PLAN 5

PLANNING APPLICATION P17-225

BARTON ROAD, EPPING FOREST

ATTACHMENTS

A Application & plans, correspondence with applicant

B Responses from referral agencies

C Representations & applicant's response

ATTACHMENT A

PLANNING APPLICATION
Proposal

Description of proposal: REFER TO D.A. SUBMISSION REPORT

(attach additional sheets if necessary)

Site address: BARTON RD, EPPING FOREST

CT no: 27720/1

Estimated cost of project $200,000 *(include cost of landscaping, car parks etc for commercial/industrial uses)*

Are there any existing buildings on this property? Yes / (NO)
If yes – main building is used as .....

If variation to Planning Scheme provisions requested, justification to be provided:

REFER TO D.A. SUBMISSION REPORT

(attach additional sheets if necessary)

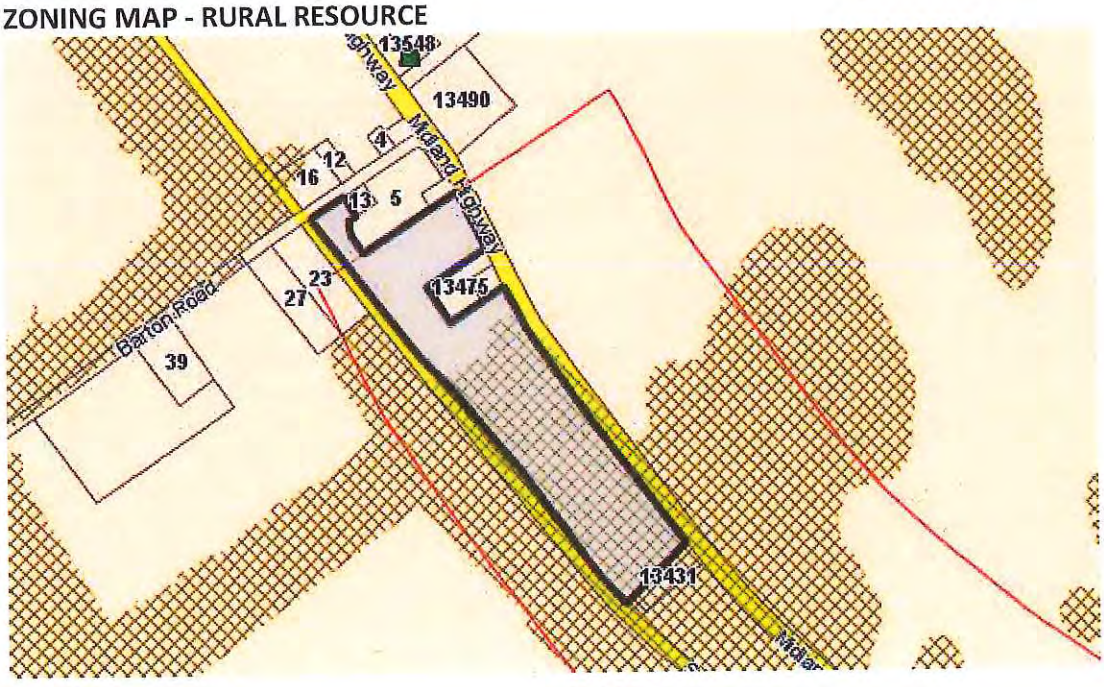
Is any signage required? NO
(if yes, provide details)

Exhibited

P17-225

AERIAL PHOTOGRAPH & SERVICES MAP for BARTON ROAD, EPPING FOREST

ZONING MAP - RURAL RESOURCE



Exhibited

GHD

Zinfra

Small Towns Water Supply Program WP2
Epping Forest DA Submission Report
ZIN-WP2-R-6-O-002-1

August 2017

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Appendices

1. Introduction

1.1 Purpose of this Report

This report has been prepared to accompany a development application for a 0.35 ML reservoir and security fencing at certificate of title 27720/1 Barton Road, Epping Forest as part of TasWater's Small Towns Water Supply Program.

The report provides an assessment of the proposal against the requirements of the *Northern Midlands Interim Planning Scheme 2013* (the Scheme).

1.2 Report Structure

This report has been structured to provide background to the proposal and an assessment of the applicable Interim Planning Scheme provisions. Section 2 examines the characteristics of the existing site and surrounds. Section 3 details the proposed use and development, including background. The statutory planning assessment is provided in Section 4.

1.3 Scope and Limitations

This report has been prepared by GHD Pty Ltd for Zinfra Contracting Pty Ltd and may only be used and relied on by Zinfra Contracting Pty Ltd for the purposes of accompanying the Development Application to Northern Midlands Council and the Department of State Growth. GHD Pty Ltd otherwise disclaims responsibility to any person other than Zinfra Contracting Pty Ltd, Northern Midlands Council and the Department of State Growth arising in connection with this report. GHD Pty Ltd also excludes implied warranties and conditions, to the extent legally permissible.

2. Site and Surrounds

2.1 Subject Site

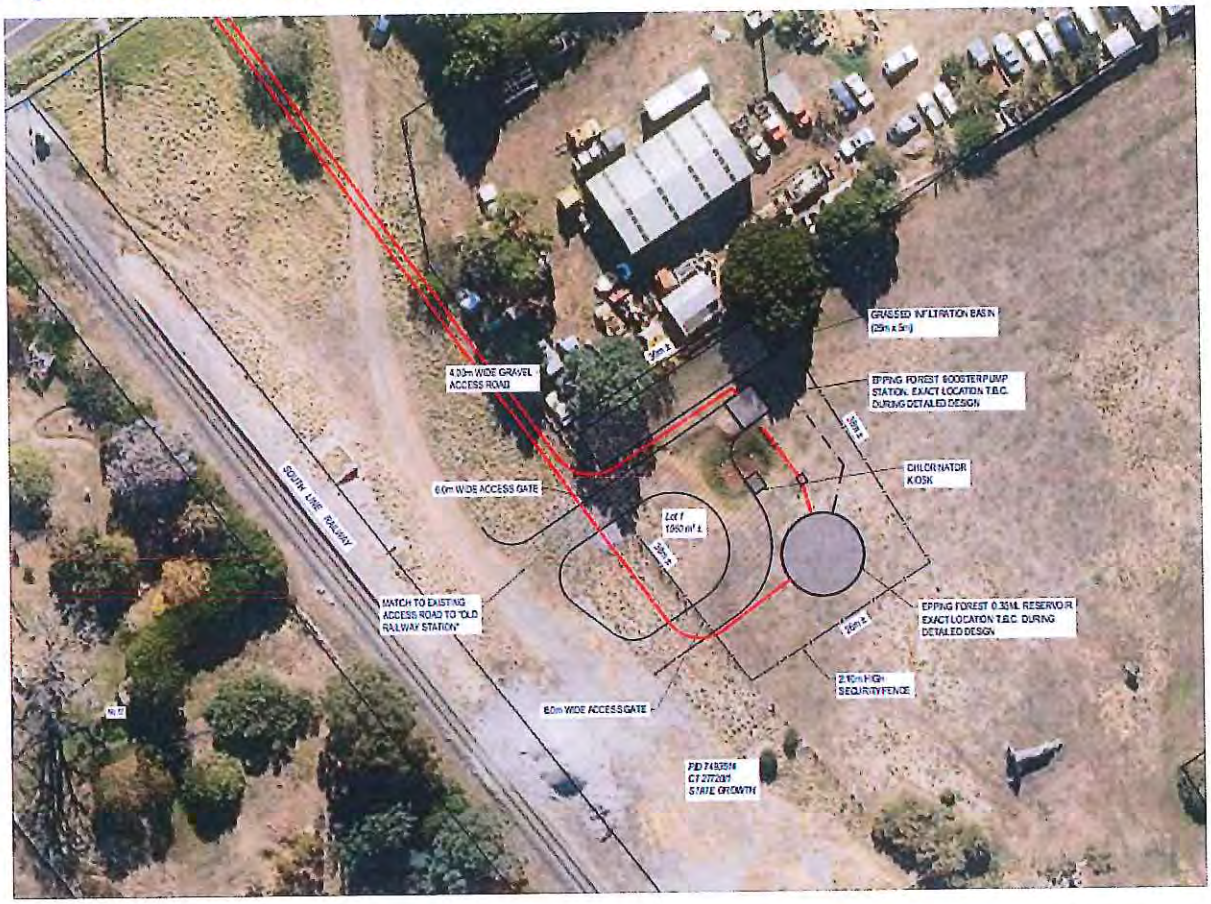
2.1.1 Location

The subject site is located at Barton Road, Epping Forest, with additional frontages to the Midland Highway and the South Line Railway. The site incorporates an overall area of approximately 6 hectares (Figure 2-1). The subject reservoir area, however, is located on an area of 1,060 m^2 and situated adjacent to the neighbouring property, which has frontage to Midland Highway (Figure 2-2). There is existing access to the site from Barton Road.

Figure 2-1 Aerial view of subject site

Base image from theLIST (www.thelist.tas.gov.au). © State of Tasmania.

Figure 2-2 View of land that is the subject of this application



Base image from theLIST (www.thelist.tas.gov.au). © State of Tasmania.

2.1.2 Title Information

The site is Crown land under the authority of the Department of State Growth and legally comprised in Certificate of Title Volume 27720 Folio 1. A copy of the title for the property is included in Appendix A and Crown landowner consent is provided at Appendix B.

2.1.3 Land Use History

The land has been used by the Australian National Railways Commission (railway) and the former Department of Main Roads (gravel reserve) in the past. It is currently managed by the Department of State Growth and it is understood that the land is surplus to the Department's requirements. A temporary licence for grazing purposes exists over the land.

2.1.4 Land Capability

The land is categorised as Class 4 in terms of the Land Capability Classification System used by the Department of Primary Industries, Parks, Water and Environment and mapped on the LIST. Class 4 land is described as 'well suited to grazing but which is limited to occasional cropping or a very restricted range of crops'. The land is not prime agricultural land, which is classified as Class 1, 2 or 3 on the system.

2.1.5 Planning Overlays

The title is affected by a Priority Habitat overlay (striped green) and a Scenic Corridor overlay (solid green) to the south. The land required for TasWater infrastructure is to the north of the site and not affected by any planning scheme overlays.

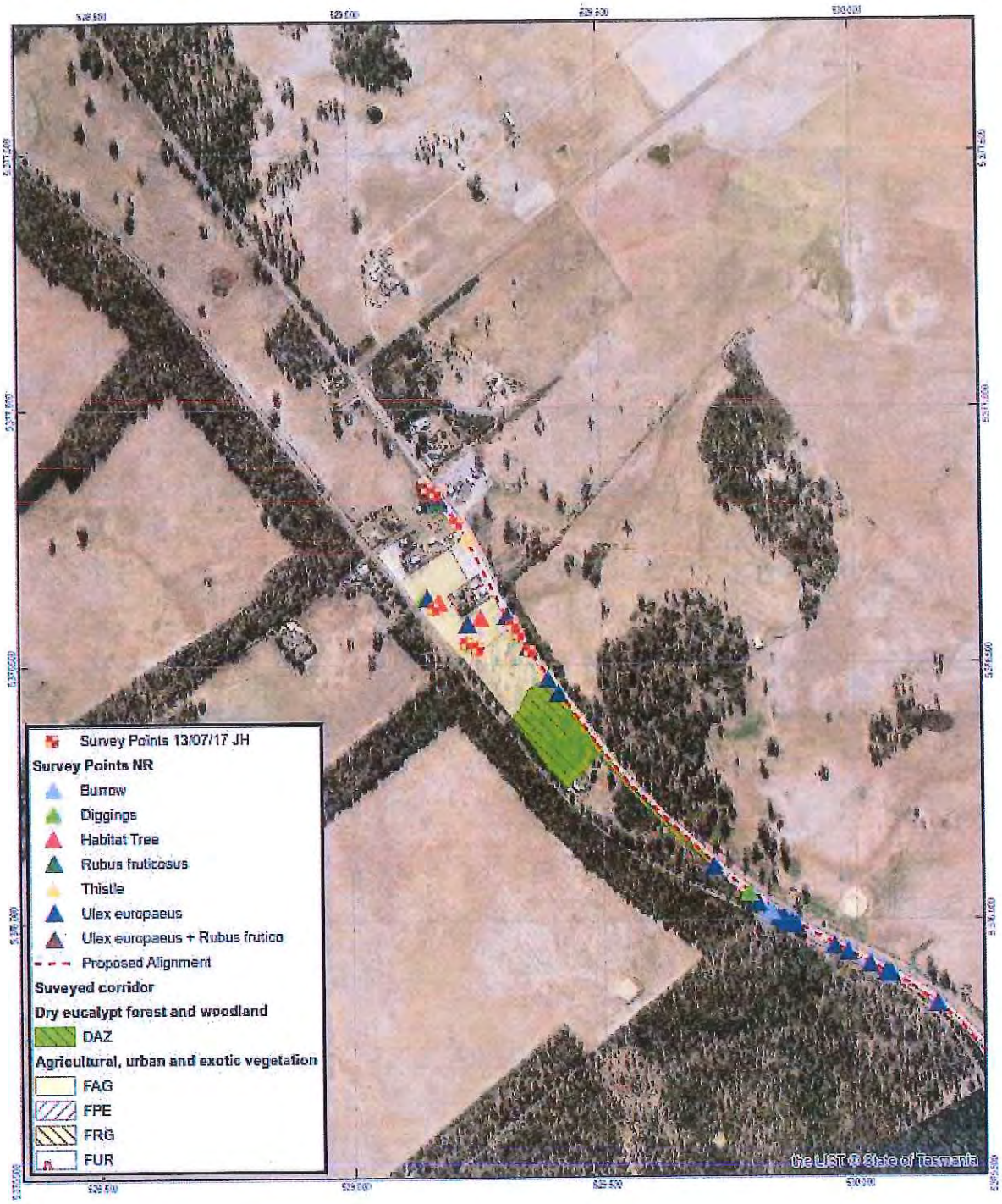
Figure 2-3 Planning scheme overlays

Base image from theLIST (www.thelist.tas.gov.au). © State of Tasmania.

2.1.6 Flora and Fauna

An ecological values survey of the site has been undertaken as part of the overall Small Towns Water Supply Program. The survey reveals that the vegetation adjacent to Barton Road is categorised as FAG (agricultural land) and does not contain any priority habitat or protected vegetation (Figure 2-4). The dry eucalypt forest and woodland further to the south of the title is not affected by the proposed reservoir works.

Figure 2-4 Ecological values mapping



Paper Size A3
0 50 100 200 300 400
Metres
Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

N

GHD

Zinfra Contracting
Small Towns Water Supply Program

Job Number 32-18506
Revision B
Date 20 Jul 2017

Ecological Values - Epping Forest

Figure1-D

G:\32\18506\GIS\Maps\Working\3218500_02_Ecological Values_Epping_RevB.mxd © Sellarsbruce Square Hobart TAS 7000 Australia T 61 3 6210 0000 F 61 3 6210 0001 E ghdmail@ghd.com W www.ghd.com

Data source: DPIPWE Tasveg 2017; DPIPWE NVA threatened species occurrences 2017; GHD proposed route 2017. Created by: jspencer

2.1.7 Site Topography

The topography is relatively flat across the site.

2.2 Surrounding Area

The site is within a rural area predominantly used for primary industry purposes. However, there are a number of other uses in the vicinity of the site including the Epping Fire Station, a service station and several residential properties.

2.3 Infrastructure Services

There is an existing TasWater water main running along Barton Road adjacent to the site. There is no existing sewer or stormwater infrastructure at the site.

3. Proposed Development

3.1 TasWater Small Towns Water Supply Program

The TasWater Small Towns Water Supply Program aims to provide fully-treated water to 12 Tasmanian regional townships currently experiencing Boil Water or Public Health Alerts associated with their existing water supplies. The program is spilt into three packages, namely:

- Work Package 1: Water Treatment Plants (9 towns)
- Work Package 2: Pipeline solutions for 3 towns, including Judbury, Colebrook and Epping Forest
- Work Package 3: Reticulation upgrades in all 12 towns.

3.2 Work Package 2 Scope of Works at Epping Forest

Epping Forest will receive a new water supply from a new Water Treatment Plant (WTP) on the South Esk River near Conara. Treated water from the new WTP will be gravity fed into Conara via an existing pipeline. A new gravity pipeline will then transfer water to a new reservoir in Epping Forest. Water will then be re-chlorinated and fed into the existing reticulation via a booster pump station.

3.3 Works Subject to this Development Application

The subject of this development is the proposed:

- 0.35 megalitre reservoir structure to an approximate height of 3.5 m.
- Grassed infiltration basin for stormwater runoff.
- Associated non-native vegetation clearance (introduced grasses).
- 2.1 m high chain wire security fencing.

The exempt works are described below.

3.4 Works exempt under the *Water and Sewerage Industry (General) Regulations 2009*

Pursuant to Section 10 of the *Water and Sewerage Industry (General) Regulations 2009*, subdivisions creating lots no greater than 800 m^2 are not development under the *Land Use Planning and Approvals Act 1993*. In relation to this development application Taswater are

negotiating with State Growth in relation to occupation of the land without the need for subdivision.

Pursuant to Section 11 of the *Water and Sewerage Industry (General) Regulations 2009*, pump stations, chlorination stations and underground water pipelines are not use or development under the *Land Use Planning and Approvals Act 1993.*

These works therefore do not require assessment against the provisions of the planning scheme and do not form part of this application.

4. Planning Assessment

4.1 Zoning

The subject site is zoned Rural Resource under the *Northern Midlands Interim Planning Scheme 2013* (the Scheme).

4.2 Use Categorisation

4.2.1 Utilities Use

The use is categorised as 'Utilities', which is defined at Table 8.2 of the Scheme as follows:

Use of land for utilities and infrastructure including:

(a) telecommunications;

(b) electricity generation;

(c) transmitting or distributing gas, oil, or power;

(d) transport networks;

(e) collecting, treating, transmitting, storing or distributing water; or

(f) collecting, treating, or disposing of storm or floodwater, sewage, or sullage.

Examples include an electrical sub-station or powerline, gas, water or sewerage main, optic fibre main or distribution hub, pumping station, railway line, retarding basin, road, sewage treatment plant, storm or floodwater drain, water storage dam and weir.

4.2.2 Use Table

In the Rural Resource zone, the Utilities use is classified as Discretionary under the following circumstances:

If :

(a) for existing uses on prime agricultural land; or

(b) not for existing uses; or

(c) the curtilage increases by more than 30% as at the effective date.

Subclause (b) is applicable and, as such, the use is Discretionary.

4.3 Rural Resource Zone

4.3.1 Zone Purpose

26.1.1 Zone Purpose Statements

26.1.1.1 To provide for the sustainable use or development of resources for agriculture, aquaculture, forestry, mining and other primary industries, including opportunities for resource processing.

26.1.1.2 To provide for other use or development that does not constrain or conflict with resource development uses.

26.1.1.3 To provide for economic development that is compatible with primary industry, environmental and landscape values.

26.1.1.4 To provide for tourism-related use and development where the sustainable development of rural resources will not be compromised.

26.1.2 Local Area Objectives

a) Primary Industries:

Resources for primary industries make a significant contribution to the rural economy and primary industry uses are to be protected for long-term sustainability.

The prime and non-prime agricultural land resource provides for variable and diverse agricultural and primary industry production, which will be protected through individual consideration of the local context.

Processing and services can augment the productivity of primary industries in a locality and are supported where they are related to primary industry uses and the long-term sustainability of the resource is not unduly compromised.

b) Tourism

Tourism is an important contributor to the rural economy and can make a significant contribution to the value adding of primary industries through visitor facilities and the downstream processing of produce. The continued enhancement of tourism facilities with a relationship to primary production is supported where the long-term sustainability of the resource is not unduly compromised.

The rural zone provides for important regional and local tourist routes and destinations such as through the promotion of environmental features and values, cultural heritage and landscape. The continued enhancement of tourism facilities that capitalise on these attributes is supported where the long-term sustainability of primary industry resources is not unduly compromised.

c) Rural Communities

Services to the rural locality through provision for home-based business can enhance the sustainability of rural communities. Professional and other business services that meet the needs of rural populations are supported where they accompany a residential or other established use and are located appropriately in relation to settlement activity centres and surrounding primary industries such that the integrity of the activity centre is not undermined and primary industries are not unreasonably confined or restrained.

26.1.3 Desired Future Character Statements

The visual impacts of use and development within the rural landscape are to be minimised such that the effect is not obtrusive.

Comment:

The proposal is to provide a service to the rural community by upgrading the water supply infrastructure in Epping Forest, as directly relevant to 26.1.2 (c). The proposal will not constrain or compromise resource development uses in the area, nor cause an obtrusive visual impact within the rural landscape.

Exhibited

4.3.2 Use Standards

26.3.1 Discretionary Uses if not a single dwelling

Objective

a) To provide for an appropriate mix of uses that support the Local Area Objectives and the location of discretionary uses in the rural resources zone does not

unnecessarily compromise the consolidation of commercial and industrial uses to identified nodes of settlement or purpose built precincts.

b) *To protect the long term productive capacity of prime agricultural land by minimising conversion of the land to non-agricultural uses or uses not dependent on the soil as a growth medium, unless an overriding benefit to the region can be demonstrated.*

c) *To minimise the conversion of non-prime land to a non-primary industry use except where that land cannot be practically utilised for primary industry purposes.*

d) *Uses are located such that they do not unreasonably confine or restrain the operation of primary industry uses.*

e) *Uses are suitable within the context of the locality and do not create an unreasonable adverse impact on existing sensitive uses or local infrastructure.*

f) *The visual impacts of use are appropriately managed to integrate with the surrounding rural landscape.*

Comment:

Epping Forest is a small town affected by long term Boiled Water and Public Health Alerts. As such, the proposal to upgrade the water supply infrastructure in Epping Forest is appropriate within the context of the locality. The proposal will not constrain or compromise resource development uses in the area, nor cause an obtrusive visual impact within the rural landscape. The siting of the reservoir to the rear of the adjacent Barton Road fronting property further reduces its visual impact in the landscape.

Acceptable Solutions	Performance Criteria
***A1** If for permitted or no permit required uses.*	***P1.1** It must be demonstrated that the use is consistent with local area objectives for the provision of non-primary industry uses in the zone, if applicable; and* ***P1.2** Business and professional services and general retail and hire must not exceed a combined gross floor area of 250m^2 over the site.*

Complies with the performance criteria

P1.1 The use is consistent with the zone local area objectives as demonstrated at 4.3.1 above.

P1.2 Not applicable to the Utilities use.

***A2** If for permitted or no permit required uses.*	***P2.1** Utilities, extractive industries and controlled environment agriculture located on prime agricultural land must demonstrate that the:* *i) amount of land alienated/converted is minimised; and* *ii) location is reasonably required for operational efficiency; and*

P2.2 *Uses other than utilities, extractive industries or controlled environment agriculture located on prime agricultural land, must demonstrate that the conversion of prime agricultural land to that use will result in a significant benefit to the region having regard to the economic, social and environmental costs and benefits.*

Complies with the performance criteria

P1.1 Not applicable as the land is not classed as prime agricultural land (see Clause 2.1.4 above).

P1.2 Not applicable to the Utilities use.

A3 *If for permitted or no permit required uses.*

P3 *The conversion of non-prime agricultural to non-agricultural use must demonstrate that:*

a) the amount of land converted is minimised having regard to:

i) existing use and development on the land; and

ii) surrounding use and development; and

iii) topographical constraints; or

b) the site is practically incapable of supporting an agricultural use or being included with other land for agricultural or other primary industry use, due to factors such as:

i) limitations created by any existing use and/or development surrounding the site; and

ii) topographical features; and

iii) poor capability of the land for primary industry;

or

c) the location of the use on the site is reasonably required for operational efficiency.

Complies with the performance criteria

The amount of land is minimised to that required to accommodate the reservoir, grased infiltration basin and vehicle access. There is poor capability for the land to be used for primary industry given existing constraints such as the Midland Highway to the north east, the South Line Railway to the south west, the environmental (priority habitat) overlay to the south, and the adjacent smaller lots and residential development. While only needing to comply with subclauses (a), (b) or (c), the proposal complies with all three subclauses.

A4 *If for permitted or no permit required uses.*	***P4*** *It must be demonstrated that:* *a) emissions are not likely to cause an environmental nuisance; and* *b) primary industry uses will not be unreasonably confined or restrained from conducting normal operations; and* *c) the capacity of the local road network can accommodate the traffic generated by the use.*

Complies with the performance criteria

(a) There are no emissions associated with the reservoir use.

(b) The proposal requires a fenced area of 1060 m^2 adjacent to similarly sized private lots with frontages to Barton Road and the Midland highway, and the railway line. No primary industry uses would be confined or restrained by the proposed infrastructure.

(c) The proposal will not result in any significant increase in traffic generation.

A5 *The use must:* *a) be permitted or no permit required; or* *b) be located in an existing building.*	***P5*** *It must be demonstrated that the visual appearance of the use is consistent with the local area having regard to:* *a) the impacts on skylines and ridgelines; and* *b) visibility from public roads; and* *c) the visual impacts of storage of materials or equipment; and* *d) the visual impacts of vegetation clearance or retention; and* *e) the desired future character statements.*

Complies with the performance criteria

(a) The proposal does not affect any skylines or ridgelines.

(b) The proposal will not be visible from Barton Road. The reservoir is approximately 100 m distant when viewed from Midland Highway. The proposed infrastructure is not out of character with the surrounding rural development and railway infrastructure.

(c) No additional storage is proposed.

(d) The subject reservoir area only consist of introduced grasses.

(e) The proposal complies with the desired future character statement, which requires that the visual impacts of use and development within the rural landscape be to be minimised such that the effect is not obtrusive. The visual impacts have been minimised to that required to provide safe drinking water to the town and associated security fencing.

26.3.3 Irrigation Districts

Objective

To ensure that land within irrigation districts proclaimed under Part 9 of the Water Management Act 1999 is not converted to uses that will compromise the utilisation of water resources.

Acceptable Solutions	Performance Criteria
A1 *Non-agricultural uses are not located within an irrigation district proclaimed under Part 9 of the Water Management Act 1999.*	***P1*** *Non-agricultural uses within an irrigation district proclaimed under Part 9 of the Water Management Act 1999 must demonstrate that the current and future irrigation potential of the land is not unreasonably reduced having regard to:* *a) the location and amount of land to be used; and* *b) the operational practicalities of irrigation systems as they relate to the land; and* *c) any management or conservation plans for the land.*

Complies with the performance criteria

The site is within the Lower South Esk Irrigation District. The district services pasture and cropping land in several townships including Epping Forest. Water is pumped from the South Esk River during winter and transported by pipeline for storage in the Milford Dam, approximately 20 km from the subject site (see Tasmanian Irrigation, Lower South Esk Irrigation District Overview, Version 2016-2017).

With reference to subclause (a), the land to be used for TasWater water supply purposes is immediately adjacent to other non-agricultural uses as well as Barton Road, Midland Highway and the South Line Railway, and is no greater than 1060 m^2 in area.

With reference to subclause (b), the property does not rely on the Irrigation Scheme.

The Lower South Esk Irrigation Scheme Overview and Entitlements registers have been reviewed in accordance with subclause (c). There are no other management or conservation plans relevant to the proposal.

As such, the proposal does not unreasonably reduce the existing and future irrigation potential of the land.

4.3.1 Development Standards

26.4.1 Building Location and Appearance

Objective

To ensure that the:

a) ability to conduct extractive industries and resource development will not be constrained by conflict with sensitive uses; and

b) development of buildings is unobtrusive and complements the character of the landscape.

Acceptable Solutions	Performance Criteria
A1 *Building height must not exceed:* *a) 8m for dwellings; or*	***P1*** *Building height must:*

b) 12m for other purposes.	*a) be unobtrusive and complement the character of the surrounding landscape; and* *b) protect the amenity of adjoining uses from adverse impacts as a result of the proposal.*

Complies with the acceptable solution

The reservoir will be approximately 3.5 m in height, significantly less than the allowable 12 m height limit.

***A2** Buildings must be set back a minimum of:* *a) 50m where a non-sensitive use or extension to existing sensitive use buildings is proposed; or* *b) 200m where a sensitive use is proposed; or* *c) the same as existing for replacement of an existing dwelling.*	*P2 Buildings must be setback so that the use is not likely to constrain adjoining primary industry operations having regard to:* *a) the topography of the land; and* *b) buffers created by natural or other features; and* *c) the location of development on adjoining lots; and* *d) the nature of existing and potential adjoining uses; and* *e) the ability to accommodate a lesser setback to the road having regard to:* *i) the design of the development and landscaping; and* *ii) the potential for future upgrading* *iii) of the road; and* *iv) potential traffic safety hazards; and* *v) appropriate noise attenuation.*

Not applicable

The new reservoir will be setback approximately 100 m from Midland Highway. However, there are no adjoining primary industry operations and, as such, the performance criteria are not applicable. It is noted that the proposed setbacks exceed the setbacks of the adjacent residential developments to the north east, south west and immediately opposite the site.

4.1 Codes

The applicable Codes are outlined below.

4.1.1 E2 Potentially Contaminated Land Code

Note: not applicable as no sensitive uses are proposed.

4.1.2 E4 Road and Railway Assets Code

This Code is applicable as the proposal also includes works within 50 m of a railway.

E4.6 Use Standards

E4.6.1 Use and road or rail infrastructure

Objective
To ensure that the safety and efficiency of road and rail infrastructure is not reduced by the creation of new accesses and junctions or increased use of existing accesses and junctions.

Acceptable Solutions	Performance Criteria
A2 *For roads with a speed limit of 60km/h or less the use must not generate more than a total of 40 vehicle entry and exit movements per day.*	***P2*** *For roads with a speed limit of 60km/h or less, the level of use, number, location, layout and design of accesses and junctions must maintain an acceptable level of safety for all road users, including pedestrians and cyclists.*

Complies with the acceptable solution
Barton Road has a speed limit of 60 km/h. The use will not generate more than 40 vehicle movements per day. The access will only be required by TasWater vehicles occasionally for reservoir inspection and maintenance purposes.

E4.7 Development Standards

E4.7.1 Development on and adjacent to Existing and Future Arterial Roads and Railways

Objective
To ensure that development on or adjacent to category 1 or 2 roads (outside 60km/h), railways and future roads and railways is managed to:
a) ensure the safe and efficient operation of roads and railways; and
b) allow for future road and rail widening, realignment and upgrading; and
c) avoid undesirable interaction between roads and railways and other use or development.

Acceptable Solutions	Performance Criteria
A1 *The following must be at least 50m from a railway, a future road or railway, and a category 1 or 2 road in an area subject to a speed limit of more than 60km/h:* *a) new road works, buildings, additions and extensions, earthworks and landscaping works; and* *b) building envelopes on new lots; and* *c) outdoor sitting, entertainment and children's play areas*	***P1*** *Development including buildings, road works, earthworks, landscaping works and level crossings on or within 50m of a category 1 or 2 road, in an area subject to a speed limit of more than 60km/h, a railway or future road or railway must be sited, designed and landscaped to:* *a) maintain or improve the safety and efficiency of the road or railway or future road or railway, including line of sight from trains; and* *b) mitigate significant transport-related environmental impacts, including noise, air pollution and vibrations in accordance with a report from a suitably qualified person; and* *c) ensure that additions or extensions of buildings will not reduce the existing setback*

to the road, railway or future road or railway; and

d) ensure that temporary buildings and works are removed at the applicant's expense within three years or as otherwise agreed by the road or rail authority.

Complies with the performance criteria

The infrastructure will be within 50 m of the South Line Railway and therefore relies on assessment against the performance criteria.

(a) The proposal will be referred to TasRail, as the rail authority, within the planning assessment process and the pre-lodgement Crown landowner consent assessment process. Tas Rail will assess the proposal with regard to safety and efficiency of the railway. It is noted, however, that the security fencing achieves a 25 m setback from the boundary of the railway, which is a significantly greater setback than other buildings and structures in the area and there is not expected to be any impediment to the existing line of sight from trains.

(b) Not applicable - there are no transport related environmental impacts caused by the adjacent railway which will affect the proposed infrastructure use. TasWater have chosen this location with full knowledge of the adjacent railway line.

(c) The proposed structures do not constitute a lesser setback than the setbacks at adjacent sites. See the 0 m setback at 16 Barton Road and the approximately 14 m setback at 23 Barton Road.

(d) N/A

E4.7.2 Management of Road Accesses and Junctions

Not applicable – no change to the existing site access.

E4.7.3 Management of Rail Level Crossings

Not applicable.

E4.7.4 Sight Distance at Accesses, Junctions and Level Crossings

Not applicable – no change to the existing site access or lines of site. Given that this access is existing, and will not be subject to an intensification of traffic, if anything the likely traffic generation will reduce for this access, re-assessment of this access in terms of sight lines is not applicable.

4.1.3 E6 Car Parking and Sustainable Transport Code

E6.1 Purpose of Code

E6.1.1 The purpose of this provision is to:
(a) ensure that an appropriate level of car parking facilities are provided to service new land use and development having regard to the operations on the land and the nature of the locality; and
(b) ensure that cycling, walking and public transport are encouraged as a means of transport in urban areas; and

(c) ensure access for cars and cyclists and delivery of people and goods is safe and adequate; and
(d) ensure that parking does not adversely impact on the amenity of a locality and achieves high standards of urban design; and
(e) ensure that the design of car and bicycle parking space and access meet appropriate design standards; and
(f) provide for the implementation of parking precinct plans.

E6.6 Use Standards

E6.6.1 Car Parking Numbers

Objective - To ensure that an appropriate level of car parking is provided to service use.

Acceptable Solutions	Performance Criteria
A1 *The number of car parking spaces must not be less than the requirements of:* *a) Table E6.1; or* *b) a parking precinct plan contained in Table E6.6: Precinct Parking Plans (except for dwellings in the General Residential Zone).*	**P1** N/A

Complies with the acceptable solution

There is no requirement set for the Utilities use class at Table E6.1 of the Code, and therefore compliance with the acceptable solution is demonstrated.

E6.6.2 Bicycle Parking Numbers

Objective - To encourage cycling as a mode of transport within areas subject to urban speed zones by ensuring safe, secure and convenient parking for bicycles.

Acceptable Solutions	Performance Criteria
A1.1 *Permanently accessible bicycle parking or storage spaces must be provided either on the site or within 50m of the site in accordance with the requirements of Table E6.1; or A1.2* *The number of spaces must be in accordance with a parking precinct plan contained in Table E6.6: Precinct Parking Plans.*	**P1** N/A

Complies with the acceptable solution

There is no requirement set for the Utilities use class at Table E6.1 of the Code.

E6.6.3 Taxi Drop-off and Pickup

Acceptable Solutions	Performance Criteria
A1 *One dedicated taxi drop-off and pickup space must be provided for every 50 car spaces required by Table E6.1 or part thereof (except for dwellings in the General Residential Zone).* **Not applicable**	***P1*** *No performance criteria.*

E6.6.4 Motorbike Parking Provisions

Acceptable Solutions	Performance Criteria
A1 *One motorbike parking space must be provided for each 20 car spaces required by Table E6.1 or part thereof.* **Not applicable**	***P1*** *No performance criteria.*

E6.7 Development Standards

Not applicable – a gravel access road area is provided adjacent to the reservoir for TasWater vehicles to park on the site while maintenance and other monitoring activities are undertaken. However, no specific car parking spaces are required for the utilities use class under this Code and, as such, these provisions are not applicable.

4.1.4 E7 Scenic Management Code

Not applicable - the overall site is affected by a Scenic Corridor overlay to the south east (Figure 2-3). The proposed reservoir land, however, is not affected by the overlay and is significantly set back from the corridor.

4.1.5 E8 Biodiversity Code

This Code applies to use or development of land identified as priority habitat on the planning scheme maps or the removal of native vegetation.

Native vegetation means:
Plants that are indigenous to Tasmania including trees, shrubs, herbs and grasses that have not been planted for domestic or commercial purposes.

No clearance or disturbance of vegetation within the area identified as priority habitat is proposed.

Also see ecological values mapping at Section 2.1.6 Flora and Fauna above, where the subject land is mapped FAG (agricultural land).

4.1.1 E15 Signs Code

No signs are proposed as part of this application. Any required regulatory signage, erected at the direction of a public authority, is exempt in accordance with Clause E15.4.1 of the Scheme.

5. Conclusion

The application for a 0.35 ML reservoir and security fencing at certificate of title 27720/1 Barton Road, Epping Forest has been assessed against all applicable provisions of the *Northern Midlands Interim Planning Scheme 2013*. As demonstrated in this report, the proposal complies with all applicable provisions under the Scheme and approval is therefore supported.

Appendices

Appendix A – Title Documentation

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
27720	1
EDITION	DATE OF ISSUE
2	02-Aug-1999

SEARCH DATE : 10-Aug-2017
SEARCH TIME : 03.55 PM

DESCRIPTION OF LAND

Parish of EPPING, Land District of SOMERSET
Lot 1 on Plan 27720
Derivation : Whole of Lot 1 (5.843ha) vested in The Australian National Railways
Prior CT 4370/33

SCHEDULE 1

THE CROWN

SCHEDULE 2

Reservations and conditions in the Crown Grant if any

UNREGISTERED DEALINGS AND NOTATIONS

No unregistered dealings or other notations

Exhibited

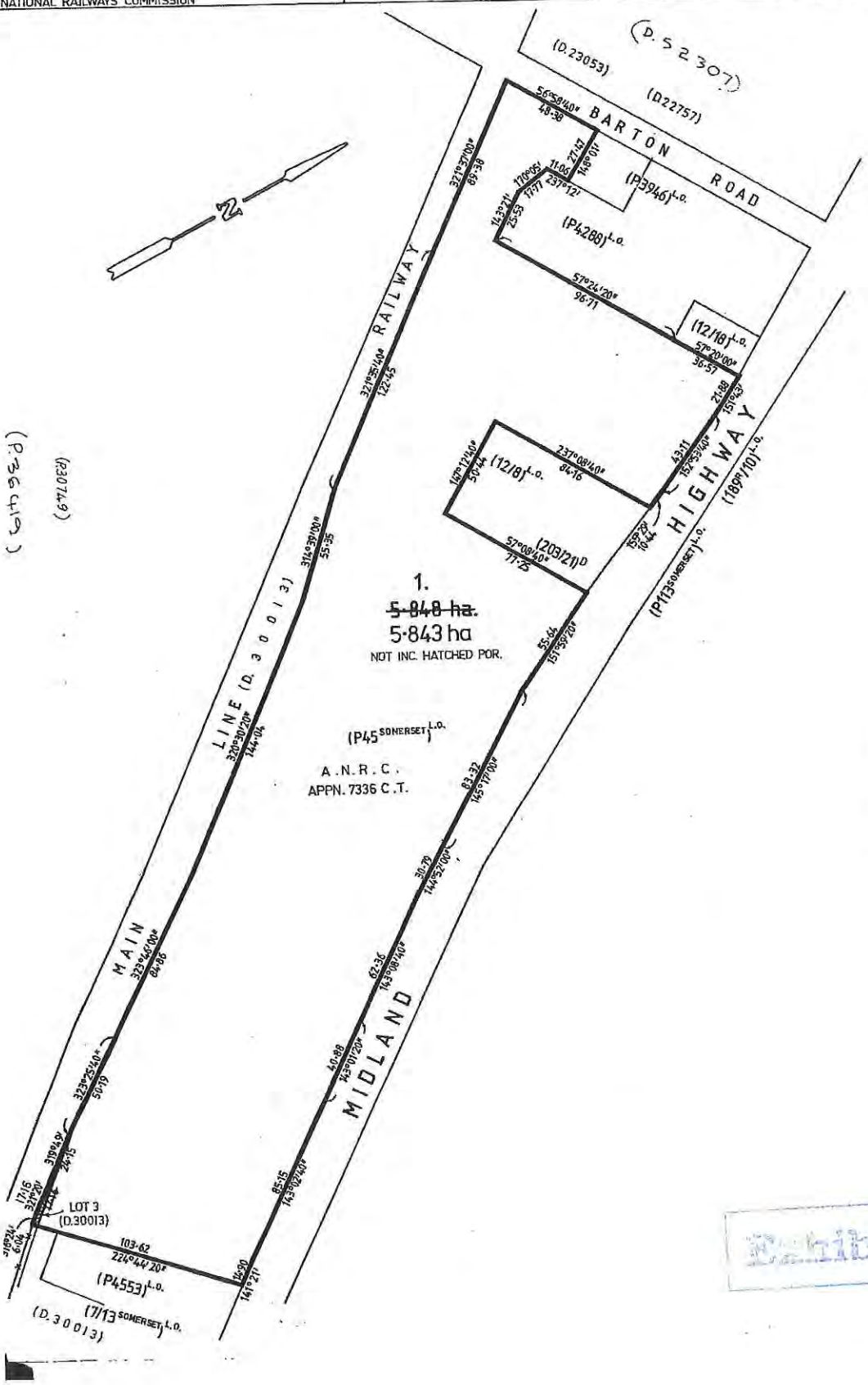
FOLIO PLAN

RECORDER OF TITLES 781

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

Owner: Australian National Railways Commission.	PLAN OF SURVEY by Surveyor J. Vander Niet of land situated in the LAND DISTRICT OF SOMERSET PARISH OF EPPING	Registered Number: P27720
Title Reference: Conv. 6-413		Approved 9 JUN 1987
Grantee: ~~Part of Lot 614, 810 ac. Robert Taylor Pur.~~ WHOLE OF LOT 1 5·843ha VESTED IN THE AUSTRALIAN NATIONAL RAILWAYS COMMISSION	SCALE 1:1500 MEASUREMENTS IN METRES	~~Effective from~~ ACTING Recorder of Titles



Appendix B – Crown Landowner Consent

Department of State Growth

STATE ROADS

Enquiries Lucy Thorne
Ph 6166 3441
Email lucy.thorne@stategrowth.tas.gov.au Web www.stategrowth.tas.gov.au
Your Ref Our Ref 052821

Tasmanian Government

GHD OBO TasWater
GPO Box 667
Hobart TAS 7001

By email:
To: brad.davie@ghd.com
Cc: council@nmc.tas.gov.au

Dear Sir/Madam

Barton Road, Epping Forest, CT 27720/1 – Water Tank, Pump Station and Associated Works Development Application

I, Andrew Hargrave, Manager Asset Management, State Roads, the Department of State Growth, having been duly delegated by the Minister under Section 52 (1F) of the *Land Use Planning and Approvals Act 1993* (the Act), and in accordance with the provisions of Section 52 (1B) (b) of the Act, hereby give my permission to the making of the application, insofar as it affects the State road network and any Crown land under the jurisdiction of this Department.

The consent given by this letter **is for the making of the application** only and is with reference to the attached documents:

	Title	Reference number	Dated
1.	Council planning application form		
2.	Crown consent application form		10/8/17
3.	Planning report		August 2017
4.	Site plan	32-184118-W370, Rev E	8/8/17
5.	Plan and sections	32-18418-W022, Rev B	2/8/17
6.	Ecological Assessment Report		August 2017

The Department reserves the right to make a representation to the Northern Midlands Council in relation to any aspect of the proposed development relating to its road network and/or property.

Please contact the officer indicated at the top of this letter if you have any further queries.

Yours sincerely

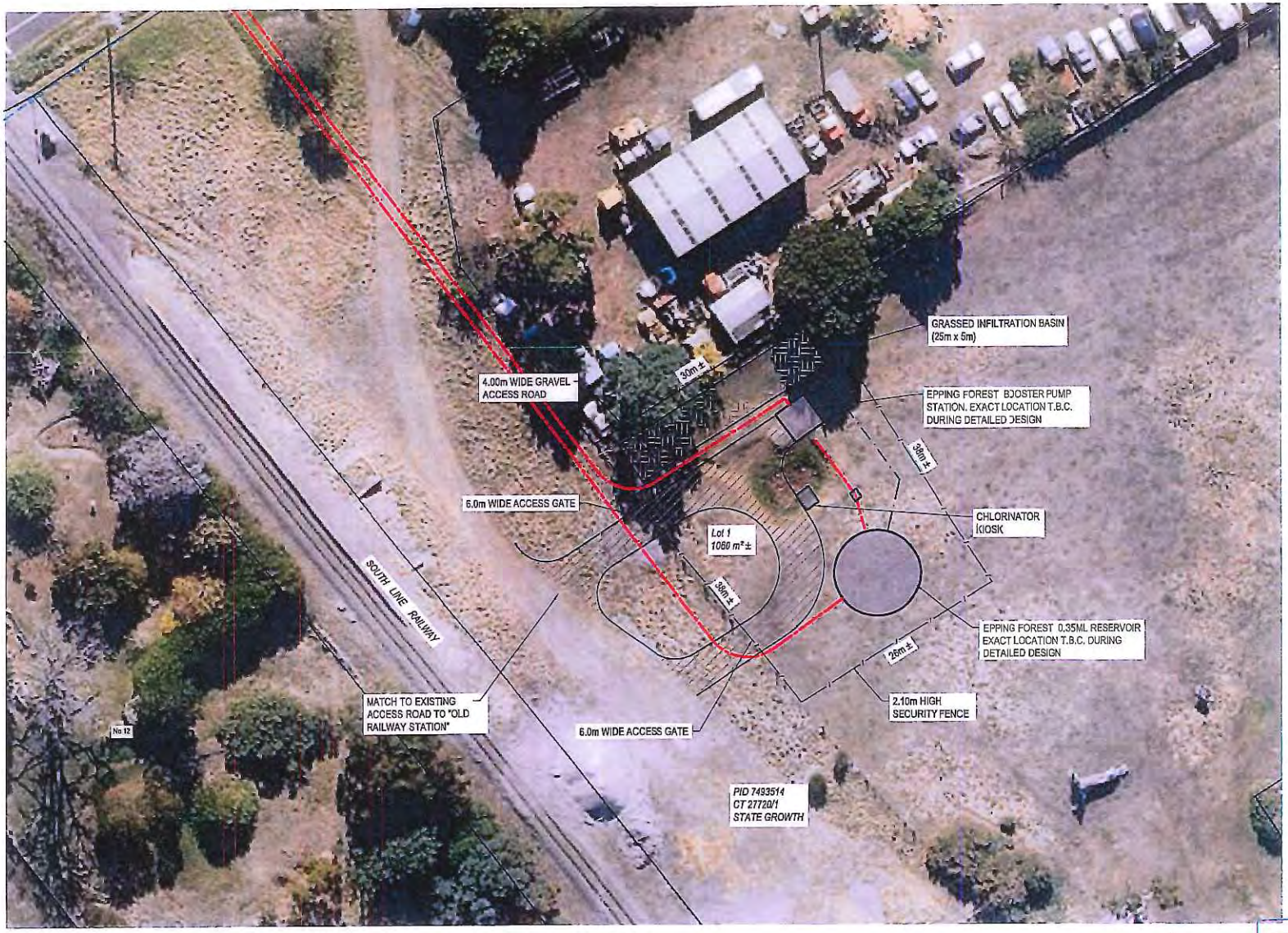
Exhibited

Andrew Hargrave
Manager Asset Management

Appendix C – Development Drawings

DIAL BEFORE YOU DIG
www.1100.com.au

1-785



SITE PLAN
SCALE 1:250

Exhibited

BASE MAP DATA SOURCED FROM THE LIST

Revision Notes
A - ISSUED TO ZINFRA
B - ISSUED FOR PRELIMINARY DESIGN SUBMISSION -
C - ISSUED FOR PRELIMINARY TENDER DESIGN
D - RESERVOIR LOCATION AMENDED
E - RESERVOIR LOCATION AMENDED

Rev.	Date	Approved
E	08.08.2017	B. DAVIE

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SCALE 1:250 AT ORIGINAL SIZE

CHD
Zinfra

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Sheet Size	A1

References

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Project No.		Drawn G.SCOLYER	MAR. 2017
Vault Folder	PROJECTS	Designed B. DAVIE	MAR. 2017
Discipline	W	Verified	
HPRM Folder		© 2015	

DRAWING ISSUE
NOT FOR CONSTRUCTION

Taswater

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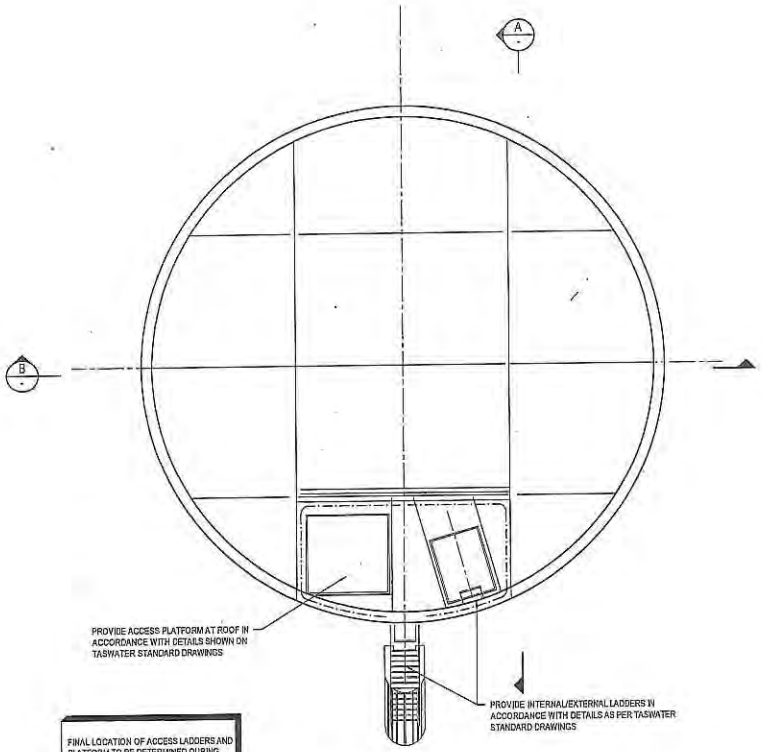
SMALL TOWNS WATER SUPPLY PROGRAM
EPPING FOREST TRANSFER PIPELINE & ASSOCIATED WORKS
EPPING FOREST 0.35 ML RESERVOIR
SITE PLAN

TASMANIAN WATER & SEWAGE CORPORATION PTY LTD
ABN: 47 162220 653

Drawing No. 32-18418-W370
Revision E

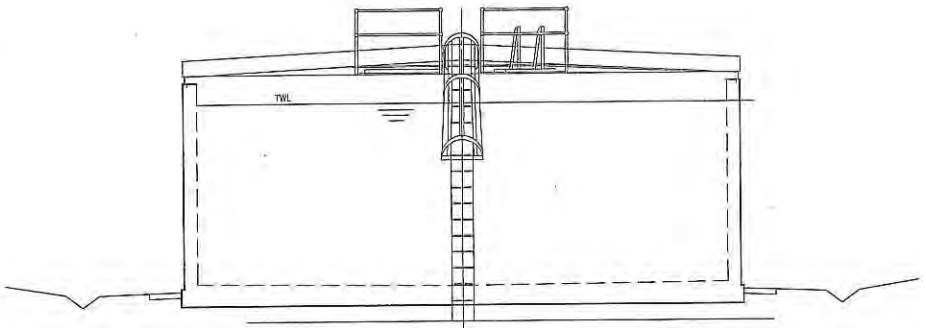
1-786



ROOF STRUCTURE - LAYOUT PLAN

SCALE 1:50

NOTE:
REFER TO SITE PLAN FOR ORIENTATION OF RESERVOIR, INCLUDING ACCESS LADDERS, PIPEWORK ETC.



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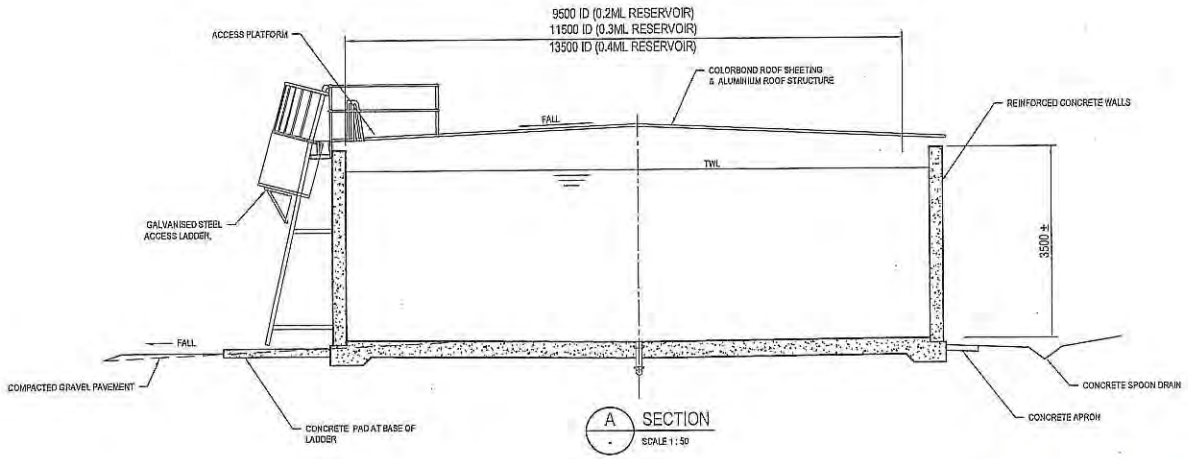

A SECTION

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Exhibited

Revision Notes				
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B - AMENDMENTS				
Rev.	B	Date	02.08.2017	Approved
				B. DAVIE

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SCALE 1:50 AT ORIGINAL SIZE

Scale	Scale
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Sheet Size	A1

References

PROJECT DETAILS		DESIGN		DATE
Project No.		Drawn	C.SCOLYER	MAR. 2017
Vault Folder	PROJECTS	Designed	B. DAVIE	MAR. 2017
Discipline	W	Verified		
HPRM Folder		© 2015		

DRAWING ISSUE

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taswater

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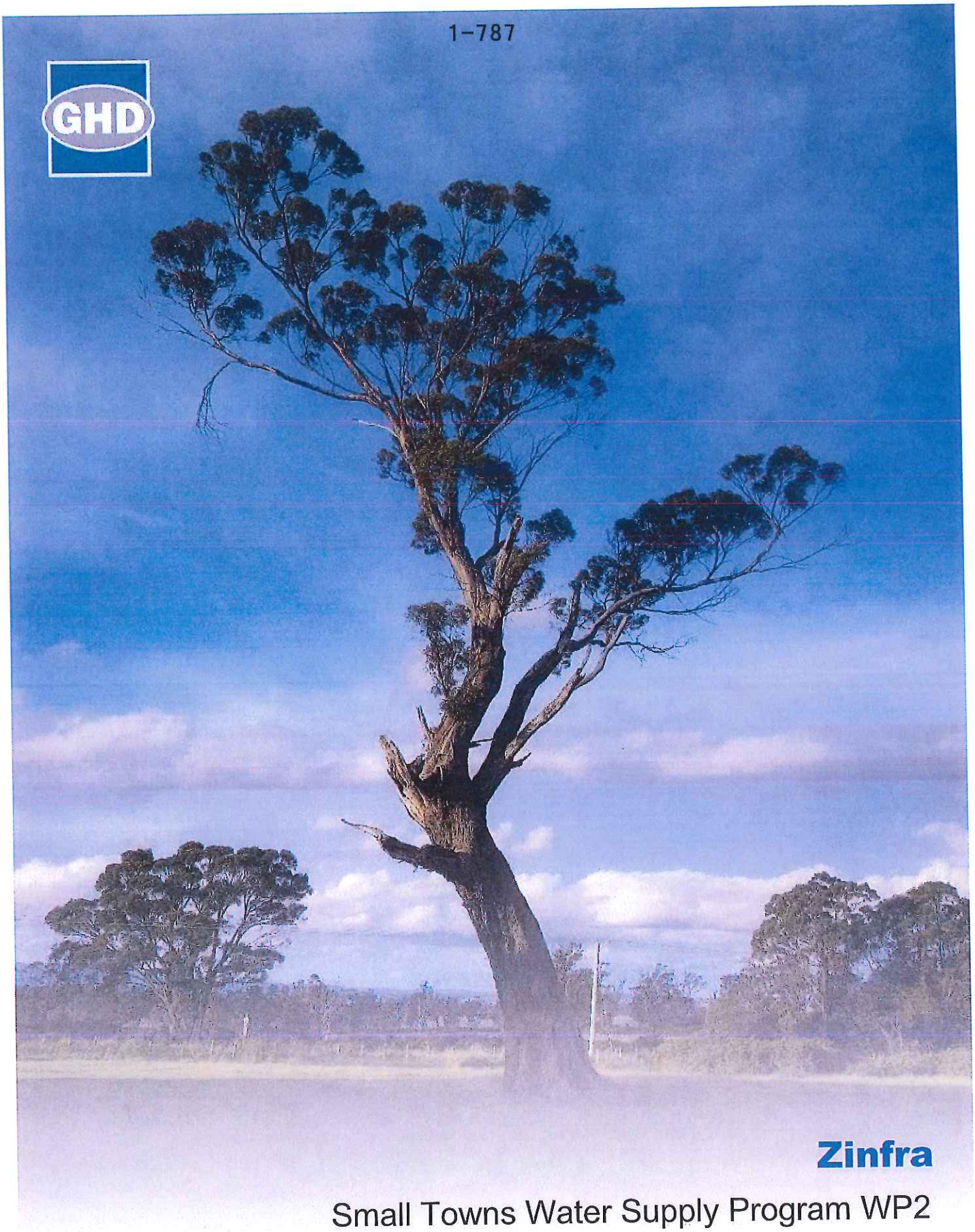
SMALL TOWNS WATER SUPPLY PROGRAM
TRANSFER PIPELINES & ASSOCIATED WORKS
STORAGE RESERVOIR - TYPICAL
ROOF PLAN & TYPICAL SECTIONS

TASMANIAN WATER & SEWAGE CORPORATION PTY LTD
ABN: 47 162220 653

Drawing Number: 32-18418-W022

Sheet Number:

REVISION: B



Zinfra

Small Towns Water Supply Program WP2

Conara to Epping Forest Ecological Assessment Report

ZIN-WP2-R-6-O-001-2

August 2017

Table of contents

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Appendices

1. Introduction

1.1 Project Background

Zinfra has engaged GHD Pty Ltd (GHD) to undertake a botanical survey and fauna habitat assessment of a proposed treated water pipeline from Conara to Epping Forest in the Northern Midlands of Tasmania. This pipeline will be constructed by Zinfra, on behalf of TasWater, to supply treated water to Epping Forest.

Proposed infrastructure includes a connection to the existing Conara gravity pipeline, from which the new pipeline will extent to Epping Forest via the Midland Highway road reservation. The pipeline will terminate at a new Epping Forest reservoir and booster pumpstation site, located off Barton Rd in Epping Forest.

1.2 Study Area

The study area is detailed in Figure 1. For the purpose of this assessment the study area consisted of a 11 km long corridor of approximately 10 m wide on the western side of the Midland Highway between Conara and Epping Forest. The 10 m wide study area extended from the edge of the sealed highway to approximately 5 m beyond the existing fence line. A parcel of land at Epping Forest for a potential reservoir site was also surveyed.

1.3 Potential Impact Area

The majority of the proposed pipeline route is located within disturbed areas such as permanent easement and agricultural land, and will generally not require removal of native vegetation. The corridor (impact area) has been reduced to a maximum impact zone of up to 10 m width, along a linear route. Native vegetation discussed in this report is predominantly to the west of the proposed impact area (corridor), and the Midland Highway is on the eastern side of the survey area.

1.4 Purpose of this Report

The purpose of this assessment was to:

- Describe the vegetation, flora and fauna of the study area;
- Identify listed ecological values within the study area;
- Identify any key threatening processes within the study area;
- Outline potential impacts of the proposed installation of the pipeline on ecological values;
- Evaluate the proposed installation of the pipeline against relevant ecological policy and legislation; and
- Provide recommendations to minimise impacts of the proposed installation of the pipeline on ecological values.

1.5 Scope and limitations

This report: has been prepared by GHD for Zinfra Contracting Pty Ltd and may only be used and relied on by Zinfra Contracting Pty Ltd for the purpose agreed between GHD and Zinfra Contracting Pty Ltd as set out in section 1.4 of this report.

GHD otherwise disclaims responsibility to any person other than Zinfra Contracting Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report:

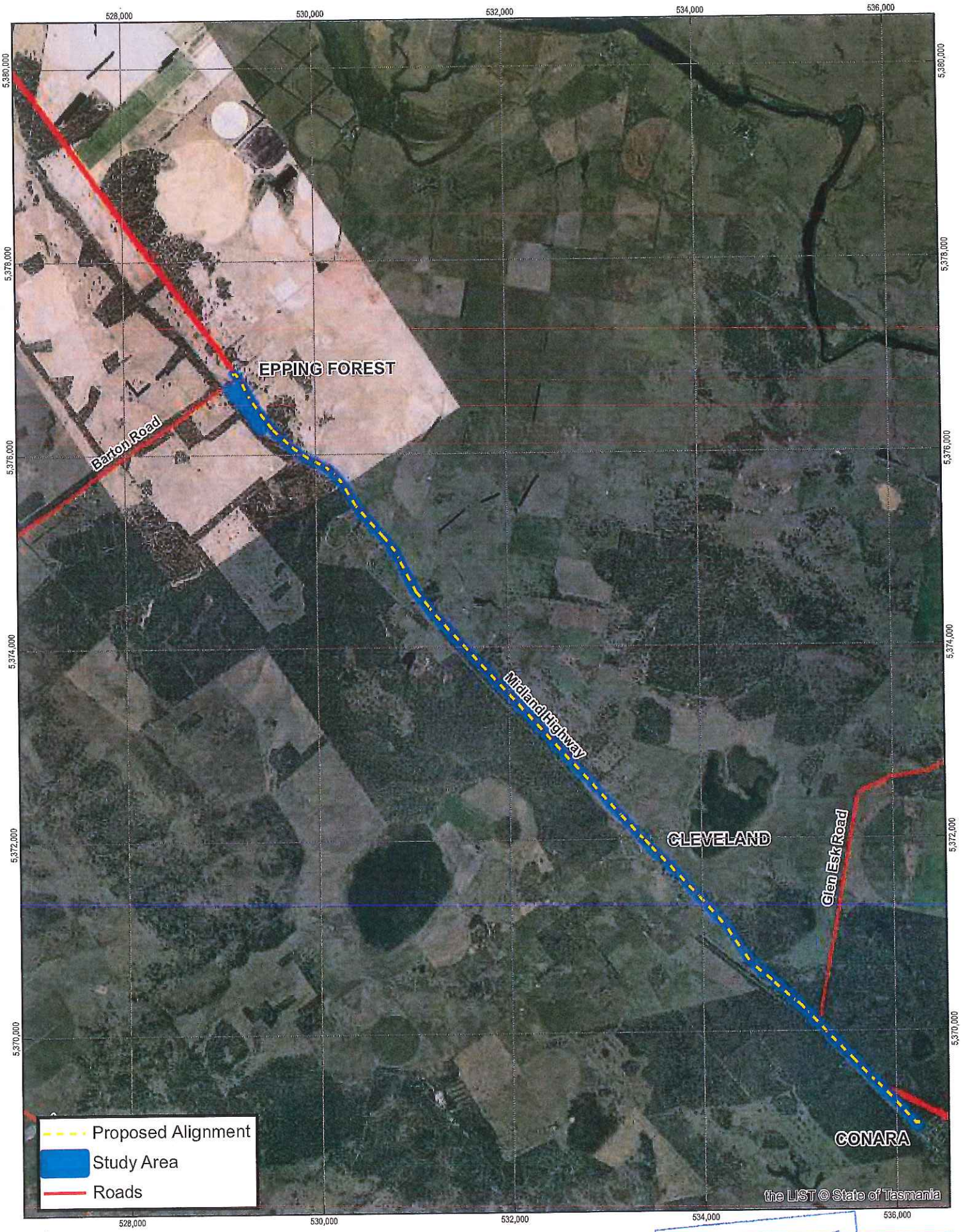
- *were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report;*
- *were limited to an ecological assessment of vascular plant species (ferns, conifers and flowering plants), terrestrial and migratory vertebrate fauna;*
- *did not include non-vascular flora (e.g. mosses, liverworts, lichens, and fungi), marine fauna habitat and invertebrate habitat, which were not formally surveyed as part of this assessment;*
- *included field surveys during winter, which is a sub-optimal time of year to survey for most herbaceous annuals and grass species. Therefore, it is considered possible that threatened plant species were overlooked during the survey. A follow-up spring survey should be conducted if disturbance of areas identified as containing possible habitat for threatened flora are to be disturbed;*
- *did not include a detailed fauna field survey (i.e. trapping or camera survey,or targeted bird utilisation surveys) at the study area. The fauna investigation instead focussed on fauna habitat, and evidence of animals (e.g. scats, tracks, feathers); and*
- *did not include an aquatic assessment, with aquatic environment(s) not formally surveyed as part of this assessment.*

GHD has prepared this report on the basis of information provided by Zinfra Contracting Pty Ltd and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

1.6 Acknowledgements

- The Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE) for access to its Natural Values Atlas (NVA) database; and
- The Commonwealth Department of the Environment and Energy (DOTEE) for access to its Protected Matters Search Tool (PMST)



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GHD

Zinfra Contracting
Small Towns Water Supply Program

Exhibited

Job Number 32-18506
Revision A
Date 28 Jul 2017

Epping Forest to Conara Study Area

Figure1

2. Methods

2.1 Background Research

The primary data sources accessed during the background research included:

- The Natural Values Atlas (NVA) database (BCB 2017) – which provides a NVA Report identifying threatened fauna and flora records within 500 m and 5000 m of the study area;
- The *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) Protected Matters Search Tool (PMST) (Australian Government 2017) – which provides a PMST Report that identifies any matters listed under the EPBC Act within a 5000 m buffer around the study area;
- The Land Information System Tasmania (LIST) database (Service Tasmania 2017) – which provides information on the location of vegetation communities according to TASVEG 3.0 (2013), including the location of threatened vegetation;
- The DPIPWE website – which contains links to biological and ecological information on many of the State's threatened species (available online at: http://dpipwe.tas.gov.au/conservation/threatened-species-and-communities/lists-of-threatened-species/full-list-of-threatened-species, accessed 25 and 26/07/2017)

2.2 Field Survey

2.2.1 Botanical Survey and Fauna Habitat Assessment

The survey was conducted on the 13th July 2017 by James Hill (Senior Ecologist) and Nicole Reineker (Graduate Environmental Scientist). The study area was surveyed on foot utilising the random meander technique and areas pin pointed as potentially supporting significant flora and fauna values investigated thoroughly.

The survey was not conducted at the optimum time of year, as the majority of plant species were not in a reproductive phase making identification of potential threatened species difficult.

All flora and fauna species observed (and/or heard) were recorded, along with fauna habitat values, native vegetation communities and weed infestations.

2.2.2 Statement of Compliance

Plant species were collected in accordance with the Department of Primary Industries, Parks, Water and Environment's Plant Collection Permit Number DA 17108 (expiry: 30/06/2020).

2.3 Nomenclature and Assessment of Significance

All plants were identified in accordance with A Census of the Vascular Plants of Tasmania (Baker & de Salas 2016). Flora and fauna conservation significance was determined in accordance with the Tasmanian *Threatened Species Protection (TSP) Act 1995* and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA).

Conservation significance of vegetation communities was assessed in accordance with the TASVEG 2013 and Regional Forestry Agreement (RFA) classification and associated criteria (DPIPWE 2014). Conservation significance of other ecological communities was determined in accordance with the Commonwealth EPBCA.

Significance of impacts on Matters of National Environmental Significance (MNES) were assessed in accordance with the Australian Government's Significant Impact Guidelines (DOTE 2013).

3. Results

3.1 Native Vegetation

3.1.1 Listed communities identified by background research

A search of the Natural Values Atlas and *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) Protected Matters Search Tool identified the following threatened vegetation communities. The communities presented are listed under schedule 3A of the *Nature Conservation Act 2002* (NCA) or the EPBCA.

Ecological Communities listed under Commonwealth Legislation

One community listed under the Commonwealth EPBCA was identified by desktop research as likely to occur within 5 km of the study area:

- Lowland Native Grasslands of Tasmania

Eucalyptus ovata forest and woodland is currently being assessed for listing as critically endangered under the EPBCA.

Vegetation Communities listed under State Legislation.

Desktop research for communities listed under the *Nature Conservation Act 2002* within 1000 m of the study area identified the following communities:

- *Eucalyptus amygdalina* inland forest on cainozoic deposits
- *Eucalyptus ovata* forest and woodland
- Wetlands

3.1.2 Vegetation Communities identified within the Study Area

Vegetation communities recorded within the study area are illustrated in Figure 2A to Figure 2H The mapping has included a corridor of 10 m width, on the western side of the Midland Highway.

There were 5 mapping units identified along the pipeline route with one native vegetation (a threatened community) and four agricultural, urban or exotic units. The mapping units are detailed below.

Native vegetation

- *Eucalyptus amygdalina* inland forest and woodland on cainozoic deposits (DAZ) 8.937 ha - Listed as threatened under the *Nature Conservation Act 2002.*

Agricultural, urban or exotic species

- Agricultural land(FAG)
- Permanent easements(FPE)
- Urban areas (FUR)
- Regenerating cleared land(FRG)

The communities recorded within the study area are described below as defined by the document *From Forest to Fjaeldmark: Descriptions of Tasmanian Vegetation* (Kitchener & Harris 2013) and local site characteristics.

Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits (DAZ)

This community generally contains several age classes of more than one eucalypt species, with *Eucalyptus amygdalina* (black peppermint) or *E. viminalis* subsp. *viminalis* (white gum) tending to dominate on Tertiary gravels, whereas *E. viminalis* subsp. *viminalis* (white gum) or *E. pauciflora* subsp. *pauciflora* (cabbage gum) dominate on sand and alluvium. Localised areas in the Midlands dominated by *E. ovata* (black gum), generally on poorly-drained flats and the margins of lagoons, can also be subsumed into this community. The understorey is dominated by dry sclerophyll shrubs, *Pteridium esculentum* (bracken), and grasses or graminoids, varying greatly in structure and composition depending on physical site characteristics, fire history and land use, or a combination of these factors.

Within the study area this community occurred along the western side of the Midland Highway, generally on the western side of the fence running along the highway easement boundary. The community was characterised by *Eucalyptus amygdalina* trees up to 12 meters in height with individuals ranging from saplings to older trees with a diameter at breast height (DBH) of up to 60 cm. There was also the occasional subdominant *Eucalyptus viminalis* subsp. *viminalis* generally confined to the wetter areas. The understorey component included shrub species such as *Acacia dealbata, Allocasuarina littoralis, Banksia marginata, Exocarpos cupressiformis* and *Daviesia latifolia*. Sedges and grasses include *Lomandra longifolia, Lepidosperma longitudinale, Poa labillardierei* and *Themeda triandra*. The ground layer included variable occurrences of *Astroloma humifusum, Viola hederacea* and *Oxalis perennans*. Overall this community is in good condition, however it should be noted that weed and exotic species occur more frequently in close proximity to the Midland Highway and become less frequent with increasing distance.

Plate 1 - Eucalyptus amygdalina forest and woodland on Cainozoic deposits (DAZ) bordering the Midland Highway.

Agricultural land (FAG)

This vegetation type generally includes improved pastures, cropland and orchards, with numerous exotic species dominating, although minor occurrences of native species such as those in the genera *Austrodanthonia* (wallabygrass) and *Austrostipa* (speargrass) may also be present.

Due to the survey time and the level of grazing pressure on the areas mapped as agricultural land it was difficult to confirm species present. However, some species were identified and included *Aira caryophyllea* subsp. *caryophyllea*, *Briza maxima*, *Poa annua* and *Holcus lanatus*. Thistles, hawthorn and gorse were frequent in some areas.

Areas mapped as agricultural land included the reservoir site at Conara and several sections along the Midland Highway and the parcel of land at Epping Forest for the proposed reservoir.

Plate 2 - Agricultural land (FAG) bordering the Midland Highway road easement

Permanent easement (FPE)

This mapping unit encompasses permanent easements derived from recurrent disturbance events (e.g. slashing) associated with linear infrastructure such as powerlines, railways, highways and pipelines.

This section of the study area is associated with the Midland Highway and freight rail lines. It is quite variable in the composition of flora as in some sections there are remnant patches of DAZ, which is highly impacted with gorse infestations and other weed species. Other areas where characterised by small patches of *Themeda triandra* and *Lomandra longifolia* with the majority of other species exotic.

Plate 3 - Permanent easement (FPE) with obvious frequent slashing

Regenerating cleared land (FRG)

An area of cleared land dominated by exotic pasture where there has been significant recolonisation by native species is mapped as the regenerating cleared land (FRG) community. It is typically characterised by an invasion of exotic pasture by native species, including graminoid species such as *Lomandra longifolia* (sagg), *Isolepis nodosa* (knobby club rush) and *Juncus* (rush) species. Drainage flats are commonly recolonised by *J. sarophorus* (broom rush), *J. australis* (southern rush), *J. amabilis* (gentle rush), *Carex iynx* (tussock sedge) or *Gahnia grandis* (cutting grass). Small native shrubs may be present during latter colonisation, and scattered shrubs of *Tasmannia lanceolata* (mountain pepper), *Senecio linearifolius* (fireweed groundsel) and *Cassinia aculeata* (dollybush) are common recolonising species of pasture in the northwest of the state. Insignificant amounts of *Austrodanthonia* (wallabygrass) or *Austrostipa* (speargrass) species may also be included within this category.

Within the study area occasional areas bordering the road and close to the urban developments of Epping Forest and Conara have been mapped as FRG. In some cases, regenerating areas were high in native species such as *Acacia dealbata* and *Lomandra longifolia* and in others gorse and other introduced species were present.

Urban areas (FUR)

This community generally contains introduced vegetation associated with human habitation and related gardens, and is largely devoid of native plant species.

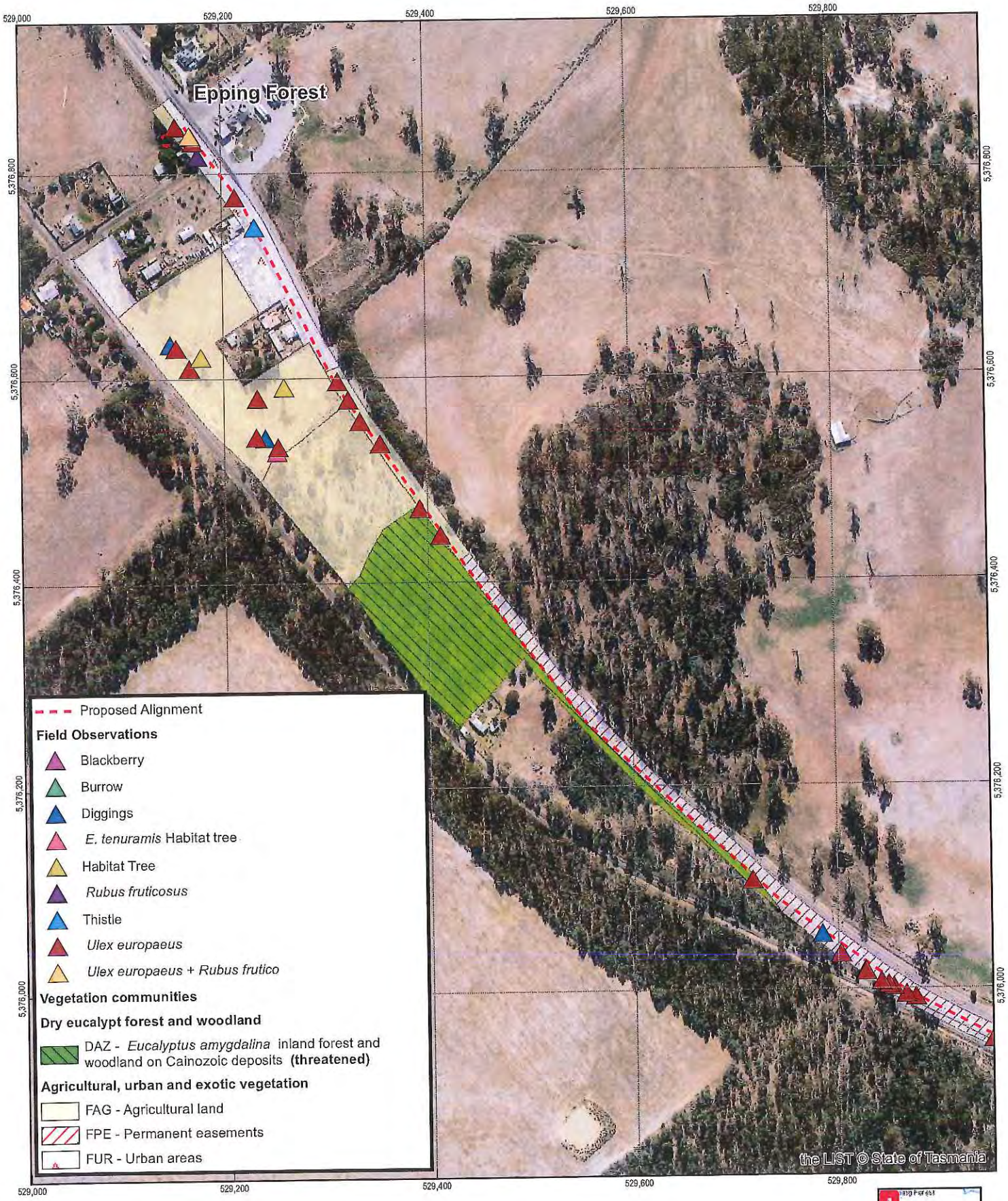
Within the study area this mapping unit included areas near Epping Forest that have residential development as the primary land use.

Weed infestation (FWU)

Dense occurrences of weeds are mapped as this vegetation community, and include large infestations of *Ulex europaeus* (gorse), introduced *Rubus* species (blackberry), *Lycium ferocissimum* (African boxthorn), *Salix fragilis* (crack willow), *Cirsium vulgare* (spear thistle) and significant plantings or escapees of other exotic species.

Within the study area there are large continuous patches (>20m^2), smaller clusters of plants as well as individual plants of *Ulex europaeus* (gorse) and there was also a few *Rubus* species (blackberry vines) present.

Plate 4 - Gorse infestation within the Eucalyptus amygdalina community along the proposed pipeline route



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Zinfra Contracting
Small Towns Water Supply Program

Ecological Values
Epping Forest to Conara

Job Number 32-18506
Revision C
Date 09 Aug 2017

Figure 2-A

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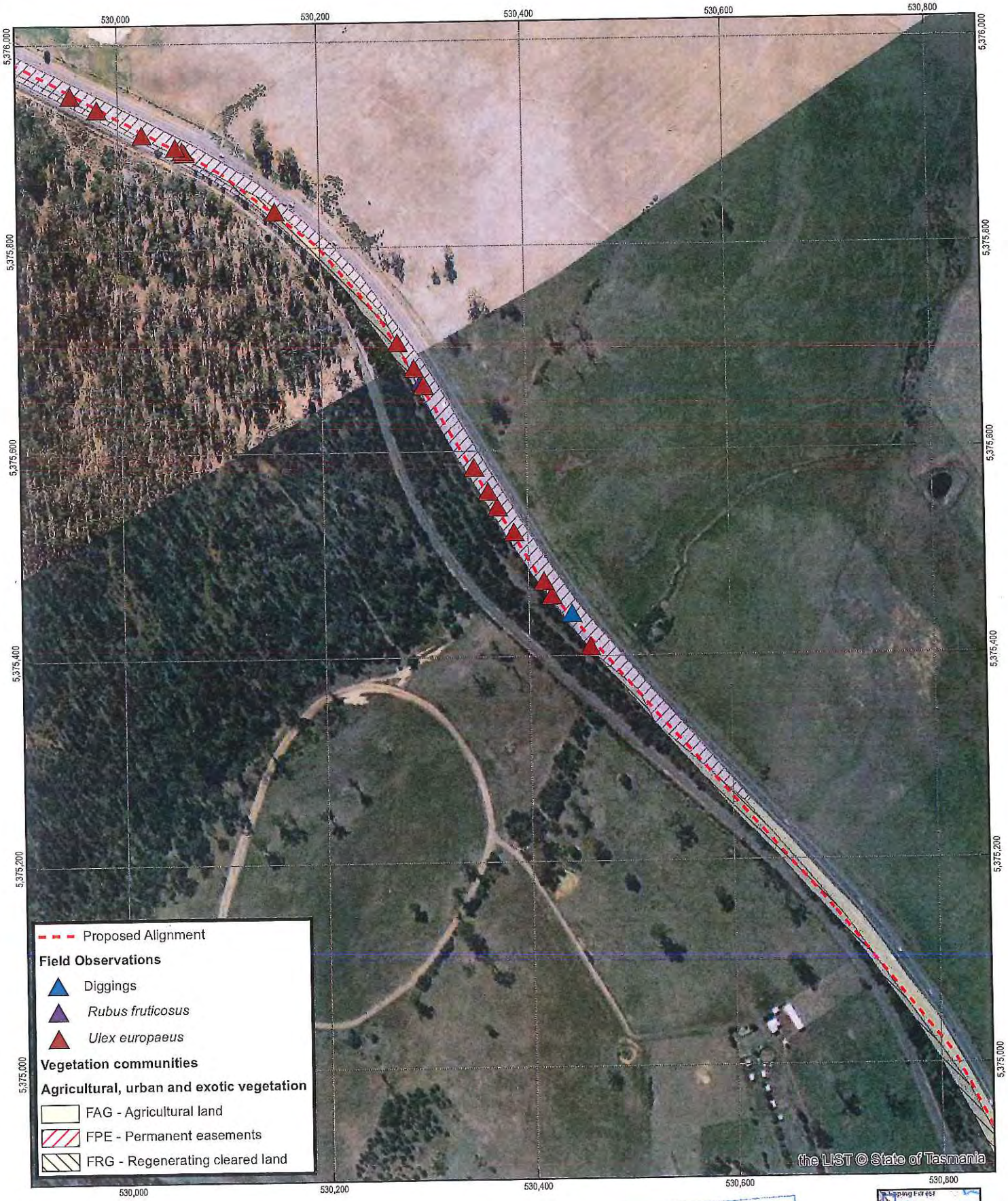

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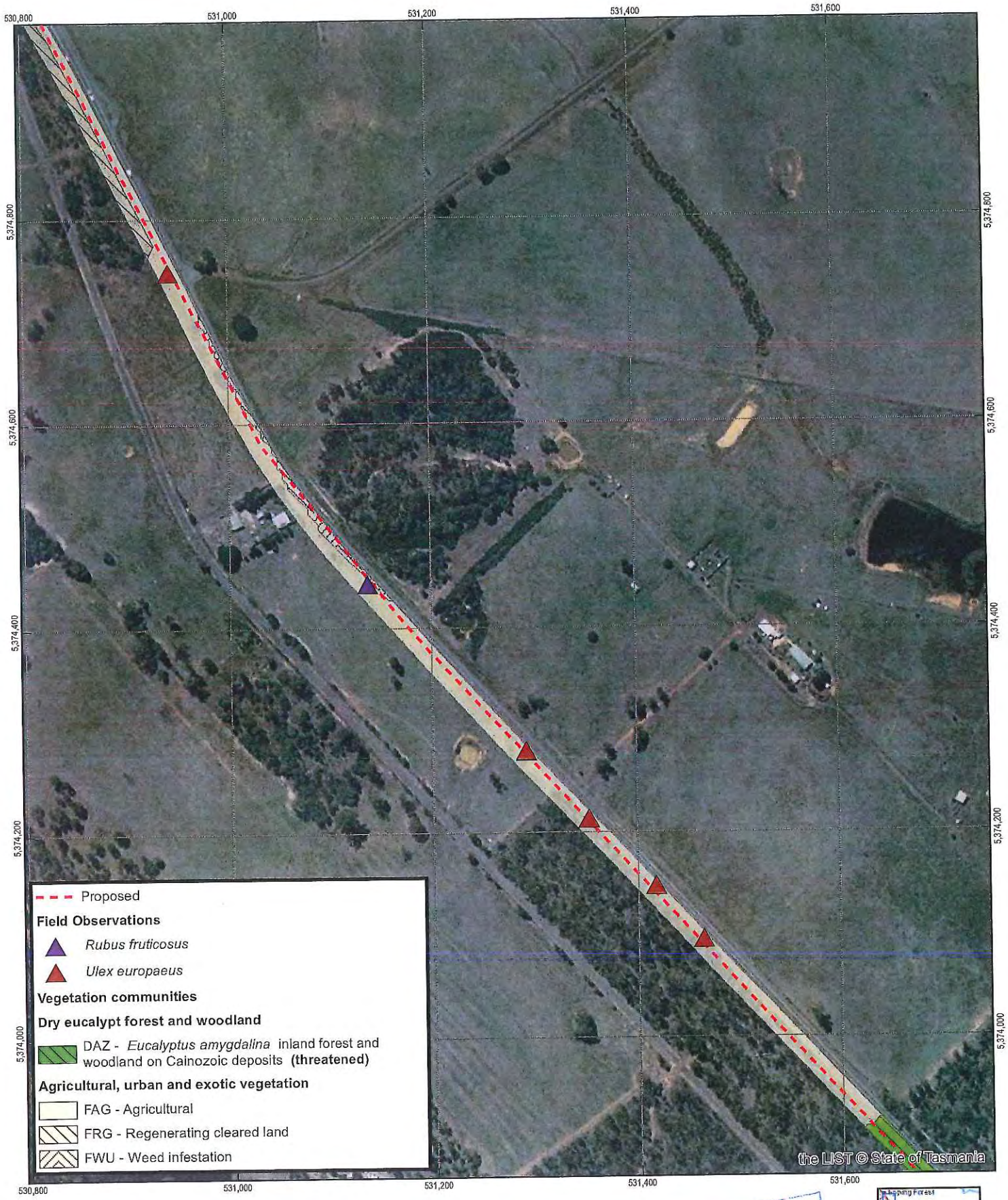
Zinfra Contracting
Small Towns Water Supply Program
Ecological Values
Epping Forest to Conara

Job Number 32-18506
Revision C
Date 09 Aug 2017

Figure 2-B



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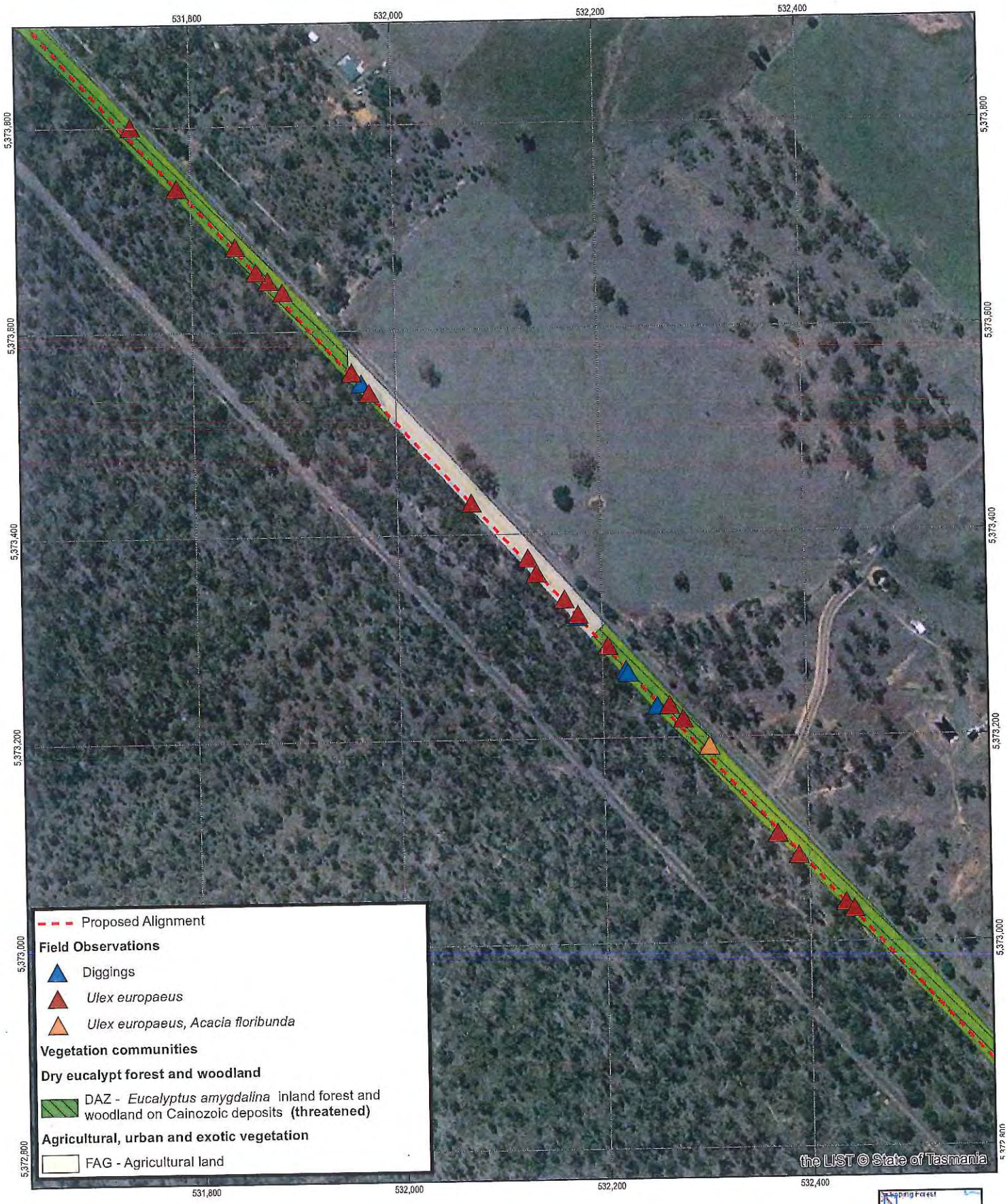
Zinfra Contracting
Small Towns Water Supply Program

Ecological Values
Epping Forest to Conara

Job Number 32-18506
Revision C
Date 09 Aug 2017

Figure 2-C



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Zinfra Contracting

Small Towns Water Supply Program

Ecological Values
Epping Forest to Conara

Job Number	32-18506
Revision	C
Date	09 Aug 2017

Figure 2-D

Paper Size A3

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994

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GHD

Zinfra Contracting

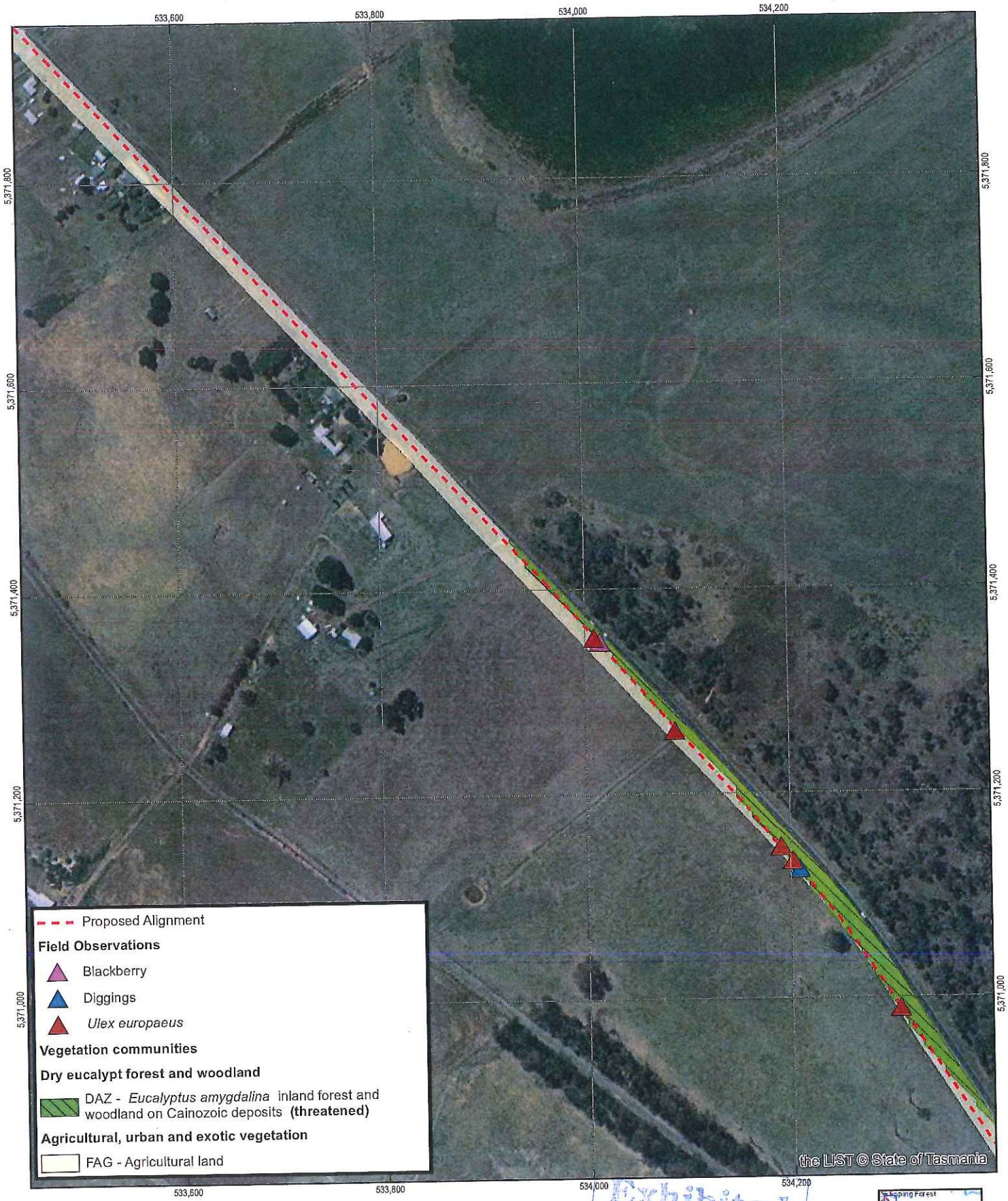
Small Towns Water Supply Program

Ecological Values

Epping Forest to Conara

Job Number 32-18506
Revision C
Date 09 Aug 2017

Figure 2-E



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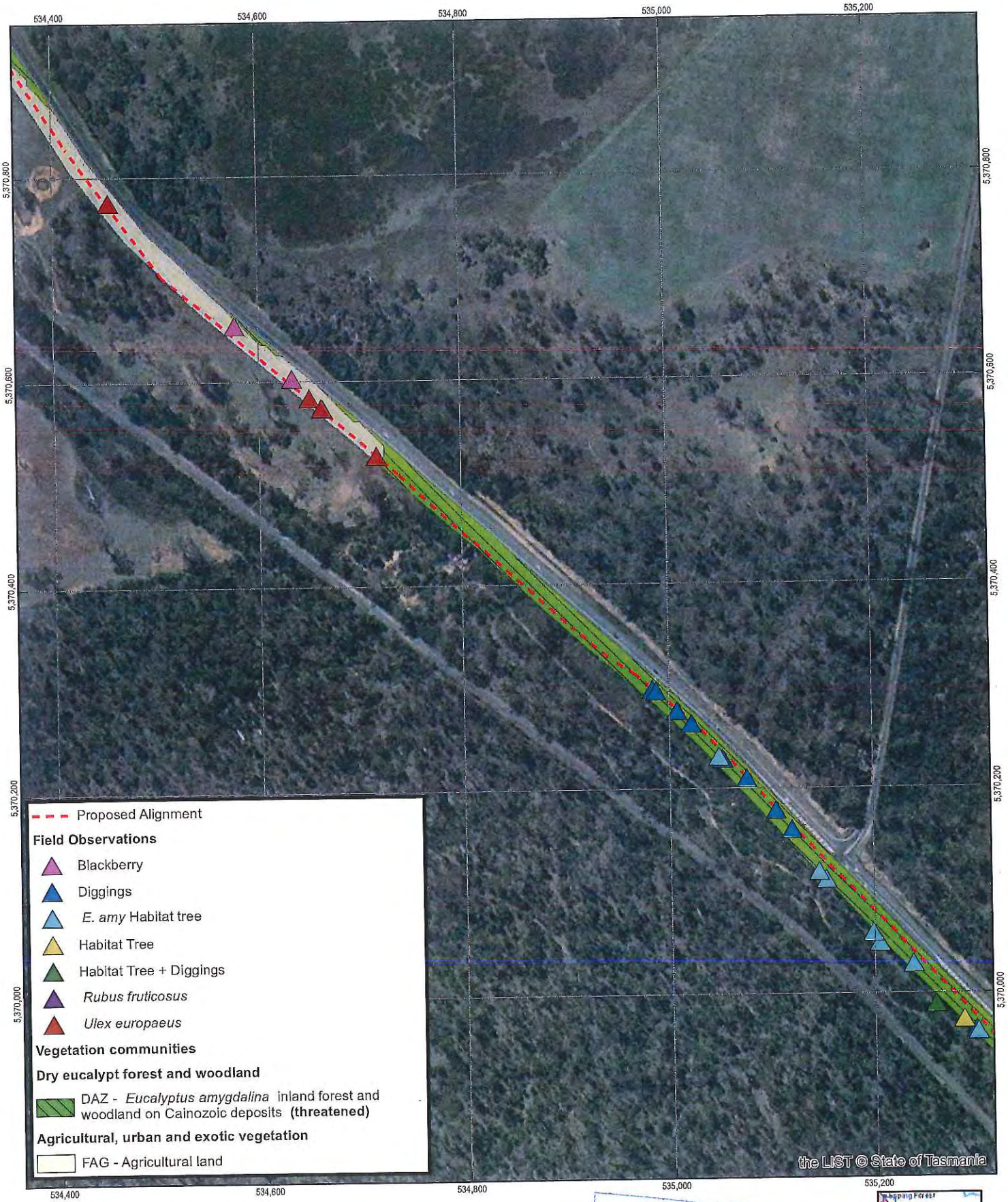
Small Towns Water Supply Program
Ecological Values
Epping Forest to Conara

Job Number 32-18506
Revision C
Date 09 Aug 2017

Figure 2-F



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Small Towns Water Supply Program

Ecological Values
Epping Forest to Conara

Job Number 32-18506
Revision C
Date 09 Aug 2017

Figure 2-G

Paper Size A3

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Grid: GDA 1994 MGA Zone 55

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Zinfra Contracting
Small Towns Water Supply Program

Ecological Values
Epping Forest to Conara

Job Number 32-18506
Revision C
Date 09 Aug 2017

Figure 2-H

3.2 Native Flora

3.2.1 Threatened flora identified by desktop research

The Natural Values Atlas and EPBCA Protected Matters Search Tool identified a range of flora species listed under the Tasmanian Threatened Species Protection Act 1995 (TSPA) and EPBCA which have been previously recorded or are predicted to occur in the vicinity of the proposed pipeline route.

Thirty eight threatened flora species listed under the Tasmanian TSPA occur within 500 m of the study area, as detailed in the Natural Values Report Appendix A. These species are:

- *Amphibromus macrorhinus* (longnose swampgrass)
- *Aphelia gracilis* (slender fanwort)
- *Aphelia pumilio* (dwarf fanwort)
- *Austrostipa scabra* (rough speargrass)
- *Brunonia australis* (blue pincushion)
- *Caesia calliantha* (blue grasslily)
- *Caladenia anthracina* (blacktip spider-orchid)
- *Caladenia filamentosa* (daddy longlegs)
- *Caladenia lindleyana lindleys* (spider-orchid)
- *Carex longebrachiata* (drooping sedge)
- *Dianella amoena* (grassland flaxlily)
- *Glycine latrobeana* (clover glycine)
- *Gratiola pubescens* (hairy brooklime)
- *Haloragis heterophylla* (variable raspwort)
- *Isoetes drummondii subsp. drummondii* (plain quillwort)
- *Isolepis stellata* (star clubsedge)
- *Juncus fockei* (slender jointleaf rush)
- *Leucochrysum albicans var. tricolor* (grassland paperdaisy)
- *Leucopogon virgatus var. brevifolius* (shortleaf beardheath)
- *Lobelia pratioides* (poison lobelia)
- *Lobelia rhombifolia* (tufted lobelia)
- *Melaleuca pustulata*(warty paperbark)
- *Myriophyllum integrifolium* (tiny watermilfoil)
- *Phyllangium distylis* (tiny mitrewort)
- *Pimelea curviflora var. gracilis* (slender curved riceflower)
- *Pterostylis squamata* (ruddy greenhood)
- *Pterostylis ziegeleri* (grassland greenhood)
- *Pultenaea humilis* (dwarf bushpea)

- *Pultenaea prostrata* (silky bushpea)
- *Rytidosperma indutum* (tall wallabygrass)
- *Senecio squarrosus* (leafy fireweed)
- *Siloxerus multiflorus* (small wrinklewort)
- *Stylidium despectum* (small triggerplant)
- *Tricoryne elatior* (yellow rushlily)
- *Triptilodiscus pygmaeus* (dwarf sunray)
- *Trithuria submersa* (submerged watertuft)
- *Vittadinia gracilis* (woolly new-holland-daisy)
- *Xerochrysum palustre* (swamp paperdaisy)

Table 3-1 Threatened flora known or predicted to occur within 5 km of the study area

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelihood of occurrence within study area
Amphibromus macrorhinus longnose swampgrass	Endangered	Not Listed	In Tasmania the species is restricted to the Northern Midlands , where it grows in low-lying wet places and swamps, including sedgelands dominated by Lepidosperma longitudinale. **Possible, some suitable habitat. Flowering is between November and January.**
Aphelia gracilis slender fanwort	Rare	Not Listed	Occurs in damp, sandy ground and wet places. **Possible, some suitable habitat. Flowering is between October and December.**
Aphelia pumilio dwarf fanwort	Rare	Not Listed	Often growing in damp conditions in dry open grassland and dry sclerophyll forest. **Possible, some suitable habitat. Flowering is between October to January.**
Austrostipa scabra rough speargrass	Rare	Not Listed	Inhabits dry open areas along the east coast and south and central midlands, and has also been recorded from grassy remnants, roadside banks and coastal vegetation. **Possible, some suitable habitat, Flowers in September to November.**
Brachyscome perpusilla tiny daisy	Rare	Not Listed	Occurs in grassy woodland. Known from only a few localities in the northeast and south of the State, with key sites including the Queen's Domain in Hobart, and Hardwicke's Hill. **Possible in close vicinity to the study area as no rock outcrop was observed within the study area boundary.**
Brunonia australis blue pincushion	Rare	Not Listed	Occurs in grassy woodlands, dry sclerophyll forests and in heathy and shrubby dry forests. **Possible, as there is some appropriate habitat. Flowering time is October to early January.**
Caesia calliantha blue grasslily	Rare	Not Listed	Occurs in grassland or grassy woodland habitat and has also been recorded from grassy roadsides. **Possible as there is some suitable habitat. Flowering is October to December.**
Caladenia anthracina blacktip spider-orchid	Endangered	Critically Endangered	Occurs in grassy woodland with silver wattle and bracken on well-drained sandy soil. **Possible some suitable habitat. Flowering is from October to early November.**
Caladenia filamentosa daddy longlegs	Rare	Not Listed	Occurs in heathy and sedgy open eucalypt forests and woodlands on sandy soils. **Possible, some suitable Habitat. Flowering is October to early November.**

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelihood of occurrence within study area
Caladenia lindleyana Lindley's spider-orchid	Endangered	Critically Endangered	Endemic to Tasmania and is now known only from a few localities in a 58 square km area in the central north and northern Midlands. It occupies only a few square meters in total. It is found in open eucalypt forest and woodland. **Possible as there is some suitable habitat and the precise habitat requirements are poorly understood. Flowering is from October to early November.**
Caladenia pallida rosy spider-orchid	endangered	Critically Endangered	Endemic to Tasmania. In recent years it has only been recorded from the northern Midlands at Epping Forest and in the central north at Railton. The habitat is restricted to lowland areas with a rainfall less than 1000 mm per annum, growing in open eucalypt forest. The historical distribution may have included more diverse habitats. **Possible, some suitable habitat. Peak flowering is November.**
Calandrinia granulifera pygmy purslane	Rare	Not Listed	Calandrinia granulifera grows in gravelly and sandy pockets in rocky outcrops in coastal situations (typically within the spray zone), and also on shallow rock-plate soils in the Midlands, substrates including Jurassic dolerite, Devonian granite and Tertiary basalt. The near-coastal sites occur up to 70 m above sea level, with the Midlands occurrences in the altitude range 200 to 210 metres. **Possible, some marginal habitat. Flowering is October and November.**
Calocephalus lacteus milky beautyheads	Rare	Not Listed	Occurs in open grassland situations. **Possible some suitable habitat, flowering is from November to March.**
Carex longebrachiata drooping sedge	Rare	Not Listed	Occurs on riverbanks, in rough grassland and pastures. **Unlikely as the proposed pipeline route does not cross any rivers.**
Colobanthus curtisiae grassland cupflower	Rare	Vulnerable	Occurs in grasslands and grassy woodlands. Known to persist in remnant grasslands, however its range is extremely restricted. **Possible as there is some suitable habitat. Flowering is from November to January.**
Dianella amoena grassland flaxlily	Rare	Endangered	Inhabits native grasslands and grassy woodlands, mainly within the Midlands. **Possible as there is some suitable habitat. Flowers from November to January, however it can be detected all year round. Not observed during the field assessment.**
Glycine latrobeana clover glycine	Vulnerable	Vulnerable	Occurs in dry sclerophyll forest, native grasslands and woodland, usually on flat sites with loose, sandy soil. **Possible, some suitable habitat. Flowering is from September to November.**
Gratiola pubescens hairy brooklime	Vulnerable	Not Listed	Inhabits areas that are seasonally damp or swampy. **Unlikely as there is little suitable habitat. Flowers from late spring to late summer.**
Haloragis heterophylla variable raspwort	Rare	Not Listed	Known to inhabit *Themeda* grassland, roadsides and woodlands in the Midlands, the east coast and the north and south eastern areas of Tasmania. **Possible as there is some suitable habitat. Flowers from September to February.**
Hyalosperma demissum moss sunray	Endangered	Not Listed	Occurs in shallow, stony soils (dry dolerite ridges) and rock plates in the eastern half of the State. **Unlikely, as there is little suitable habitat. Flowers from September to December.**
Isoetes drummondii subsp. *drummondii* plain quillwort	rare	Not Listed	Grows in mud or temporary shallow water, including in damp depressions, ephemeral creeklines and the margins of wetlands. **Possible as there is some marginal habitat. Generally detected from November to February.**
Isolepis stellata star clubsedge	rare	Not Listed	Habitat includes the margins of sedgey wetlands, wet soaks and seasonally inundated heathy sedgelands; the altitude of recorded sites in Tasmania ranges from close to sea level to elevations of 240 m. **Possible, some suitable habitat, flowering is from October to January.**

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelihood of occurrence within study area
Juncus amabilis gentle rush	Rare	Not Listed	Occurs in moist habitats, generally areas of seepage confined to roadsides. **Possible, some suitable habitat, flowering is generally November to early summer. Can be detected throughout the year. Not recorded during the field assessment.**
Juncus fockei slender jointleaf rush	rare	Not Listed	The key site for this species is at Epping Forest. **Possible, as there is some suitable habitat. However the species has only been recorded once in Tasmania.**
Juncus prismatocarpus branching rush	Rare	Not Listed	Occasionally found in swampy places across Tasmania, including Maria Island. **Unlikely, as there is little suitable habitat. Generally observed from December to March.**
Lachnagrostis punicea subsp. *punicea* bristle blowngrass	Rare	Not Listed	Occurs in dry woodland and forest, grazed pasture and wet soaks. **Possible, some suitable habitat. Flowers between December and January.**
Leptorhynchos elongatus lanky buttons	Endangered	Not Listed	Recorded from herb-grassland and alpine shrubland, usually associated with dry dolerite and basalt sites. **Possible, some appropriate habitat. Flowers from October to November.**
Leucochrysum albicans subsp. *albicans* var. *tricolor* Grassland paperdaisy	Endangered	Endangered	Restricted to non-sandy soils, known from Middlesex Plains near Cradle Mountain. Originally occupied *E. pauciflora* woodland and tussock grassland, however most of this habitat is now converted to improved pasture or cropland. **Possible, some suitable habitat. Flowering is from November to January.**
Leucopogon virgatus var. brevifolius shortleaf beardheath	Rare	Not Listed	Occurs is the Northern Midlands, where it is generally associated with Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits. **Possible, some suitable habitat. Flower is from September to November.**
Liparophyllum exaltatum erect marshwort	Rare	Not Listed	Habitat is found in the north-east near St Helens, Scamander and the Ringarooma River. It grows in stationary or slow flowing water to a depth of 50 cm. **Unlikely, no suitable habitat.**
Lobelia pratioides poison lobelia	Vulnerable	Not Listed	Inhabits the edge of rivers and moist areas within grasslands and grassy woodlands. **Possible, some suitable habitat. Flowering is from November to January.**
Lobelia rhombifolia tufted lobelia	Rare	Not Listed	It grows in dry sclerophyll forests dominated by Eucalyptus amygdalina (black peppermint) on mostly granite-derived sands. **Highly unlikely as the soils in the study area not derived from granite.**
Melaleuca pustulata warty paperbark	Rare	Not Listed	This species is endemic to Tasmania and is found in a range of habitats including dry open woodland, grassland and scrub, riparian zones and stable dunes in sparse coastal shrubbery. It is restricted to the central East Coast. **Highly unlikely as this species id predominantly coastal.**
Muehlenbeckia axillaris Matted lignum	Rare	Not Listed	Predominantly found in moist gravely or rocky places on the Central Plateau extending out to the northeast, northwest and west of the State. **Possible, some suitable habitat. Flowering is from December to February.**
Myriophyllum integrifolium tiny watermilfoil	Vulnerable	Not Listed	Occurs in muddy soil, saline swamps and on the edge of wetlands. **Unlikely, little suitable habitat.**
Phyllangium distylis tiny mitrewort	Rare	Not Listed	Occurs in muddy soaks and hollows prone to flooding in sandy humic heaths and open shrublands, near the coast in the north and north east of the State, and with outlying populations on King Island. **Possible, some suitable habitat. Flowering is October to December.**
Pilularia novae-hollandiae australian pillwort	rare	Not Listed	Aquatic or semi-aquatic found growing in the mud or silt of shallow rivers and on the seasonally inundated margins of creeks and rivers. Often hidden among grasses and sedges in damp mud, bogs and swamps in central/northern Tasmania. **Unlikely, as there is no appropriate habitat.**

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelihood of occurrence within study area
Pimelea curvifolia var. *gracilis* slender curved riceflower	Rare	Not Listed	Occurs in wet sclerophyll forests, predominantly in the north of the State. **Unlikely, as the vegetation in the study area is not consistent with previous records.**
Prasophyllum incorrectum golfers leek-orchid	endangered	Critically Endangered	Grows in relatively damp native grassland and grassy eucalypt and banksia woodland on sandy loams, and appears endemic to the northern midlands. **Possible, some appropriate habitat. Flowering is during late October and early November.**
Prasophyllum tunbridgense tunbridge leek-orchid	eendangered	Endangered	Habiait is native grassland on welldrained loams derived from basalt and is restricted to the Tunbridge – Campbell Town area in Tasmania's Midlands. The altitude range of recorded sites is 200to 240 m above sea level. **Unlikely, as the geology of the study area is not consistent with the known preferred substrate of basalt.**
Pterostylis squamata ruddy greenhood	vulnerable	Not Listed	Occurs in heathy and grassy open eucalypt forest, woodland and heathland on well drained sandy and loamy soils (Jones *et al.* 1999). **Possible, some marginal habitat. Flowering is between December and March, however this varies significantly between populations.**
Pterostylis ziegeleri grassland greenhood	vulnerable	Vulnerable	Found on the slopes of low stabilised sand dunes and in grassy dune swales on the coast, while in the Midlands it grows in native grassland or grassy woodland on well-drained clay loams **derived from basalt. Possible, in the southern end of the study are as there is some basalt derived soils. Flowering is October to early November.**
Pultenaea humilis dwarf bushpea	vulnerable	Not Listed	Restricted to grassy roadsides and gravels in the Midlands region. **Possible, appropriate habitat occurs in the study area. Flowering is October to November.**
Pultenaea prostrata silky bushpea	Vulnerable	Not Listed	Occurs in sandy, inland soil in grassy woodlands and grasslands. **Possible, some appropriate habitat, however geology is not consistent with known records. Peak flowering is generally November.**
Ranunculus prasinus midlands buttercup	endangered	Endangered	Endemic to Tasmania's central Midlands, extending from Tunbridge in the south to Campbell Town in the north. The linear range of the species is 22 km, extent of occurrence 230 km2, and area of occupancy less than 5 ha. Possible, some appropriate habitat. Flowering is October to Novemeber.
Ranunculus pumilio var. pumilio ferny buttercup	Rare	Not Listed	Occurs mostly in wet places from sea level to altitudes of 800-900 metres. **Unlikely, as the study area does not contain the preferred habitat. Flowering is generally late October and November.**
Rytidosperma indutum tall wallaby-grass	Rare	Not Listed	Occurs on mudstone and dolerite in open, dry sclerophyll woodlands. **Likely as there are previous records within the study area. Flowering is from November to February.**
Schenkia australis spike centaury	Rare	Not Listed	Recorded from cleared forest pasture, rainforest/wet sclerophyll forest and heathland in the east and north of the State; however, this species may have been introduced to Tasmania. **Unlikely, as appropriate habitat is not present within the study area.**
Schoenus latelaminatus medusa bogsedge	Endangered	Not Listed	Occurs in the Midlands, where the species is found growing in moist soil along creek beds, in soaks or in marshy paddocks. **Unlikely, as there is no appropriate habitat within the study area.**
Scleranthus diander tufted knawel	vulnerable	Not Listed	It is a sprawling herb that grows in dry, grassy woodlands on basalts and dolerite. **Possible, in the southern end of the study area. Flowering is from November to January.**
Scleranthus fasciculatus spreading knawel	Vulnerable	Not Listed	Recorded in *Poa labillardierei* (silver tussock) grassland/grassy woodland and appears to need gaps between the tussock spaces for its survival. **Unlikely, as there is no appropriate habitat within the study area.**

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelihood of occurrence within study area
Senecio squarrosus leafy fireweed	Rare	Not Listed	Occurs in dry sclerophyll forest. **Possible, there is some appropriate habitat. Flowering is from October to December.**
Siloxerus multiflorus small wrinklewort	Rare	Not Listed	Occurs near river mouths, in coastal areas and inland dry forests. **Unlikely, no suitable habitat.**
Spyridium vexilliferum var. *vexilliferum* helicopter bush	rare	Not Listed	Occurs in sandy heaths and on rocky outcrops. **Possible, some appropriate habitat. Flowering is from September to January.**
Stackhousia subterranea grassland candles	endangered	Not Listed	Habitat occurs within *Themeda triandra* grassland, or grassy woodland dominated by *Eucalyptus pauciflora, Eucalyptus rodwayi* or *Eucalyptus ovata* Known sites occur within the altitude range 180 to 260 m, and are within the 650 mm annual rainfall. **Possible, some appropriate habitat. Flowering is from September to November.**
Stenanthemum pimeleoides propeller plant	vulnerable	Vulnerable	Occurs in dry sclerophyll forest or woodland with an open heathy or shrubby understorey . It usually occurs in woodlands dominated by either *Eucalyptus amygdalina* or *Eucalyptus aff. pulchella*. **Possible, some appropriate habitat. Flowering is November to February, however this species can be identified all year round. It was not recorded within the study area during this field assessment.**
Stuckenia pectinata fennel pondweed	rare	Not Listed	Found in fresh to brackish/saline water of various depths, from a few centimetres to four metres deep, in rivers, estuaries and inland lakes. **Unlikely as there is no appropriate habitat.**
Stylidium despectum small triggerplant	Rare	Not Listed	Known from sandy heathlands and moist habitat such as wet soaks (often with a peat soil), muddy flats and saline swamps along the coast in the north of the State. **Unlikely, no appropriate habitat.**
Tricoryne elatior yellow rushlily	Vulnerable	Not Listed	Occurs in grasslands, heaths and open woodland near the coast and inland to approximately 1000 metres altitude in the north-east, the Midlands and the East Coast. **Possible, some appropriate habitat. Flowering in November to January.**
Triptilodiscus pygmaeus dwarf sunray	Vulnerable	Not Listed	Occurs on roadsides, semi-improved pasture, grasslands, riverine scrub and dry sclerophyll forests. **Possible, some appropriate habitat, flowering is September to November.**
Trithuria submersa submerged watertuft	Rare	Not Listed	Occurs in marshy habitat in the Midlands, Central Highlands and the northeast of the State. **Possible, some appropriate habitat, flowering is Spring to Summer.**
Velleia paradoxa spur velleia	Vulnerable	Not Listed	Occurs in grassland and grassy woodland. **Possible, some appropriate habitat. Flowering is November to early January.**
Vittadinia burbidgeae smooth new-holland-daisy	rare	Not Listed	Collected from drier areas of the east coast and midlands regions, with a number of specimens of this endemic species from shallow, doleritic soils. **Possible, some appropriate habitat.**
Vittadinia cuneata var. *cuneata* fuzzy new-holland-daisy	rare	Not Listed	Occurs in areas of low precipitation on both fertile and infertile soils, predominantly within dry sclerophyll forest. **Possible, some marginal habitat. Flowering is November to March.**

Vittadinia gracilis woolly new-holland-daisy	Rare	Not Listed	Occurs on dry sites on dolerite and basalt and is predominantly found in dry sclerophyll forest. **Possible, some suitable habitat. Flowering is spring to early summer.**
Vittadinia muelleri narrowleaf new-holland-daisy	Rare	Not Listed	Occurs on very dry and fertile sites. **Possible, some appropriate habitat. Flowering is November to May.**
Xerochrysum palustre	Vulnerable	Vulnerable	Found in swamps or winter-wet grasslands and swampy riparian vegetation. **Possible, some suitable habitat. Flowering is spring to summer.**

Note: Likelihood of occurrence of threatened flora is assessed on a 4-tier scale:
1. **Present** - individuals recorded within the study area during the field assessment or any previous assessment within the boundaries of study area;

2. **Possible** - suitable habitat occurs within the study area;

3. **Unlikely** - suitable habitat unlikely to occur within the study area, or suitable habitat substantially modified, or suitable habitat present but species not recorded for over 50 years within 5 km of the site;

4. **Highly unlikely** - no suitable habitat present within the study area, and individuals not recorded within the study area during current or any previous assessment.

3.2.2 Threatened flora recorded within the study area

45 native flora species were recorded during the field assessment with no threatened flora species detected. However, the survey was not conducted at an appropriate time of year to identify many of the potential threatened species that may occur within the study area. It is therefore possible that threatened flora species have been overlooked. Refer to Table 3-1 for detail on the likelihood of occurrence and peak flowering period.

3.3 Native Fauna

3.3.1 Listed fauna identified by desktop research

The Natural Values Atlas and EPBCA Protected Matters Search Tool identified a range of fauna species listed under the Tasmanian TSPA and Commonwealth EPBCA which have been previously recorded or are predicted to occur in the vicinity of the proposed pipeline route.

Eight threatened fauna species have been recorded within 500 metres of the proposed pipeline route. These are:

- *Aquila audax* (wedge-tailed eagle)
- *Dasyurus maculatus* subsp. *maculatus* (spotted-tailed quoll)
- *Dasyurus viverrinus* (eastern quoll)
- *Litoria raniformis* (green and gold frog)
- *Perameles gunnii*(eastern barred bandicoot)
- *Pseudemoia pagenstecheri*(tussock skink)
- *Sarcophilus harrisii* (Tasmanian devil)
- *Tyto novaehollandiae* subsp. *castanops* (masked owl (Tasmanian))

All species are listed as endangered under both the Tasmanian TSPA and the Commonwealth EPBCA, with the exception of *Perameles gunnii* (eastern barred bandicoot) and *Dasyurus viverrinus* (eastern quoll) which are only listed under the EPBCA, and *Pseudemoia pagenstecheri* (tussock skink) which is only listed under the TSPA.

Additional listed species have been recorded, or are predicted to occur based on habitat mapping, within 5 km of the site according to the NVA and PMST reports. These species (except listed marine and migratory marine species) and their likelihood of occurrence within the study areas are shown in Table 3-2. The PMST Report identified a number of migratory marine

and wetland species and listed marine birds (other matters protected by the EPBCA). Species solely listed as marine and marine migratory[1] under the EPBCA have been excluded from this assessment as the relevant habitats for these species are absent from the study area. Furthermore, the field survey was confined to the terrestrial habitats (as no water bodies present along proposed pipeline route) for vertebrate species within the study area, and as such marine and marine migratory species were not considered in detail.

Table 3-2 Listed fauna known or predicted to occur within 5 km of the study area

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelyhood of occurrence within study area
Mammals			
Dasyurus maculatus subsp. *maculatus* spotted-tailed quoll	Rare	Vulnerable	Most commonly inhabit cool temperate rainforest, wet sclerophyll forest, and coastal scrub. **Possible, some potential foraging habitat, may pass through the study area. Previously recorded within 500 m.**
Dasyurus viverrinus eastern quoll	Not listed	Endangered	Found in a variety of habitats including rainforest, heathland, alpine areas and scrub. Prefers dry grassland and forest mosaics which are bounded by agricultural land, particularly where pasture grubs are common. **Possible, potential foraging habitat, pass through in transit from adjacent areas.**
Perameles gunnii eastern barred bandicoot	Not Listed (but of high conservation significance)	Vulnerable	Usually occurs in open habitats, including woodlands, open forests with a grassy understorey, and native and exotic grasslands, with some form of thick ground cover/understorey for shelter and nesting. **Likely to forage, some diggings evident in the study area. Previously recorded within 500 m**
Sarcophilus harrisii Tasmanian devil	Endangered	Endangered	May occur in a variety of forest types including coastal heath, open dry sclerophyll forest, and mixed sclerophyll rainforest. **Possible, may transit through the study area, however is unlikely to utilise for denning. Previously recorded within 500 m**
Birds			
Accipiter novaehollandiae grey goshawk	Endangered	Not Listed	Occurs in closed forests, with high priority nesting habitat along watercourses with blackwoods. May otherwise nest in melaleuca, myrtle, teatree and eucalypt species, occasionally up to 100 metres from a watercourse. **Unlikely as there is no suitable habitat.**
Apus pacificus fork-tailed swift	Not Listed	Migratory	These birds are usually observed in flight but have been observed roosting in tall trees. **Unlikely as the area is not the preferred habitat.**
Aquila audax subsp. *fleayi* wedge-tailed eagle	Endangered	Endangered	Nest in old growth trees, and common in areas with a mosaic of forest, farmland and waterways. **Possible, may forage, however is unlikely to nest within the study area.**
Botaurus poiciloptilus Australasian bittern	Not Listed	Endangered	Mainly occurs in densely vegetated freshwater wetlands and, rarely, in estuaries or tidal wetlands. Formerly widespread in Tasmania, now appears confined to coastal regions in the northeast and on the Bass Strait islands. **Unlikely as there is no appropriate habitat.**
Calidris ferruginea curlew sandpiper	Not Listed	Critically Endangered	Occurs on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They occur in both fresh and brackish waters. **Unlikely, study area is out of the preferred range and there is no appropriate habitat.**

[1] For a list of possible marine migratory, wetland migratory and marine species see the EPBC Act protected Matters Report in Appendix B.

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelyhood of occurrence within study area
Gallinago hardwickii Latham's snipe	Not Listed	Migratory	Occurs in permanent and ephemeral wetlands, usually in open freshwater wetlands with low, dense vegetation such as swamps, flooded grasslands or heathlands, around bogs and other waterbodies; however, can also occur in saline or brackish water, and in modified or artificial habitats. **Unlikely, as there is no appropriate habitat.**
Haliaeetus leucogaster white-bellied sea-eagle	Vulnerable	Migratory	Generally nest and forage near the coast; however, also occur near large rivers and inland lakes. Require old growth trees for nesting. **Possible, some limited potential foraging habitat, however is unlikely to nest.**
Hirundapus caudacutus white-throated needletail	Not Listed	Migratory	In Australia this species is almost entirely aerial. Occurs most often above wooded areas and heathland, but can occur over farmland and remnant vegetation at the edge of paddocks. **Possible, may overfly the site.**
Lathamus discolor swift parrot	Endangered	Endangered	Feed on the nectar of *Eucalyptus globulus* and *E. ovata*. Nest in tree hollows in eastern Tasmania, usually near the coast in dry forests. **Unlikely to nest, however may pass through on the migratory route from Victoria to southern Tasmania. Very limited potential foraging habitat.**
Myiagra cyanoleuca satin flycatcher	Not Listed	Migratory	Inhabit heavily vegetated gullies, generally in eucalypt dominated forests and taller woodlands near wetlands or watercourses, although can occur in coastal or drier woodlands and open forests. Widespread in eastern Tasmania through to a line joining Ulverstone and South Cape, though also recorded further west along the northern coast and in the north-west, and at scattered sites near the western coast. **Possible, some appropriate habitat however unlikely to be core habitat for this species.**
Numenius madagascariensis eastern curlew	Endangered	Migratory	This coastal species is found on islands in Bass Strait and the north and east coasts of Tasmania, and is most commonly associated with sheltered coasts. It primarily occurs in Australia during the non-breeding season, and non-migrating immature birds still move northward in winter. Preferred habitats include estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats. **Unlikely outside the preferred range of the species.**
Prototroctes maraena Australian grayling	Vulnerable	Vulnerable	Occurs in middle to lower reaches of rivers and streams. **Highly unlikely as there is no appropriate habitat.**
Pterodroma leucoptera subsp. *leucoptera* Gould's petrel	not listed	Endangered	Pelagic, marine species that spends much of its time foraging at sea. Mostly recorded off the coast of Tasmania between December and April. This species breeds in NSW. **Highly unlikely are the study area is outside the preferred range of the species.**
Tyto novaehollandiae subsp. *castanops* masked owl (Tasmanian)	Endangered	Vulnerable	Usually found in lowland dry sclerophyll forest; however, can occur in wet sclerophyll forest, non-eucalypt dominated forest, scrub and urban environments. **Possible, may forage and there are some appropriate habitat trees (large hollows) in close proximity to the study area.**
Reptiles			
Pseudemoia pagenstecheri tussock skink	Vulnerable	Not Listed	Restricted to lowland tussock grassland and woodland, with a good cover of medium to tall tussocks. **Unlikely as the study area does not provide the preferred habitat.**
Fish and Amphibians			
Galaxias fontanus swan galaxias	Endangered	Endangered	Known only from the Swan and Macquarie River catchments of eastern Tasmania, and not found within the distribution of the introduced brown trout (*Salmo trutta*). **Highly unlikely as there is not appropriate habitat.**

Species	Tasmanian Status -TSP Act	Commonwealth Status- EPBC Act	Brief habitat description & Likelyhood of occurrence within study area
Litoria raniformis green and gold frog	Vulnerable	Vulnerable	Occurs in permanent or temporary water bodies, generally dominated by *Triglochin* or a species of *Juncus* or sedge. **Unlikely as there is no appropriate habitat for the species.**
Inverbrates			
Catadromus lacordairei green-lined ground beetle	Vulnerable	Not Listed	Occurs beneath stones and woody debris, or within fissures of basaltic clay soils, in open grassy woodland associated with dams or wetlands at low elevations, mainly in the northern and central midlands. **Possible, not observed during the field assessment.**

Note: Likelihood of occurrence of threatened fauna is assessed on a 4-tier scale:
1. **Present** - individuals recorded within the study area during the field assessment or any previous assessment within the boundaries of study area;

2. **Possible** - suitable habitat occurs within the study area;

3. **Unlikely** - suitable habitat does not occur within the study area, or suitable habitat substantially modified, or suitable habitat present but species not recorded for over 50 years within 5 km of the site;

4. **Highly unlikely** - no suitable habitat present within the study area, and individuals not recorded within the study area during current or any previous assessment.

3.3.2 Listed fauna and potential habitat of listed species recorded within the study area

General Habitat Values

As the majority of the proposed pipeline route is situated in roadside verges, permanent easement and agricultural land the habitat values in these locations are marginal. Some moderate quality habitat is found within the sections of DAZ bordering the road easement with good quality habitat situated with increasing distance from the Midland Highway.

The surrounding forest community, *Eucalyptus amygdalina* forest and woodland on Cainozoic deposits provides roosting, foraging, refuge, and some nesting habitat for bird, ground-dwelling and arboreal mammal species. A few possible hollow-bearing trees were recorded within the study area (ground level assessment only), however there are several habitat trees in the surrounding area. The immediate study area is unlikely to provide nesting sites for birds and arboreal mammals. It is likely however, to provide some foraging habitat and be traversed intermittently by mammals such as potoroos, Bennett's wallabies, pademelons and brown bandicoots and other animals. Diggings within the study area boundary were evident during the survey, however it was not possible to determine the origin of these, i.e. whether they were derived from bandicoots, echidnas or other ground foraging fauna.

Other habitat features of the woodland communities such as woody debris, leaf litter and more open sunny areas may be utilised by ground-dwelling mammals, reptiles and small bird species.

In summary, the following vegetation (habitat) types (likely to provide moderate to high quality fauna habitat) were recorded within the total study area:

- *Eucalyptus amygdalina* inland forest and woodland on Cainozoic deposits(DAZ)

Threatened Fauna Habitat

No threatened fauna were detected during the field survey. This did not include a detailed fauna survey (i.e. trapping) but focussed on fauna habitat and evidence of animals (e.g. scats, tracks).

Table 3-2 above identifies a number of species that have previously been recorded within and adjacent to the study area.

The eastern barred bandicoot (*Perameles gunnii*) and eastern quoll (*Dasyurus viverrinus*) have previously been recorded within 500 m of the study area. Multiple fresh diggings were recorded but no other evidence (such as scats) of either species were recorded during the field assessment. However, it is possible both species forage within the study area but are more likely to shelter/nest (and possibly breed) within the forested areas adjacent to the highway and rail easements

The Tasmanian devil (*Sarcophilus harrisii*) has been previously recorded within 500 m of the study area and the site provides limited potential foraging habitat for this species. No direct evidence (such as scats) was observed during the site assessment, however it is possible the devil would access the study area in transit from larger forested areas surrounding the proposed pipeline route. No potential den sites were observed within the study area during the current assessment.

The site provides some potential foraging habitat for both the wedge-tailed eagle (*Aquila audax* subsp. *fleayi)* and white-bellied sea eagle (*Haliaeetus leucogaster*). This foraging habitat is limited in size and is unlikely to be critical habitat. There have been 4 verified wedge-tailed eagle *(Aquila audax* subsp. *fleayi)* nests within 5 kms of the survey area, however they are not within 500 m or 1 km line of sight. No potential nesting sites were observed within the study area during the current assessment.

The masked owl (*Tyto novaehollandiae* subsp. *castanops*) is considered likely to occur within the study area, as it provides some potential foraging habitat in the woodland and more open grassland areas, and along rail lines. There have been eight previous recorded (sightings) of this species within the study area. No evidence of the masked owl was recorded during this assessment but there was at least one tree with a hollow of a suitable size for this species detected (refer to Figure 2A for location).

There is a low likelihood the swift parrot (*Lathamus discolour*) may occur in the area. Blue gums (*E.globulus*) and *E. ovata*, are the preferred feed trees for the species, and a number of these trees were recorded in close proximity to the southern end of the study area, near the Conara township. However, there have been no sightings of swift parrot recorded within 5 km of the survey area. No direct evidence of the species was recorded during the field assessment.

3.3.3 Raptor Nest identified by desktop research

There are several nest locations for raptors within 5000 metres of the study area identified by the Natural Values Atlas. All nest locations are a minimum of 500 metres or 1000 m line of sight of the proposed pipeline route. A targeted raptor nest survey has not been undertaken as part of this assessment, with the exception of one suitable masked owl hollow observed during the survey and noted in Figure 2A. There was no potential eagle nesting habitat observed within the study area.

3.4 Geoconservation Sites

According to the Natural Values Atlas, the following geoconservation sites occur within 1000 m of the study area:

- Conara Lunettes- Notable example of type, of particular significance due to the retention of intact native vegetation and hydrological processes.
- Deflation Basins of Eastern Tasmania in Good Condition - Deflation basins are relic features formed under colder, drier and windier conditions during the Late Pleistocene. They are a distinctive element of Tasmania's geodiversity, differ in significant respects compared to examples on mainland Australia, and contain evidence concerning environmental conditions in eastern Tasmania under glacial climatic conditions.
- Macquarie River Valley Sandsheets – Notable example of type

3.5 Reserves

The Natural Values Atlas identified 20 reserves within 1 km of the proposed pipeline route, these are as follows;

- Cleveland Lagoon Conservation Area
- 15 private Conservation Covenants; and
- Four Informal Reserves on public land.

3.6 Nationally Important and RAMSAR Wetlands

The EPBC Protected Matters Search Tool did not identify any RAMSAR Wetlands or Wetlands of National Importance within 5 km of the proposed pipeline route survey area.

4. Results-Threatening Process

The TSP Act defines a threatening process as any action which poses a threat to the natural survival of any native taxon of flora or fauna. The Tasmanian Threatened Species Strategy 2000, prepared under the TSP Act, has identified six threatening processes as having the greatest impact on Tasmania's native flora and fauna:

- Native vegetation clearance;
- Pests, weeds and diseases;
- Degradation of water systems;
- Inappropriate use of fire;
- Bycatch and illegal harvesting; and
- Impacts of stock.

The EPBCA also provides for the identification and listing of key threatening processes. A threatening process is defined under the EPBCA as a key threatening process if it threatens or may threaten the survival, abundance or evolutionary development of a native species or ecological community. The implications of listed key threatening processes are different for each state and territory. Those currently listed under the EPBCA are shown in Table 4-1 below

Table 4-1 Listed Key Threatening Processes

Listed Key Threatening Process
Competition and land degradation by rabbits
Competition and land degradation by unmanaged goats
Dieback caused by the root-rot fungus (*Phytophthora cinnamomi*)
Infection of amphibians with chytrid fungus resulting in chytridiomycosis
Land clearance
Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants
Loss of biodiversity and ecosystem integrity following invasion by the Yellow Crazy Ant (*Anoplolepis gracilipes*) on Christmas Island, Indian Ocean
Loss of climatic habitat caused by anthropogenic emissions of greenhouse gases
Novel biota and their impact on biodiversity
Predation by European red fox
Predation by exotic rats on Australian offshore islands of less than 1000 km^2 (100,000 ha)
Predation by feral cats
Predation, Habitat Degradation, Competition and Disease Transmission by Feral Pigs
Psittacine Circoviral (beak and feather) Disease affecting endangered psittacine species
The biological effects, including lethal toxic ingestion, caused by Cane Toads (*Bufo marinus*)
The reduction in the biodiversity of Australian native fauna and flora due to the red imported fire ant, *Solenopsis invicta* (fire ant)

Ecological values, such as those outlined in Section 3 of this document, can be adversely affected by threatening processes. Key threatening processes identified within the study area have been outlined below, and those relating more specifically to the proposed activities associated with this project (e.g. clearance of native vegetation) are discussed in Section 5.

4.1 Invasive Species

4.1.1 Introduced Plants

Key Threatening Process: Loss and degradation of native plant and animal habitat by invasion of escaped garden plants, including aquatic plants and Novel biota and their impact on biodiversity

Introduced plants identified by desktop research

Nineteen species listed as declared weeds under the Tasmanian *Weed Management Act 1999*, including eight Weeds of National Significance (WONS), have been previously recorded or are predicted to occur within 5 km of the study area (by the PMST Report and/or the NVA Report). They are:

- *Carduus nutans* (nodding thistle)
- *Carduus pycnocephalus* (slender thistle)
- *Carthamus lanatus* (saffron thistle)
- *Cirsium arvense var. arvense* (creeping thistle)
- ***Cytisus scoparius*** **(english broom)(WONS)**
- *Echium plantagineum* (patersons curse)
- *Eragrostis curvula* (african lovegrass)
- *Erica lusitanica* (spanish heath)
- *Foeniculum vulgare* (fennel)
- ***Genista monspessulana*** **(montpellier broom)(WONS)**
- *Hypericum perforatum* (perforated st johns)
- ***Lycium ferocissimum*** **(african boxthorn)(WONS)**
- *Onopordum acanthium* (scotch thistle)
- ***Rubus fruticosus*** **(blackberry)(WONS)**
- ***Salix matsudana cv. tortuosa*** **(twisted willow)(WONS)**
- ***Salix x fragilis nothovar. fragilis*** **(crack willow)(WONS)**
- ***Ulex europaeus*** **(gorse)(WONS).**

The above weeds in bold are Weeds of National Significance (WONS).

The NVA Report also identified an additional priority weed (not listed as a declared weed) that has been recorded within 5 km of the study area:

- Gleditsia triacanthos (honey locust tree)

Introduced plants recorded within the study area

Twenty introduced plant species were recorded within the study area during the field assessment, of these two are declared weeds and Weeds of National Significance:

- Ulex europaeus (gorse)
- Rubus fruticosus (blackberry)

Individual location data is not provided in this section, however, the locations are provided in as the occurrence of Ulex europaeus (gorse) in particular is frequent along the entire proposed pipeline route. A file of GIS data for these locations can be provided if required.

For a full list of introduced plants species recorded during the field study see Appendix C.

4.1.2 Feral Animals

Nine feral birds and seven feral mammals are predicted to occur within 5 km of the study area (by the PMST Report). These are:

- Alauda arvensis (skylark)
- Anas platyrhynchos (mallard)
- Carduelis carduelis (eurpoean goldfinch)
- Carduelis chloris (eurpoean goldfinch)
- Columba livia (domestic pigeon)
- Passer domesticus (house sparrow)
- Streptopelia chinensis (spotted turtle dove)
- Sturnus vulgaris (common startling)
- Turdus merula (Common Blackbird)
- Felis catus (cat)
- Feral deer (deer)
- Lepus capensis (brown hare)
- Oryctolagus cuniculus (rabbit)
- Rattus norvegicus (brown rat)
- Rattus rattus (black rat)
- Vulpes vulpes (fox)

The NVA Report did not identify any known species of biosecurity risk within 1000 m of the study area.

Introduced animals recorded within the study area

No introduced fauna were detected during the field survey. This did not include a detailed fauna survey (i.e. trapping) but focussed on fauna habitat and evidence of animals (e.g. scats, tracks).

4.1.3 Pathogens

Phytophthora cinnimomi

There was no evidence of the root pathogen *Phytophthora cinnimomi* observed or recorded during the survey within the study area.

5. Potential Ecological Impacts

In general, there is a low probability that ecological values would be impacted if the pipe line is located within 4 to 5 meters of the road edge as this zone is highly modified and is generally gravel or exotic flora species.

5.1 Vegetation Communities

The majority of the 11 km pipeline route is situated within roadside and rail easement, and urban areas and agricultural land, and will generally not require removal of native vegetation. There is potential for impacts to patches of native vegetation outside of the easements, such as *Eucalyptus amygdalina* inland forest and woodland on Cainozoic (DAZ). The patches are small in size and Zinfra have advised the pipeline can be micro-aligned (or under-bored) to minimise clearance of trees.

As DAZ is a threatened community (listed under the *Nature Conservation Act 2002*), ***if impacts to this community cannot be avoided approval is likely to be required, including preparation of a Forest Practices Plan, from the Forest Practices Authority.***

5.2 Significant Flora

No threatened flora were recorded during the current survey. However, the majority of the pipeline route does provide suitable potential habitat for threatened flora, and in particular threatened orchid species, as it is situated along roadsides, rail lines and urban areas and there are several species previously recorded within or in close proximity to the study area.

Orchid species generally recover well, and even respond in greater numbers after disturbance of habitat (assuming the top horizon of soil is carefully scraped, retained and respread over the disturbed area as planned). As such, the proposed works are not expected to have a long term or significant detrimental impact on orchid species.

After the mitigation and rehabilitation recommendations in 6 below are implemented, the disturbed zones are likely to naturally regenerate (with appropriate weed and sediment control) to their previous condition.

If after conducting the recommended follow-up spring survey (discussed in Section 6 below), threatened flora are confirmed as present within the proposed works area, then a Permit to Take (and possibly approval under the Commonwealth EPBCA), will be required before disturbance of these individuals occurs.

5.3 Significant Fauna Habitat

In general, the suitable habitats within the study area for most species (e.g. masked owl, eastern quoll, spotted-tailed quoll, eastern barred bandicoot and Tasmanian devil), only represent a small component of a much larger area of habitat required and available for any individual of these species. The study area borders the national highway connecting the north and south of the state and as such the quality of fauna habitat adjacent to the highway is considered low to moderate.

The proposed works will include some areas of trenching, and other zones of directional drilling. It is understood disturbed areas will be allowed to regenerate naturally after completion of the works. The habitat within the study area is not considered at risk of significant impact for the species or local populations of these species. There will be minimal permanent loss of potential foraging habitat, and overall impacts will be minor and temporary during the construction period.

Based on current design plans, permits or approval under the Tasmanian TSPA or Commonwealth EPBCA are not expected to be required for potential impacts to threatened fauna.

6. Conclusions and Recommendations

6.1 Flora

The ecological survey was not conducted at an optimum time of year to survey for many of the threatened flora species that have a moderate probability of occurring within the study area.

Due to the number of threatened flora species that may have been over looked it is recommended to conduct an additional flora survey in late October/early November. This will reduce the risk that threatened flora species may be impacted during the construction of the proposed pipeline.

An alternative risk mitigation measure may be to utilise a qualified ecologist (botany) at the time of construction (if constructed during late September to February) to undertake a clearance survey as the pipeline is constructed. The only downfall to this method is if a "Permit to Take" under the TSPA, and/or an approval under the EPBCA, is required it will have potential to delay construction timeframes if impacts cannot be avoided.

In relation to native vegetation communities, if impacts to the threatened DAZ community cannot be avoided, it is recommended confirmation be sought from the Forest Practices Authority regarding the requirement for submission and approval of a Forest Practices Plan, prior to any vegetation clearance occurring.

6.2 Fauna

The impacts to fauna habitat values are considered likely to be low, and temporary in nature. However, if trees are to be removed it is recommended that a pre clearance survey is undertaken for any individuals that may have the potential to provide nesting for arboreal mammals or bird species. These would likely include any trees that have a DBH greater than 30 cm, and are potentially hollow bearing.

In addition it is recommended that the large hollow bearing tree marked on Figure 2A is retained, as this contains a large hollow, of a suitable size to provide a possible masked owl roost or nest site.

6.3 Preparation of Construction Environmental Management Plan

It is recommended that a Construction Environmental Management Plan (CEMP) be prepared for the project that includes provisions relevant to protecting the ecological values identified within the site and more broadly adjacent to the construction area. Provisions to minimise impacts to ecological values that are recommended for inclusion in the CEMP are listed below:

- Avoid any unnecessary clearance and/or disturbance of native vegetation, including both trees and understorey vegetation where possible.
- Where clearance of hollow bearing trees (including dead stags) is required, a pre-clearance survey for birds and other native arboreal fauna is recommended to ensure no direct impacts to native fauna.
- Locate site compounds and facilities, including laydown and parking areas, in disturbed zones such as cleared agricultural or urban areas, to minimise disturbance of native vegetation.

- When working in zones either containing or bordering the threatened DAZ community, the areas of vegetation not approved for clearance should be clearly fenced off as 'no go' or 'environmental protection zones' to prevent unintentional incursion by people and machinery.
- Topsoil from the immediate works area should be scalped (top horizon) and carefully stockpiled for replacement after the proposed construction works, to facilitate natural regeneration of native vegetation, in particular nny woody debris cleared as part of the work should also be retained and re-laid once works are complete.
- Sediment and erosion control measures such as silt fencing should be in place around the works, to minimise the risk of runoff during rain events, particularly where working in areas within or adjacent to the threatened DAZ community.
- No open trenches or holes should be left uncovered at the end of each day. Open trenches and/or holes may cause impacts to wildlife such as bandicoots and quolls.
- It is recommended that all contractor staff are provided an environmental induction to ensure there is understanding of the issues (values and risks) associated with operations within the area, particularly how to minimise possible impacts to threatened flora and fauna species

6.3.1 Preparation of a Weed Management/Hygiene Plan

It is recommended that weed, disease and pest control be considered in the detailed project planning either through incorporation of control measures in a site specific Construction Environmental Management Plan (CEMP) or preparation of a Weed Management/Hygiene Plan. This documentation should include:

- Control of weeds prior to construction where appropriate.
- Washdown and inspection of vehicles, machinery and boots before leaving/entering the site to ensure no viable plant materials or large clods of soil are transported.
- Washdown to be conducted in accordance with the Tasmanian Weed and Disease Planning and Hygiene Guidelines (DPIPWE 2015).
- Control of material brought onto the site, to ensure it is free from weed seeds or diseases.
- Ongoing weed control will be required post-construction.

The above recommendations are based on current plans for the proposed pipeline and may need to be revised if the development plans change.

7. References

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Appendices

Appendix A - Natural Values Atlas Report

Natural Values Atlas Report

Authoritative, comprehensive information on Tasmania's natural values.

Reference:
Requested For:
Report Type: Summary Report
Timestamp: 10:15:20 AM Tuesday 25 July 2017

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

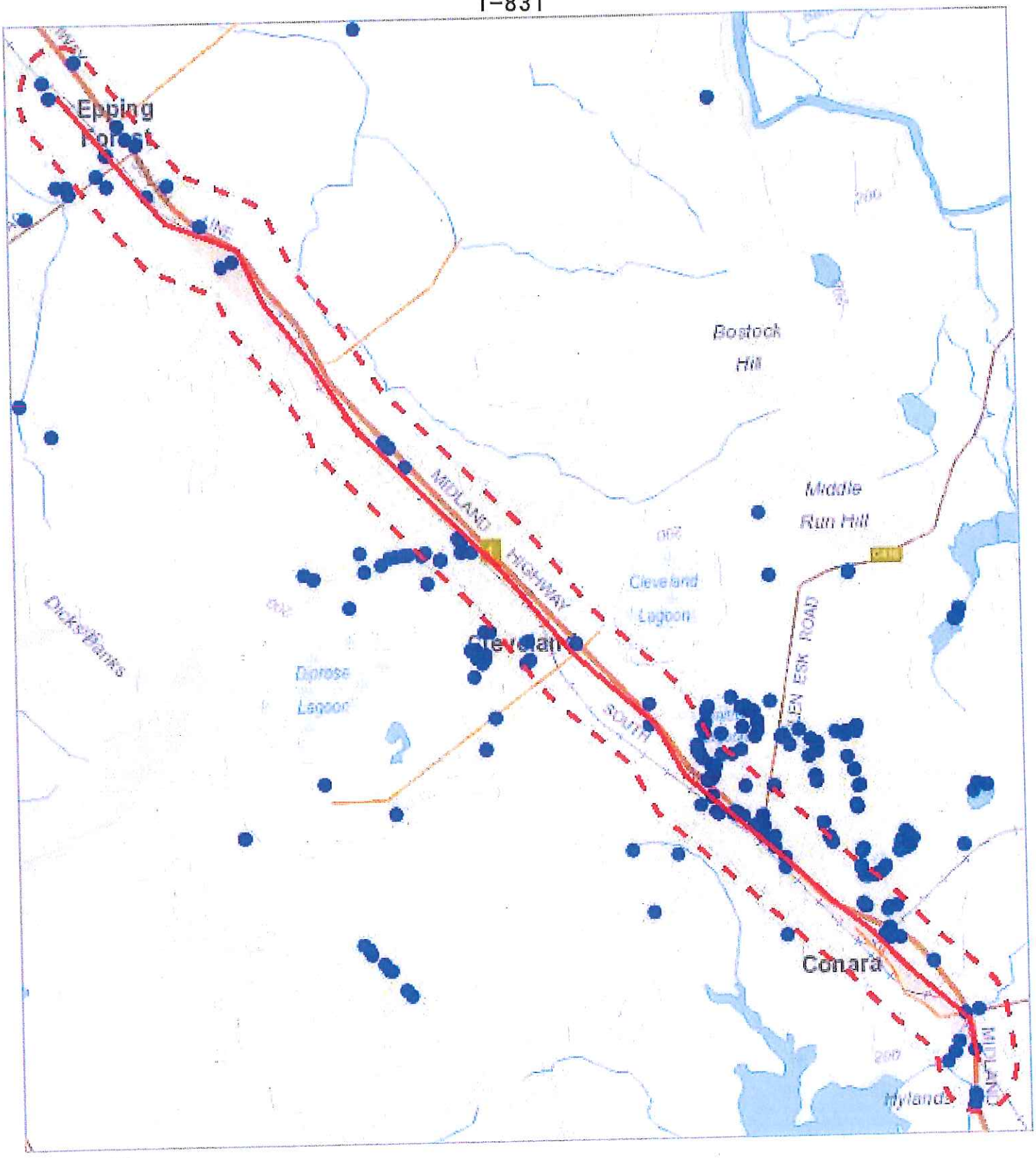
The centroid for this query GDA94: **532826.0, 5372630.0** falls within:

Property: 0

Threatened flora within 500 metres

1-831

537814, 5378045



527898, 5367175

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

Exhibited

Threatened flora within 500 metres

1-832

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

1-833

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Amphibromus macrorhinus	longnose swampgrass	e		n	2	14-Jan-2014
Aphelia gracilis	slender fanwort	r		n	16	18-Dec-2013
Aphelia pumilio	dwarf fanwort	r		n	6	22-Oct-2015
Austrostipa scabra	rough speargrass	r		n	7	28-Nov-2013
Brunonia australis	blue pincushion	r		n	2	01-Jan-1969
Caesia calliantha	blue grasslily	r		n	11	28-Nov-2013
Caladenia anthracina	blacktip spider-orchid	e	CR	e	3	06-Nov-2002
Caladenia filamentosa	daddy longlegs	r		n	1	24-Oct-2012
Caladenia lindleyana	lindleys spider-orchid	e	CR	e	5	01-Jan-1995
Carex longebrachiata	drooping sedge	r		n	1	07-Nov-2012
Dianella amoena	grassland flaxlily	r	EN	n	2	11-Nov-1994
Glycine latrobeana	clover glycine	v	VU	n	2	15-Nov-2001
Gratiola pubescens	hairy brooklime	v		n	2	18-Dec-2013
Haloragis heterophylla	variable raspwort	r		n	5	22-Oct-2015
Isoetes drummondii subsp. drummondii	plain quillwort	r		n	3	14-Nov-2010
Isolepis stellata	star clubsedge	r		n	7	18-Jan-2014
Juncus fockei	slender jointleaf rush	r		n	1	01-Mar-1995
Leucochrysum albicans var. tricolor	grassland paperdaisy	e	EN	n	2	01-Jan-1993
Leucopogon virgatus var. brevifolius	shortleaf beardheath	r		n	3	14-Nov-2010
Lobelia pratioides	poison lobelia	v		n	17	14-Jan-2014
Lobelia rhombifolia	tufted lobelia	r		n	1	31-Dec-1961
Melaleuca pustulata	warty paperbark	r		e	1	01-Nov-1984
Myriophyllum integrifolium	tiny watermilfoil	v		n	11	22-Oct-2015
Phyllangium distylis	tiny mitrewort	r		n	8	14-Jan-2014
Pimelea curviflora var. gracilis	slender curved riceflower	r		n	1	01-Jan-1918
Pterostylis squamata	ruddy greenhood	v		n	4	19-Jan-2011
Pterostylis ziegeleri	grassland greenhood	v	VU	e	1	15-Oct-1985
Pultenaea humilis	dwarf bushpea	v		n	7	30-Jan-2007
Pultenaea prostrata	silky bushpea	v		n	2	01-Nov-1995
Rytidosperma indutum	tall wallabygrass	r		n	4	19-Jan-2011
Senecio squarrosus	leafy fireweed	r		n	3	10-Nov-2015
Siloxerus multiflorus	small wrinklewort	r		n	4	22-Oct-2015
Stylidium despectum	small triggerplant	r		n	8	14-Jan-2014
Tricoryne elatior	yellow rushlily	v		n	3	29-Jan-2002
Triptilodiscus pygmaeus	dwarf sunray	v		n	1	22-Oct-2015
Trithuria submersa	submerged watertuft	r		n	8	18-Dec-2013
Vittadinia gracilis	woolly new-holland-daisy	r		n	1	28-Nov-2013
Xerochrysum palustre	swamp paperdaisy	v	VU	n	1	13-Feb-2011

Unverified Records

No unverified records were found!

For more information about threatened species, please Threatened Species Enquiries.

Telephone: (03) 6165 4340

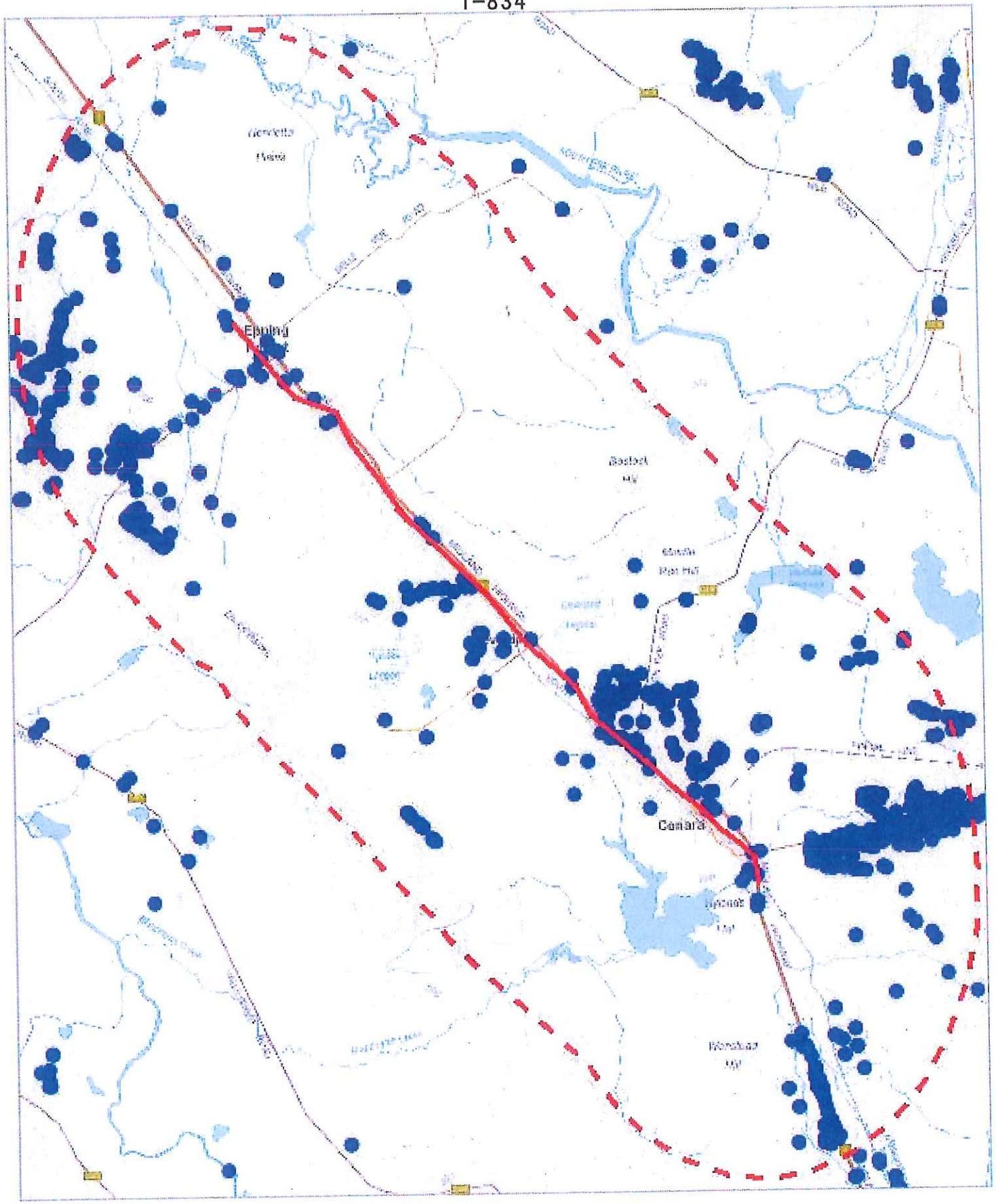
Email: ThreatenedSpecies.Enquiries@dpipwe.tas.gov.au

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

Threatened flora within 5000 metres

1-834

541207, 5382548



524525, 5362661

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

Threatened flora within 5000 metres

1-835

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	SS	NS	Bio	Observation Count	Last Recorded
Amphibromus macrorhinus	longnose swampgrass	e		n	15	30-Nov-2016
Aphelia gracilis	slender fanwort	r		n	67	14-Jan-2014
Aphelia pumilio	dwarf fanwort	r		n	45	26-Oct-2016
Austrostipa scabra	rough speargrass	r		n	189	30-Nov-2016
Brachyscome perpusilla	tiny daisy	r		n	28	29-Nov-2012
Brunonia australis	blue pincushion	r		n	11	26-Oct-2013
Caesia calliantha	blue grasslily	r		n	86	28-Nov-2013
Caladenia anthracina	blacktip spider-orchid	e	CR	e	3	06-Nov-2002
Caladenia filamentosa	daddy longlegs	r		n	4	24-Oct-2012
Caladenia lindleyana	lindleys spider-orchid	e	CR	e	5	01-Jan-1995
Caladenia pallida	rosy spider-orchid	e	CR	e	1	19-Nov-1979
Calandrinia granulifera	pygmy purslane	r		n	7	29-Nov-2012
Calocephalus lacteus	milky beautyheads	r		n	62	29-Oct-2014
Carex longebrachiata	drooping sedge	r		n	1	07-Nov-2012
Colobanthus curtisiae	grassland cupflower	r	VU	n	2	06-Nov-1996
Dianella amoena	grassland flaxlily	r	EN	n	22	27-Oct-2014
Glycine latrobeana	clover glycine	v	VU	n	91	22-Nov-2011
Gratiola pubescens	hairy brooklime	v		n	9	14-Jan-2014
Haloragis heterophylla	variable raspwort	r		n	97	30-Nov-2016
Hyalosperma demissum	moss sunray	e		n	35	26-Oct-2013
Isoetes drummondii subsp. drummondii	plain quillwort	r		n	32	22-Oct-2016
Isolepis stellata	star clubsedge	r		n	7	18-Jan-2014
Juncus amabilis	gentle rush	r		n	3	21-Jan-2010
Juncus fockei	slender jointleaf rush	r		n	1	01-Mar-1995
Juncus prismatocarpus	branching rush	r		n	1	29-Mar-2006
Lachnagrostis punicea subsp. punicea	bristle blowngrass	r		n	2	30-Nov-2016
Leptorhynchos elongatus	lanky buttons	e		n	4	27-Oct-2015
Leucochrysum albicans var. tricolor	grassland paperdaisy	e	EN	n	5	26-Oct-1998
Leucopogon virgatus var. brevifolius	shortleaf beardheath	r		n	38	19-Mar-2014
Liparophyllum exaltatum	erect marshwort	r		n	1	24-Jan-1986
Lobelia pratioides	poison lobelia	v		n	61	22-Oct-2015
Lobelia rhombifolia	tufted lobelia	r		n	1	31-Dec-1961
Melaleuca pustulata	warty paperbark	r		e	1	01-Nov-1984
Muehlenbeckia axillaris	matted lignum	r		n	1	01-Nov-1984
Myriophyllum integrifolium	tiny watermilfoil	v		n	68	22-Oct-2015
Phyllangium distylis	tiny mitrewort	r		n	24	14-Jan-2014
Pilularia novae-hollandiae	australian pillwort	r		n	2	01-Jan-1993
Pimelea curviflora var. gracilis	slender curved riceflower	r		n	1	01-Jan-1918
Prasophyllum incorrectum	golfers leek-orchid	e	CR	e	1	23-Oct-1999
Prasophyllum tunbridgense	tunbridge leek-orchid	e	EN	e	1	16-Nov-1996
Pterostylis squamata	ruddy greenhood	v		n	5	19-Jan-2011
Pterostylis ziegeleri	grassland greenhood	v	VU	e	2	07-Nov-1996
Pultenaea humilis	dwarf bushpea	v		n	26	26-Oct-2013
Pultenaea prostrata	silky bushpea	v		n	27	27-Oct-2014
Ranunculus prasinus	midlands buttercup	e	EN	e	1	20-Sep-2013
Ranunculus pumilio var. pumilio	ferny buttercup	r		n	1	03-Nov-1983
Rytidosperma indutum	tall wallabygrass	r		n	4	19-Jan-2011
Schenkia australis	spike centaury	r		n	1	24-Jan-1986
Schoenus latelaminatus	medusa bogsedge	e		n	15	14-Jan-2014
Scleranthus diander	tufted knawel	v		n	2	17-Nov-2008
Scleranthus fasciculatus	spreading knawel	v		n	9	19-Nov-2014
Senecio squarrosus	leafy fireweed	r		n	4	10-Nov-2015
Siloxerus multiflorus	small wrinklewort	r		n	75	30-Nov-2016
Spyridium vexilliferum var. vexilliferum	helicopter bush	r		n	39	29-Oct-2015
Stackhousia subterranea	grassland candles	e		n	8	06-Nov-2015
Stenanthemum pimeleoides	propeller plant	v	VU	e	45	02-Nov-2012
Stuckenia pectinata	fennel pondweed	r		n	2	09-Feb-1948
Stylidium despectum	small triggerplant	r		n	53	14-Jan-2014
Tricoryne elatior	yellow rushlily	v		n	29	19-Mar-2014
Triptilodiscus pygmaeus	dwarf sunray	v		n	157	22-Oct-2015
Trithuria submersa	submerged watertuft	r		n	17	14-Jan-2014
Velleia paradoxa	spur velleia	v		n	5	06-Dec-2012

Threatened flora within 5000 metres

1-837

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Vittadinia burbidgeae	smooth new-holland-daisy	r		e	16	27-Oct-2014
Vittadinia cuneata var. cuneata	fuzzy new-holland-daisy	r		n	2	05-Feb-1993
Vittadinia gracilis	woolly new-holland-daisy	r		n	13	27-Oct-2014
Vittadinia muelleri	narrowleaf new-holland-daisy	r		n	6	06-Dec-2012
Xanthoparmelia mannumensis		v			1	20-Oct-2001
Xerochrysum palustre	swamp paperdaisy	v	VU	n	9	13-Feb-2011

Unverified Records

No unverified records were found!

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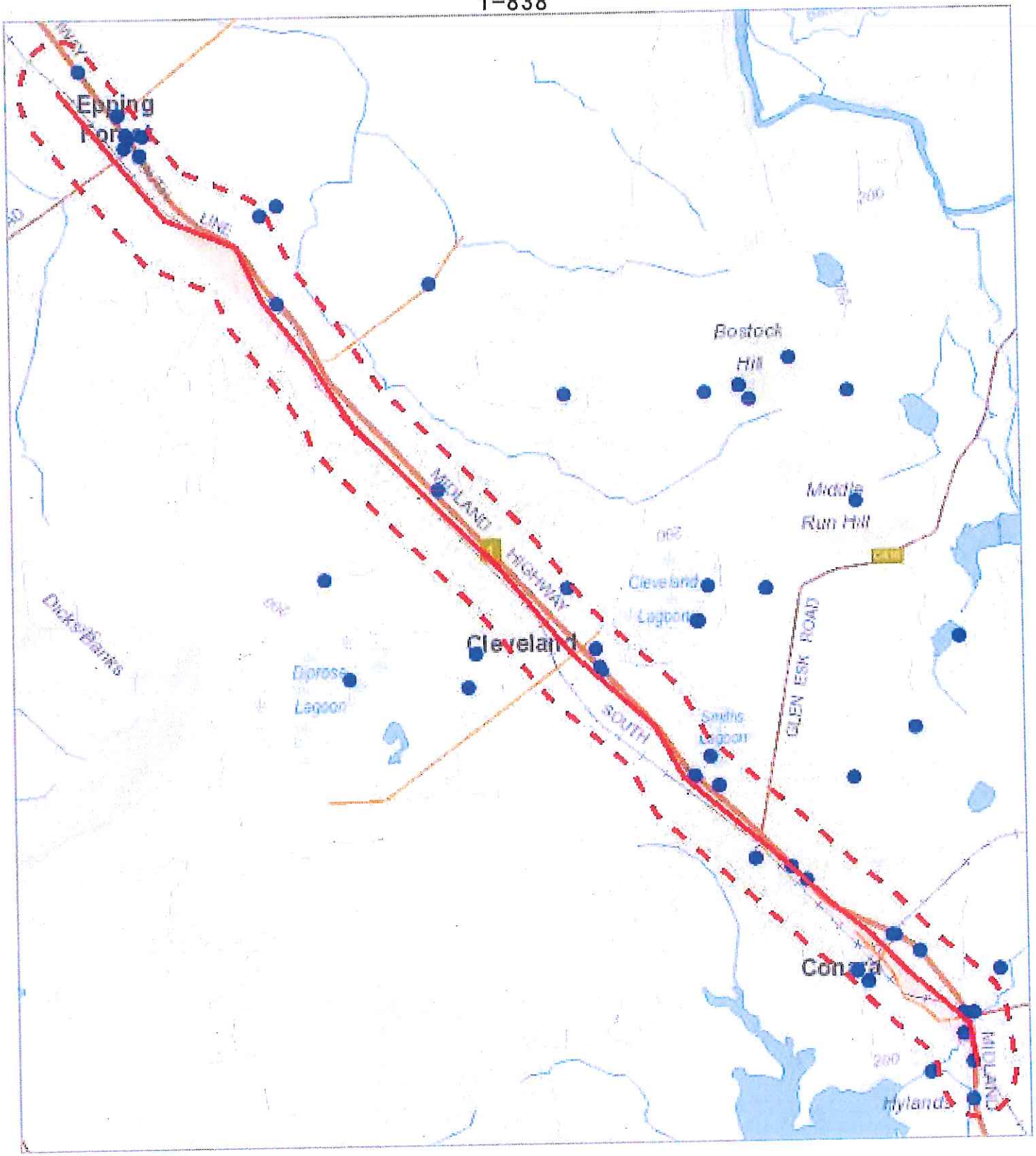
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Threatened fauna within 500 metres

1-838

537814, 5378045



527898, 5367175

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

Exhibited

Threatened fauna within 500 metres

1-839

Legend: Verified and Unverified observations

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

Legend: Cadastral Parcels

Threatened fauna within 500 metres

1-840

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Aquila audax	wedge-tailed eagle	pe	PEN	n	2	13-Jan-2012
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	2	02-Mar-2005
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	3	22-May-1986
Dasyurus viverrinus	eastern quoll		EN	n	3	06-Sep-1996
Litoria raniformis	green and gold frog	v	VU	n	2	18-Sep-2008
Perameles gunnii	eastern barred bandicoot		VU	n	2	25-Oct-1992
Pseudemoia pagenstecheri	tussock skink	v		n	2	08-Mar-1995
Sarcophilus harrisii	tasmanian devil	e	EN	e	14	08-Oct-2016
Tyto novaehollandiae	masked owl	pe	PVU	n	8	13-Oct-2004
Tyto novaehollandiae subsp. castanops	masked owl (tasmanian)	e	VU	e	1	08-Feb-2017

Unverified Records

No unverified records were found!

Threatened fauna within 500 metres

(based on Range Boundaries)

Species	Common Name	SS	NS	BO	Potential	Known	Core
Litoria raniformis	green and gold frog	v	VU	n	1	0	1
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	1
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Aquila audax	wedge-tailed eagle	pe	PEN	n	2	0	0
Galaxias fontanus	swan galaxias	e	EN	e	1	0	0
Tyto novaehollandiae	masked owl	pe	PVU	n	1	0	1
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1
Sarcophilus harrisii	tasmanian devil	e	EN	e	1	0	0
Accipiter novaehollandiae	grey goshawk	e		n	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	1	0	0
Catadromus lacordairei	Green-lined ground beetle	v		n	1	1	0

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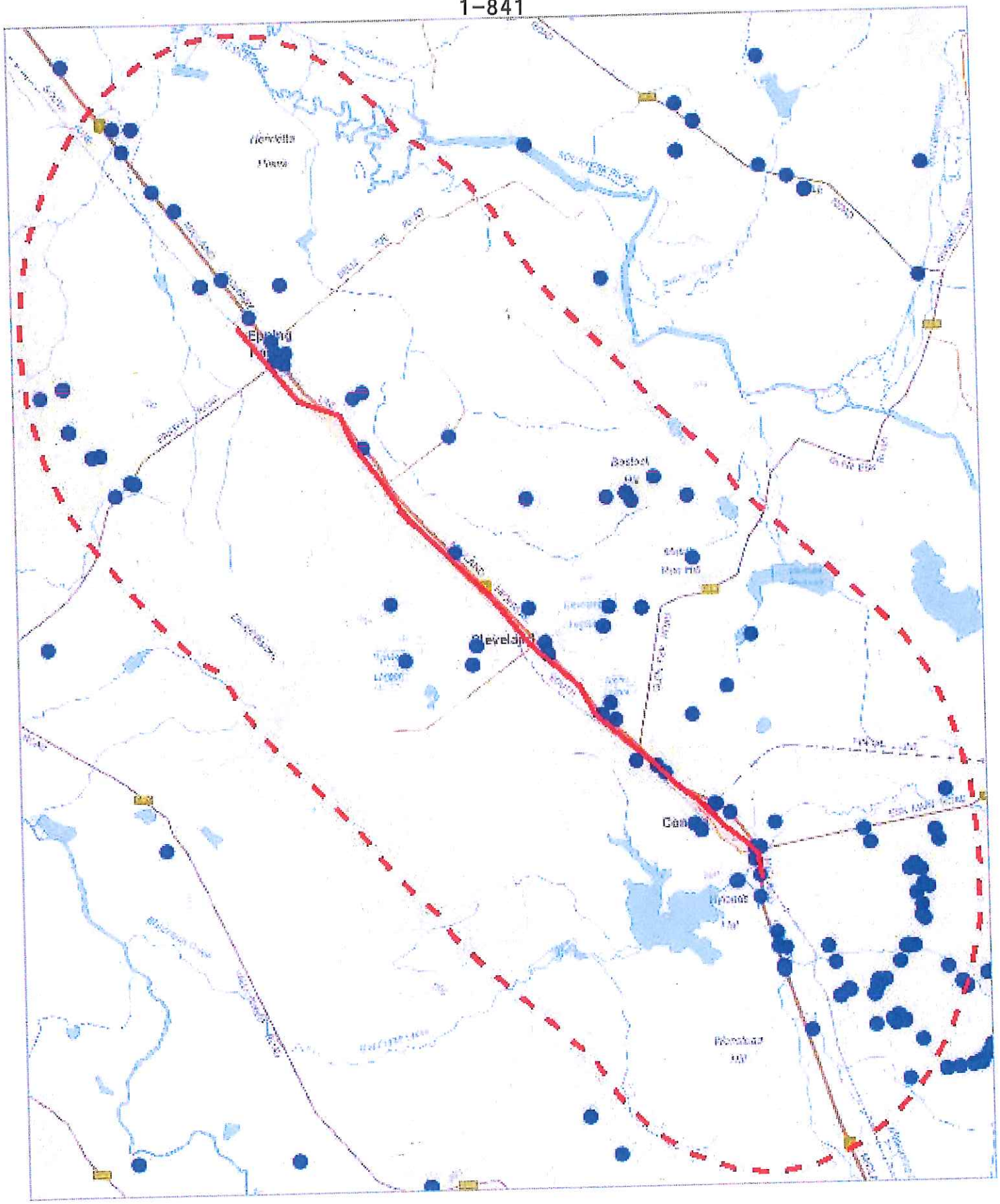
Threatened fauna within 5000 metres

541207, 5382548



524525, 5362661

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

Threatened fauna within 5000 metres

1-842

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

1-843

Verified Records

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
Aquila audax	wedge-tailed eagle	pe	PEN	n	3	01-Jul-2015
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	14	17-Aug-2015
Catadromus lacordairei	Green-lined ground beetle	v		n	6	27-Dec-2013
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	5	19-Feb-2016
Dasyurus maculatus subsp. maculatus	spotted-tailed quoll	r	VU	n	88	28-Jun-2016
Dasyurus viverrinus	eastern quoll		EN	n	10	26-May-2016
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	2	23-Mar-1995
Litoria raniformis	green and gold frog	v	VU	n	3	15-Nov-2013
Perameles gunnii	eastern barred bandicoot		VU	n	5	25-Oct-1992
Pseudemoia pagenstecheri	tussock skink	v		n	2	08-Mar-1995
Sarcophilus harrisii	tasmanian devil	e	EN	e	73	08-Oct-2016
Tyto novaehollandiae	masked owl	pe	PVU	n	9	29-Oct-2007
Tyto novaehollandiae subsp. castanops	masked owl (tasmanian)	e	VU	e	4	08-Feb-2017

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
Litoria raniformis	green and gold frog	v	VU	n	1	0	1
Pseudemoia pagenstecheri	tussock skink	v		n	1	0	1
Dasyurus maculatus	spotted-tailed quoll	r	VU	n	1	0	0
Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	e	EN	e	1	0	0
Aquila audax	wedge-tailed eagle	pe	PEN	n	2	0	0
Galaxias fontanus	swan galaxias	e	EN	e	1	0	1
Tyto novaehollandiae	masked owl	pe	PVU	n	1	0	1
Perameles gunnii	eastern barred bandicoot		VU	n	1	0	1
Dasyurus viverrinus	eastern quoll		EN	n	0	0	1
Prototroctes maraena	australian grayling	v	VU	n	1	0	0
Sarcophilus harrisii	tasmanian devil	e	EN	e	1	0	0
Accipiter novaehollandiae	grey goshawk	e		n	1	0	0
Haliaeetus leucogaster	white-bellied sea-eagle	v		n	1	0	0
Catadromus lacordairei	Green-lined ground beetle	v		n	1	4	0

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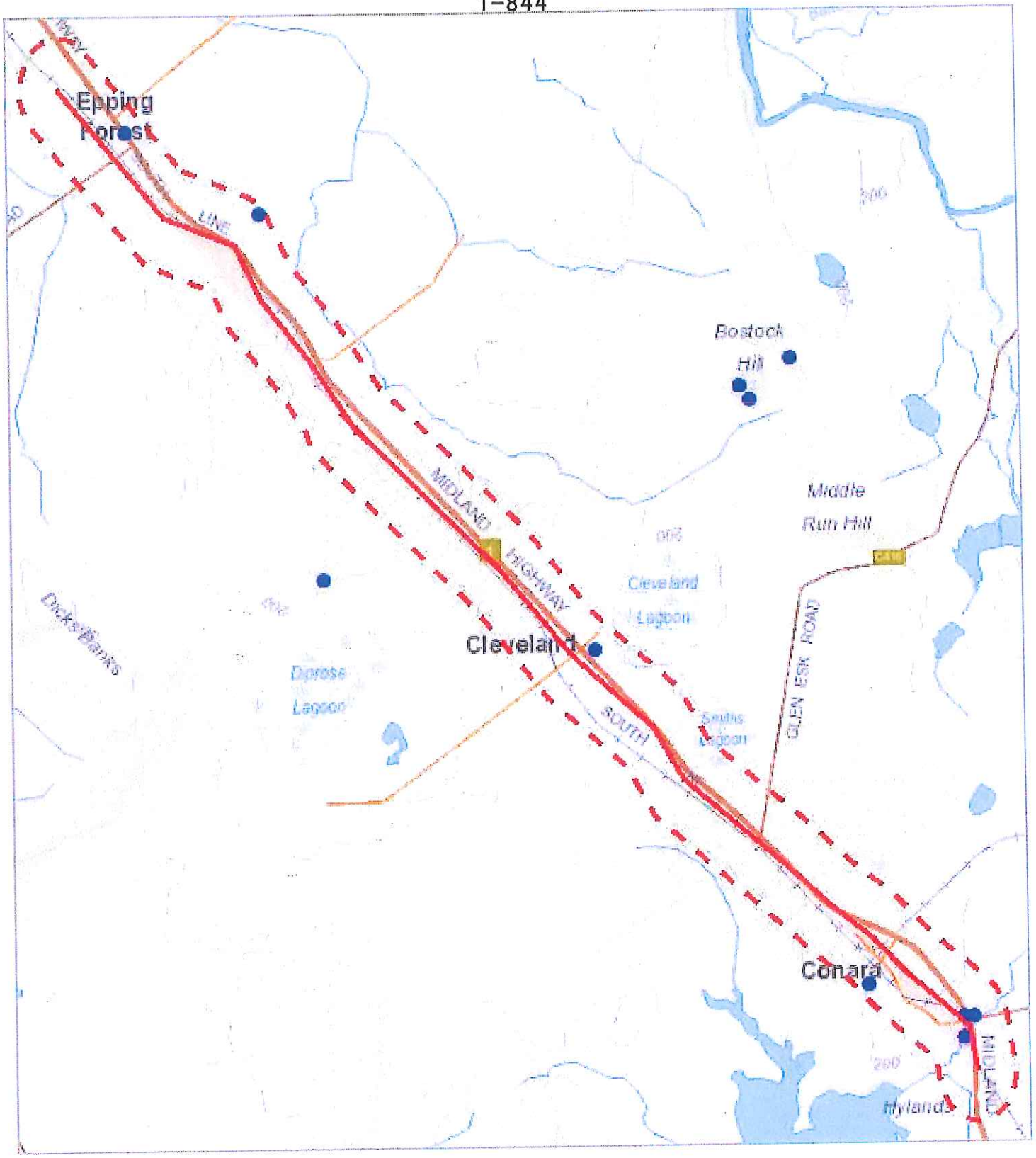
Raptor nests and sightings within 500 metres

1-844

537814, 5378045



527898, 5367175

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

Exhibited

Raptor nests and sightings within 500 metres

1-845

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 500 metres

1-846

Verified Records

Nest Id/Location Foreign Id	Species	Common Name	Obs Type	Observation Count	Last Recorded
	Aquila audax	wedge-tailed eagle	Carcass	1	13-Jan-2012
	Aquila audax	wedge-tailed eagle	Sighting	1	13-Jan-2012
	Tyto novaehollandiae	masked owl	Sighting	8	13-Oct-2004

Unverified Records

No unverified records were found!

Raptor nests and sightings within 500 metres

(based on Range Boundaries)

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

For more information about raptor nests, please contact Threatened Species Enquiries.

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

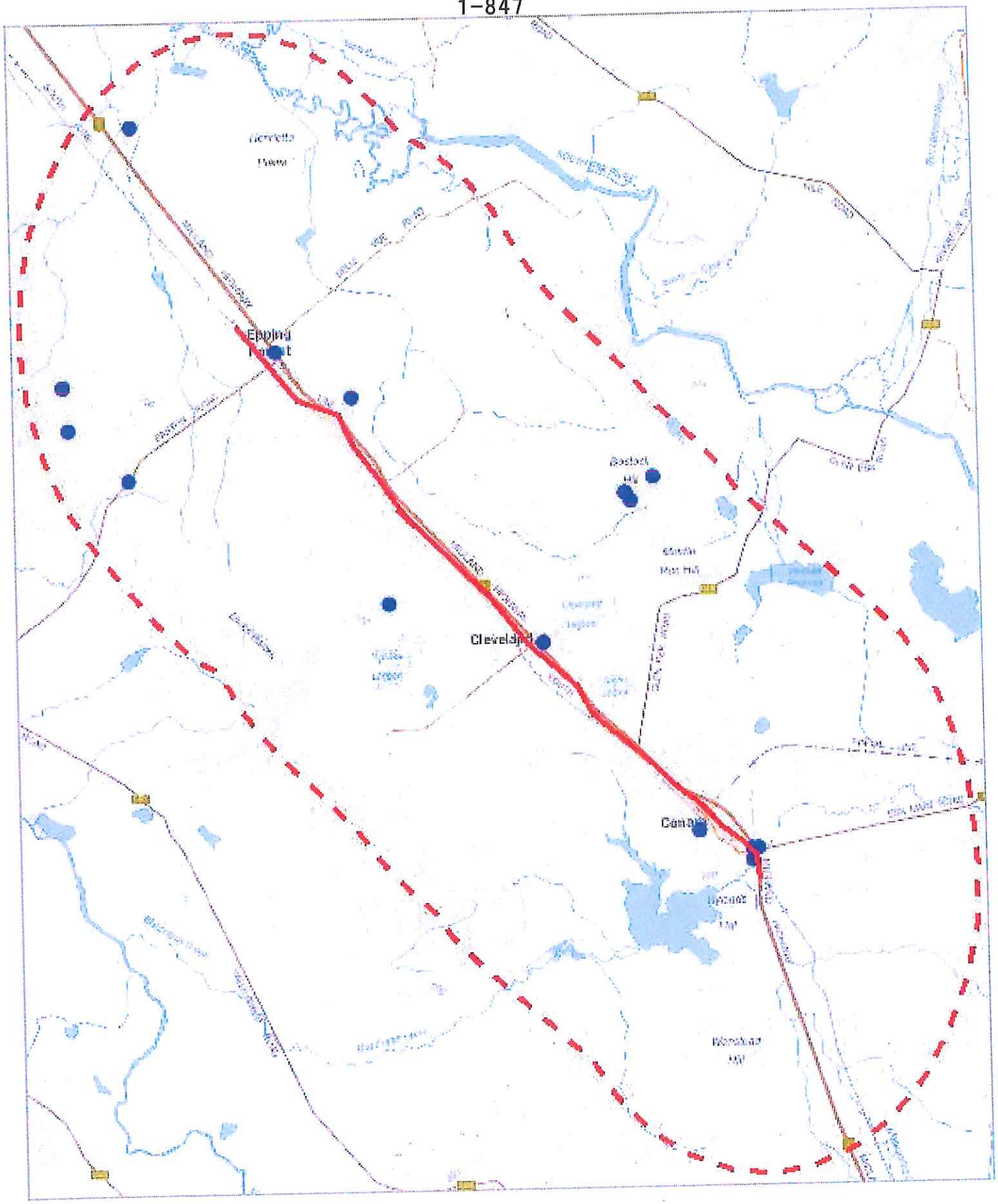
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Exhibited

Raptor nests and sightings within 5000 metres

1-847

541207, 5382548



524525, 5362661

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

Raptor nests and sightings within 5000 metres

1-848

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

1-849

Verified Records

Nest Id/Location Foreign Id	Species	Common Name	Obs Type	Observation Count	Last Recorded
1026	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	1	13-Dec-2001
1080	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	6	19-Nov-2007
2262	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	1	17-Aug-2015
717	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Nest	5	26-Nov-2012
	Aquila audax	wedge-tailed eagle	Camera Trap	1	01-Jul-2015
	Aquila audax	wedge-tailed eagle	Carcass	1	13-Jan-2012
	Aquila audax	wedge-tailed eagle	Sighting	2	19-Feb-2016
	Aquila audax subsp. fleayi	tasmanian wedge-tailed eagle	Sighting	1	01-Jan-0001
	Haliaeetus leucogaster	white-bellied sea-eagle	Sighting	2	23-Mar-1995
	Tyto novaehollandiae	masked owl	Sighting	9	29-Oct-2007

Unverified Records

No unverified records were found!

Raptor nests and sightings within 5000 metres

(based on Range Boundaries)

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

For more information about raptor nests, please contact Threatened Species Enquiries.

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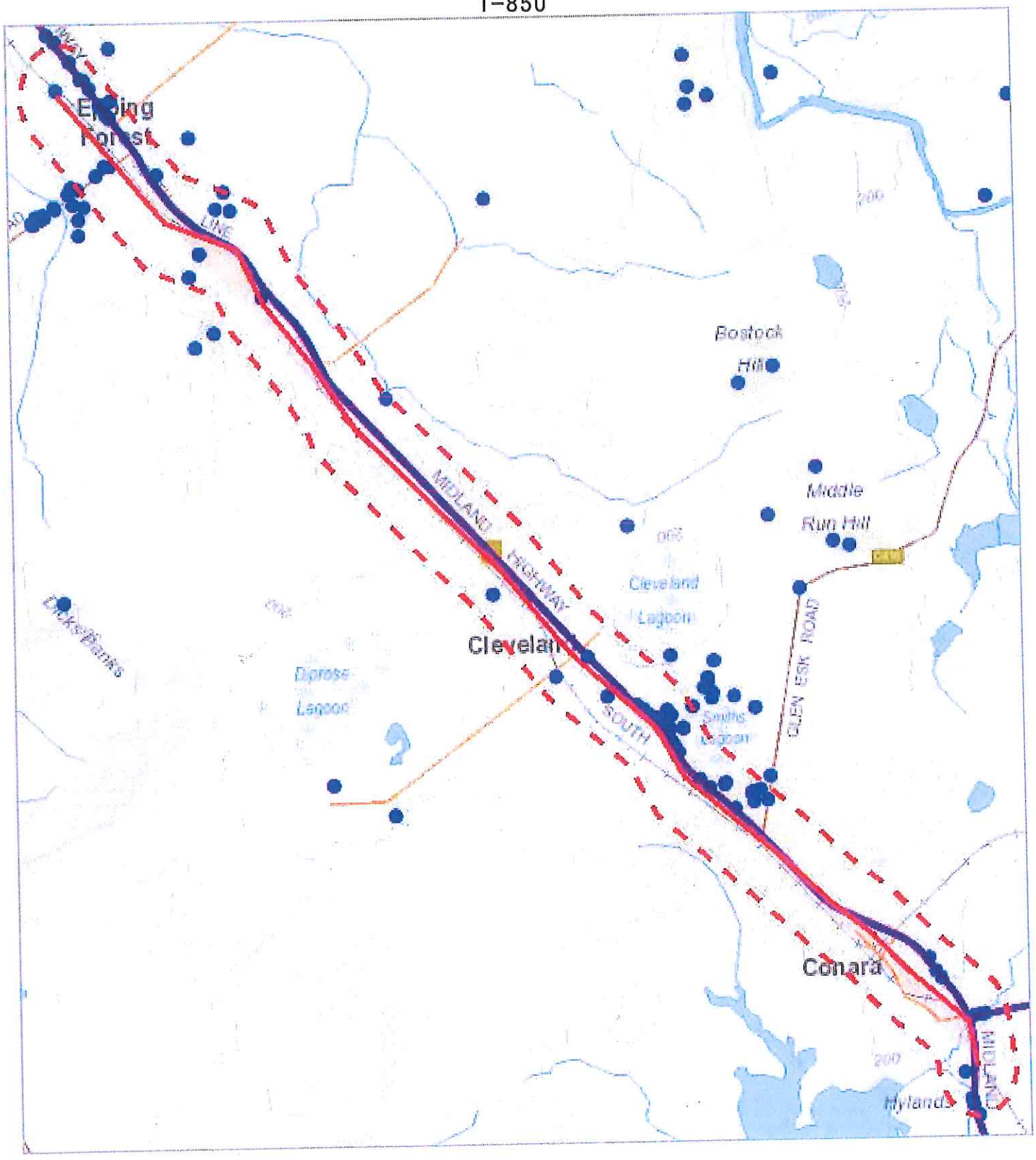
Address: GPO Box 44, Hobart, Tasmania, Australia, 7000

Tas Management Act Weeds within 500 m

1-850

537814, 5378045



527898, 5367175

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

Exhibited

Tas Management Act Weeds within 500 m

1-851

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 500 m

1-852

Verified Records

Species	Common Name	Observation Count	Last Recorded
Cytisus scoparius	english broom	2	28-Nov-2013
Echium plantagineum	patersons curse	1	07-Dec-2016
Eragrostis curvula	african lovegrass	3	03-May-2016
Erica lusitanica	spanish heath	6	22-Oct-2015
Foeniculum vulgare	fennel	3	08-Jan-1995
Genista monspessulana	montpellier broom	1	18-Nov-2014
Hypericum perforatum	perforated st johns-wort	1	18-Nov-2014
Hypericum perforatum subsp. veronense	perforated st johns-wort	1	01-Jan-0001
Lycium ferocissimum	african boxthorn	8	22-Oct-2015
Onopordum acanthium	scotch thistle	2	01-Jan-1993
Rubus fruticosus	blackberry	8	18-Nov-2014
Ulex europaeus	gorse	62	18-Nov-2014

Unverified Records

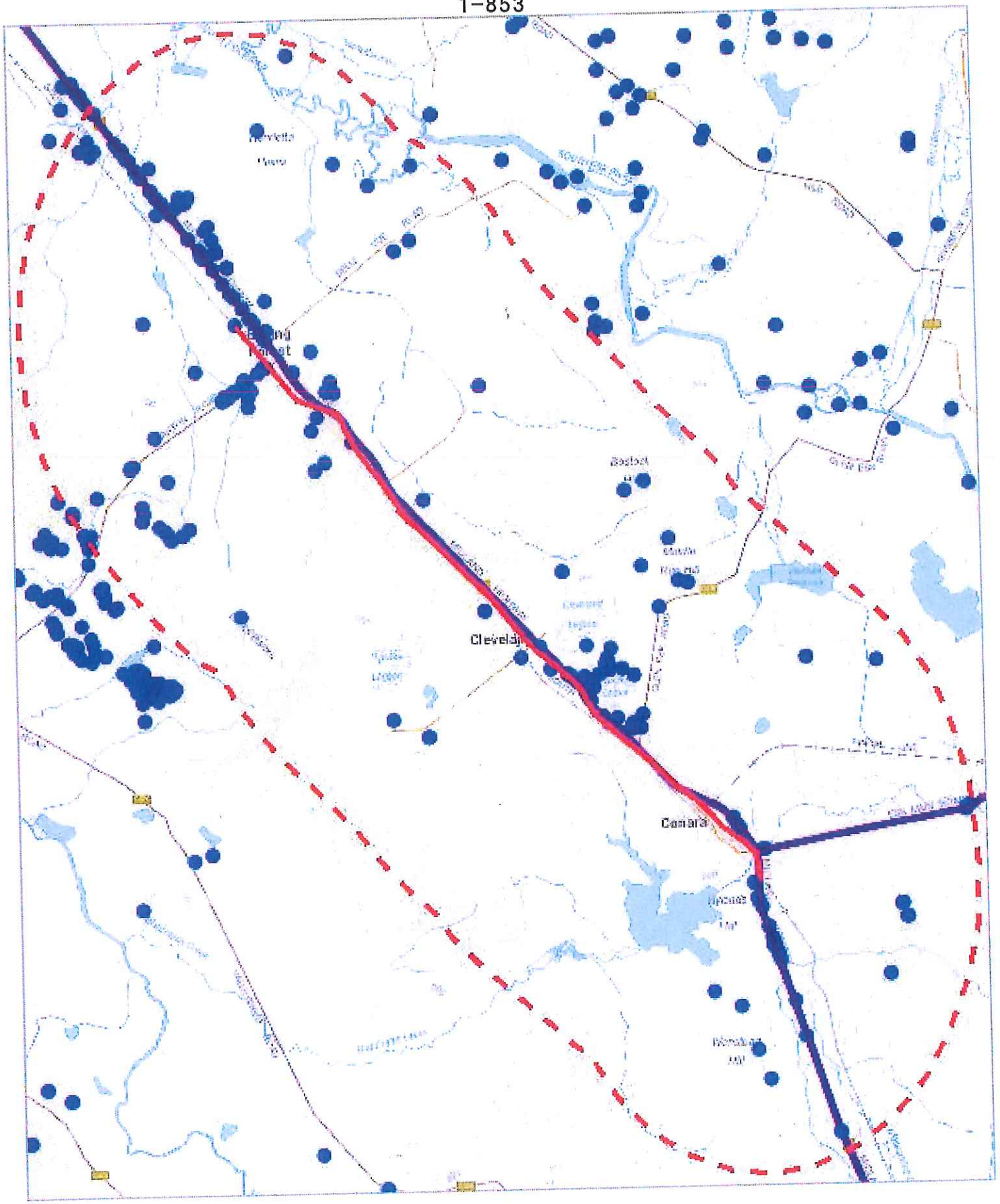
For more information about introduced weed species, please visit the following URL for contact details in your area:

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

Tas Management Act Weeds within 5000 m

1-853

541207, 5382548



524525, 5362661

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

Tas Management Act Weeds within 5000 m

1-854

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

1-855

Verified Records

Species	Common Name	Observation Count	Last Recorded
Carduus nutans	nodding thistle	4	01-Jan-1993
Carduus pycnocephalus	slender thistle	3	27-Oct-2014
Carthamus lanatus	saffron thistle	2	20-Feb-2017
Cirsium arvense var. arvense	creeping thistle	2	29-Mar-2006
Cytisus scoparius	english broom	6	19-Nov-2014
Echium plantagineum	patersons curse	1	07-Dec-2016
Eragrostis curvula	african lovegrass	3	03-May-2016
Erica lusitanica	spanish heath	11	22-Oct-2015
Foeniculum vulgare	fennel	4	08-Jan-1995
Genista monspessulana	montpellier broom	2	19-Nov-2014
Hypericum perforatum	perforated st johns-wort	1	18-Nov-2014
Hypericum perforatum subsp. veronense	perforated st johns-wort	1	01-Jan-0001
Lycium ferocissimum	african boxthorn	10	22-Oct-2015
Onopordum acanthium	scotch thistle	8	01-Jan-1993
Rubus fruticosus	blackberry	15	07-Jan-2016
Salix matsudana cv. tortuosa	twisted willow	1	14-Oct-2012
Salix x fragilis nothovar. fragilis	crack willow	4	04-Dec-2012
Ulex europaeus	gorse	226	20-Feb-2017

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

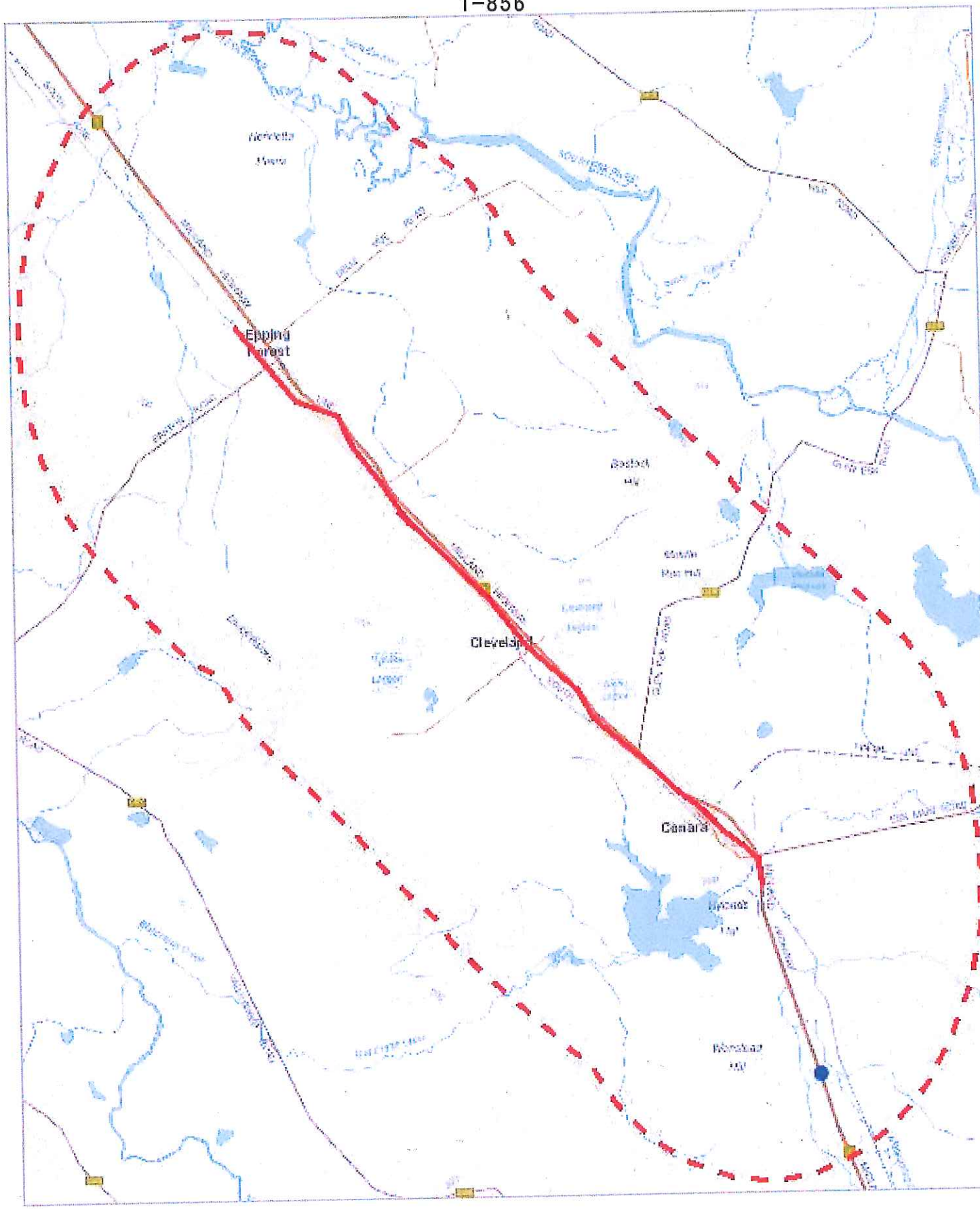
***** No Priority Weeds found within 500 metres *****

Exhibited

Priority Weeds within 5000 m

1-856

541207, 5382548



524525, 5362661

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

Exhibited

Priority Weeds within 5000 m

1-857

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

1-858

Verified Records

Species	Common Name	Observation Count	Last Recorded
Gleditsia triacanthos	honey locust tree	1	07-Jan-2016

Unverified Records

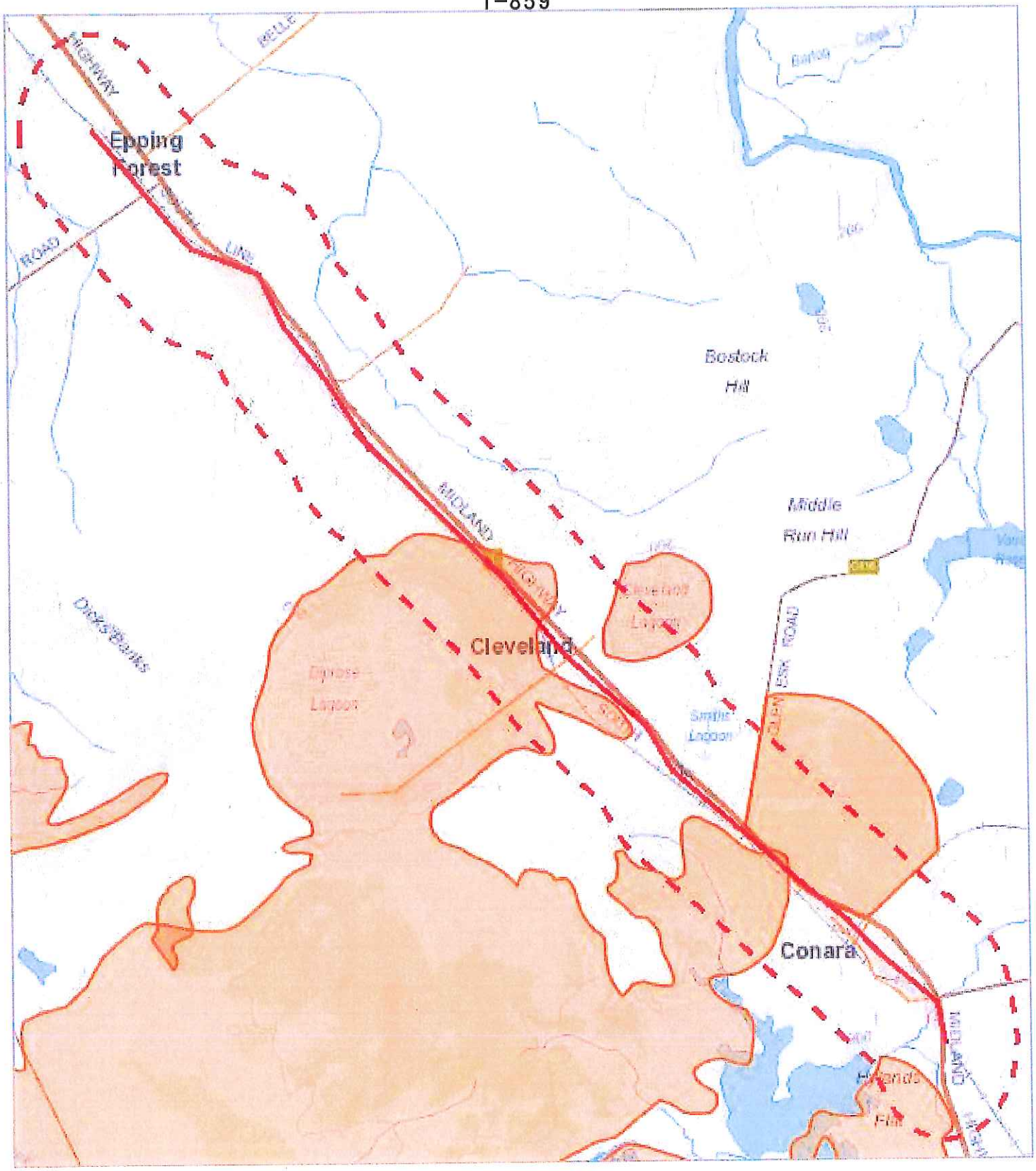
For more information about introduced weed species, please visit the following URL for contact details in your area:

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

Geoconservation sites within 1000 metres

1-859

538191, 5378546



527523, 5366674

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

Exhibited

Geoconservation sites within 1000 metres

1-860

Legend: Geoconservation (NVA)

Legend: Cadastral Parcels

Geoconservation sites within 1000 metres

Id	Name	Statement of Significance	Geographical Significance	Status
2248	Conara Lunettes	Notable example of type, of particular significance due to retention of intact native vegetation and hydrological processes.	Region	Listed
3186	Deflation Basins of Eastern Tasmania in Good Condition	Deflation basins are relict features formed under colder, drier and windier conditions during the Late Pleistocene. They are a distinctive element of Tasmania's geodiversity, differ in significant respects compared to examples on mainland Australia, and contain evidence concerning environmental conditions in eastern Tasmania under glacial climatic conditions.	Region	Listed
2249	Macquarie River Valley Sandsheets	Notable example of type.	Sub-Region	Interim

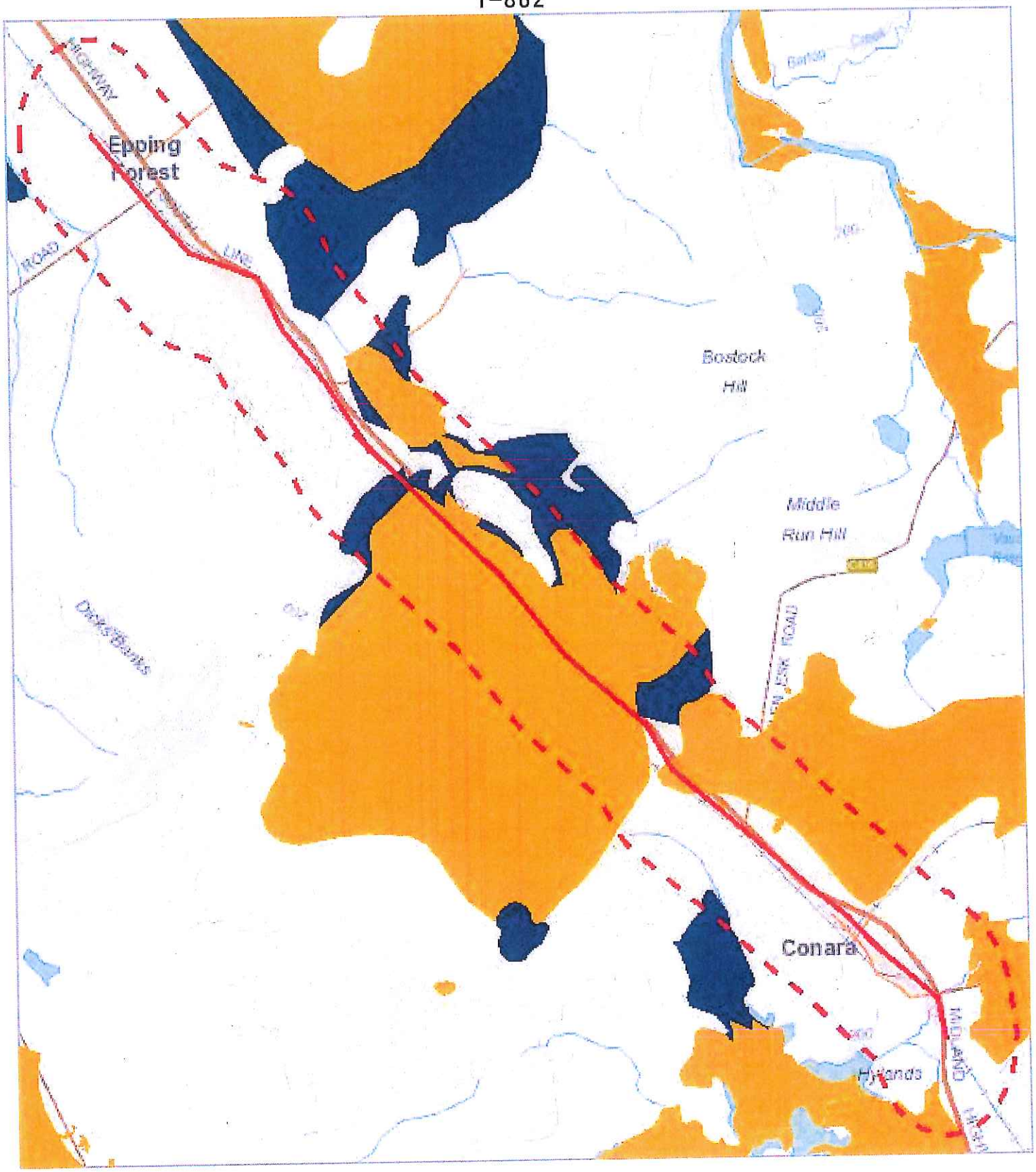
For more information about the Geoconservation Database, please visit the website: http://dpipwe.tas.gov.au/conservation/geoconservation or contact the Geoconservation Officer:

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

Acid Sulfate Soils within 1000 metres

1-862

538191, 5378546



527523, 5366674

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

Exhibited

Acid Sulfate Soils within 1000 metres

1-863

Legend: Coastal Acid Sulfate Soils (0 - 20m AHD)

High | Low | Extremely Low

Legend: Inland Acid Sulfate Soils (>20m AHD)

High | Low | Extremely Low

Legend: Marine Subaqueous/Intertidal Acid Sulfate Soil

High (Intertidal) | High (Subtidal)

Legend: Cadastral Parcels

Acid Sulfate Soils within 1000 metres

Dataset Name	Acid Sulfate Soil Probability	Acid Sulfate Soil Atlas	Description 1-864
Inland Acid Sulfate Soils	Extremely Low	Cj(p4)	Extremely low probability of occurance (1-5% of mapping unit). with occurences in small areas. Sandplains and dunes >10m AHD, ASS generally below 1m from the surface. Heath, forests. Mainly Pleistocene. Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.
Inland Acid Sulfate Soils	Low	Bj(p4)	Low probability of occurance (6-70% chance of occurrence in mapping unit). Sandplains and dunes >10m AHD, ASS generally below 1m from the surface. Heath, forests. Mainly Pleistocene. Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.
Inland Acid Sulfate Soils	Low	Bm(p4)	Low probability of occurance (6-70% chance of occurrence in mapping unit). Hydrosols, ASS generally within upper 1m in wet/riparian areas with Hydrosols (Isbell 1996). Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.

For more information about Acid Sulfate Soils, please contact Land Management Enquiries.

Telephone: (03) 6777 2227

Fax: (03) 6336 5111

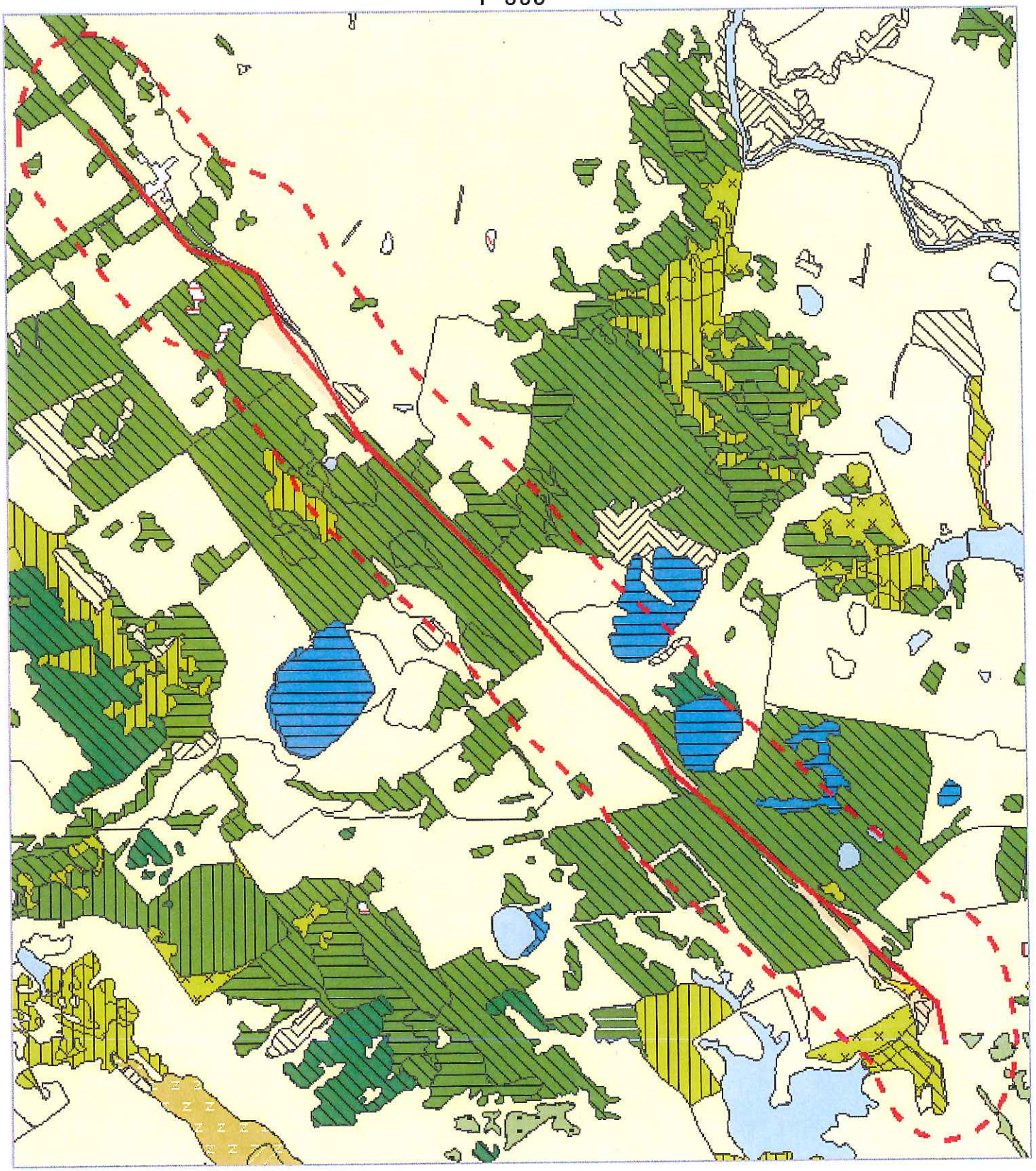
Email: LandManagement.Enquiries@dpipwe.tas.gov.au

Address: 171 Westbury Road, Prospect, Tasmania, Australia, 7250

TASVEG 3.0 Communities within 1000 metres

1-865

538191, 5378546



527523, 5366674

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

TASVEG 3.0 Communities within 1000 metres

1-866

Legend: TASVEG 3.0

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

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

TASVEG 3.0 Communities within 1000 metres

1–868

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

Legend: Cadastral Parcels

TASVEG 3.0 Communities within 1000 metres

1-869

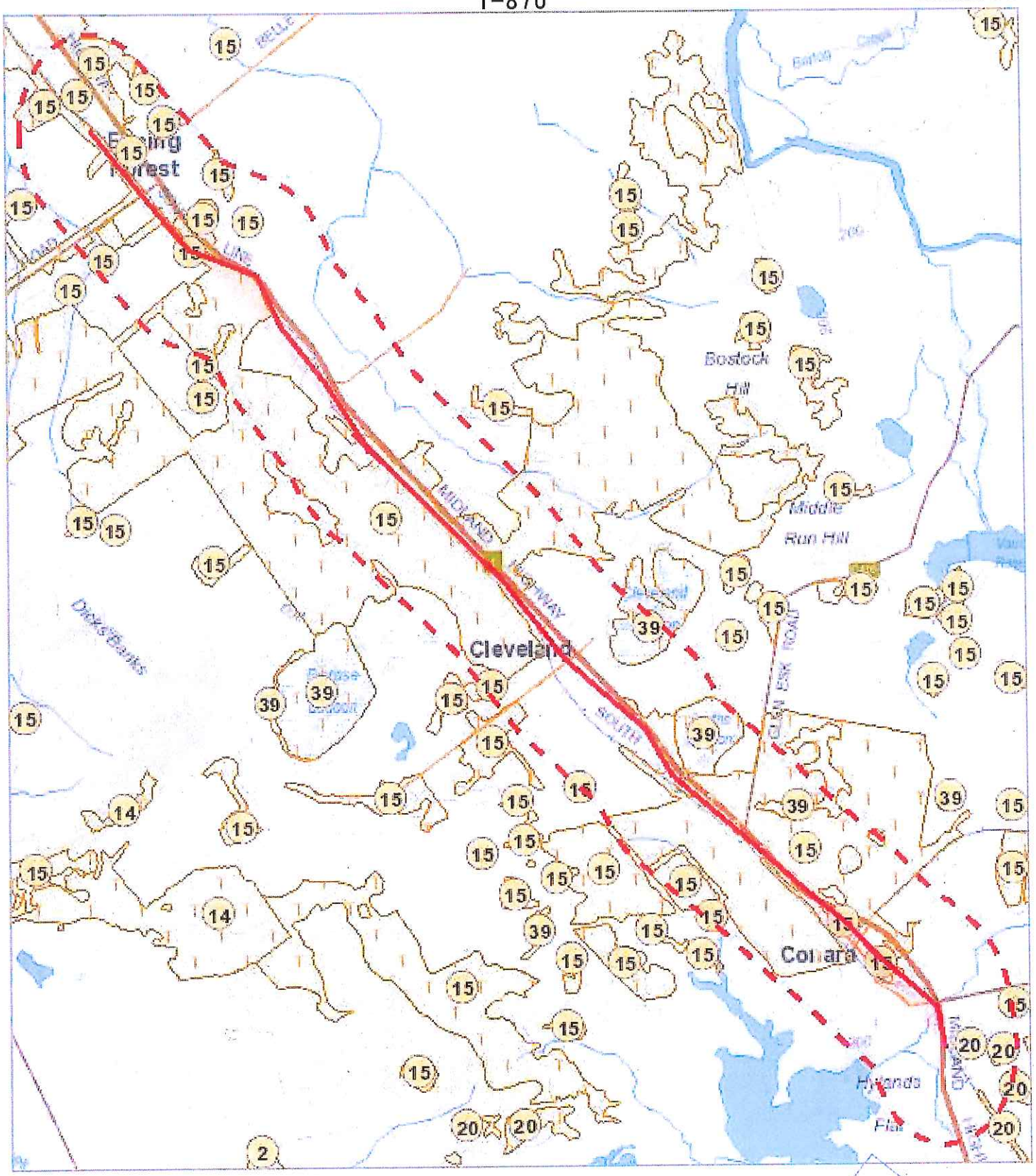
Code	Community	Emergent Species
ASF	(ASF) Freshwater aquatic sedgeland and rushland	
DAD	(DAD) Eucalyptus amygdalina forest and woodland on dolerite	
DAZ	(DAZ) Eucalyptus amygdalina inland forest and woodland on Cainozoic deposits	
DOV	(DOV) Eucalyptus ovata forest and woodland	
DPO	(DPO) Eucalyptus pauciflora forest and woodland not on dolerite	
DVG	(DVG) Eucalyptus viminalis grassy forest and woodland	
FAG	(FAG) Agricultural land	EA
FAG	(FAG) Agricultural land	EV
FAG	(FAG) Agricultural land	
FPE	(FPE) Permanent easements	
FRG	(FRG) Regenerating cleared land	
FUM	(FUM) Extra-urban miscellaneous	
FUR	(FUR) Urban areas	
FWU	(FWU) Weed infestation	EA
FWU	(FWU) Weed infestation	
GCL	(GCL) Lowland grassland complex	EA
GCL	(GCL) Lowland grassland complex	
GPL	(GPL) Lowland Poa labillardierei grassland	
GTL	(GTL) Lowland Themeda triandra grassland	
OAQ	(OAQ) Water, sea	

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

1-870

538191, 5378546



527523, 5366674

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

Exhibited

Legend: Threatened Communities

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

Legend: Cadastral Parcels

- [ ]

Threatened Communities (TNVC 2014) within 1000 metres

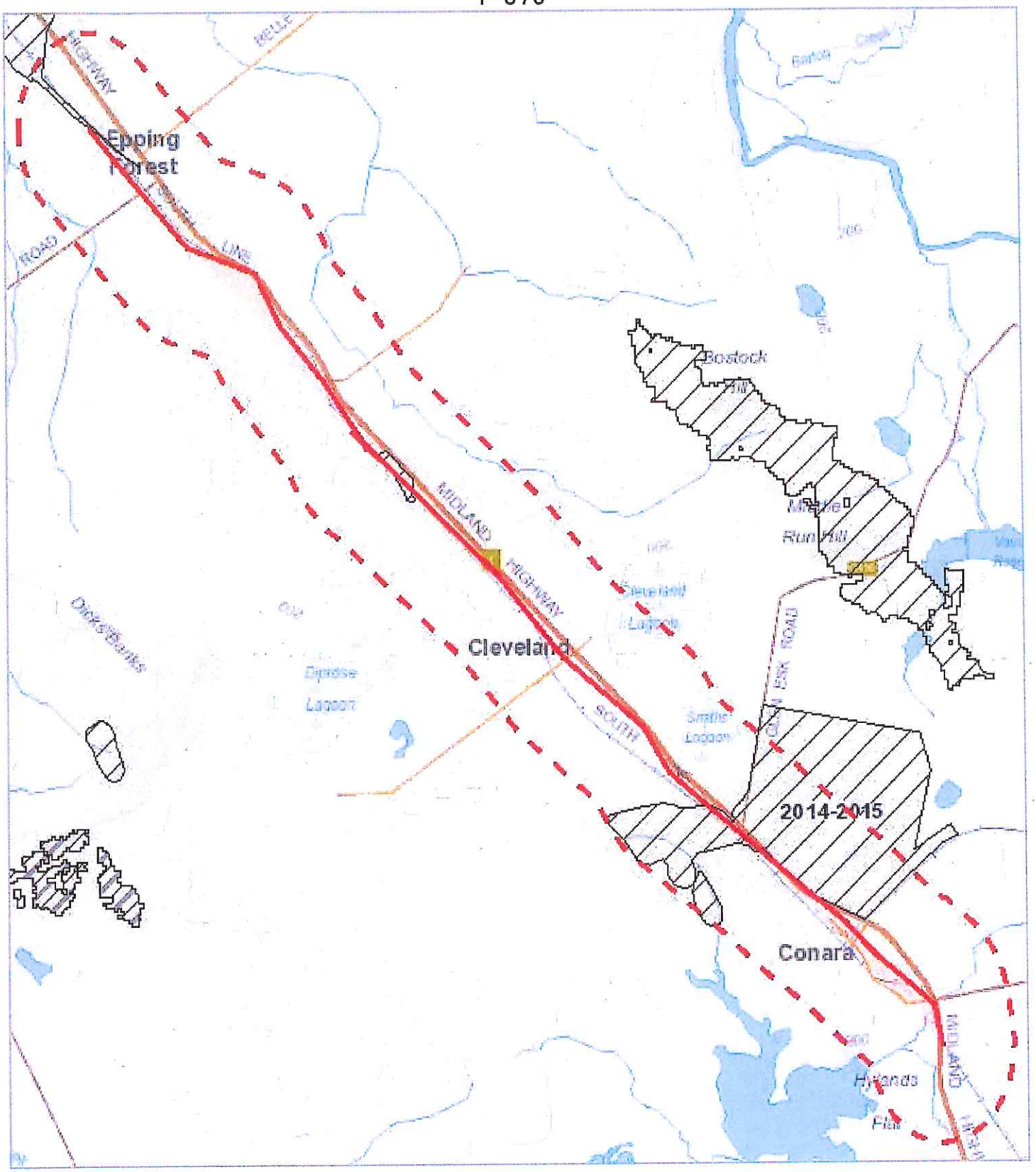
Scheduled Community Id	Scheduled Community Name
15	Eucalyptus amygdalina inland forest and woodland on cainozoic deposits
20	Eucalyptus ovata forest and woodland
39	Wetlands

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

Fire History (All) within 1000 metres

1-873

538191, 5378546



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

Exhibited

Fire History (All) within 1000 metres

1-874

Legend: Fire History All

- Bushfire-Unknown Category
- Completed Planned Burn
- Bushfire

Legend: Cadastral Parcels

Fire History (All) within 1000 metres

Incident Number	Fire Name	Ignition Date	Fire Type	Ignition Cause	Fire Area (HA)
1500	Conara	23-Mar-2002	Bushfire	Undetermined	0.0924437
154864	Midland Hwy Epping Forest	23-Jan-2009	Bushfire	Undetermined	693.37758415
222725	Midland Highway Conara	18-Nov-2014	Bushfire	Undetermined	386.95544328
223593	Midland Highway	15-Dec-2014	Bushfire	Deliberate	6.04488761
236287	Midland Highway	21-Jan-2016	Bushfire	Undetermined	10.63049621

For more information about Fire History, please contact the Manager Community Protection Planning, Tasmania Fire Service.

Telephone: 1800 000 699

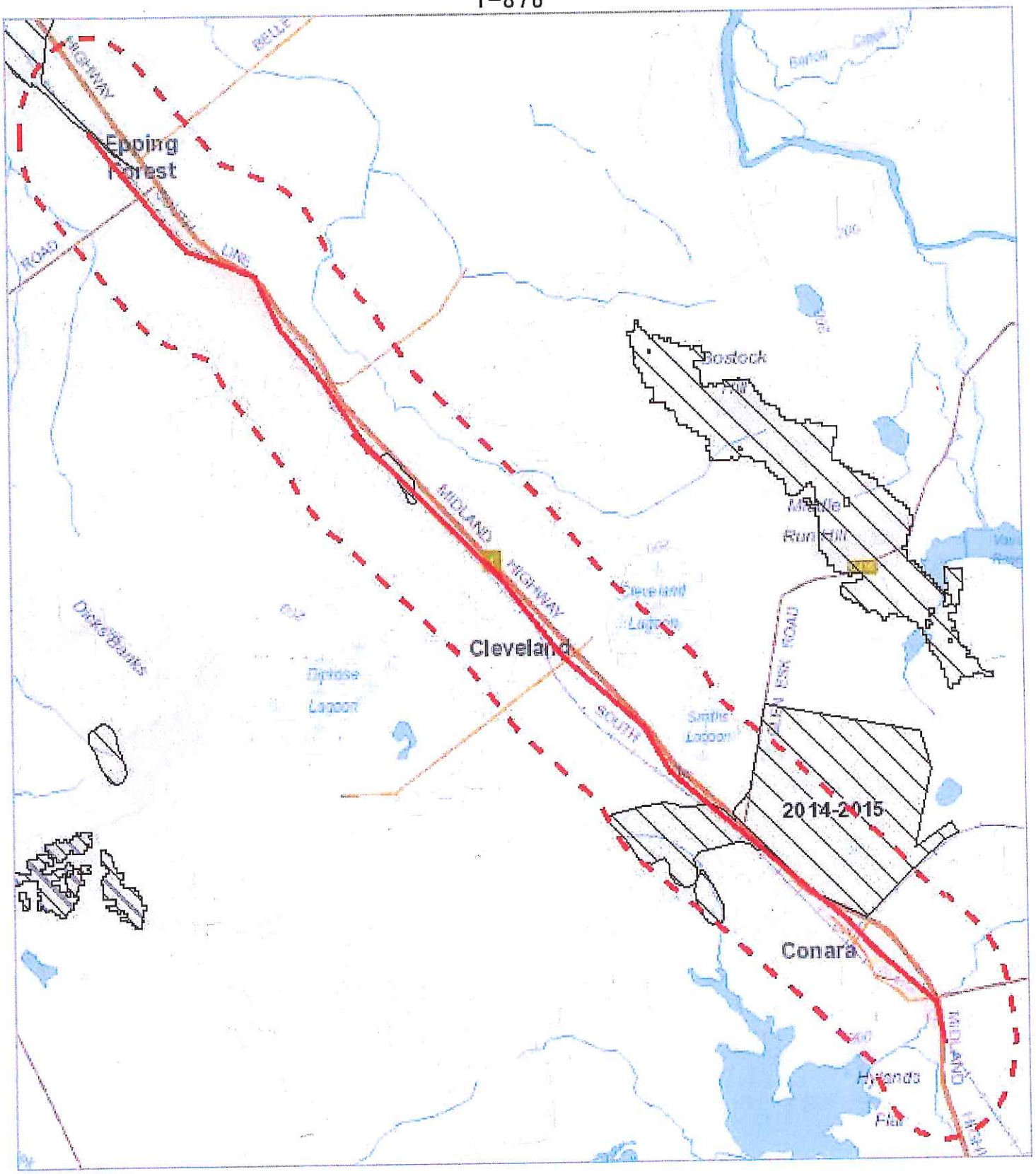
Email: planning@fire.tas.gov.au

Address: cnr Argyle and Melville Streets, Hobart, Tasmania, Australia, 7000

Fire History (Last Burnt) within 1000 metres

1-876

538191, 5378546



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

Exhibited

Fire History (Last Burnt) within 1000 metres

1-877

Legend: Fire History Last

- Bushfire-Unknown category
- Completed Planned Burn
- Bushfire

Legend: Cadastral Parcels

Fire History (Last Burnt) within 1000 metres

1-878

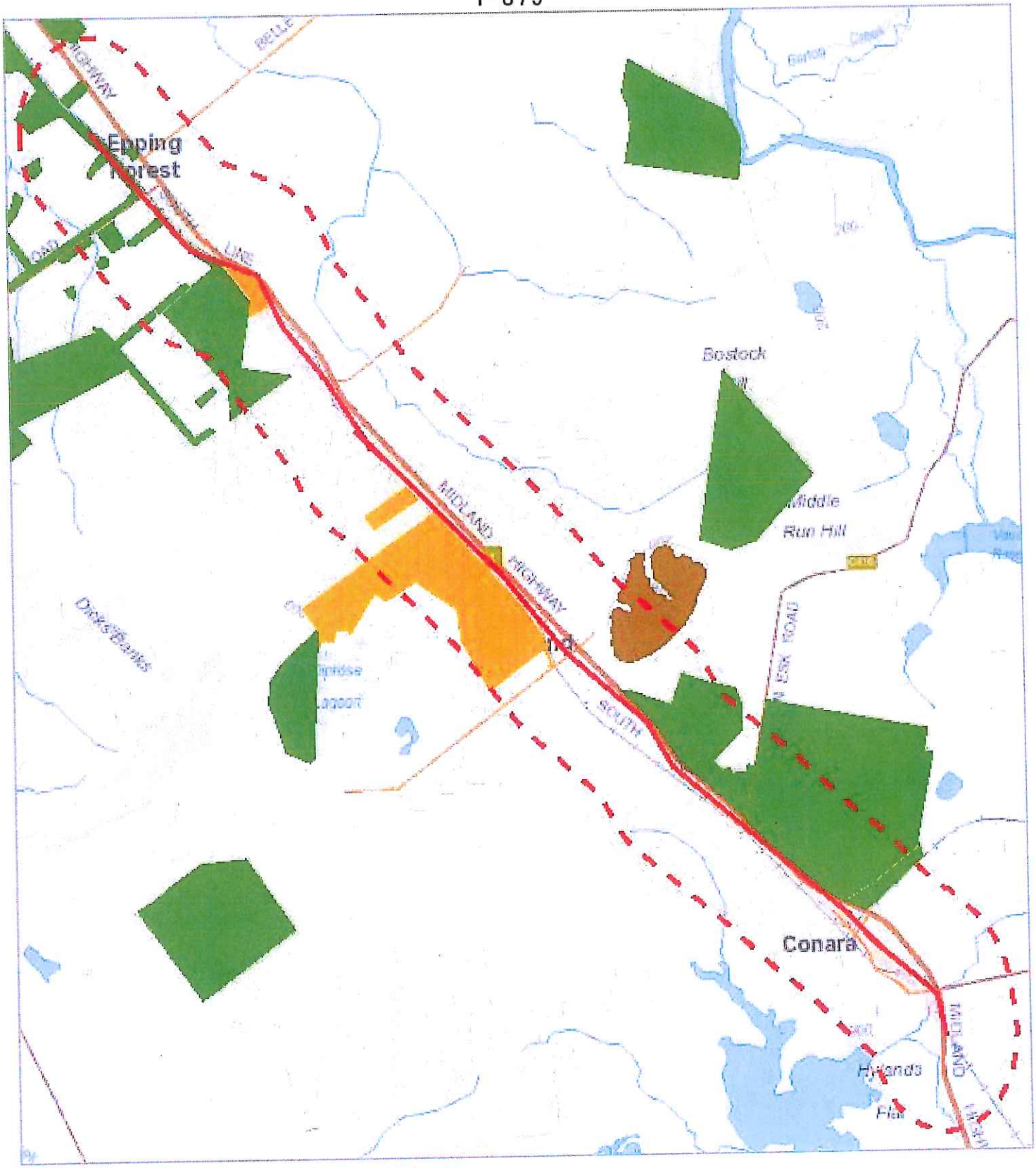
Incident Number	Fire Name	Ignition Date	Fire Type	Ignition Cause	Fire Area (HA)
1500	Conara	23-Mar-2002	Bushfire	Undetermined	0.0924437
154864	Midland Hwy Epping Forest	23-Jan-2009	Bushfire	Undetermined	693.37758415
222725	Midland Highway Conara	18-Nov-2014	Bushfire	Undetermined	386.95544328
223593	Midland Highway	15-Dec-2014	Bushfire	Deliberate	6.04488761
236287	Midland Highway	21-Jan-2016	Bushfire	Undetermined	10.6304962 1

For more information about Fire History, please contact the Manager Community Protection Planning, Tasmania Fire Service.
Telephone: 1800 000 699
Email: planning@fire.tas.gov.au
Address: cnr Argyle and Melville Streets, Hobart, Tasmania, Australia, 7000

Reserves within 1000 metres

1-879

538191, 5378546



527523, 5366674

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

Exhibited

Reserves within 1000 metres

1-880

Legend: Tasmanian Reserve Estate

- Conservation Area
- Game Reserve
- Historic Site
- Indigenous Protected Area
- National Park
- Nature Reserve
- Nature Recreation Area
- Regional Reserve
- State Reserve
- Wellington Park
- Public authority land within WHA
- Future Potential Production Forest
- Informal Reserve on State Forest or Forestry Tas. managed land
- Informal Reserve on other public land
- 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

1-881

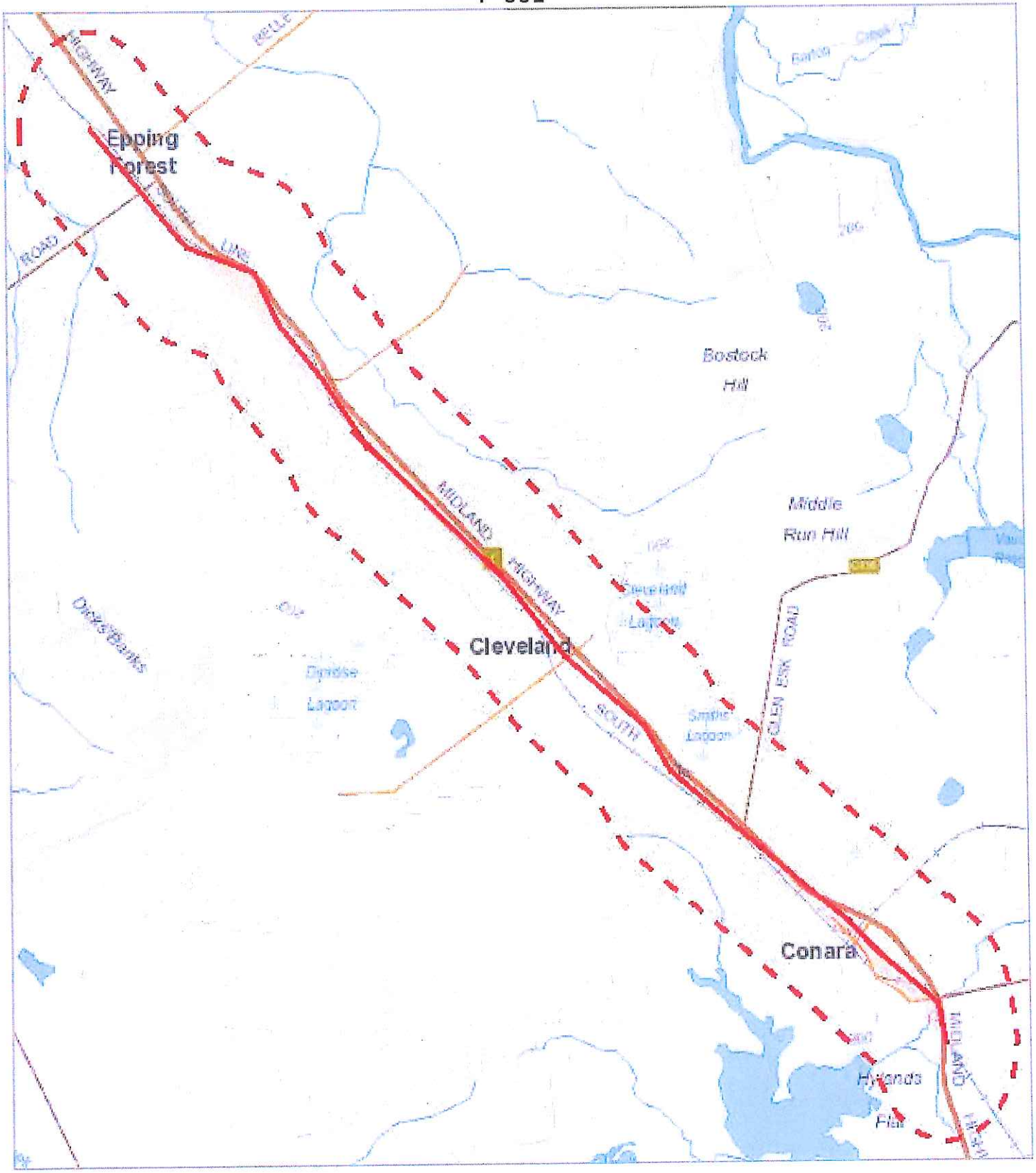
Name	Classification	Status	Area (HA)
Cleveland Lagoon Conservation Area	Conservation Area	Other Formal Reserve	75.38
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	1.101
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	1.365
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	1.416000000 0000001
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	2.338
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	2.494
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	3.189
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	3.391
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	5.551
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	13.442
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	17.907
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	34.959
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	79.206
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	85.705
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	91.394
	Conservation Covenant (NCA)	Private Reserve (Perpetual)	294.447
	Informal Reserve on other public land	Informal Reserve	0.09
	Informal Reserve on other public land	Informal Reserve	8.812000000 000001
	Informal Reserve on other public land	Informal Reserve	9.852
	Informal Reserve on other public land	Informal Reserve	170.44

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

1-882

538191, 5378546



527523, 5366674

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

Exhibited

Known biosecurity risks within 1000 meters

1-883

Legend: Biosecurity Risk Species

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

Legend: Hygiene infrastructure

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

Legend: Cadastral Parcels

Known biosecurity risks within 1000 meters

1-884

Verified Species of biosecurity risk

No verified species of biosecurity risk found within 1000 metres

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

Appendix B - Protected Matters Search

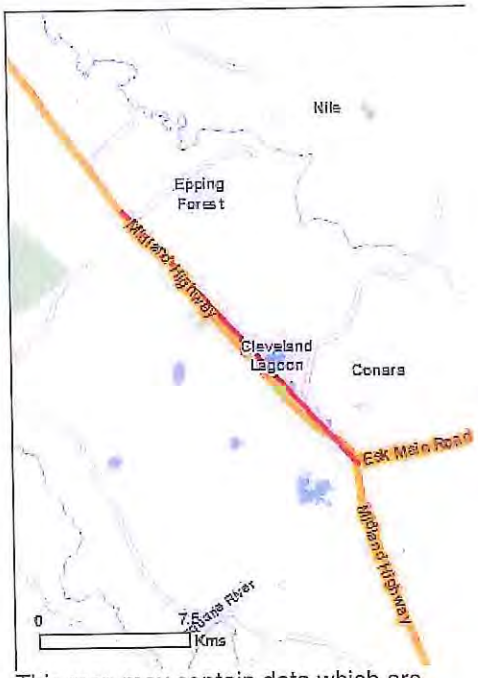
EPBC Act Protected Matters Report

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: 25/07/17 08:56:56



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates
Buffer: 5.0Km

Exhibited

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:	1
Listed Threatened Species:	33
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	14
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Commonwealth Reserves Marine:	None

Extra Information

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

State and Territory Reserves:	19
Regional Forest Agreements:	1
Invasive Species:	23
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
Lowland Native Grasslands of Tasmania	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 likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	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
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area
Tyto novaehollandiae castanops (Tasmanian population) Masked Owl (Tasmanian) [67051]	Vulnerable	Species or species habitat known to occur within area
Frogs		
Litoria raniformis Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog [1828]	Vulnerable	Species or species habitat known to occur within area
Mammals		
Dasyurus maculatus maculatus (Tasmanian population) Spotted-tail Quoll, Spot-tailed Quoll, Tiger Quoll (Tasmanian population) [75183]	Vulnerable	Species or species habitat known to occur within area
Dasyurus viverrinus Eastern Quoll, Luaner [333]	Endangered	Species or species habitat known to occur within area

Name	Status	Type of Presence
Perameles gunnii gunnii Eastern Barred Bandicoot (Tasmania) [66651]	1-889 Vulnerable	Species or species habitat known to occur within area
Sarcophilus harrisii Tasmanian Devil [299]	Endangered	Species or species habitat likely to occur within area
Plants		
Acacia axillaris Midlands Mimosa, Midlands Wattle [13563]	Vulnerable	Species or species habitat likely to occur within area
Barbarea australis Native Wintercress, Riverbed Wintercress [12540]	Endangered	Species or species habitat likely to occur within area
Bertya tasmanica subsp. tasmanica Tasmanian Bertya [78359]	Endangered	Species or species habitat may occur within area
Boronia hippopala Velvet Boronia [78925]	Vulnerable	Species or species habitat may occur within area
Caladenia anthracina Black-tipped Spider-orchid [64855]	Critically Endangered	Species or species habitat known to occur within area
Caladenia lindleyana Lindley's Spider-orchid [9305]	Critically Endangered	Species or species habitat likely to occur within area
Caladenia pallida Rosy Spider-orchid, Pale Spider-orchid, Summer Spider-orchid [9604]	Critically Endangered	Species or species habitat known to occur within area
Colobanthus curtisiae Curtis' Colobanth [23961]	Vulnerable	Species or species habitat known to occur within area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat known to occur within area
Epacris exserta South Esk Heath [19879]	Endangered	Species or species habitat known to occur within area
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat known to occur within area
Lepidium hyssopifolium Basalt Pepper-cress, Peppercress, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area
Leucochrysum albicans var. tricolor Hoary Sunray, Grassland Paper-daisy [56204]	Endangered	Species or species habitat known to occur within area
Prasophyllum incorrectum Golfers Leek-orchid [78898]	Critically Endangered	Species or species habitat known to occur within area
Prasophyllum tunbridgense Tunbridge Leek-orchid [64957]	Endangered	Species or species habitat likely to occur within area
Pterostylis commutata Midland Greenhood [64535]	Critically Endangered	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Pterostylis ziegeleri Grassland Greenhood, Cape Portland Greenhood [64971]	1-890 Inerable	Species or species habitat likely to occur within area
Ranunculus prasinus Midlands Buttercup, Tunbridge Buttercup [4862]	Endangered	Species or species habitat likely to occur within area
Stenanthemum pimeleoides Spreading Stenanthemum, Propellor Plant [15450]	Vulnerable	Species or species habitat likely to occur within area
Xanthorrhoea arenaria Sand Grasstree [21603]	Vulnerable	Species or species habitat may occur within area
Xerochrysum palustre Swamp Everlasting [76215]	Vulnerable	Species or species habitat likely 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
Migratory Terrestrial Species		
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known 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 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
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

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

Name

Commonwealth Land -

Listed Marine Species [Resource Information]

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

Name	Threatened	Type of Presence
Birds		
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 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
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		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
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Cleveland Lagoon	TAS
Conara Junction	TAS
Diprose Lagoon (Forest Hall) Extension	TAS
Eskvale	TAS
Fairfield	TAS
Forton #1	TAS
Forton #2	TAS
Glasslough	TAS
Meadowbank Atkinson	TAS
Meadowbank Conara	TAS
Somerset Epping Forest #1a	TAS
Somerset Epping Forest #1b	TAS
Tayhan Park	TAS
Tom Gibson	TAS
Valleyfield	TAS
Vaucluse	TAS
Vaucluse Conara	TAS
Wanstead Park	TAS
Wanstead Stewardship Agreement	TAS

Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been included.	
Name	State
Tasmania RFA	Tasmania

Invasive Species	[Resource Information]

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

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

Name	Status	Type of Presence
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]	1-893	Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		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
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus 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
Vulpes vulpes Red Fox, Fox [18]		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
Cytisus scoparius Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to 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
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Ulex europaeus Gorse, Furze [7693]	1-894	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

-41.753961 147.346294,-41.837482 147.449291,-41.837482 147.449291

Acknowledgements

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

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-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.

Department of the Environment
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Canberra ACT 2601 Australia
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Appendix C - Flora Species List

Job Number	3218506
Project	Small Towns Water Program
Client	Zinfra
Site	Epping Forest to Conara
Grid Reference	Midpoint of the study area at approximately GDA94 532939E 5372658N
Surveyed By	James Hill, Senior Ecologist GHD Hobart
Date of Survey	13 July 2017
Plant Collection Permit No.	DA 17108 (expiry: 30/06/2020)

Key:

	STATE LEGISLATION
r	rare – Tasmanian TSP Act
v	vulnerable – Tasmanian TSP Act
e	endangered – Tasmanian TSP Act
	COMMONWEALTH LEGISLATION
VU	vulnerable – Commonwealth EPBC Act
EN	endangered – Commonwealth EPBC Act
CR	critically endangered – Commonwealth EPBC Act
	Introduced Species
i	introduced
P	planted
D	declared weed – Tasmanian *Weed Management Act 1999*

VASCULAR FLORA RECORDED WITHIN THE STUDY AREA

Status	Species Name	Common Name
Indigenous Species		
	Acacia dealbata subsp. *dealbata*	silver wattle
	Allocasuarina littoralis	black sheoak
	Astroloma humifusum	native cranberry
	Austrostipa mollis	soft speargrass
	Banksia marginata	silver banksia
	Daviesia latifolia	hop bitterpea
	Daviesia ulicifolia	spiky bitterpea
	Dianella revoluta	spreading or black-anther flax-lily
	Eragrostis curvula	african lovegrass
	Eucalyptus amygdalina	black peppermint
	Eucalyptus viminalis subsp. *viminalis*	white gum
	Exocarpos cupressiformis	common native-cherry
	Exocarpos strictus	pearly native-cherry

Status	Species Name	Common Name
	Gonocarpus tetragynus	common raspwort
	Holcus lanatus	yorkshire fog
	Hypochaeris radicata	rough catsear
	Juncus bufonius	toad rush
	Juncus pallidus	pale rush
	Juncus planifolius	broadleaf rush
	Lepidosperma laterale	variable swordsedge
	Lepidosperma longitudinale	pithy swordsedge
	Lepidosperma longitudinale	pithy swordsedge
	Leptocarpus tenax	slender twinerush
	Leucopogon virgatus	common beard-heath
	Lissanthe strigosa subsp. *subulata*	peachberry heath
	Lomandra longifolia	sagg
	Lomandra nana	dwarf mat-rush
	Oxalis perennans	grassland woodsorrel
	Pimelea humilis	dwarf riceflower
	Poa labillardierei	tussockgrass
	Poa labillardierei var. *labillardierei*	silver tussockgrass
	Poa sieberiana var. *sieberiana*	grey tussockgrass
	Ranunculus sp.	buttercup
	Rytidosperma sp.	wallabygrass
	Senecio glomeratus	purple fireweed
	Luzula flaccida	pale woodrush
	Pteridium esculentum subsp. *esculentum*	bracken
	Themeda triandra	kangaroo grass
	Viola hederacea subsp. *hederacea*	ivyleaf violet
Introduced Species		
i	*Aira* sp.	hair grass
i	*Acetosella vulgaris*	sheep sorrel
i	*Aira caryophyllea* subsp. *caryophyllea*	silvery hairgrass
i	*Briza maxima*	greater quaking-grass
i, n	*Hypochaeris glabra*	smooth catsear
i, n	*Hypochaeris radicata*	rough catsear
i	*Onopordum acanthium*	scotch thistle
i	*Poa annua*	winter grass
i	*Lycium ferocissimum*	african boxthorn
i	*Pinus radiata*	radiata pine
i	*Crataegus monogyna*	hawthorn
i	*Acacia floribunda*	gossamer wattle
i	*Carduus tenuiflorus*	winged thistle
i	*Cirsium vulgare*	spear thistle
i	*Cirsium arvense*	Californian thistle
i	*Conyza* sp.	fleabanes
I, D	*Rubus fruticosus*	blackberry
I, D	*Ulex europaeus*	gorse
i	*Trifolium repens*	white clover

GHD

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3218506-27640/https://projects.ghd.com/oc/Tasmania/smalltownswatersuppl2/Delivery/Documents/Environment/Epping Forest to Conara Ecological Assessment v2.docx

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
2	J Hill and Nicole Reineker	W McMinn		B Davie		10.08.2017

www.ghd.com

GHD

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Hobart Tasmania 7000
T: (03) 6210 0600 E: ashley.brook@ghd.com

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
1	A Brownlie	B Davie	On file	B Davie	On file	10.08.17

www.ghd.com

Appendix D – Conara to Epping Forest Ecological Assessment Report

TasWater

Submission to Planning Authority Notice

Council Planning Permit No.	P17-225	Council notice date	15/09/2017

TasWater details

TasWater Reference No.	TWDA 2017/01478-NMC	Date of response	21/09/2017
TasWater Contact	Anthony Cengia	Phone No.	(03) 6237 8243

Response issued to

Council name	NORTHERN MIDLANDS COUNCIL
Contact details	Planning@nmc.tas.gov.au

Development details

Address	BARTON RD, EPPING FOREST	Property ID (PID)	7493514
Description of development	Reservoir and Security Fencing		

Schedule of drawings/documents

Prepared by	Drawing/document No.	Revision No.	Date of Issue
GHD, Zinfra, TasWater	32-18418-W370	E	05/08/2017
GHD, Zinfra, TasWater	32-18418-W022	B	02/08/2017

Conditions

SUBMISSION TO PLANNING AUTHORITY NOTICE OF PLANNING APPLICATION REFERRAL

Pursuant to the *Water and Sewerage Industry Act 2008 (TAS)* Section 56P(1) TasWater does not object to the proposed development and no conditions are imposed.

Advice

General

For information on TasWater development standards, please visit http://www.taswater.com.au/Development/Development-Standards

For application forms please visit http://www.taswater.com.au/Development/Forms

Declaration

The drawings/documents and conditions stated above constitute TasWater's Submission to Planning Authority Notice.

Authorised by

Jason Taylor
Development Assessment Manager

TasWater Contact Details

Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au

Rosemary Jones

From: Hills, Garry (StateGrowth) <Garry.Hills@stategrowth.tas.gov.au>
Sent: Wednesday, 4 October 2017 4:02 PM
To: Rebecca Green
Cc: Rosemary Jones
Subject: RE: REMINDER: Referral to Department of State Growth of Planning Application P17-225 - Barton Road, EPPING FOREST

Our Ref: D17/373459

Rebecca, sorry a response had not yet been provided.

The Department have no objection to the proposal, however could you please include the usual standard condition for application of a works permit prior to any activity in the State Road reserve (Service Works permit specifically in this instance).

Thanks, Garry

Garry Hills | Senior Traffic Engineering Officer
State Roads Division | Department of State Growth
GPO Box 536, Hobart TAS 7001
Phone: (03) 6777 1940
www.stategrowth.tas.gov.au

From: Rebecca Green [mailto:rebecca.green@nmc.tas.gov.au]
Sent: Wednesday, 4 October 2017 11:23 AM
To: Development (StateGrowth) <Development@stategrowth.tas.gov.au>
Cc: Rosemary Jones <rosemary.jones@nmc.tas.gov.au>
Subject: REMINDER: Referral to Department of State Growth of Planning Application P17-225 - Barton Road, EPPING FOREST

Good morning,

Just following up on the referral for the above-mentioned planning application. Can you please provide your comment/feedback to Planning@nmc.tas.gov.au as soon as possible?

Thank you

Rebecca Green

Rosemary Jones

From: Jennifer Jarvis <Jennifer.Jarvis@tasrail.com.au>
Sent: Wednesday, 4 October 2017 5:57 PM
To: Rebecca Green
Cc: Rosemary Jones
Subject: RE: Reminder - NMC Referral of Planning Application

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Sent to ECM

Hello Rebecca, thanks for the follow-up. I will send you a formal letter tomorrow, but in the interim the below points summarise TasRail's position.

- TasRail is satisfied that the barrier fence is proposed to be setback 25 metres from the railway.
- TasRail notes that the proposal includes a 4.0m wide access gravel road that appears to cuts across an existing gravel road that is frequently used by TasRail employees and residents, and therefore TasRail is concerned to ensure the potential for collision is mitigated with appropriate controls such as speed limits and signage.
- The proposed development appears to be sufficiently away from the railway infrastructure to not require a Traffic Impact Assessment, but noting point 2 above remains a concern.

Please don't hesitate to contact me if you require further information/clarification.

Kind regards

Jennifer Jarvis

TASRAIL

Manager Group Property & Compliance |
Phone: 03 6335 2603 | Mobile: 0428 139 238
11 Techno Park Drive, Kings Meadows, Tasmania, 7249
Jennifer.Jarvis@tasrail.com.au

From: Rebecca Green [mailto:rebecca.green@nmc.tas.gov.au]
Sent: Wednesday, 4 October 2017 11:21 AM
To: Property
Cc: Rosemary Jones
Subject: Reminder - NMC Referral of Planning Application

Good morning,

As the subject proposal is within 50m of the South Line Railway, are you able to provide any comment/feedback to Planning@nmc.tas.gov.au as soon as possible?

NORTHERN MIDLANDS COUNCIL	
Location	1-907
File No.	
Property	
Attachments	
REC'D 29 SEP 2017	

ATTACHMENT C

C. ENNISS
5 BARTON R-D
Epping forest
7211.

THe General Manager Po Box 156.

NOTICE TO property owners 16 Sept.

Epping forest is Built over A Shallow Depression.

The Lowest point is Western side of Rail Line

All water from Highway to Rail Line west on Barton RD

Exits via small pipe under Rail Line. (pipe too High)

and stays there for months, The Drain goes up hill thereon.

Spillway overflow from small Dam next to me Exits

via same pipe under Rail Line.

Pipe under Rail Line is too High eastern side of

Barton RD will not Drain. Dam next to me will not Drain.

Spillway is only inches deep.

Epping forest has "0-6" inches topsoil 8-10 inches gravel then

water tight clay

If small Dam fills it stays full to top soil

my Drive way and shed Entrance are lower and stay

wet

To Fix this / Dam Spillway and pump out Dam, two Feet

or so Below top soil. If it Rains a lot pump stays

in. Spillway cannot Be lowerD water will not Run

Dam is only 9 meters from my Boundry. TAS waters

French Drain Looks to Be Half that Distance

Described as a "Soak" By TAS water Employee.

Holding 5-6 times as much water at ground level

to Disperse Sideways into my place. Under pressure

For 50-60 ? meters Along my Boundry

TAS water Also stated spill would Exit via same

Drain It will not Drain.

Questions

Questions. 1-908

Will this Drain Still cross my place ?
Will TAS water repair - maintain Drain ?
How far of my Boundry is this "Snake pit" To Be ?
IS my Boundry Fence To Be rephaced
IF So with what, Have I Any choice ?
IS TASwater TO MAINTAIN Remainder of lease outside
it's Enclosure. Railyard is part of lease, grass must be cut ?
Can This "Soak" — open french Drain - Snake pit, Be Shifted
South AWAY from my Boundry ?
Does pump Station emit Any Noise ?
Can Eppings Drainage Be fixed.
Functioning Drain on Highway would Help
Pipe or Drain From Rail yard to Southeast would
Fix problem for Town.

AFTER Having My Driveway, Sheb Entrance
and Rail yard Road Flood, I Dug out the Drain.
Small Dam to Rail Line. A Section of Drain Had
Been filled to use as French Drain By my northern Neighbour
I unearthed pipe BACK TO His property
He Has Filled Drain in four times I've Dug it out Five
At the moment Drain is clear AND He'S Blocked pipe
From His place His END. Thus Rendering 40-50 sqm of my place
wet AND useless from His under size Block AND Disfunctional
Drainage System. Two Restraining orders, Six court Appearances
over $5,000.00 Dollars in Fees Legal AND other my place is
Still wet.
When Drain from Small Dam or new "Soak" is filled in
or Blocked (pipe under Rail Line must Be cleared)
My place AND rail yard flood. Road into Rail yard Has pipe
under AND must ALSO Be cleared

OR is my place now ment to Absorbe
All this water
Will I have to Dig a Sump Near By and
continue to pump to stay Dry?

Charles Enniss

09 October 2017

Northern Midlands Council
PO Box 156
Longford TAS 7301
via email: Planning@nmc.tas.gov.au

Our ref: 32/18506/07
Your ref: P17-225

Dear Sir/Madam

Planning Application P17-225 - Water Supply Reservoir, Epping Forest
Response to Representation

Thank you for providing a redacted copy of the representation received in relation to Planning Application P17-225, and for the opportunity to provide a response to the issues raised in the representation.

Issue	Response
Stormwater	Our client is aware of the local stormwater issues relevant to the surrounding area. However, in the absence of local stormwater reticulation, an infiltration basin is proposed in order to retain stormwater within the portion of the site to be occupied by TasWater. Further, the reservoir will have the ability to be emptied into a water cartage truck as required for maintenance, reducing the reliance on infiltration.
Fencing and Site Maintenance	The portion of the site to be occupied by TasWater infrastructure will be provided with chain wire security fencing to a height of 2.1 m. Our client is willing to alter the specific details of the fencing along the boundary shared with the representor provided it meets TasWater's security requirements. It is noted that fencing along a side or rear boundary to a height of 2.1 m ordinarily does not require approval under Council's planning scheme. TasWater will undertake maintenance of the area within the compound (including mowing of the grass), with general maintenance of the remainder of the Crown land continuing to be the responsibility of the Department of State Growth.
Noise	The electric booster pumps emit low levels of noise and will be housed within a building of masonry construction providing further noise attenuation. A permanent generator will also be installed in conjunction with the pumps, however this will also be attenuated and will only operate very infrequently in response to network power outages. It is noted the planning application does not seek approval for the booster pump station which is exempt in accordance with Section 11 of the *Water and Sewerage Industry (General) Regulations 2009*.

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Sincerely
GHD Pty Ltd

Ashley Brook
Senior Planner
03 6332 5533