DPIPWE 2020) and other sources where indicated. Habitat descriptions are taken from FPA (2016), FPA (2017) and TSS (2003+), except where otherwise indicated. Species marked with # are listed in CofA (2020).

Scientific name **Common name**	**Status** TSPA EPBCA	**Tasmanian habitat description (and distribution)**	**Comments on study area and database records**
Acacia uncifolia coast wirilda	r -	*Acacia uncifolia* is thought to be restricted to the Furneaux Group. It is usually found on soils derived from calcareous limestone in coastal heath, heathy scrub and dry open woodland, sometimes with emergent *Allocasuarina verticillata* (drooping sheoak). Occurrences on mainland Tasmania are assumed to have originated from ornamental plantings. A population on King Island is of uncertain status.	Potential habitat likely to be widespread, especially in near-coastal scrub and heath vegetation types. My observations of the species south of Mount Killiecrankie in 2015 appear to be the current northernmost records of the species on the western coastline of the island. It may be absent from the study area because it is a distinctive species and unlikely to have been overlooked from the Flinders Trail. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Caladenia caudata tailed spider-orchid	v VU # only	*Caladenia caudata* has highly variable habitat, which includes the central north: *Eucalyptus obliqua* heathy forest on low undulating hills; the northeast: *E. globulus* grassy/heathy coastal forest, *E. amygdalina* heathy woodland and forest, *Allocasuarina* woodland; and the southeast: *E. amygdalina* forest and woodland on sandstone, coastal *E. viminalis* forest on deep sands. Substrates vary from dolerite to sandstone to granite, with soils ranging from deep windblown sands, sands derived from sandstone and well-developed clay loams developed from dolerite. A high degree of insolation is typical of many sites.	The study area is unlikely to support potential habitat.
Cyrtostylis robusta large gnat-orchid	r -	*Cyrtostylis robusta* is known from coastal or near-coastal sites in forest and heathland on well-drained soils. There is sometimes a strong correlation with *Allocasuarina verticillata* (drooping sheoak) on coastal dolerite cliffs.	Potential habitat likely to be widespread. This species is best detected when in full flower (June to August) but can be detected and identified from vegetative material (leaves) prior to and after this period. The species tends to form localised colonies (because of vegetative reproduction) so if present is unlikely to present a critical constraint to the administrative act of subdivision nor future small-scale development.

Scientific name **Common name**	**Status** TSPA EPBCA	**Tasmanian habitat description (and distribution)**	**Comments on study area and database records**
Eucalyptus globulus subsp. *pseudoglobulus* gippsland blue gum	r -	*Eucalyptus globulus* subsp. *pseudoglobulus* has been recorded from the far north of Flinders Island, Inner Sister Island and Rodondo Island. On the latter it occurs in *Melaleuca armillaris* forest with a damp understorey (ferns, etc.).	There are records of this species from the far north of Flinders Island. However, collections I made from south of Mount Killiecrankie in 2015 were confirmed as subsp. *globulus* (3-fruited form) by experts (B. Potts pers. comm.). Aerial imagery suggests limited vegetation within the study area with a canopy of *Eucalyptus*, so it is unlikely the species is present. Irrespective of the subspecies (threatened or non-threatened), any *Eucalyptus globulus* is considered of biogeographic and biodiversity significance. However, even if present, micro-siting will be practical to ensure retention of mature individuals. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Eutaxia microphylla spiny bushpea	r -	On Flinders Island, *Eutaxia microphylla* mainly occurs in windswept coastal heathland on calcarenite. On mainland Tasmania, the species usually occurs in low open coastal shrubbery and on cliff edges (various substrates). There is an apparently outlier that occurs in dense roadside grass (mainly *Themeda triandra*) and *Acacia dealbata* (silver wattle) heathy scrub along the Esk Main Road.	There is a database record (Alex. M. Buchanan, 20 Nov. 2009, vouchered at the Tasmanian Herbarium as HO557313, "0.5 km N of The Dock, Flinders Island") located on the Flinders Trail southeast of the study area. The habitat of the record is indicated as "sand over limestone". Aerial imagery and geology mapping suggests that some parts of the study area may support similar potential habitat. If present, the species is likely to be restricted to this habitat type and practical to avoid by micro-siting any developments. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Frankenia pauciflora var. *gunnii* southern seaheath	r -	*Frankenia pauciflora* var. *gunnii* is restricted to coastal areas, occurring on exposed granite in the spray zone, usually on the north and northwestern shores (Furneaux Group islands) and in saltmarshes (Short and Harcus islands in Robbins Strait on the northwest coast).	Potential habitat will be absent from the study area, although the species could occur ion the adjacent Blyth Point Conservation Area.
Gyrostemon thesioides broom wheelfruit	r -	*Gyrostemon thesioides* occurs predominately on dolerite or granite in *Allocasuarina* (sheoak) forest in the State's east and northeast, including the Furneaux Group.	There is a database record (Katriona Hopkins, Wayne Warren & Nicole Gill, 4 Dec. 2012) located on the Flinders Trail southeast of the study area (south of The Dock at the end of the vehicle track). At this site, it is noted as co-occurring with the threatened sub-shrub *Zygophyllum billardierei*. In my experience, this species can be locally prolific, especially in naturally-disturbed (e.g. windthrown forests, burnt areas) and anthropogenically-

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
			disturbed vegetation (e.g. ex-cleared areas, grazed areas). The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Hakea ulicina furze needlebush	v -	*Hakea ulicina* is restricted to the Furneaux Group, where it occurs in heaths and scrubs.	Potential habitat likely to be limited. If present, the species is likely to be localised and practical to avoid by micro-siting any developments. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development
Hydrocotyle comocarpa fringefruit pennywort	r -	*Hydrocotyle comocarpa* has been recorded from Cape Barren, Flinders and Deal islands. Habitat descriptions include a ridge crest with shallow soil with other forbs surrounded by shrubs and *Eucalyptus nitida*, and for Deal Island on penguin pads, with some plants in bare soil.	Potential habitat is likely to be widespread. However, this species has a very short flowering and fruiting period (may be early to mid spring) and detection is reliant on "good" seasonal conditions. If present, the species may be widespread but highly localised. The potential presence of this species is not likely to present a critical constraint to the administrative act of subdivision nor future small-scale development.
Isopogon ceratophyllus horny conebush	v -	*Isopogon ceratophyllus* occurs on acidic sandy soils in dry heathlands in the Furneaux Group.	Potential habitat likely to be limited to near-coastal heathy vegetation types. Based on aerial imagery and comparison to known sites, it is unlikely the species will be present. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Lasiopetalum baueri slender velvetbush	r -	*Lasiopetalum baueri* occurs in open, coastal shrubbery (usually low *Allocasuarina* forest) on dolerite along the north and northeast of the State.	Potential habitat likely to be limited to near-coastal shrubby and heathy vegetation types. Based on aerial imagery and comparison to known sites, it is unlikely the species will be present. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Leucopogon affinis lance beardheath	r -	*Leucopogon affinis* occurs in a broad range of habitats including tall scrub, mainly on stabilised dune sands and hinterlands, lagoon margins, and gullies and riverbanks in wet eucalypt forest, probably restricted to the Bass Strait islands. Observations near Devonport, Latrobe and Arthur River require confirmation.	Potential habitat likely to be widespread. In my experience, the species tends to form localise patches amongst dune scrub (e.g. sites south of Mount Killiecrankie). If present, the species is likely to be localised and practical to avoid by micro-siting any developments. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.

Scientific name **Common name**	**Status** TSPA EPBCA	**Tasmanian habitat description (and distribution)**	**Comments on study area and database records**
Leucopogon esquamatus swamp beardheath	r -	*Leucopogon esquamatus* occurs in sandy heathland and heathy woodland.	Potential habitat likely to be absent (tends to occur in inland heathy vegetation types rather than coastal heathland). The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Parietaria debilis shade pellitory	r -	*Parietaria debilis* occurs around muttonbird rookeries, on cliffs/rocks in the salt spray zone, in moist shaded areas in dune scrubs, and under rock overhangs in forested gullies.	Potential habitat widespread, although in my experience from nearby sites (e.g. south of Mount Killiecrankie), this species tends to be localised. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Phyllangium distylis tiny mitrewort	r -	*Phyllangium distylis* occurs in sandy humic heaths and open shrublands, muddy soaks and the margins of ephemeral wetlands.	There is only one database record from within 5,000 m of the study area, this from 1966. The habitat of that site is near-coastal rock exposures. Potential habitat is likely to be restricted to the near-coastal windswept heathy/scrubby vegetation with patches of bare soil, rock exposures and possibly to the granite outcrops elsewhere. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Phylloglossum drummondii pygmy clubmoss	r -	*Phylloglossum drummondii* occurs in wet peaty soils where there is little competition from other plants.	See above.
Pimelea curviflora var. *sericea* silky curved riceflower	r -	*Pimelea curviflora* var. *sericea* occurs on Flinders and its outer islands on plains grasslands and dry sclerophyll forests, predominantly in calcareous and sandy soils.	Potential habitat likely to be limited to near-coastal heathy vegetation types. Based on aerial imagery and comparison to known sites, it is unlikely the species will be present (if present, it would co-occur with species such as *Eutaxia microphylla* and it is probably informative that the species has gone undetected from the Flinders Trail). The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Poa halmaturina dune tussockgrass	r -	*Poa halmaturina* occurs on deep dune sands amongst other grasses and amongst dense windswept shrubbery.	This is an interesting specie because there are very few confirmed records from the Furneaux group of islands (9. Dec. 1975 – Wingaroo/Fairhaven roads area; 29 Jan. 1994 – Clarke Island), both supported by voucher specimens held at the Tasmanian Herbarium. However, there are extensive areas of potential habitat (grass- and shrub-covered stabilised dunes, often subject to the Roaring Forties) present, especially on the west coast of the island. Surveys in the area south of Mount Killiecrankie failed to

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
			confirm the species although there are now over 100 database records from that site by another observer (none supported by vouchers and/or images). Potential habitat is widespread within the study area, especially dune swales and slopes associated with old sandblows and tracks. Confirming the species will be of biogeographic interest but if present, it is likely to be widespread, abundant and acting as a primary coloniser of bare ground. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Pomaderris oraria subsp. *oraria* bassian dogwood	r -	*Pomaderris oraria* subsp. *oraria* is known from the central north coast near Badger Head, and near Wingaroo on Flinders Island. At Badger Head plants grow on skeletal soils over fine siltstones on clifftops and foredune slopes within 100 m of the shore. Habitat includes wind-pruned coastal scrubs, and low forest dominated by *Allocasuarina verticillata* (drooping sheoak).	Potential habitat likely to be widespread, especially in near-coastal scrub and heath vegetation types. It may be absent from the study area because it is a distinctive species and unlikely to have been overlooked from the Flinders Trail. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Pterostylis ziegeleri grassland greenhood	v VU # only	*Pterostylis ziegeleri* occurs in the State's south, east and north, with an outlying occurrence in the northwest. In coastal areas, the species occurs on the slopes of low stabilised sand dunes and in grassy dune swales, while in the Midlands it grows in native grassland or grassy woodland on well-drained clay loams derived from basalt.	Potential habitat may be widespread., However, surveys of similar habitat south of Mount Killiecrankie did not detect the species. The species is not actually formally recorded from the Furneaux group of islands.
Senecio psilocarpus swamp fireweed	e VU # only	*Senecio psilocarpus* is known from six widely scattered sites in the northern half of the State, including King and Flinders islands. It occurs in swampy habitats including broad valley floors associated with rivers, edges of farm dams amongst low-lying grazing/cropping ground, herb-rich native grassland in a broad swale between stable sand dunes, adjacent to wetlands in native grassland, herbaceous marshland and low-lying lagoon systems.	Potential habitat will be restricted to the old farm dams. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Stellaria multiflora subsp. *nebulosa* nebulous rayless starwort	r -	*Stellaria multiflora* var. *nebulosa* appears to be restricted to the Furneaux Group where it is strongly associated with dune sands.	Potential habitat is likely to be restricted to near-coastal dune habitats (based on available information) but could extend to sites occupied by species such as *Parietaria debilis* and *Hydrocotyle comocarpa*. Like the latter species, this is an annual requiring spring surveys to detect. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.

Scientific name **Common name**	**Status** TSPA EPBCA	**Tasmanian habitat description (and distribution)**	**Comments on study area and database records**
Stuckenia pectinata fennel pondweed	r -	*Stuckenia pectinata* is found in fresh to brackish/saline waters in rivers, estuaries and inland lakes. It forms dense stands or mats, particularly in slow-flowing or static water. The species grows in water of various depth.	Potential habitat will be restricted to the old farm dams. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Stylidium beaugleholei blushing triggerplant	r -	*Stylidium beaugleholei* occurs in wet sandy heaths, moist depressions, soaks and hollows.	Potential habitat is likely to be similar to species such as *Phyllangium divergens* – see notes under that species. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Zygophyllum billardierei coast twinleaf	r -	*Zygophyllum billardierei* is known from calcareous sands, forests, wetlands and heath communities on the Furneaux Group.	There are two database records southeast of the study area (see notes under *Eutaxia microphylla* and *Gyrostemon thesioides* – same locations, collectors and dates) and two database records within the study area (eastern record: Dean Vincent & Janine Berechree, 20 Jul. 2010, ± 10 m, approx. 15 plants in 20 x 20 m area, observed in SCA; western record: Dean Vincent & Janine Berechree, 20 Jul. 2010, ± 10 m, approx. 50 plants in 50 x 50 m area, observed in boundary of SCH/SCA). Aerial imagery places both records well away from tracks in quite different habitats (denser scrub vs. open dunes) suggesting potential habitat is widespread. In my experience, this species can be locally abundant in undisturbed and disturbed habitats (the latter often including sandy tracks) and it thrives on localised disturbance. The known and wider potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.

APPENDIX B. Analysis of database records of threatened fauna

Table B1 provides a listing of threatened fauna from within 5,000 m of the study area (nominal buffer width usually used to discuss the potential of a particular study area to support various species listed in databases), with comments on whether potential habitat is present for the species, and possible reasons why a species was not recorded.

Table B1. Threatened fauna records from 5,000 m of boundary of the study area

Species listed below are listed as rare (r), vulnerable (v), endangered (e), or extinct (x) on the Tasmanian *Threatened Species Protection Act 1995* (TSPA); vulnerable (VU), endangered (EN), critically endangered (CR) or extinct (EX) on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA). Information below is sourced from the DPIPWE's *Natural Values Atlas* (DPIPWE 2020), Bryant & Jackson (1999) and FPA (2020); marine, wholly pelagic and littoral species such as marine mammals, fish and offshore seabirds are excluded. Species marked with # are listed in CofA (2020).

Scientific name **Common name**	**Status** TSPA EPBCA	**Tasmanian habitat description (and distribution)**	**Comments on study area and database records**
Accipiter novaehollandiae grey goshawk	e -	Potential habitat is native forest with mature elements below 600 m altitude, particularly along watercourses. Significant habitat may be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.).	Potential habitat as described will be absent. The species may occasionally utilise the greater study area as part of a home range and for foraging but routine property management and small-scale projects should not impact on this aspect of the species' life history.
Antipodia chaostola tax. *leucophaea* chaostola skipper	e EN	Potential habitat is dry forest and woodland supporting *Gahnia radula* (usually on sandstone and other sedimentary rock types) or *Gahnia microstachya* (usually on granite-based substrates).	Potential habitat highly unlikely to be present (neither key larval host plants likely to be present).
Apus pacificus fork-tailed swift	- - # only	Occasional non-breeding migrant to Tasmania only.	Potential habitat will be present. However, as this species rarely lands or roosts (and does not breed) on the Australian migration, routine property management and small-scale projects that do not manifestly impact on the native vegetation should not impact on the species.
Ardea alba great egret	- - # only	Potential habitat is a wide range of poorly-drained habitats such as wetlands, farm dams, wet paddocks and mudflats.	Potential habitat marginally present (e.g. old farm dams). If present (which is only likely to be ephemeral and occasional), routine property management and small-scale projects that do not manifestly impact on the riparian zone and farm dams should not impact on the species.
Ardea ibis cattle egret	- - # only	Potential habitat is a wide range of poorly-drained habitats such as wetlands, farm dams, wet paddocks and mudflats.	As above.

Scientific name Common name	Status TSPA EPBCA	Tasmanian habitat description (and distribution)	Comments on study area and database records
Aquila audax subsp. *fleayi* tasmanian wedge-tailed eagle	e EN #	Potential habitat comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Nests are usually not constructed close to sources of disturbance and nests close to disturbance are less productive.	Potential nesting habitat likely to be absent. No known nests within 1,000 m of study area. The species may occasionally utilise the greater study area as part of a home range and for foraging but routine property management and small-scale projects should not impact on this aspect of the species' life history.
Botaurus poiciloptilus australasian bittern	- EN # only	Potential habitat is comprised of wetlands with tall dense vegetation. It favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and reeds (e.g. *Phragmites*, *Cyperus*, *Eleocharis*, *Juncus*, *Typha*, *Baumea*, *Bolboschoenus*) or cutting grass (*Gahnia*) growing over a muddy or peaty substrate (TSSC 2011).	Potential habitat marginally present (e.g. old farm dams). If present (which is only likely to be ephemeral and occasional), routine property management and small-scale projects that do not manifestly impact on the riparian zone and farm dams should not impact on the species.
Engaeus martigener Furneaux burrowing crayfish	e EN # only	Potential habitat includes boggy areas and small clear water creeks in high altitude wet ferny gullies. These areas appear to be the stronghold of the species, although recent survey work has also located populations at lower altitudes and in a poorly-drained mossy tea-tree bog and a small grassy spring/soak in open dry eucalypt forest.	Potential habitat will be absent.
Galaxiella pusilla eastern swamp galaxiid	v VU #	Potential habitat is slow-flowing waters such as swamps, lagoons, drains or backwaters of streams, often with aquatic vegetation. It may also be found in temporary waters that dry up in summer for as long as 6-7 months, especially if burrowing crayfish burrows are present (although these will usually be connected to permanent water). Habitat may include forested swampy areas but does not include blackwood swamp forest. Juveniles congregate in groups at the water surface in pools free of vegetation. Significant habitat is all potential habitat and a 30 m stream-side reserve within the core range.	While DPIPWE (2020) lists the potential for this species, the site is well outside the predicted range of the species based on database records (eastern Flinders Island). It is highly unlikely that Edens Creek will provide potential habitat.

Scientific name **Common name**	**Status** TSPA EPBCA	**Tasmanian habitat description (and distribution)**	**Comments on study area and database records**
Haliaeetus leucogaster white-bellied sea-eagle	v -	Potential habitat comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (class 1), lakes or complexes of large farm dams. Scattered trees along river banks or pasture land may also be used.	See comments under wedge-tailed eagle.
Hirundapus caudacutus white-throated needletail	- VU #	This species is mostly aerial, from heights of less than 1 m up to more than 1,000 m above the ground. Although they occur over most types of habitat, they are recorded most often above wooded areas, including open forest and rainforest.	Potential habitat will be present. However, as this species rarely lands or roosts (and does not breed) on the Australian migration, routine property management and small-scale projects that do not manifestly impact on the native vegetation should not impact on the species.
Lathamus discolor swift parrot	e CR #	Potential habitat comprises potential foraging habitat and potential nesting habitat. Potential foraging habitat comprises *Eucalyptus globulus* (blue gum) or *Eucalyptus ovata* (black gum) trees that are old enough to flower. For management purposes, potential nesting habitat is considered to comprise eucalypt forests that contain hollow-bearing trees.	Potential habitat will almost certainly be absent because *Eucalyptus ovata* and *Eucalyptus globulus* (and hollow-bearing trees) are not likely to be present. Even if these habitat elements are present, they will be so at a highly localised scale, in a context atypical of known sites, and highly practical to avoid. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Limnodynastes peroni striped marsh frog	e -	Potential habitat is natural and artificial coastal and near-coastal wetlands, lagoons, marshes, swamps and ponds (including dams), with permanent freshwater and abundant marginal, emergent and submerged aquatic vegetation.	Potential habitat will be restricted to the old farm dams (although even these would be atypical). The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Litoria raniformis green and golden frog	v VU #	Potential habitat is permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water-holding sites such as old quarries, slow-flowing stretches of streams and rivers and drainage features.	Potential habitat will be restricted to the old farm dams. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Myiagra cyanoleuca satin flycatcher	- - # only	Potential habitat is variable but mainly eucalypt-dominated forests, with a stronger association with wetter forest gullies.	Potential habitat present. This is a spring-summer migrant that may occasionally utilise the greater study area for foraging. If present, routine property management and

Scientific name **Common name**	**Status** TSPA EPBCA	**Tasmanian habitat description (and distribution)**	**Comments on study area and database records**
			small-scale projects that do not manifestly impact on the riparian zone and farm dams should not impact on the species.
Pardalotus quadragintus forty-spotted pardalote	e EN #	Potential habitat is any forest and woodland supporting *Eucalyptus viminalis* (white gum) where the canopy cover of *E. viminalis* is greater than or equal to 10% or where *E. viminalis* occurs as a localised canopy dominant or codominant in patches exceeding 0.25 ha	Potential habitat will almost certainly be absent because *Eucalyptus viminalis* and hollow-bearing trees are not likely to be present. Even if these habitat elements are present, they will be so at a highly localised scale, in a context atypical of known sites, and highly practical to avoid. The potential presence of this species does not present a critical constraint to the administrative act of subdivision nor future small-scale development.
Prototroctes maraena Australian grayling	v VU #	Potential habitat is all streams and rivers in their lower to middle reaches. Areas above permanent barriers (e.g. Prosser River dam, weirs) that prevent fish migration, are not potential habitat.	Potential habitat will be absent.
Pseudemoia pagenstecheri tussock skink	v -	Potential habitat is grassland and grassy woodland (including rough pasture with paddock trees), generally with a greater than 20% cover of native grass species, especially where medium to tall tussocks are present.	Potential habitat will be absent.
Pseudomys novaehollandiae New Holland mouse	e VU #	Potential habitat is heathlands (mainly dry heathlands but also where dry heathlands form a mosaic with other heathland, moorland and scrub complexes), heathy woodlands (i.e. eucalypt canopy cover 5-20%), *Allocasuarina*-dominated forests on sandy substrates (not dolerite or basalt), and vegetated sand dunes. Key indicator plant species include (but are not restricted to) *Aotus ericoides*, *Lepidosperma concavum*, *Hypolaena fastigiata* and *Xanthorrhoea* spp.	Potential habitat is highly unlikely to be present as the species occurs in heathland and heathy woodland with a particular structure and composition that does not occur on the dune sands where some heathy vegetation may be present (will be entirely different structure and composition).

APPENDIX C. DPIPWE's *Natural Values Atlas* report for the study area

Appended as pdf file.

APPENDIX D. Forest Practices Authority's *Biodiversity Values Atlas* report for the study area

Appended as pdf file.

APPENDIX E. CofA's *Protected Matters* report for the study area

Appended as pdf file.

Threatened Fauna Range Boundaries Boundaries

Search Point 575151E,5595610N is within the following fauna range boundaries as at Mon Dec 21 2020 11:09:09 GMT+1100 (Australian Eastern Daylight Time)

Common name	Species name	Range Class	Habitat Description
grey goshawk	Accipiter novaehollandiae	Potential Range	Potential habitat for the grey goshawk is native forest with mature elements below 600 m altitude, particularly along watercourses. FPA's Fauna Technical Note 12 can be used as a guide in the identification of grey goshawk habitat. Significant habitat for the grey goshawk may be summarised as areas of wet forest, rainforest and damp forest patches in dry forest, with a relatively closed mature canopy, low stem density, and open understorey in close proximity to foraging habitat and a freshwater body (i.e. stream, river, lake, swamp, etc.). FPA's Fauna Technical Note 12 can be used as a guide in the identification of grey goshawk habitat.
chaostola skipper	Antipodia chaostola	Potential Range	Potential habitat for the Chaostola Skipper is dry forest and woodland supporting Gahnia radula (usually on sandstone and other sedimentary rock types) or Gahnia microstachya (usually on granite-based substrates).
wedge-tailed eagle	Aquila audax subsp. fleayi	Potential Range	Potential habitat for the wedge-tailed eagle comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is a wide variety of forest (including areas subject to native forest silviculture) and non-forest habitats. Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest. Nest trees are usually amongst the largest in a locality. They are generally in sheltered positions on leeward slopes, between the lower and mid sections of a slope and with the top of the tree usually lower than the ground level of the top of the ridge, although in some parts of the State topographic shelter is not always a significant factor (e.g. parts of the northwest and Central Highlands). Nests are usually not constructed close to sources of disturbance and nests close to disturbance are less productive. More than one nest may occur within a territory but only one is used for breeding in any one year. Breeding failure often promotes a change of nest in the next year. [see FPA's Fauna Technical Note 1 and FPA's Fauna Technical Note 6 for more information] Significant habitat for the wedge-tailed eagle is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where the nest tree is still present).
Dwarf galaxias	Galaxiella pusilla	Potential Range	Potential habitat for the dwarf galaxiid is slow-flowing waters such as swamps, lagoons, drains or backwaters of streams, often with aquatic vegetation. It may also be found in temporary waters that dry up in summer for as long as 6-7 months, especially if burrowing crayfish burrows are present (although these will usually be connected to permanent water). Habitat may include forested swampy areas but does not include blackwood swamp forest. Juveniles congregate in groups at the water surface in pools free of vegetation. Significant habitat for the dwarf galaxiid is all potential habitat and a 30m stream-side reserve within the core range.
white-bellied sea-eagle	Haliaeetus leucogaster	Potential Range	Potential habitat for the White-Bellied Sea-eagle species comprises potential nesting habitat and potential foraging habitat. Potential foraging habitat is any large waterbody (including sea coasts, estuaries, wide rivers, lakes, impoundments and even large farm dams) supporting prey items (fish). Potential nesting habitat is tall eucalypt trees in large tracts (usually more than 10 ha) of eucalypt or mixed forest within 5 km of the coast (nearest coast including shores, bays, inlets and peninsulas), large rivers (Class 1), lakes or complexes of large farm dams. Scattered trees along river banks or pasture land may also be used. Significant habitat for the white-bellied sea-eagle is all native forest and native non-forest vegetation within 500 m or 1 km line-of-sight of known nest sites (where nest tree still present).
striped marsh frog	Limnodynastes peroni	Potential Range	Potential habitat for the striped marsh frog is natural and artificial coastal and near-coastal wetlands, lagoons, marshes, swamps and ponds (including dams), with permanent freshwater and abundant marginal, emergent and submerged aquatic vegetation. Significant habitat for the striped marsh frog is still or very slow flowing water bodies, with at least some vegetation, and a lack of obvious pollutants (oils, chemicals, etc). See FPA Fauna Technical Note 18 for further guidance on assessing significant habitat for the striped marsh frog.
green and golden frog	Litoria raniformis	Potential Range	Potential habitat for the green and gold frog is permanent and temporary waterbodies, usually with vegetation in or around them. Potential habitat includes features such as natural lagoons, permanently or seasonally inundated swamps and wetlands, farm dams, irrigation channels, artificial water-holding sites such as old quarries, slow-flowing stretches of streams and rivers and drainage features. Significant habitat for the green and gold frog is still or very slow flowing water bodies, with at least some vegetation, and a lack of obvious pollutants (oils, chemicals, etc). See FPA Fauna Technical Note 18 for further guidance on assessing significant habitat for the green and gold frog.
forty-spotted pardalote	Pardalotus quadragintus	Potential Range	Potential habitat for the 40-spotted pardalote is any forest and woodland supporting Eucalyptus viminalis (white gum) where the canopy cover of E. viminalis is greater than or equal to 10% or where E. viminalis occurs as a localised canopy dominant or codominant in patches exceeding 0.25 ha. Significant habitat for the 40-spotted Pardalote is all potential habitat associated with known colonies and such habitat within 500 m of known colonies.
australian grayling	Prototroctes maraena	Potential Range	Potential habitat for the Australian Grayling is all streams and rivers in their lower to middle reaches. Areas above permanent barriers (e.g. Prosser River dam, weirs) that prevent fish migration, are not potential habitat.
tussock skink	Pseudemoia pagenstecheri	Potential Range	Potential habitat for the tussock skink is grassland and grassy woodland (including rough pasture with paddock trees), generally with a greater than 20% cover of native grass species, especially where medium to tall tussocks are present.
new holland mouse	Pseudomys novaehollandiae	Potential Range	Potential habitat for the New Holland mouse is heathlands (mainly dry heathlands but also where dry heathlands form a mosaic with other heathland, moorland and scrub complexes), heathy woodlands (i.e. eucalypt canopy cover 5-20%), Allocasuarina-dominated forests on sandy substrates (not dolerite or basalt), and vegetated sand dunes. Key indicator plant species include (but are not restricted to) Aotus ericoides, Lepidosperma concavum, Hypolaena fastigiata and Xanthorrhoea spp. Significant habitat for the New Holland mouse is all potential habitat within the core range of the species.

Showing 1 to 11 of 11 entries

Threatened Fauna Records

Fauna Records within 5000m of 575151E,5595610N at Mon Dec 21 2020 11:09:09 GMT+1100 (Australian Eastern Daylight Time)

Records with the project code 'rnd' and same foreign ID (nest ID) have been simplified to only show the newest observation.

Species name	Common name	Reported Position accuracy (m)	X	Y	Distance (m)	Obs. type	Obs. date	Date accuracy	Obs. state	Project code + Foreign id	NVA id
Haliaeetus leucogaster	white-bellied sea-eagle	1000	573594	5599166	3882	Nest	1985-01-01	Decade	Present	rnd 29	NVA
Haliaeetus leucogaster	white-bellied sea-eagle	1000	572628	5593316	3410	Nest	1985-01-01	Decade	Present	rnd 43	NVA
Haliaeetus leucogaster	white-bellied sea-eagle	10	573635	5599060	3768	Nest	2004-11-23	Day	Present	rnd 102	NVA
Haliaeetus leucogaster	white-bellied sea-eagle	20	574472	5599009	3466	Nest	2004-11-19	Day	Present	rnd 598	NVA

Showing 1 to 4 of 4 entries

Threatened Flora Records

Flora Records within 2000m of 575151E, 5595610N at Mon Dec 21 2020 11:09:09 GMT+1100 (Australian Eastern Daylight Time)

Species name	Common name	Reported Position accuracy (m)	X	Y	Distance (m)	Obs. type	Obs. date	Date accuracy	Obs. state	NVA id
Zygophyllum billardierei	coast twinleaf	10	574448	5595279	777	Sighting	2010-07-20	Week	Present	NVA
Zygophyllum billardierei	coast twinleaf	10	575638	5595226	620	Sighting	2010-07-20	Day	Present	NVA
Eutaxia microphylla	spiny bushpea	25	573905	5594544	1640	Sighting	2009-11-20	Day	Present	NVA
Zygophyllum billardierei	coast twinleaf	25	573905	5594544	1640	Sighting	2009-11-20	Day	Present	NVA
Zygophyllum billardierei	coast twinleaf	3	573835	5594279	1872	Sighting	2012-12-04	Day	Present	NVA
Gyrostemon thesioides	broom wheelfruit	3	573835	5594279	1872	Sighting	2012-12-04	Day	Present	NVA

Showing 1 to 6 of 6 entries

Threatened Flora Survey Notes

SURVEY SKILL LEVEL

Refer to Threatened Flora Species Survey Notes (FPA 2016) for more information.

Survey skill level:

1: highly distinctive species – an FPO or forest planner can undertake surveys

2: distinctive species – a flora-competent forest planner can undertake surveys

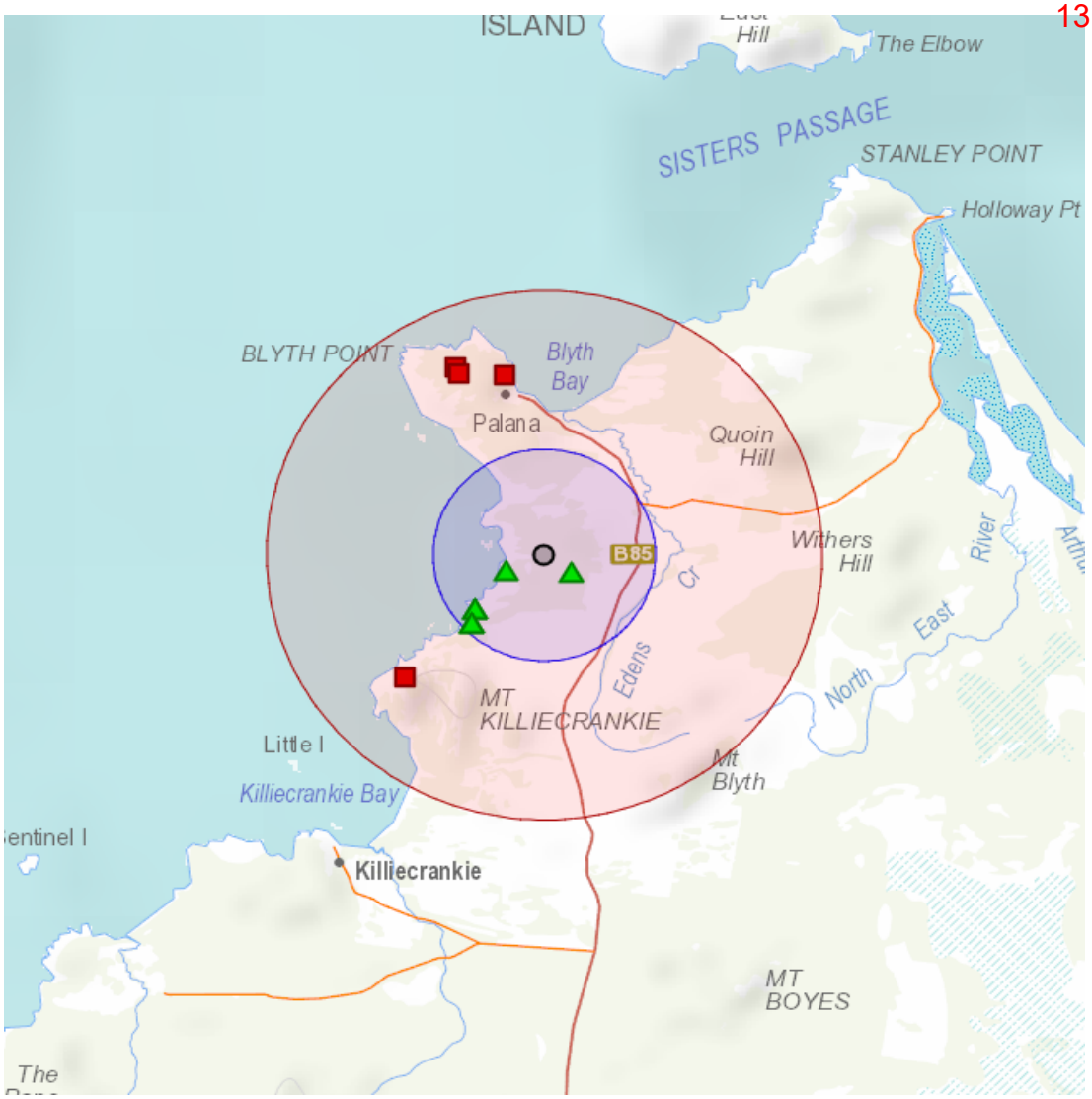
3: non-distinctive species and species occupying specialised niches – only experienced field botanists can undertake surveys

HABITAT DESCRIPTION

Refer to Habitat Descriptions of Threatened Flora in Tasmania (FPA 2016) for more information.

Species name	Common name	Life form	Status TSPA, EPBCA	Habitat description	Survey guidelines	Survey skill level
Eutaxia microphylla	spiny bushpea	shrub	r, -	On Flinders Island, Eutaxia microphylla mainly occurs in windswept coastal heathland on calcarenite. On mainland Tasmania, the species usually occurs in low open coastal shrubbery and on cliff edges (various substrates). There is an apparently outlier that occurs in dense roadside grass (mainly Themeda triandra) and Acacia dealbata (silver wattle) heathy scrub along the Esk Main Road.	The presence of flowers will aid detection of this prostrate, spreading, much-branched distinctive shrub. Flowering occurs in spring.	3
Gyrostemon thesioides	broom wheelfruit	shrub	r, -	Gyrostemon thesioides occurs predominately on dolerite or granite in Allocasuarina (sheoak) forest in the State's east and northeast, including the Furneaux Group.	Extension surveys for this short-lived species (less than 10 years) should focus on recently burnt areas as the species stores seed in the soil for long periods of time and germinates prolifically after fire, and then is often absent for long periods of no disturbance. Surveys in long-undisturbed potential habitat are likely to be unsuccessful.	3
Zygophyllum billardierei	coast twinleaf	shrub	r, -	Zygophyllum billardierei is known from calcareous sands, forests, wetlands and heath communities on the Furneaux Group.	This low spreading shrub can be identified at any time of the year from growth habit and leaf morphology. The bright yellow flowers in spring aid in detection.	2

Showing 1 to 3 of 3 entries


ISLAND
Hill
The Elbow
SISTERS PASSAGE
STANLEY POINT
Holloway Pt
BLYTH POINT
Blyth Bay
Palana
Quoin Hill
Withers Hill
B85
Cr
River
East
North
Edens
MT KILLIECRANKIE
Little I
Killiecrankie Bay
Mt Blyth
entinel I
Killiecrankie
MT BOYES
The

Natural Values Atlas Report

Authoritative, comprehensive information on Tasmania's natural values.

Reference: ECOtas_NgarraLimestoneBay
Requested For: MWapstra
Report Type: Summary Report
Timestamp: 08:44:35 AM Sunday 20 December 2020

Threatened Flora: buffers Min: 500m Max: 5000m
Threatened Fauna: buffers Min: 500m Max: 5000m
Raptors: buffers Min: 500m Max: 5000m
Tasmanian Weed Management Act Weeds: buffers Min: 500m Max: 5000m
Priority Weeds: buffers Min: 500m Max: 5000m
Geoconservation: buffer 1000m
Acid Sulfate Soils: buffer 1000m
TASVEG: buffer 1000m
Threatened Communities: buffer 1000m
Fire History: buffer 1000m
Tasmanian Reserve Estate: buffer 1000m
Biosecurity Risks: buffer 1000m

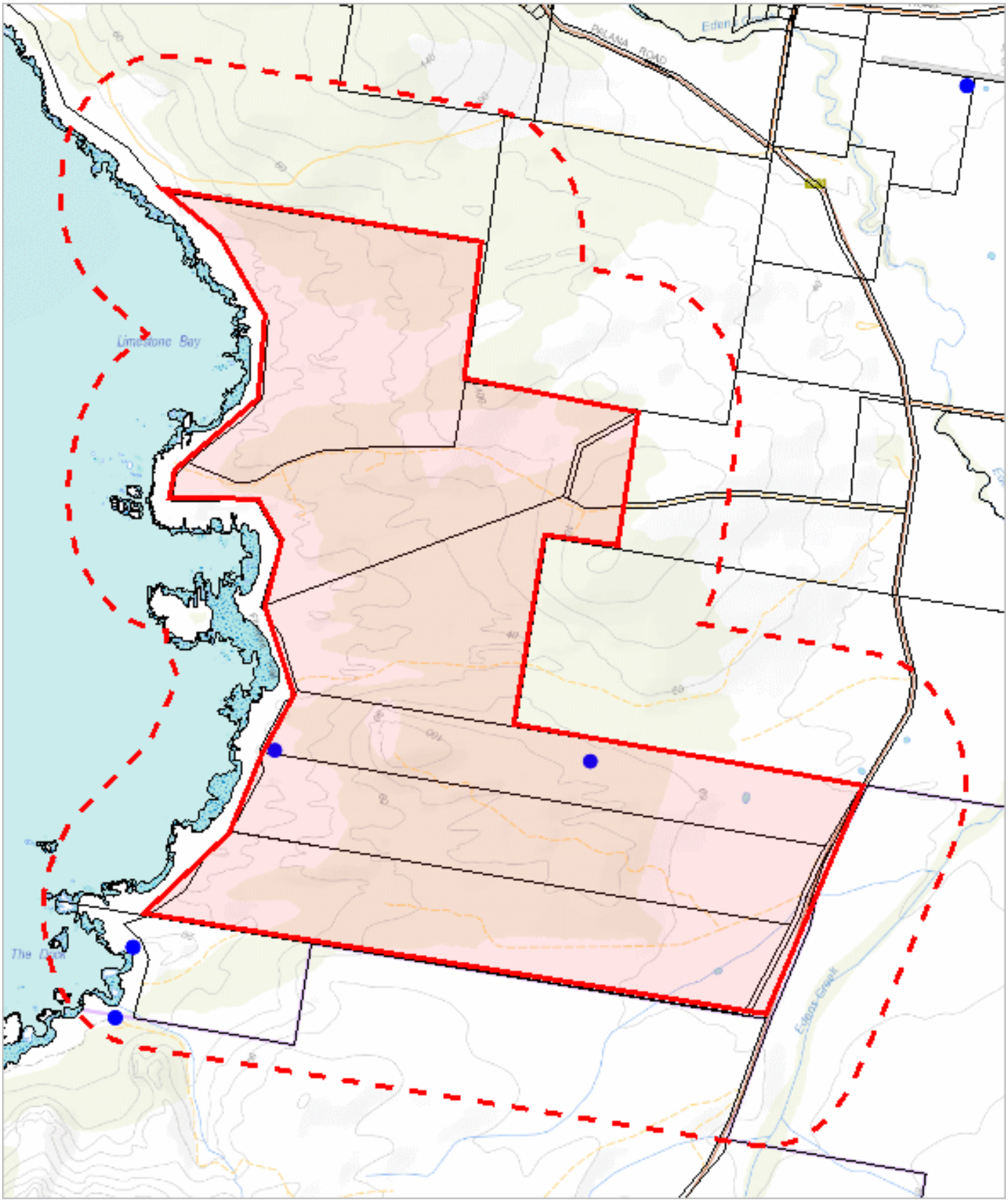
The centroid for this query GDA94: 575151.0, 5595610.0 falls within:

Property: 3152018

Threatened flora within 500 metres

13.1.2 April 2023

577236, 5598102



573402, 5593563

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

Threatened flora within 500 metres

13.1.2 April 2023

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

Threatened flora within 500 metres

13.1.2 April 2023

Verified Records

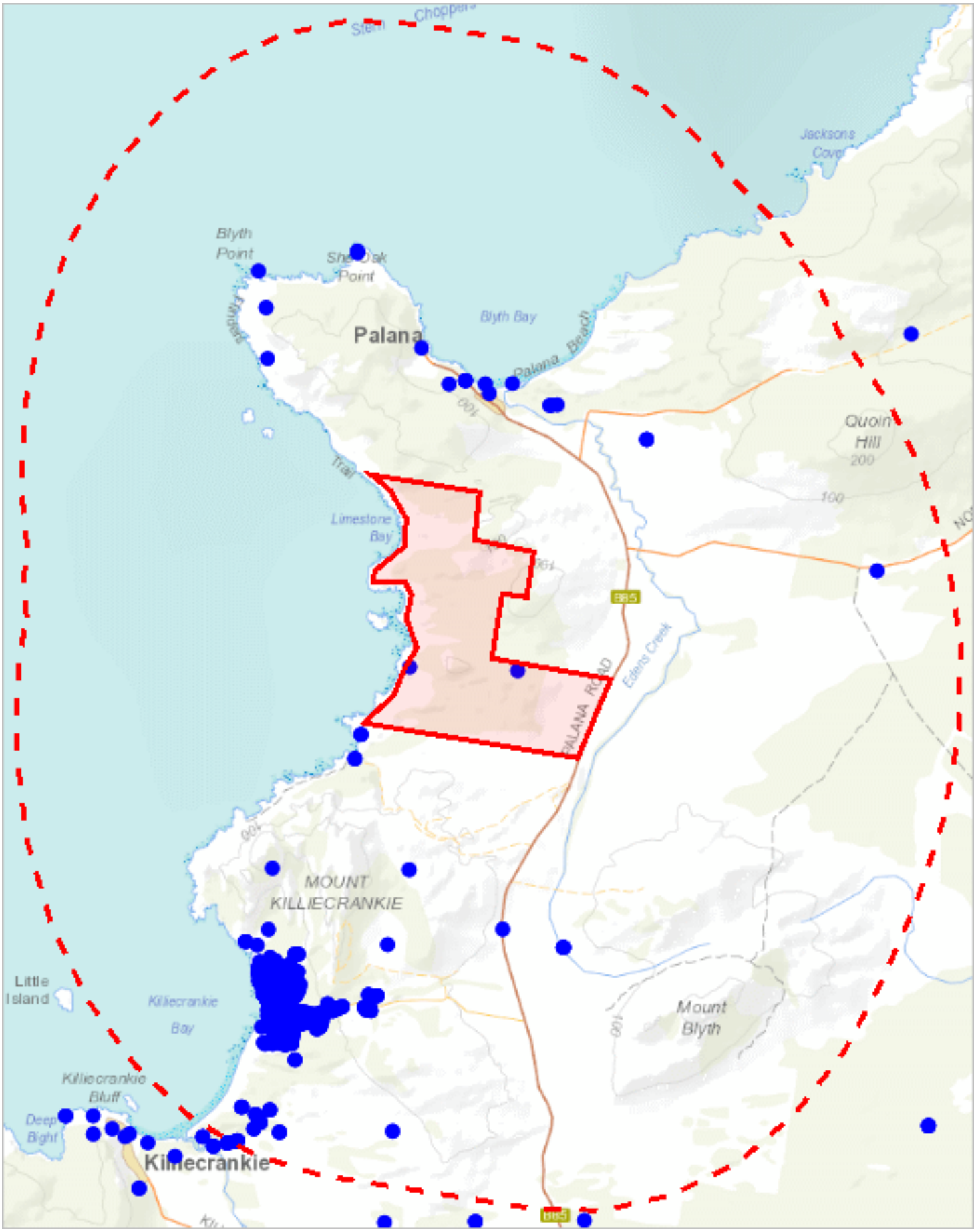
Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Eutaxia microphylla	spiny bushpea	r		n	1	20-Nov-2009
Gyrostemon thesioides	broom wheelfruit	r		n	1	04-Dec-2012
Zygophyllum billardierei	coast twinleaf	r		n	4	04-Dec-2012

Unverified Records

No unverified records were found!

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

580745, 5602622



569898, 5589042

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

Threatened flora within 5000 metres

13.1.2 April 2023

Legend: Verified and Unverified observations

Legend: Cadastral Parcels

Threatened flora within 5000 metres

13.1.2 April 2023

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Acacia uncifolia	coast wirilda	r		n	117	15-Sep-2015
Cyrtostylis robusta	large gnat-orchid	r		n	1	13-Jul-1999
Eucalyptus globulus subsp. pseudoglobulus	gippsland blue gum	r		n	6	13-Nov-2008
Eutaxia microphylla	spiny bushpea	r		n	1	20-Nov-2009
Frankenia pauciflora var. gunnii	southern seaheath	r		n	5	11-Jan-2007
Gyrostemon thesioides	broom wheelfruit	r		n	16	21-Mar-2015
Hakea ulicina	furze needlebush	v		n	1	01-Jan-1993
Hydrocotyle comocarpa	fringefruit pennywort	r		n	36	01-Oct-2015
Isopogon ceratophyllus	horny conebush	v		n	3	01-Jan-1993
Lasiopetalum baueri	slender velvetbush	r		n	1	01-Jan-1985
Leucopogon affinis	lanceleaf beardheath	r		n	9	18-Nov-2015
Leucopogon esquamatus	swamp beardheath	r		n	2	01-Jan-1993
Parietaria debilis	shade pellitory	r		n	74	18-Nov-2015
Phyllangium distylis	tiny mitrewort	r		n	1	20-Nov-1966
Phylloglossum drummondii	pygmy clubmoss	r		n	1	31-Aug-1966
Pimelea curviflora var. sericea	silky curved riceflower	r		n	1	19-Dec-1975
Poa halmaturina	dune tussockgrass	r		n	75	22-Jan-2016
Pomaderris oraria subsp. oraria	bassian dogwood	r		n	1	20-Nov-2017
Stellaria multiflora subsp. nebulosa	nebulous rayless starwort	r		n	1	27-Aug-1969
Stuckenia pectinata	fennel pondweed	r		n	2	20-Mar-2015
Stylidium beaugleholei	blushing triggerplant	r		n	2	19-Nov-2009
Zygophyllum billardierei	coast twinleaf	r		n	156	18-Nov-2015

Unverified Records

No unverified records were found!

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Telephone: 1300 368 550
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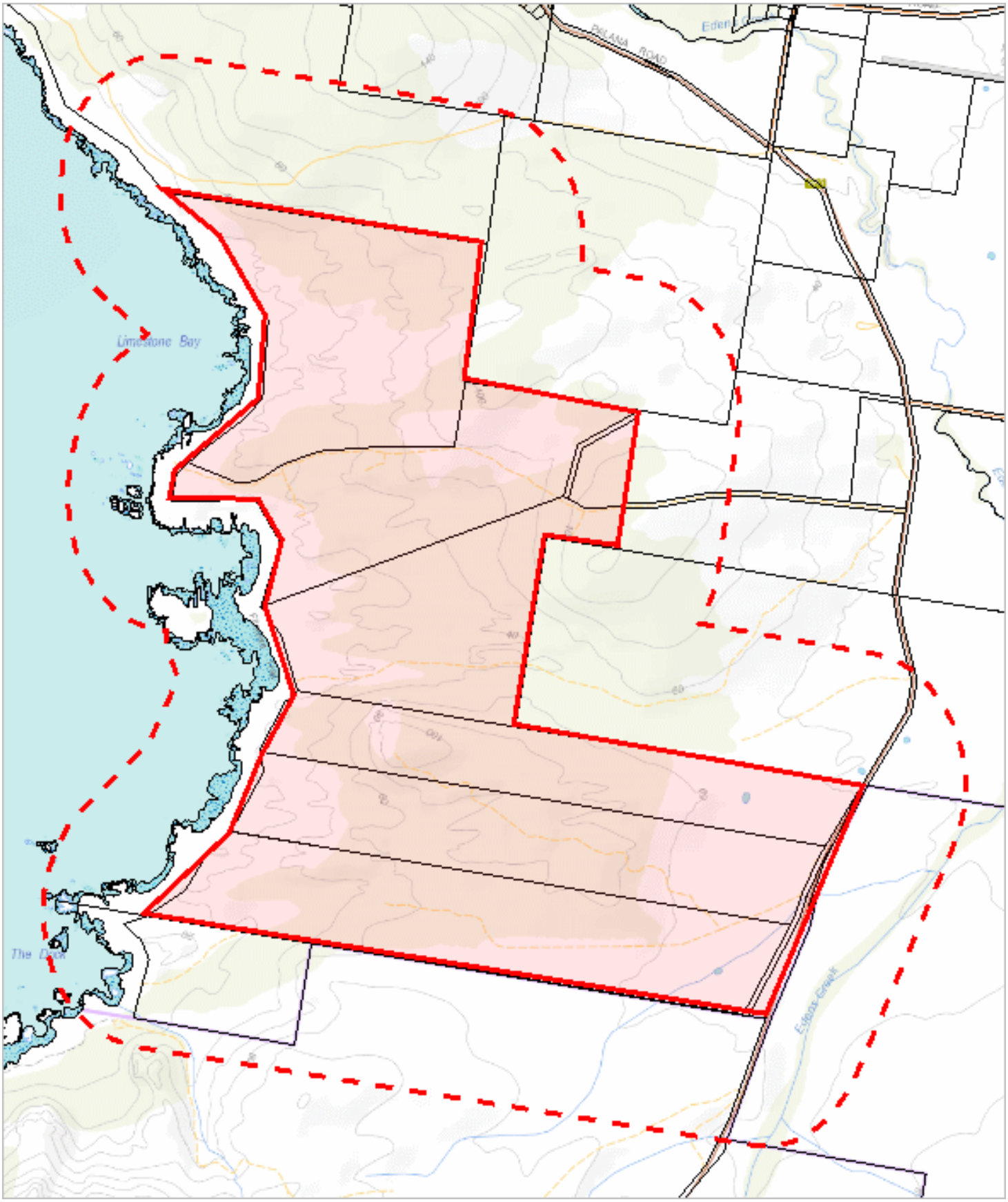
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 500 metres

13.1.2 April 2023

577236, 5598102



573402, 5593563

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

Threatened fauna within 500 metres

13.1.2 April 2023

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

13.1.2 April 2023

Threatened fauna within 500 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Pseudomys novaehollandiae	new holland mouse	e	VU	n	1	0	0
Litoria raniformis	green and gold frog	v	VU	n	1	0	0
Prototroctes maraena	australian grayling	v	VU	ae	1	0	0
Antipodia chaostola	chaostola skipper	e	EN	ae	2	0	0
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	0	0
Limnodynastes peroni	striped marsh frog	e		n	1	0	0
Galaxiella pusilla	eastern dwarf galaxias	v	VU	n	20	0	0
Pardalotus quadragintus	forty-spotted pardalote	e	EN	e	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0

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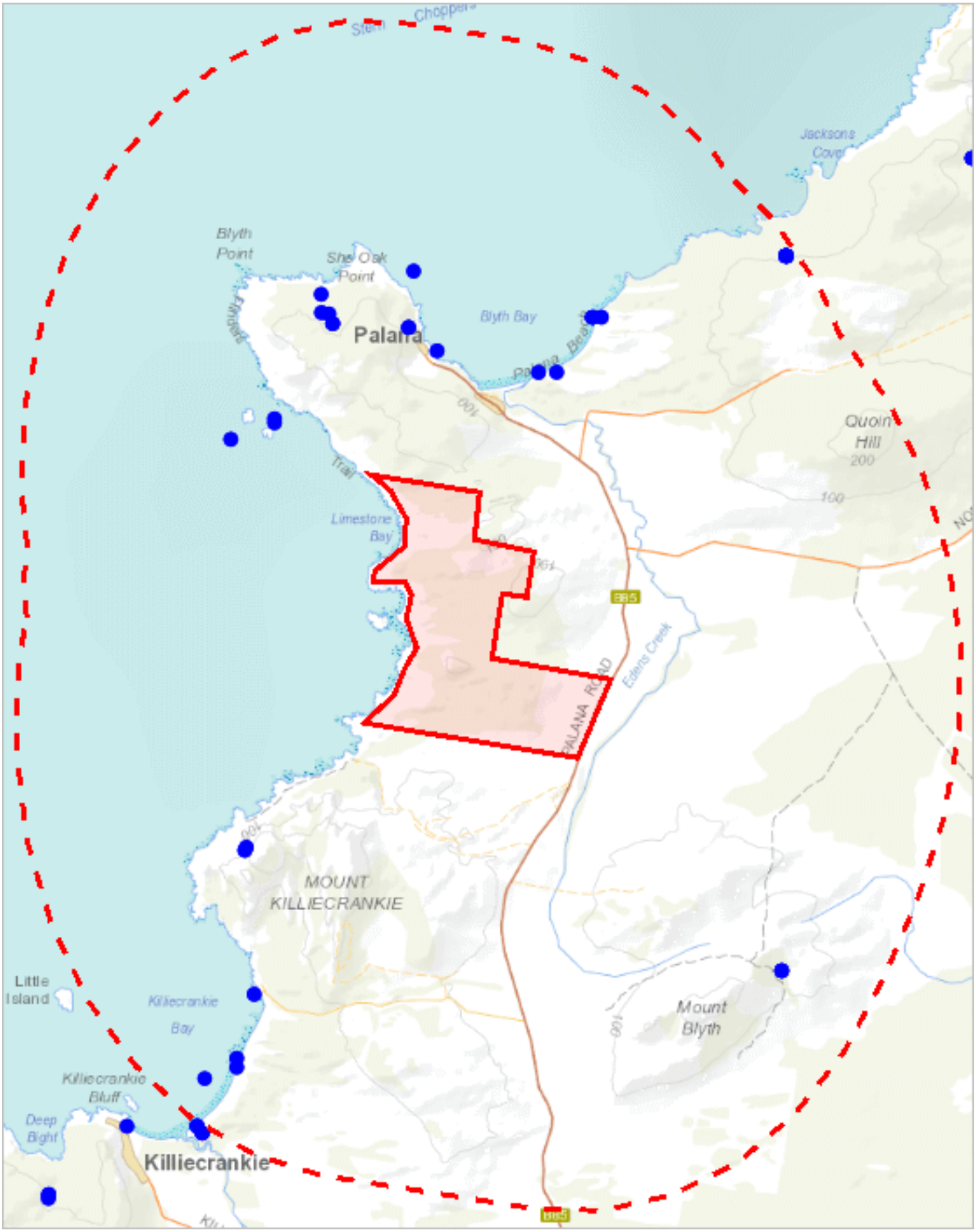
560745, 5602622



569898, 5589042

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

Threatened fauna within 5000 metres

13.1.2 April 2023

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

Threatened fauna within 5000 metres

13.1.2 April 2023

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Aquila audax	wedge-tailed eagle	pe	PEN	n	1	31-Mar-1992
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	7	23-Nov-2004
Arctocephalus tropicalis	sub-antarctic fur seal	e	VU	n	2	17-Jun-2005
Dermochelys coriacea	leatherback turtle	v	VU	n	1	05-Jan-2002
Eubalaena australis	southern right whale	e	EN	m	2	06-Aug-2004
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	13	23-Nov-2004
Hirundapus caudacutus	white-throated needletail		VU	n	1	16-Mar-1981
Megaptera novaeangliae	humpback whale	e	VU	m	3	02-Nov-2008
Numenius madagascariensis	eastern curlew	e	CR	n	1	12-Dec-1977
Sterna nereis subsp. nereis	fairy tern	pv	PVU		2	16-Nov-1981
Sternula nereis subsp. nereis	fairy tern	v	VU	n	1	05-Nov-2011
Thinornis cucullatus	Hooded Plover		PVU	n	8	05-Nov-2011
Thinornis rubricollis	hooded plover		VU	n	1	09-Sep-1977

Unverified Records

No unverified records were found!

Threatened fauna within 5000 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Pseudomys novaehollandiae	new holland mouse	e	VU	n	1	0	0
Litoria raniformis	green and gold frog	v	VU	n	1	0	0
Prototroctes maraena	australian grayling	v	VU	ae	26	0	0
Antipodia chaostola	chaostola skipper	e	EN	ae	7	0	0
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	0	0
Limnodynastes peroni	striped marsh frog	e		n	1	0	0
Galaxiella pusilla	eastern dwarf galaxias	v	VU	n	89	0	1
Pardalotus quadragintus	forty-spotted pardalote	e	EN	e	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0

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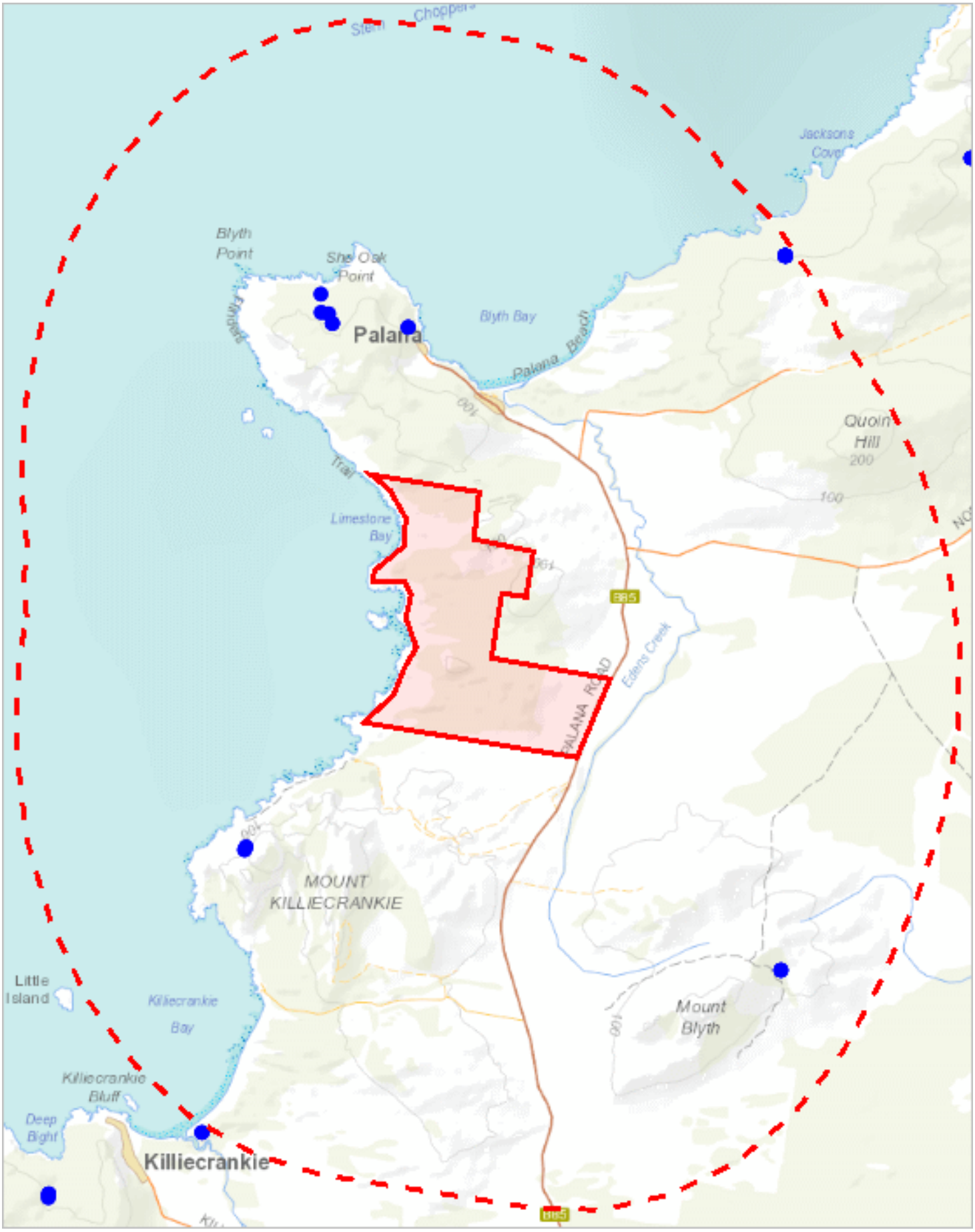
*** No Raptor nests or sightings found within 500 metres. ***

Raptor nests and sightings within 5000 metres

13.1.2 April 2023

560745, 5602622



569898, 5589042

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

Raptor nests and sightings within 5000 metres

13.1.2 April 2023

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

Raptor nests and sightings within 5000 metres

13.1.2 April 2023

Verified Records

Nest Id/Location Foreign Id	Species	Common Name	Obs Type	Observation Count	Last Recorded
102	Haliaeetus leucogaster	white-bellied sea-eagle	Nest	2	23-Nov-2004
29	Haliaeetus leucogaster	white-bellied sea-eagle	Nest	1	01-Jan-1985
33	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	2	23-Nov-2004
43	Haliaeetus leucogaster	white-bellied sea-eagle	Nest	1	01-Jan-1985
598	Haliaeetus leucogaster	white-bellied sea-eagle	Nest	2	23-Nov-2004
	Aquila audax	wedge-tailed eagle	Sighting	1	31-Mar-1992
	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Sighting	5	31-Mar-1992
	Falco cenchroides	nankeen kestrel	Sighting	5	16-Jan-1980
	Haliaeetus leucogaster	white-bellied sea-eagle	Sighting	7	16-Jan-1980

Unverified Records

No unverified records were found!

Raptor nests and sightings within 5000 metres

(based on Range Boundaries)

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

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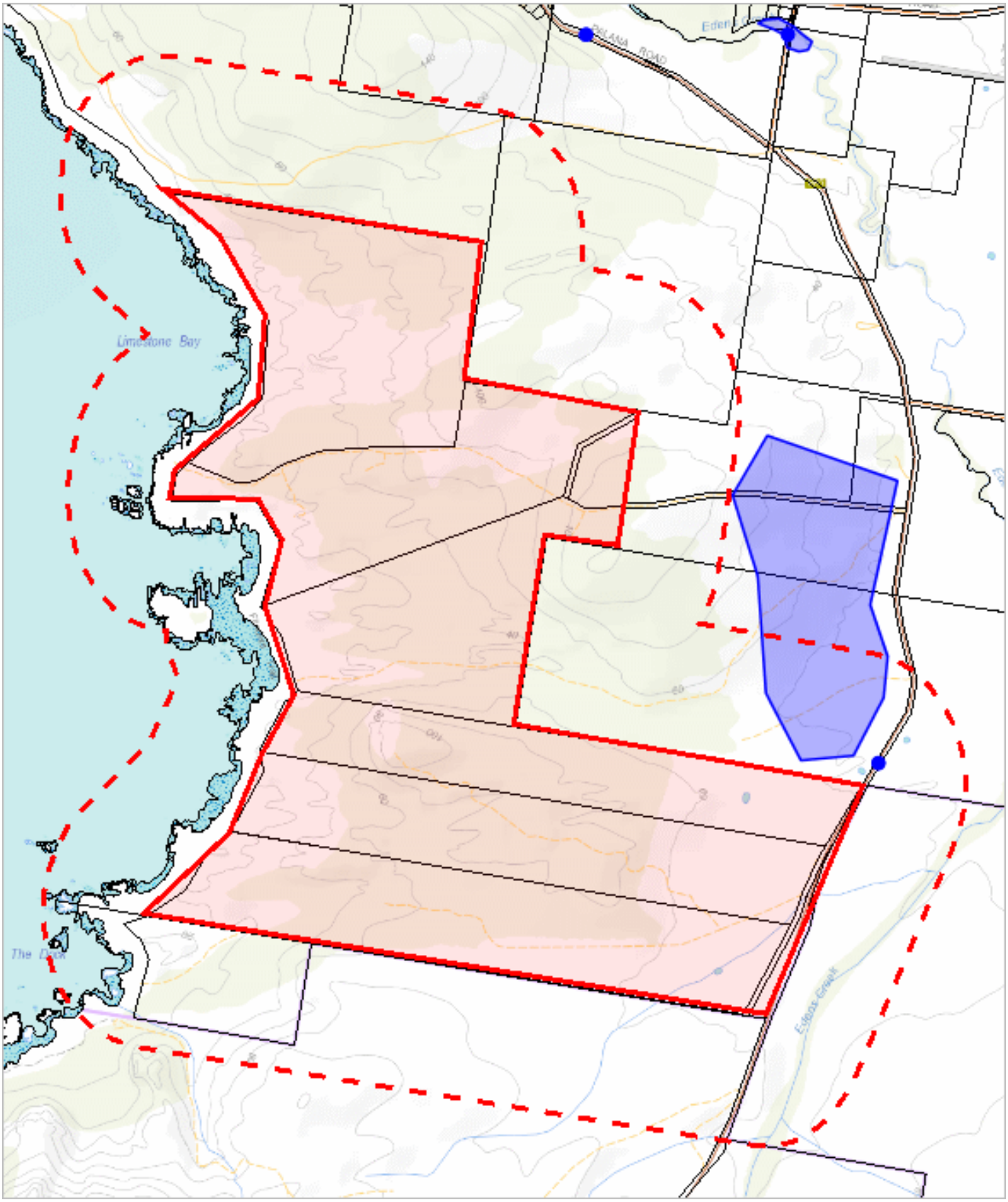
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Tas Management Act Weeds within 500 m

13.1.2 April 2023

577236, 5598102



573402, 5593563

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

Tas Management Act Weeds within 500 m

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

Verified Records

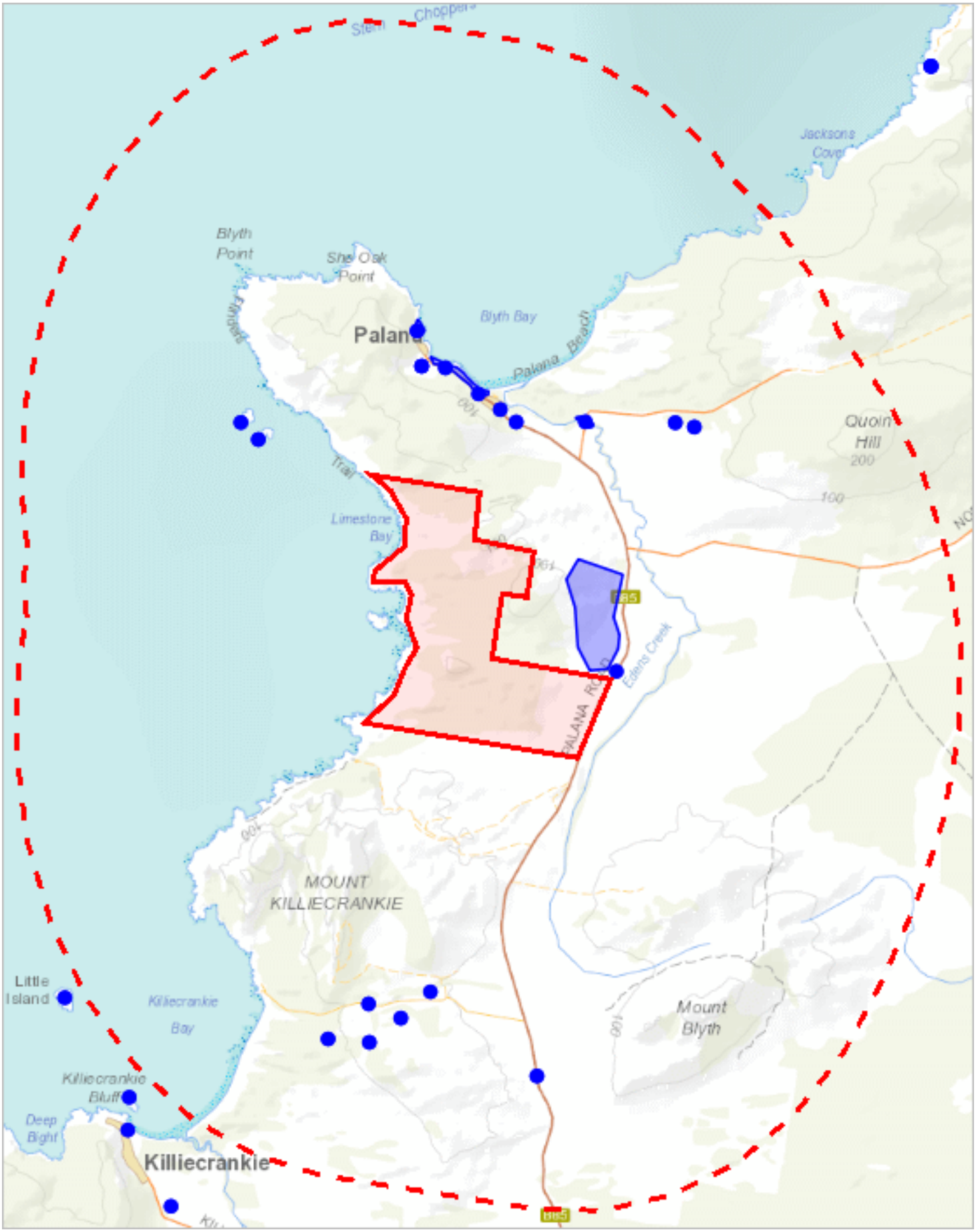
Species	Common Name	Observation Count	Last Recorded
Lycium ferocissimum	african boxthorn	2	04-Dec-2012

Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area:

http://dpipwe.tas.gov.au/invasive-species/weeds

560745, 5602622



569898, 5589042

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

Tas Management Act Weeds within 5000 m

13.1.2 April 2023

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

Tas Management Act Weeds within 5000 m

13.1.2 April 2023

Verified Records

Species	Common Name	Observation Count	Last Recorded
Asparagus asparagoides	bridal creeper	5	01-Jun-2008
Echium plantagineum	patersons curse	5	02-Feb-2017
Lycium ferocissimum	african boxthorn	15	04-Dec-2012

Unverified Records

For more information about introduced weed species, please visit the following URL for contact details in your area:

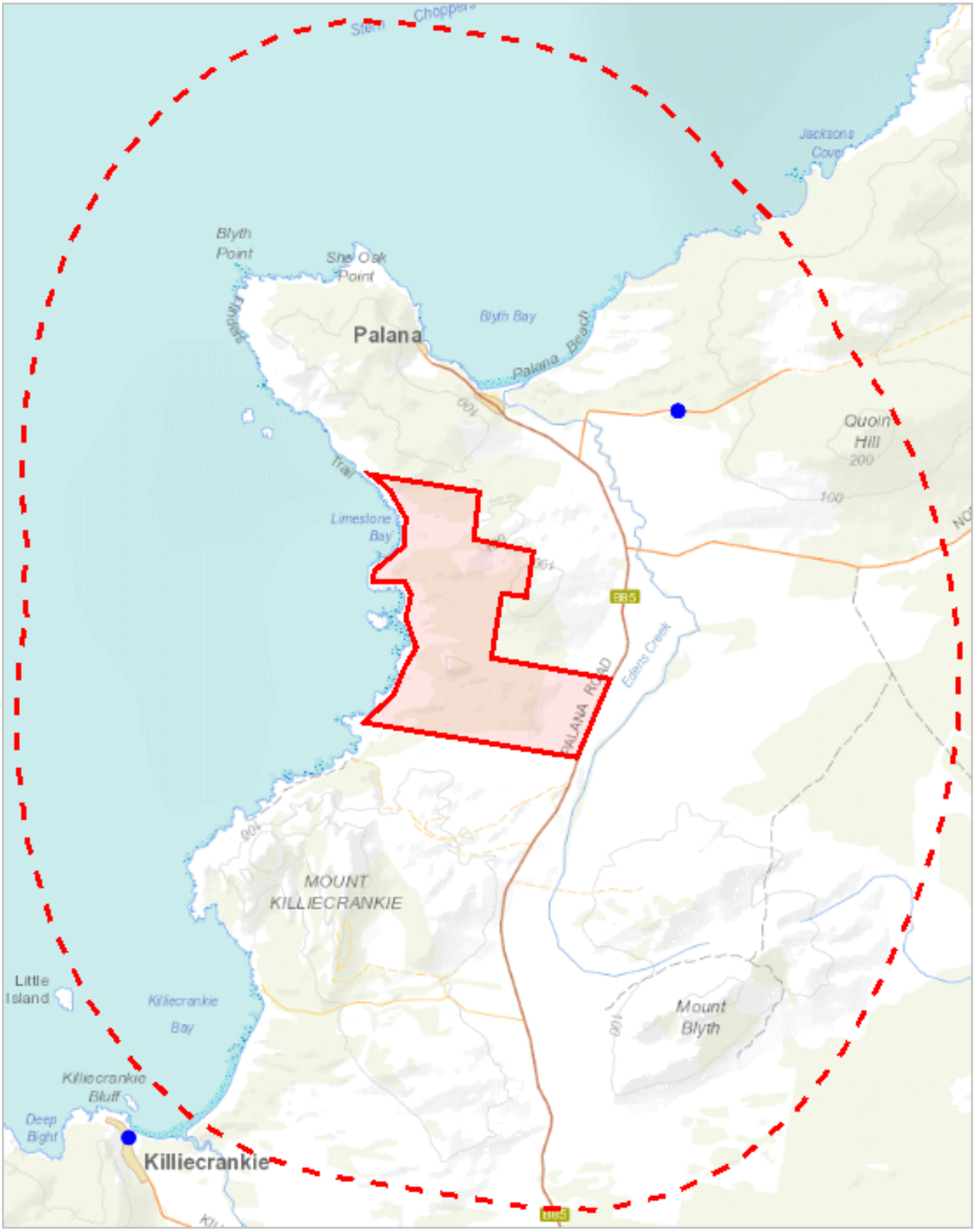
http://dpipwe.tas.gov.au/invasive-species/weeds

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

Priority Weeds within 5000 m

13.1.2 April 2023

580745, 5602622



569898, 5589042

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

Priority Weeds within 5000 m

13.1.2 April 2023

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

Priority Weeds within 5000 m

13.1.2 April 2023

Verified Records

Species	Common Name	Observation Count	Last Recorded
Gomphocarpus fruticosus subsp. fruticosus	swanplant	1	04-Dec-2012
Verbascum thapsus	great mullein	1	04-Dec-2012

Unverified Records

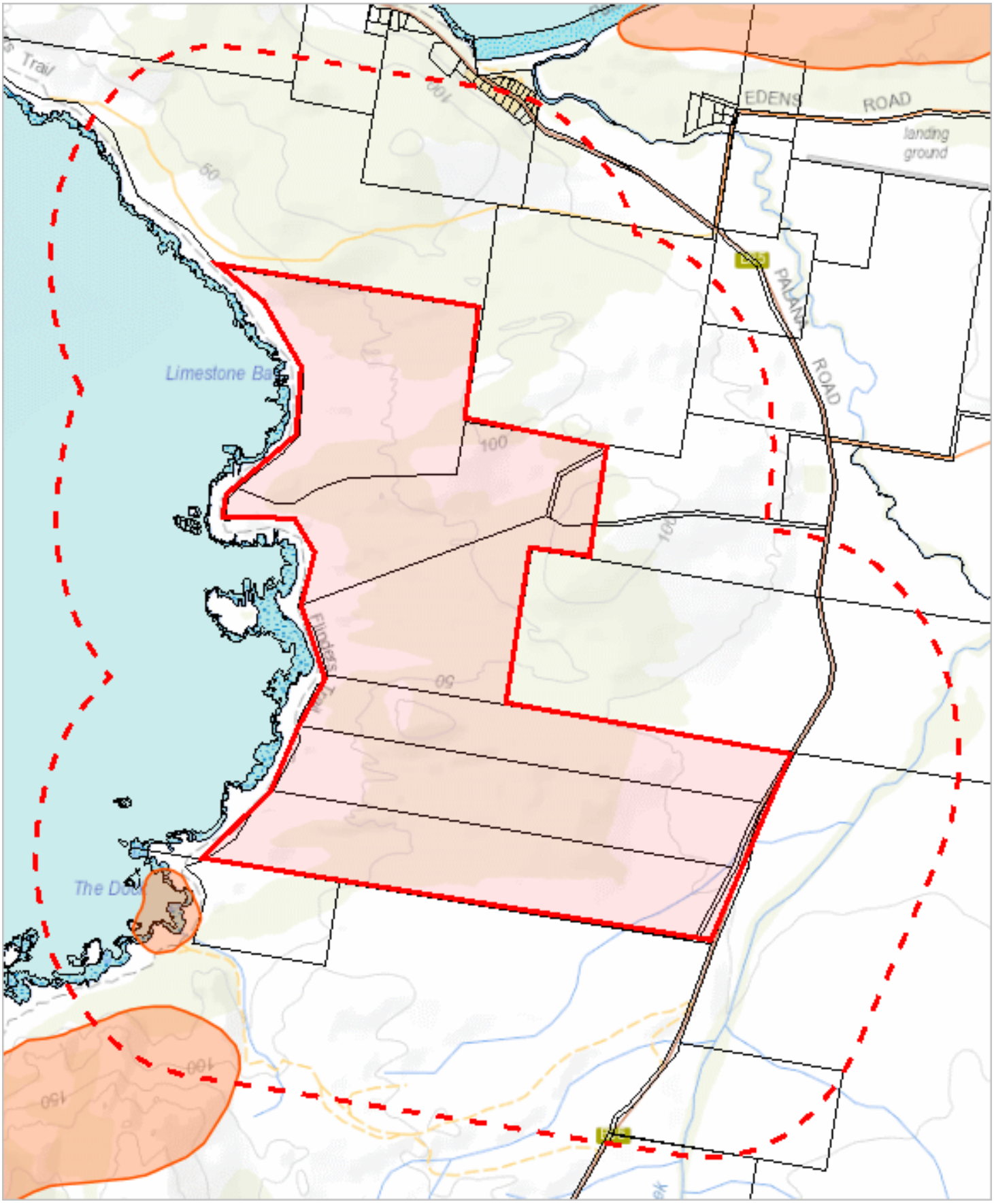
For more information about introduced weed species, please visit the following URL for contact details in your area:

http://dpipwe.tas.gov.au/invasive-species/weeds

Geoconservation sites within 1000 metres

13.1.2 April 2023

577626, 5598604



573012, 5593061

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

Geoconservation sites within 1000 metres

13.1.2 April 2023

Legend: Geoconservation (NVA)

Legend: Cadastral Parcels

Geoconservation sites within 1000 metres

Id	Name	Statement of Significance	Significance Level	Status
2268	Mt Killiecrankie Granite Pluton	Notable example of type.	District	Listed
2299	The Dock Pocket Beaches	Notable example of type.	District	Listed

For more information about the Geoconservation Database, please visit the website: http://dpipwe.tas.gov.au/conservation/geoconservation
or contact the Geoconservation Officer:

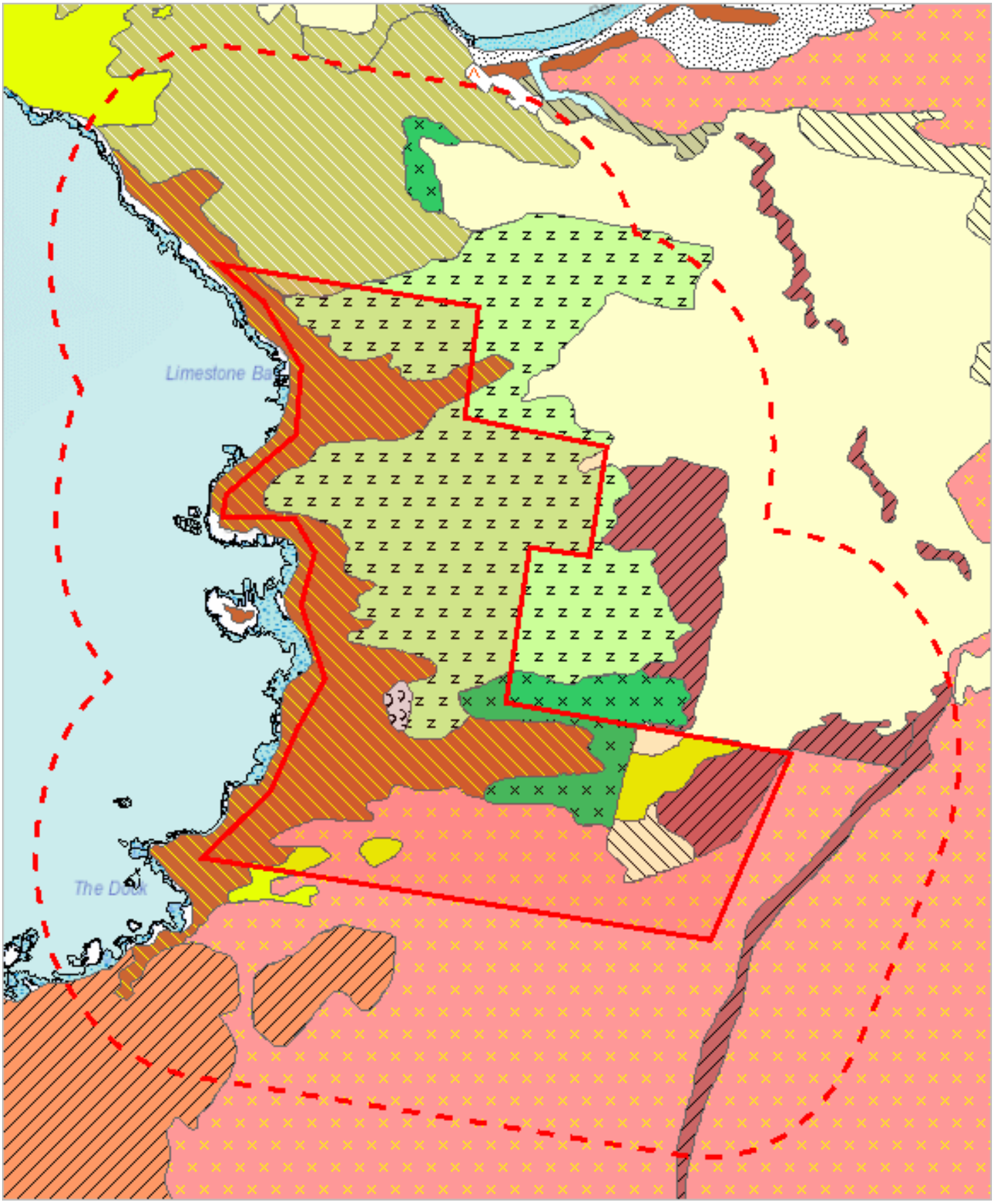
Telephone: (03) 6165 4401
Email: Geoconservation.Enquiries@dpipwe.tas.gov.au
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

*** No Acid Sulfate Soils found within 1000 metres ***

TASVEG 4.0 Communities within 1000 metres

13.1.2 April 2023

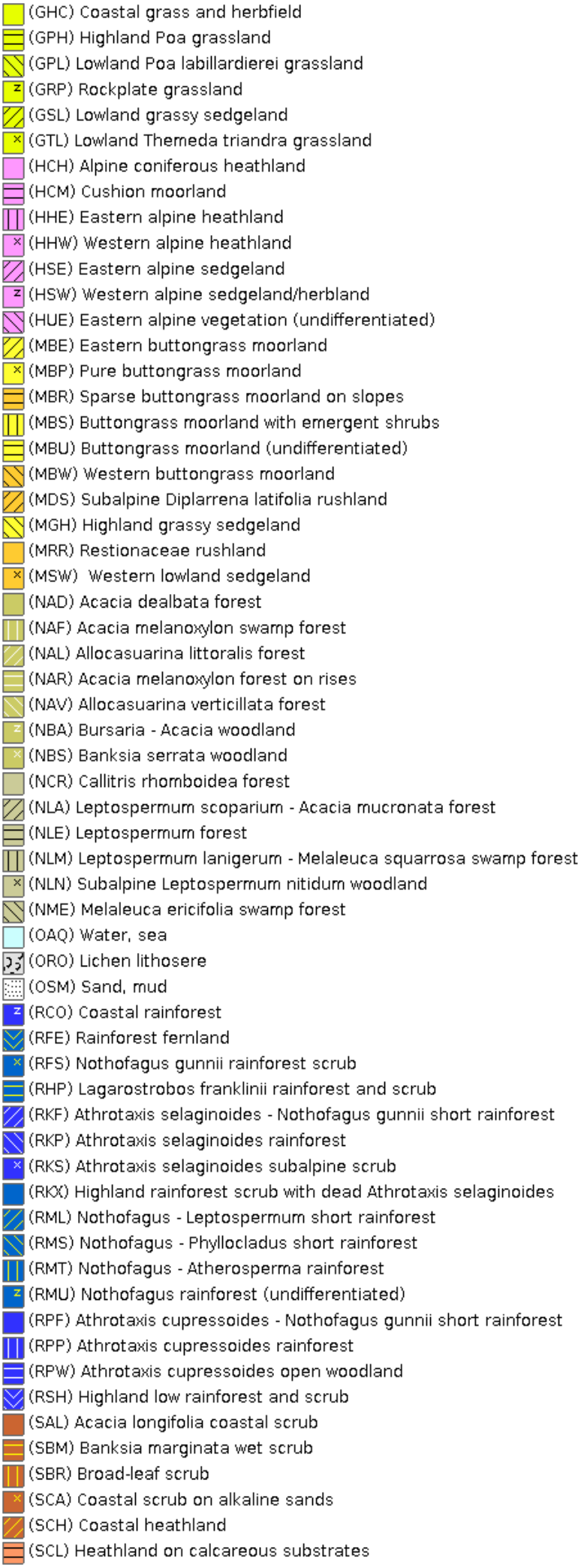
577626, 5598604



573012, 5593061

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

Legend: TASVEG 4.0


(GHC) Coastal grass and herbfield
(GPH) Highland Poa grassland
(GPL) Lowland Poa labillardierei grassland
(GRP) Rockplate grassland
(GSL) Lowland grassy sedgeland
(GTL) Lowland Themeda triandra grassland
(HCH) Alpine coniferous heathland
(HCM) Cushion moorland
(HHE) Eastern alpine heathland
(HHW) Western alpine heathland
(HSE) Eastern alpine sedgeland
(HSW) Western alpine sedgeland/herbland
(HUE) Eastern alpine vegetation (undifferentiated)
(MBE) Eastern buttongrass moorland
(MBP) Pure buttongrass moorland
(MBR) Sparse buttongrass moorland on slopes
(MBS) Buttongrass moorland with emergent shrubs
(MBU) Buttongrass moorland (undifferentiated)
(MBW) Western buttongrass moorland
(MDS) Subalpine Diplarrena latifolia rushland
(MGH) Highland grassy sedgeland
(MRR) Restionaceae rushland
(MSW) Western lowland sedgeland
(NAD) Acacia dealbata forest
(NAF) Acacia melanoxylon swamp forest
(NAL) Allocasuarina littoralis forest
(NAR) Acacia melanoxylon forest on rises
(NAV) Allocasuarina verticillata forest
(NBA) Bursaria - Acacia woodland
(NBS) Banksia serrata woodland
(NCR) Callitris rhomboidea forest
(NLA) Leptospermum scoparium - Acacia mucronata forest
(NLE) Leptospermum forest
(NLM) Leptospermum lanigerum - Melaleuca squarrosa swamp forest
(NLN) Subalpine Leptospermum nitidum woodland
(NME) Melaleuca ericifolia swamp forest
(OAQ) Water, sea
(ORO) Lichen lithosere
(OSM) Sand, mud
(RCO) Coastal rainforest
(RFE) Rainforest fernland
(RFS) Nothofagus gunnii rainforest scrub
(RHP) Lagarostrobos franklinii rainforest and scrub
(RKF) Athrotaxis selaginoides - Nothofagus gunnii short rainforest
(RKP) Athrotaxis selaginoides rainforest
(RKS) Athrotaxis selaginoides subalpine scrub
(RKX) Highland rainforest scrub with dead Athrotaxis selaginoides
(RML) Nothofagus - Leptospermum short rainforest
(RMS) Nothofagus - Phyllocladus short rainforest
(RMT) Nothofagus - Atherosperma rainforest
(RMU) Nothofagus rainforest (undifferentiated)
(RPF) Athrotaxis cupressoides - Nothofagus gunnii short rainforest
(RPP) Athrotaxis cupressoides rainforest
(RPW) Athrotaxis cupressoides open woodland
(RSH) Highland low rainforest and scrub
(SAL) Acacia longifolia coastal scrub
(SBM) Banksia marginata wet scrub
(SBR) Broad-leaf scrub
(SCA) Coastal scrub on alkaline sands
(SCH) Coastal heathland
(SCL) Heathland on calcareous substrates

(SED) Eastern scrub on dolerite
(SHS) Subalpine heathland
(SHW) Wet heathland
(SKA) Kunzea ambigua regrowth scrub
(SLG) Leptospermum glaucescens heathland and scrub
(SLL) Leptospermum lanigerum scrub
(SLS) Leptospermum scoparium heathland and scrub
(SMM) Melaleuca squamea heathland
(SMP) Melaleuca pustulata scrub
(SMR) Melaleuca squarrosa scrub
(SRE) Eastern riparian scrub
(SRF) Leptospermum with rainforest scrub
(SRH) Rookery halophytic herbland
(SSC) Coastal scrub
(SSK) Scrub complex on King Island
(SSW) Western subalpine scrub
(SSZ) Spray zone coastal complex
(SWR) Western regrowth complex
(SWW) Western wet scrub
(WBR) Eucalyptus brookeriana wet forest
(WDA) Eucalyptus dalrympleana forest
(WDB) Eucalyptus delegatensis forest with broad-leaf shrubs
(WDL) Eucalyptus delegatensis forest over Leptospermum
(WDR) Eucalyptus delegatensis forest over rainforest
(WDU) Eucalyptus delegatensis wet forest (undifferentiated)
(WGK) Eucalyptus globulus King Island forest
(WGL) Eucalyptus globulus wet forest
(WNL) Eucalyptus nitida forest over Leptospermum
(WNR) Eucalyptus nitida forest over rainforest
(WNU) Eucalyptus nitida wet forest (undifferentiated)
(WOB) Eucalyptus obliqua forest with broad-leaf shrubs
(WOL) Eucalyptus obliqua forest over Leptospermum
(WOR) Eucalyptus obliqua forest over rainforest
(WOU) Eucalyptus obliqua wet forest (undifferentiated)
(WRE) Eucalyptus regnans forest
(WSU) Eucalyptus subcrenulata forest and woodland
(WVI) Eucalyptus viminalis wet forest

Legend: Cadastral Parcels

TASVEG 4.0 Communities within 1000 metres

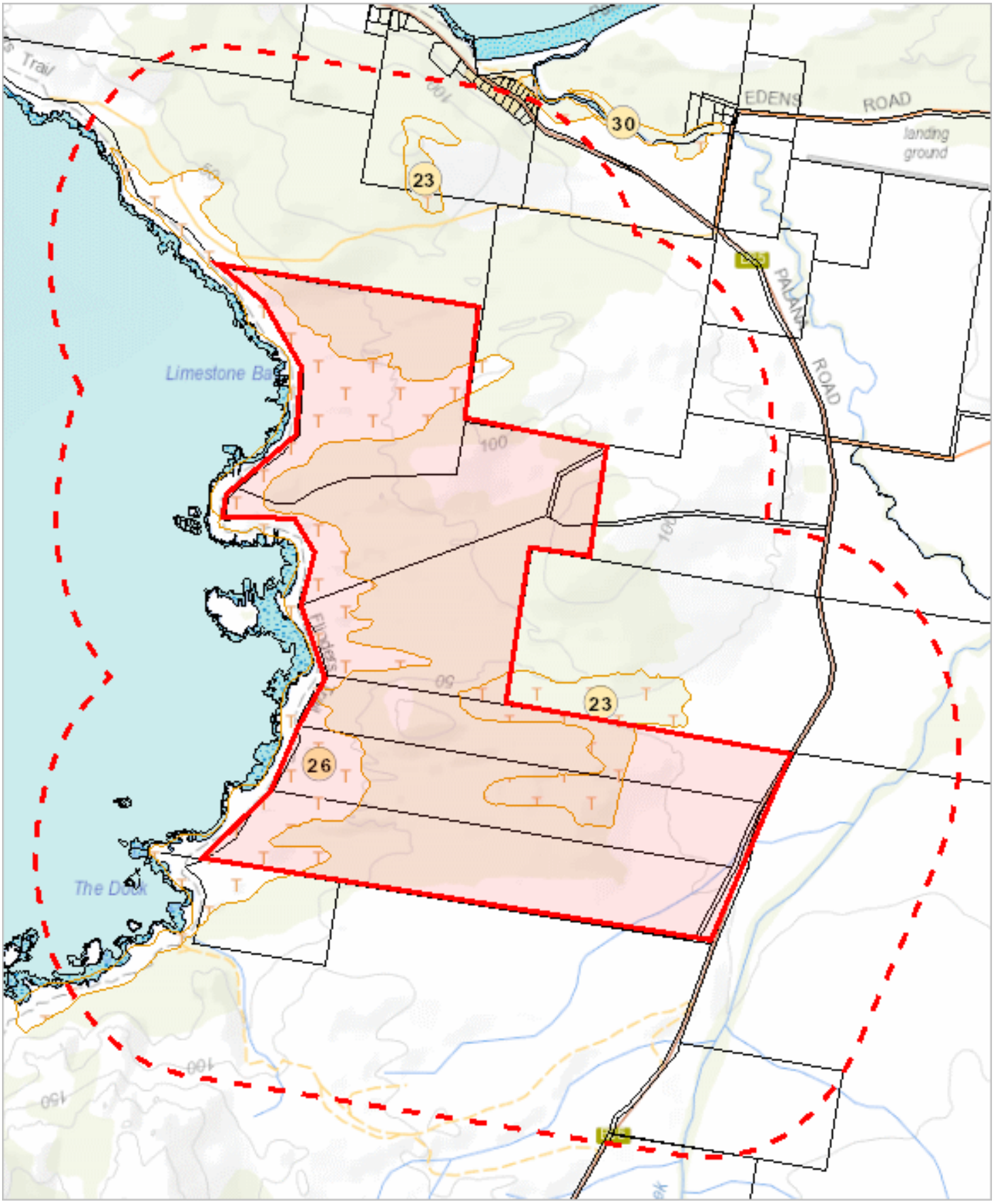
Code	Community	Canopy Tree
DNF	(DNF) Eucalyptus nitida Furneaux forest	
DVC	(DVC) Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland	
FAG	(FAG) Agricultural land	
FRG	(FRG) Regenerating cleared land	
FUR	(FUR) Urban areas	
GHC	(GHC) Coastal grass and herbfield	
NAV	(NAV) Allocasuarina verticillata forest	EG
NAV	(NAV) Allocasuarina verticillata forest	
NME	(NME) Melaleuca ericifolia swamp forest	
ORO	(ORO) Lichen lithosere	
SAL	(SAL) Acacia longifolia coastal scrub	
SHW	(SHW) Wet heathland	
SLG	(SLG) Leptospermum glaucescens heathland and scrub	
SMR	(SMR) Melaleuca squarrosa scrub	
SSC	(SSC) Coastal scrub	

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

Threatened Communities (TNVC 2014) within 1000 metres

13.1.2 April 2023

577626, 5598604



573012, 5593061

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

Threatened Communities (TNVC 2014) within 1000 metres

13.1.2 April 2023

Legend: Threatened Communities

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

Legend: Cadastral Parcels

Threatened Communities (TNVC 2014) within 1000 metres

13.1.2 April 2023

Scheduled Community Id	Scheduled Community Name
23	Eucalyptus viminalis - Eucalyptus globulus coastal forest and woodland
26	Heathland on calcareous substrates
30	Melaleuca ericifolia swamp forest

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

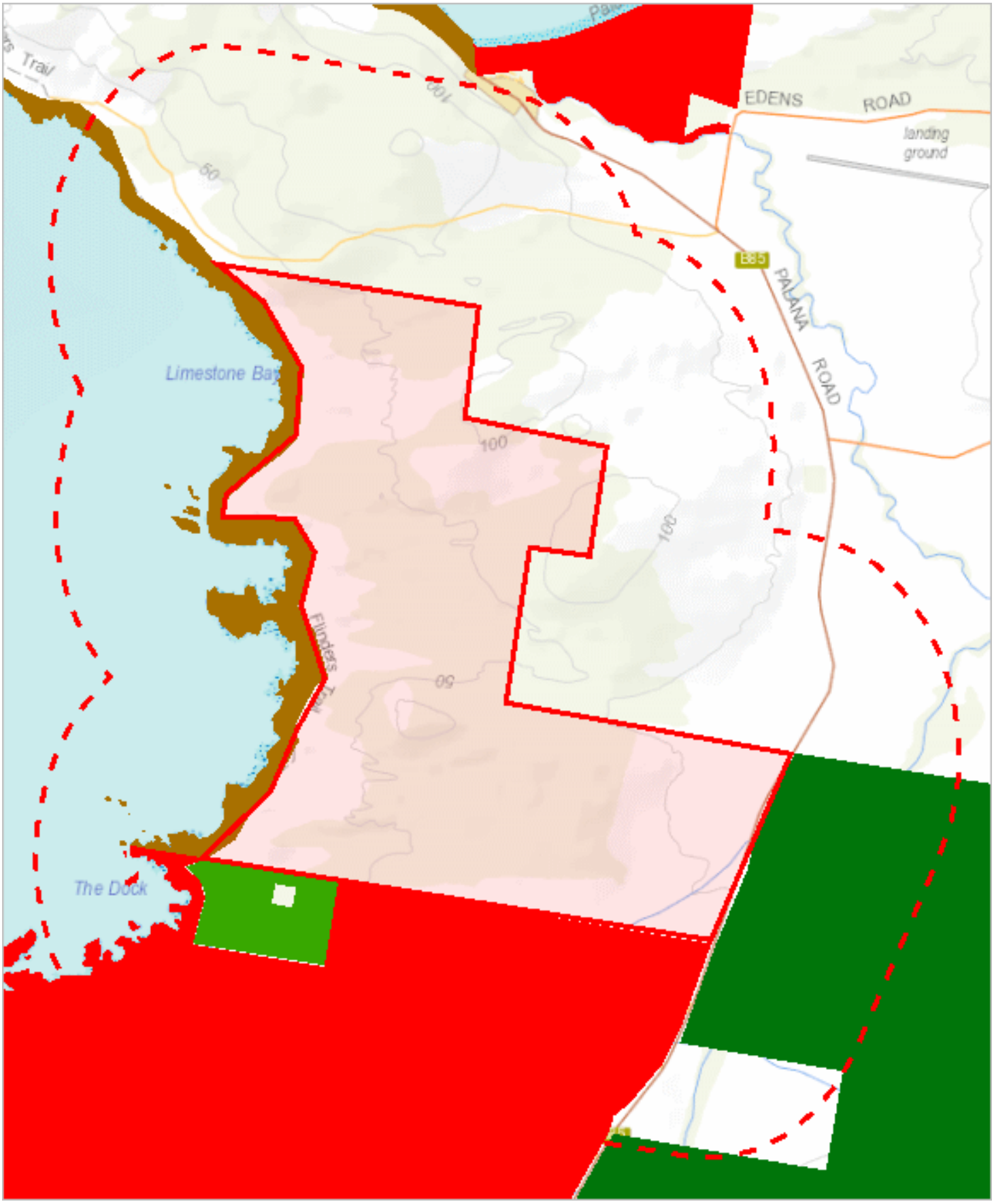
*** No Fire History (All) found within 1000 metres ***

*** No Fire History (Last Burnt) found within 1000 metres ***

Reserves within 1000 metres

13.1.2 April 2023

577626, 5598604



573012, 5593061

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

Legend: Tasmanian Reserve Estate

- Conservation Area
- Conservation Area and Conservation Covenant (NCA)
- Game Reserve
- Historic Site
- Indigenous Protected Area
- National Park
- Nature Reserve
- Nature Recreation Area
- Regional Reserve
- State Reserve
- Wellington Park
- Public authority land within WHA
- Future Potential Production Forest
- Informal Reserve on Permanent Timber Production Zone Land or STT managed land
- Informal Reserve on other public land
- Conservation Covenant (NCA)
- Private Nature Reserve and Conservation Covenant (NCA)
- Private Sanctuary and Conservation Covenant (NCA)
- Private Sanctuary
- Private land within WHA
- Management Agreement
- Management Agreement and Stewardship Agreement
- Stewardship Agreement
- Part 5 Agreement (Meander Dam Offset)
- Other Private Reserve

Legend: Cadastral Parcels

Reserves within 1000 metres

Name	Classification	Status	Area (HA)
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.007054560 0000000005
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00764929
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00788909
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00799662
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00822531
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00830053
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00845118
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00858151
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00900302
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.009201260 000000001
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00952115
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00964899
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00983944
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.00999017
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01006079
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01039496
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01040203
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01073637
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.0109287
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01171019
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01364635
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.015643999 999999998
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01660545
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01665147
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01771017
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01945961
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.01977601
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.02103427
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.024599410 000000002
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.02556139
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.02830868
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.03508395
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.03516774
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.03535785
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.03652258
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.03692551
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.03721406
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.03824712
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.04101404
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.04259181
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.04583579
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.04836657
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.05389957
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.06862436
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.06877297
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.07058721
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.073742410 00000001
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.07401064
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.076726280 00000001
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.08904963
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.09333964
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.120181900 00000001
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.12535608
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.12964134
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.281995
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.29674907
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.29781013
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.32893643

Reserves within 1000 metres

Name	Classification	Status	Area (HA)
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	0.42471685000000003
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	1.26847772
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	2.05890369
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	2.829856890000003
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	2.99103289
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	6.450584819999996
Blyth Point Conservation Area	Conservation Area	Other Formal Reserve	76.82896603
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.00723701
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.007561220000000004
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.00879979
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.00920279
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.01032197
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.01456532
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.01720177
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.01819081
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.01959808
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.02350895
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.04331781
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.05096222
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.053793560000000004
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.06433761
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.06897915
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.07748502
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.09838021
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.11977031
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.12083189
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.13487838
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.15864136
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.16357172
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.20478779
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.2500285
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.39146842
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	0.67433323
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	3.345263639999998
Killiecrankie Nature Recreation Area	Nature Recreation Area	Other Formal Reserve	826.574435999
Wingaroo Nature Reserve	Nature Reserve	Dedicated Formal Reserve	10747.2015514
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	23.12212204

For more information about the Tasmanian Reserve Estate, please contact the Sustainable Land Use and Information Management Branch.

Telephone: (03) 6777 2224

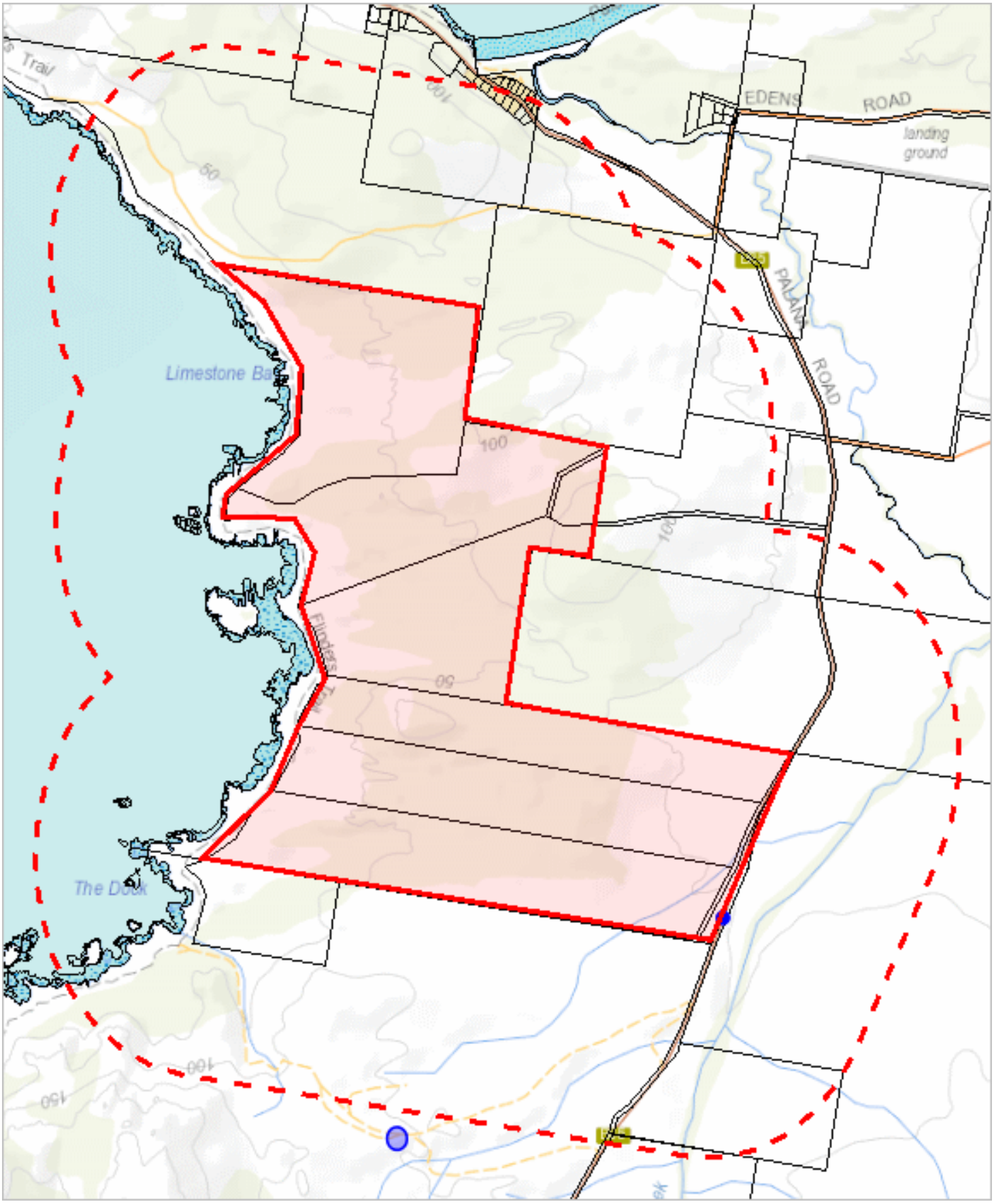
Email: LandManagement.Enquiries@dpipwe.tas.gov.au

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

Known biosecurity risks within 1000 meters

13.1.2 April 2023

577626, 5598604

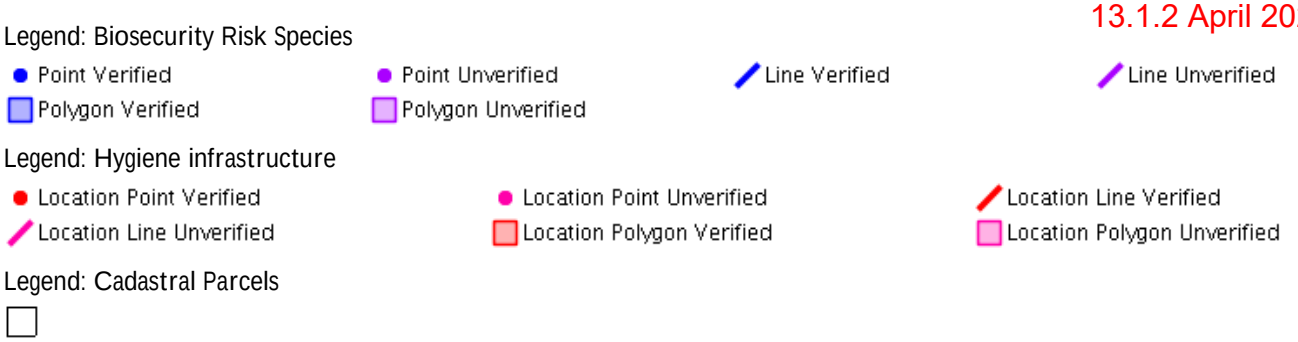


573012, 5593061

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

Known biosecurity risks within 1000 meters

13.1.2 April 2023



Known biosecurity risks within 1000 meters

13.1.2 April 2023

Verified Species of biosecurity risk

Species Name	Common Name	Prescription	Observation Count	Last Recorded
Phytophthora cinnamomi	root rot or water mould		1	04-Dec-2012

Unverified Species of biosecurity risk

No unverified species of biosecurity risk found within 1000 metres

Generic Biosecurity Guidelines

The level and type of hygiene protocols required will vary depending on the tenure, activity and land use of the area. In all cases adhere to the land manager's biosecurity (hygiene) protocols. As a minimum always Check / Clean / Dry (Disinfect) clothing and equipment before trips and between sites within a trip as needed http://dpipwe.tas.gov.au/invasive-species/weeds/weed-hygiene/keeping-it-clean-a-tasmanian-field-hygiene-manual

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

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

Apply controls relevant to the area / activity:

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

Hygiene Infrastructure

No known hygiene infrastructure found within 1000 metres

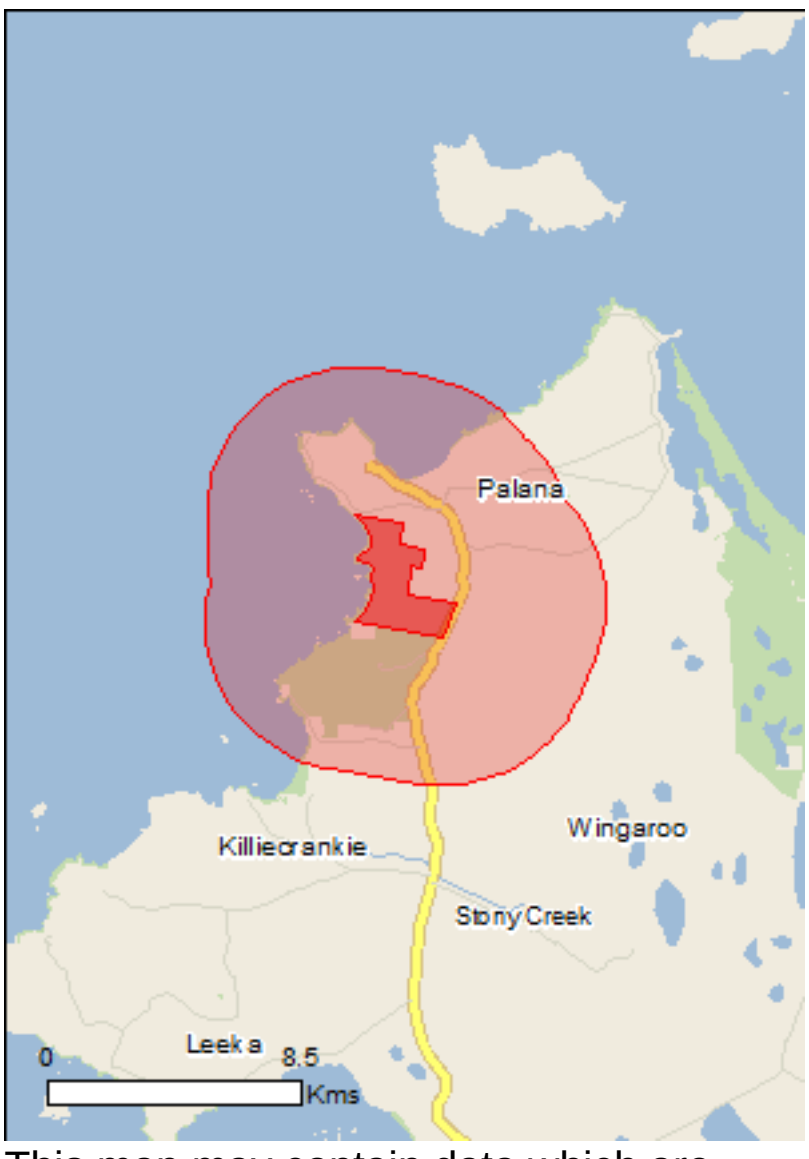
EPBC Act Protected Matters Report

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

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

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

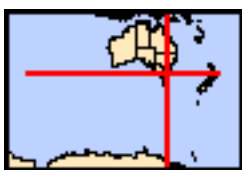
Report created: 20/12/20 08:38:47



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2015

Coordinates

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	45
Listed Migratory Species:	41

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	75
Whales and Other Cetaceans:	10
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	6
Regional Forest Agreements:	1
Invasive Species:	22
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

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

Name	Status	Type of Presence
Giant Kelp Marine Forests of South East Australia	Endangered	Community may occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area
Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana)	Critically Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Aquila audax fleayi Tasmanian Wedge-tailed Eagle, Wedge-tailed Eagle (Tasmanian) [64435]	Endangered	Breeding likely to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur

Name	Status	Type of Presence within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area
Pardalotus quadragintus Forty-spotted Pardalote [418]	Endangered	Species or species habitat may occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Status	Type of Presence
Thalassarche salvini		
Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thinornis cucullatus cucullatus		
Hooded Plover (eastern), Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat known to occur within area
Crustaceans		
Engaeus martigener		
Furneaux Burrowing Crayfish [67220]	Endangered	Species or species habitat may occur within area
Fish		
Galaxiella pusilla		
Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Vulnerable	Species or species habitat likely to occur within area
Frogs		
Litoria raniformis		
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Eubalaena australis		
Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Megaptera novaeangliae		
Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Pseudomys novaehollandiae		
New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Caladenia caudata		
Tailed Spider-orchid [17067]	Vulnerable	Species or species habitat may occur within area
Pterostylis ziegeleri		
Grassland Greenhood, Cape Portland Greenhood [64971]	Vulnerable	Species or species habitat may occur within area
Senecio psilocarpus		
Swamp Fireweed, Smooth-fruited Groundsel [64976]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Sharks		
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Listed Migratory Species [Resource Information]		
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or

Name	Threatened	Type of Presence
		related behaviour likely to occur within area
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
[Balaena glacialis australis](#) Southern Right Whale [75529]	Endangered*	Species or species habitat known to occur within area
[Balaenoptera musculus](#) Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
[Caperea marginata](#) Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
[Carcharodon carcharias](#) White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
[Caretta caretta](#) Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
[Chelonia mydas](#) Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
[Dermochelys coriacea](#) Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
[Lagenorhynchus obscurus](#) Dusky Dolphin [43]		Species or species habitat may occur within area
[Lamna nasus](#) Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
[Megaptera novaeangliae](#) Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
[Orcinus orca](#) Killer Whale, Orca [46]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
[Calidris alba](#) Sanderling [875]		Species or species habitat likely to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Endangered	Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
[Limosa lapponica](#) Bar-tailed Godwit [844]		Species or species habitat known to occur within area
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Ardea alba](#) Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
[Ardea ibis](#) Cattle Egret [59542]		Species or species habitat may occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
[Calidris alba](#) Sanderling [875]		Species or species habitat likely to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Catharacta skua](#) Great Skua [59472]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Breeding known to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Larus novaehollandiae Silver Gull [810]		Breeding known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur

Name	Threatened	Type of Presence within area
[Puffinus griseus](#) Sooty Shearwater [1024]		Species or species habitat may occur within area
[Sterna albifrons](#) Little Tern [813]		Species or species habitat may occur within area
[Sterna caspia](#) Caspian Tern [59467]		Breeding known to occur within area
[Thalassarche bulleri](#) Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
[Thalassarche cauta](#) Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche chrysostoma](#) Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area
[Thalassarche impavida](#) Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche melanophris](#) Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche salvini](#) Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Thalassarche sp. nov.](#) Pacific Albatross [66511]	Vulnerable*	Species or species habitat may occur within area
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Thinornis rubricollis](#) Hooded Plover [59510]		Species or species habitat known to occur within area
[Thinornis rubricollis rubricollis](#) Hooded Plover (eastern) [66726]	Vulnerable*	Species or species habitat known to occur within area
Fish		
[Heraldia nocturna](#) Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
[Hippocampus abdominalis](#) Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area
[Hippocampus breviceps](#) Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
[Hippocampus minotaur](#) Bullneck Seahorse [66705]		Species or species habitat may occur within area
[Histiogamphelus briggsii](#) Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Hypselognathus rostratus Knifesnout Pipefish, Knife-snouted Pipefish [66245]		Species or species habitat may occur within area
Kaupus costatus Deepbody Pipefish, Deep-bodied Pipefish [66246]		Species or species habitat may occur within area
Kimblaeus bassensis Trawl Pipefish, Bass Strait Pipefish [66247]		Species or species habitat may occur within area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys semistriatus Halfbanded Pipefish [66261]		Species or species habitat may occur within area
Mitotichthys tuckeri Tucker's Pipefish [66262]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus robustus Robust Pipehorse, Robust Spiny Pipehorse [66274]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Stipecampus cristatus Ringback Pipefish, Ring-backed Pipefish [66278]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Arctocephalus pusillus Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area

Whales and other Cetaceans [Resource Information]

Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area

Name	Status	Type of Presence
Megaptera novaeangliae		
Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca		
Killer Whale, Orca [46]		Species or species habitat likely to occur within area
Tursiops truncatus s. str.		
Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves [Resource Information]

Name	State
Blyth Point	TAS
Jacksons Cove	TAS
Killiecrankie	TAS
Palana Beach	TAS
The Dock	TAS
Wingaroo	TAS

Regional Forest Agreements [Resource Information]

Note that all areas with completed RFAs have been included.

Name	State
Tasmania RFA	Tasmania

Invasive Species [Resource Information]

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

Name	Status	Type of Presence
Birds		
Alauda arvensis		
Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos		
Mallard [974]		Species or species habitat likely to occur within area
Callipepla californica		
California Quail [59451]		Species or species habitat likely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitat likely to occur within area
Carduelis chloris		
European Greenfinch [404]		Species or species habitat likely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Meleagris gallopavo		
Wild Turkey [64380]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Pavo cristatus Indian Peafowl, Peacock [919]		Species or species habitat likely to occur within area
Phasianus colchicus Common Pheasant [920]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Caveat

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

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

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

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

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-39.770095 147.864499,-39.771942 147.878747,-39.776691 147.877889,-39.777681 147.8857,-39.782298 147.88467,-39.781968 147.88158,-39.7883 147.880121,-39.790279 147.895313,-39.798192 147.891193,-39.794763 147.86407,-39.791927 147.867589,-39.789158 147.868877,-39.787113 147.870336,-39.784277 147.869048,-39.782166 147.869735,-39.780781 147.868619,-39.780649 147.864929,-39.779726 147.8651,-39.777351 147.868877,-39.774646 147.86922,-39.771612 147.866903,-39.770095 147.864499

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-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

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

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

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