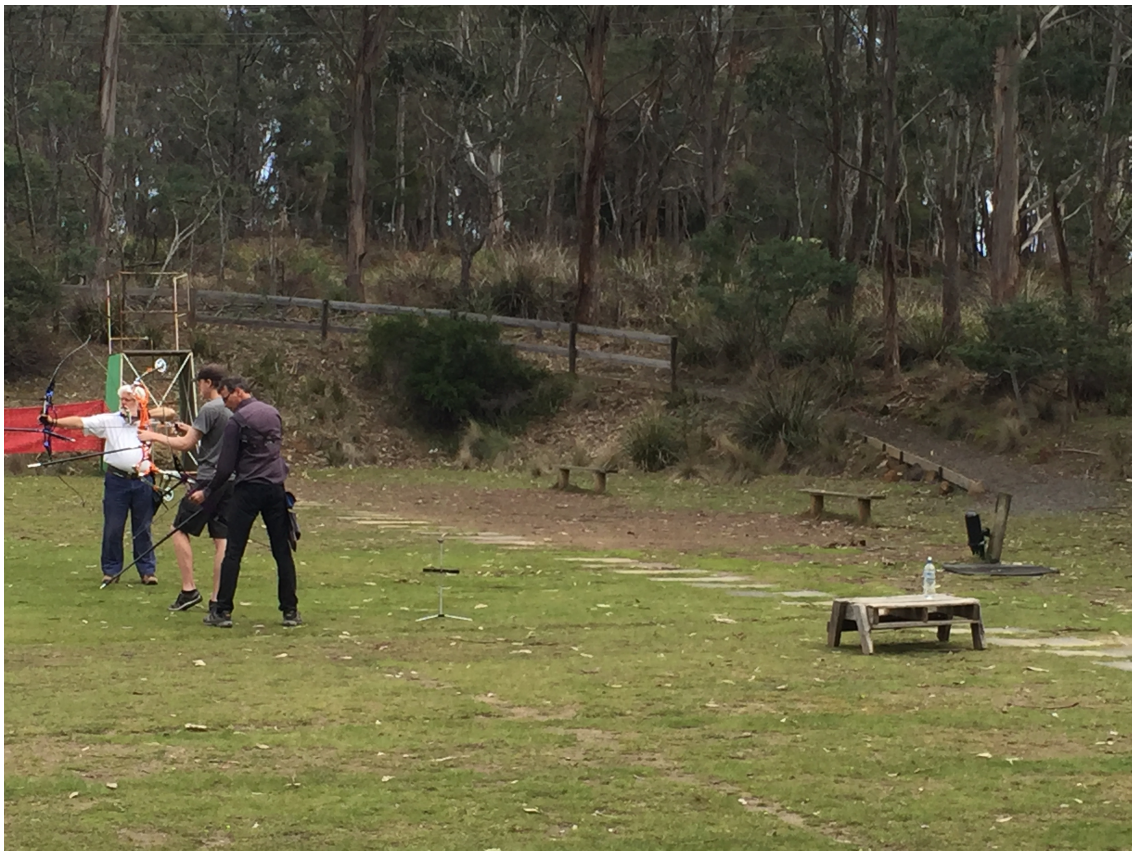
Paringa Archers



Proposed Indoor Archery Venue

Flora and Fauna Habitat Survey Report

Bush Matters

Flora and fauna advice

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Figure 1, cover photo:
A shed is proposed at this site to provide indoor options for archery

Executive Summary

Paringa Archers engaged Bush Matters to undertake a flora and fauna habitat survey, as required in the project assessment process by the Parks and Wildlife Service.

No threatened flora or threatened vegetation community was found on site during this spring survey. There is no significant habitat for threatened fauna here.

This shed development would not result in any flora or fauna issues that are covered by legislation. Some suggestions are provided to minimise the management issues which may result from disturbing a small area of bushland, to remove an existing potential for weed spread, and to reduce visual impact for passers-by along Reatta Rd and the Archery Firetrail.

Suggestions for minimising impacts are summarised here (with more detail provided in section 4):

- Avoid disturbing Area C if possible

If it is possible, it is recommended that fill not be taken from Area C, just because it is a pity to damage native vegetation in which a wide variety of species occur. Hopefully, sufficient fill could be found in the second earthen bank, F. If not, please minimise the use of Area C, and batter slopes gently so that natural regeneration is more likely to be successful. Also re-use topsoil, as discussed in section 4.3.

- Separate and re-spread topsoil

Wherever fill is taken, it is highly advisable to separate the top 10 cm of soil. Subsoil should be moved separately and used for the bulk of works. The topsoil can then be replaced over the completed earthworks, providing a suitable growing medium with soil seedbank that will regenerate more quickly and successfully than if all the soil is mixed together.

It would also be a good idea to stockpile the topsoil from area E, before the area is filled. That topsoil could then be respread over the area. It is currently densely grassed, and likely to make an ideal surface.

- Remove “mainland native” plantings

Some of the species which have been planted in the past are becoming weedy or may do so. To protect the integrity and diversity of the area, these are best removed.

- Screen shed with local native plantings

Plantings to screen the shed and the archery area from the road and the nearby firetrail are recommended. Local species only should be used. Mainland grevilleas and other non-local plants have previously been planted nearby and have begun to spread as weeds, and should be removed. Suitable species to plant are recommended in section 4.

1 Introduction

1.1 Background

The proposed project is on the Paringa Archers' lease at 93 Reatta Rd, Trevallyn, within the Trevallyn Nature Recreation Area, and this survey is required as part of the assessment process by the Parks and Wildlife Service.

The proposed project is an indoor archery venue, which would take the form of a 16 x 30m shed at the Northern end of the existing archery range. This project would enable both club and community archery activities to be held irrespective of weather conditions.

The proposed shed would sit approximately 75m from Reatta Rd, which fronts the club, and some 7m below road level, with trees and bushes in the intervening space. The paint finish would be 'Woodland Grey'.

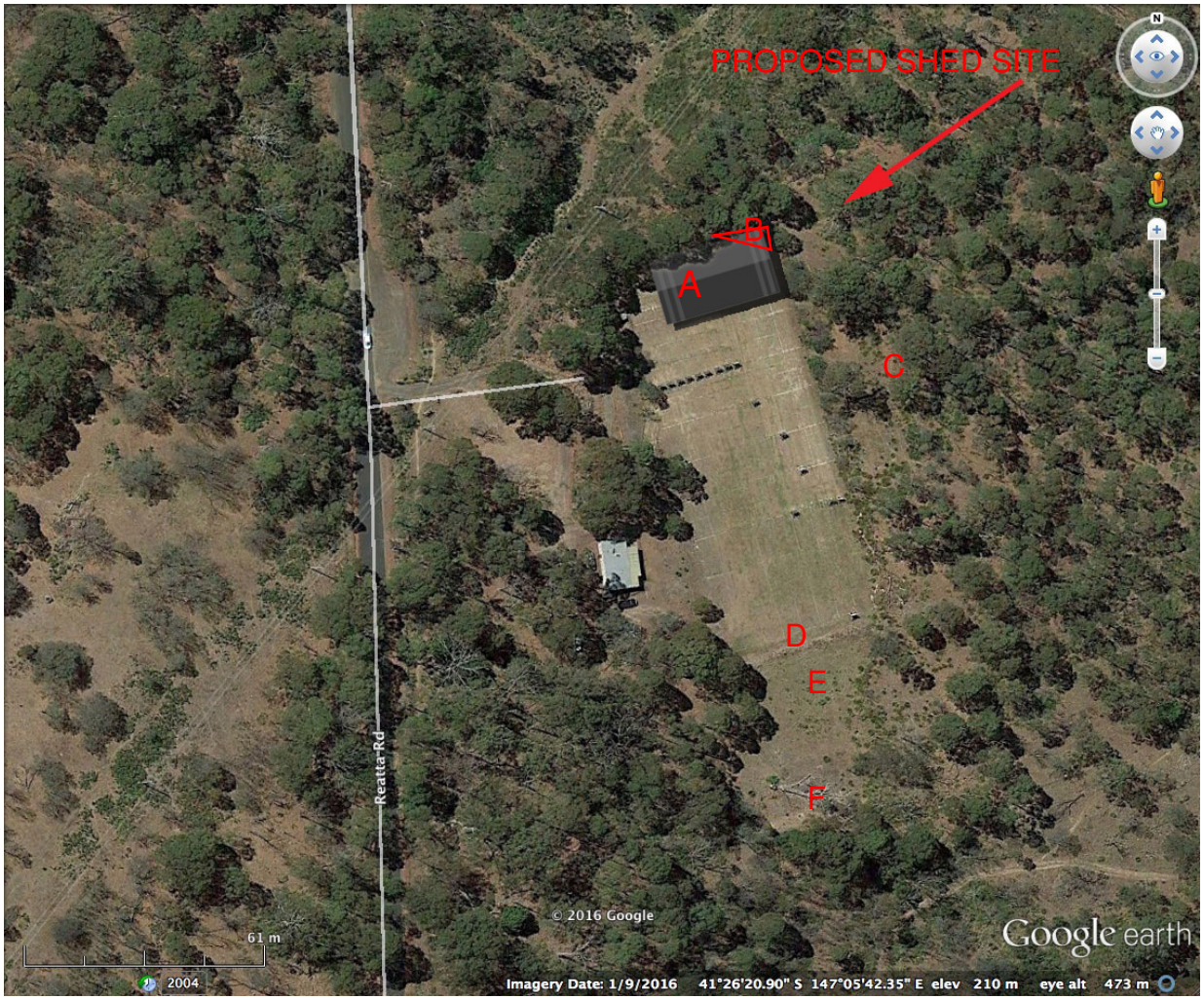
There are several parts to the proposal. These are shown outlined in Map 1, below.

A. Shed site – where the 16m x 30m shed is to be placed
B. NE corner - where an existing ditch will need to be moved northwards
C. Eastern bush slope – a potential source of fill, east of the small "Practice Range"
D. Existing earth bank – this bank will be moved south 10 metres
E. Southern flats – fill will be used to bring this area to level, to extend the existing outdoor range. It will be bounded by a new earth bank (moved from D)
F. Second earth bank – this bank could be used as another source of fill

The whole area, including the existing range, covers less than 1 hectare.

The proposed shed site is located northeast of the SW corner at E: 507963 N: 5412529 (GDA94).

Map 1. Map of proposed site
Based on picture of proposed shed, provided by Paringa Archers



2 Methodology

2.1 Background research

A Natural Values Report was conducted through the Natural Values Atlas (28/9/16) for all threatened flora and fauna records within 5 kilometres of the site.

2.2 Flora survey

A survey was conducted by Anna Povey of Bush Matters on 28th September 2016. As orchid leaves were present within the shed site, further visits were conducted until the orchids were flowering, on 18th November, at which time their identity could be determined.

All botanical names are in accordance with the recently updated "A Census of the Vascular Plants of Tasmania, Including Macquarie Island" (de Salas & Baker, 2016).

Particular attention was paid to the possible location of threatened species, with any different habitats (such as damp areas) being investigated. It is the convention to consider threatened flora which have previously been recorded within 5km of the site. Here that area includes the Cataract Gorge and its many threatened flora. Most of those species would not be likely in the (densely grassed and heavily browsed) dry sclerophyll forest of this site. All these species were considered during the field visit, however, in case any species could be found at the sites.

Specimens of native flora, including possible threatened species, were taken for the purpose of identification in accordance with Permit No. TFL 16098 (Department of Primary Industries, Parks, Water and Environment).

Locations were recorded by handheld GPS, using datum WGS84 (equivalent to GDA94).

2.3 Fauna Habitat Assessment

Likely habitat for threatened or otherwise significant fauna was noted during the above survey, together with signs of presence such as burrows, diggings and scats.

2.4 Limitations

A survey of this type can be expected to identify most vascular plant species. However any sampling technique is limited in what can be recorded during one visit. Some plants, such as some orchids, annuals and lilies, may not be visible at this time (early spring, after a wet winter). Some species also vary in abundance from year to year.

Bryophytes and lichens were not surveyed. No threatened lower plants were recorded on the Natural Values Atlas as occurring within 5 km.

3 Flora and fauna

3.1 Vegetation

The vegetation on the major areas concerned (A, D, E, F) is disturbance-induced grassland (regenerating with many natives since past clearance, formation and some pasture-sowing of the area) that comprises a mix of native and introduced grasses and herbs, especially wallaby grasses, *Rytidosperma* spp., introduced browntop bent, *Agrostis capillaris*, weeping grass, *Microlaena stipoides*, spear grasses, *Austrostipa* spp., smooth flat-herb, *Solenogyne dominii*, kidneyweed, *Dichondra repens*, introduced flatweed, *Hypochaeris radicata*, and grassland woodsorrel, *Oxalis perennans.* There are additional native species in places, especially at edges, such as sagg, *Lomandra longifolia*, and silver tussockgrass, *Poa labillardierei*.

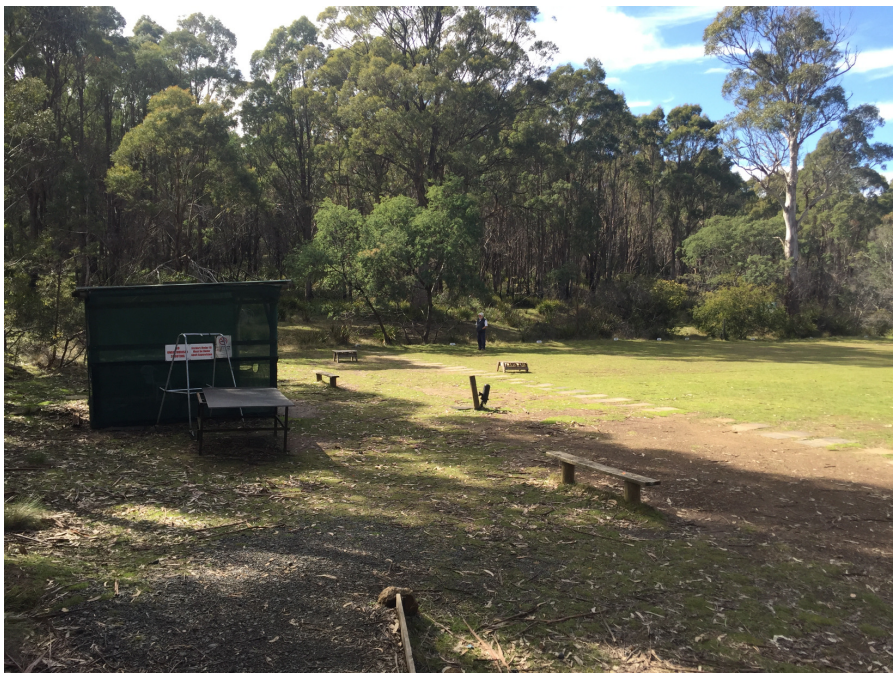
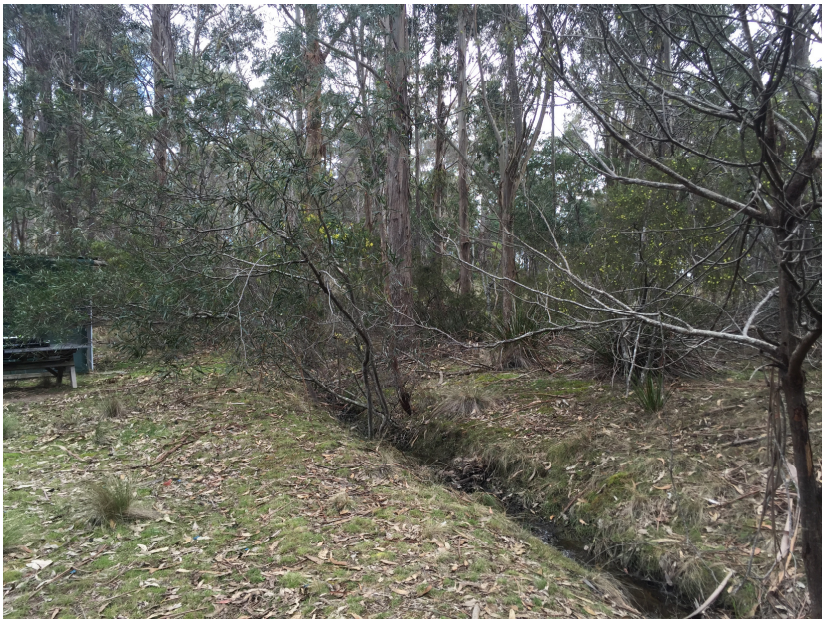


Figure 2. The proposed shed site (A) is covered by short grassland and some bare areas. The earth banks, D and F, and area E to be filled, are similar.

At the northeast corner of the proposed shed site there are sun-orchids, *Thelymitra pauciflora*. This is not a threatened species.

Figure 3. Sun-orchids occur east of the table. The ditch here may also be moved north, so area B, north of the ditch, was surveyed.



The surrounding bushland, which incorporates areas B and C, is Black Peppermint, *Eucalyptus amygdalina*, forest on dolerite (TASVEG code DAD). This is not a threatened vegetation community (Schedule 3A, *Nature Conservation Act 2002).*

In the northeast corner at B, there is a relatively natural understorey together with some planted mainland wattles and planted blue gums.

At C, where fill material may be obtained, the forest is in a relatively natural state, though lacking any mature trees with tree hollows. This is the most undisturbed of the areas surveyed for this project. Here, the forest is dominated by *Eucalyptus amygdalina*, with occasional *Acacia verticillata* and *Acacia dealbata* as shrubs. The understorey is sedgey, predominantly *Lepidosperma ensiforme* and *Lomandra longifolia*, as well as grassy, with *Microlaena stipoides*, *Poa tenera, Poa labillardierei*, *Rytidosperma* species and *Austrostipa* species. Herbs include *Dichondra repens, Oxalis perennans, Hydrocotyle hirta, Hydrocotyle callicarpa* and *Lagenophora stipitata,* and there are some lovecreepers here, *Comesperma volubile.* The sun-orchid, *Thelymitra pauciflora* was also found here, as well as maroonhoods, *Pterostylis pedunculata.*

A full flora species list is available on request.

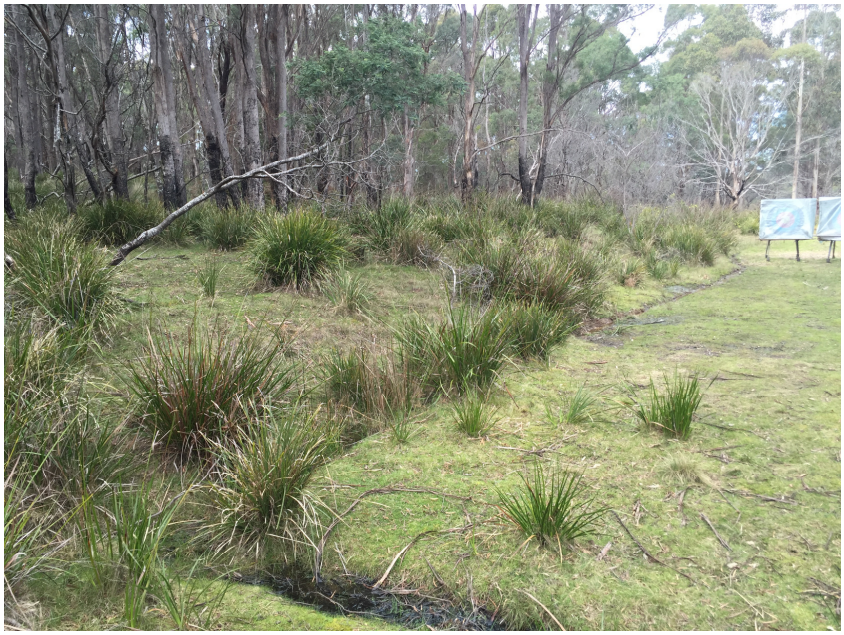


Figure 4. Area C, above the Practice Range, has young Black Peppermints over Swordsedges and Saggs.

3.2 Threatened flora species

No threatened flora was found on site during this spring survey. The species which have previously been recorded within 5km of the site are tabled and discussed in Appendix 1. These were specifically searched for but not found.

3.3 Threatened fauna habitat

There is no significant habitat for threatened fauna on any of the components of the project. No dens, hollow logs or trees with hollows are present.

Any trees that might be affected are immature, with no tree hollows. In fact, most trees nearest the proposed shed are planted Blue Gums, *Eucalyptus globulus*.

There were bandicoot diggings in the area of the proposed shed, but this area would comprise but a tiny part of the foraging range of any bandicoot, and provides no shelter or denning.

4 Management Issues and Recommendations

This shed development would not result in any flora or fauna issues that are covered by legislation. Some suggestions are provided to minimise the management issues which may result from disturbing a small area of bushland, to remove an existing potential for weed spread, and to reduce visual impact for passers-by along Reatta Rd and the Archery Firetrail.

4.1 Avoid disturbing Area C if possible

If it is possible, it is recommended that fill not be taken from Area C, just because it is a pity to damage native vegetation in which a wide variety of species occur. Hopefully, sufficient fill could be found in the second earthen bank, F. If not, please minimise the use of Area C, and batter slopes gently so that natural regeneration is more likely to be successful. Also re-use topsoil, as discussed in section 4.3.

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It would also be a good idea to stockpile the topsoil from area E, before the area is filled. That topsoil could then be respread over the area. It is currently densely grassed, and likely to make an ideal surface.

4.3 Remove “mainland native” plantings

Some of the species which have been planted in the past are becoming weedy or may do so. To protect the integrity and diversity of the area, these are best removed. Cut-and-painting with herbicide is a simple, effective method. As wattle seed can survive for many decades, it will be necessary to keep an eye out for further wattle regeneration and to continue control regularly. Friends of Trevallyn Reserve can be consulted for assistance.

4.4 Screen shed with local native plantings

Plantings to screen the shed and the archery area from the road and the nearby firetrail are recommended. Local species only should be used. Mainland grevilleas and other non-local plants have previously been planted nearby and have begun to spread as weeds, and should be removed.

For screening, suitable trees include:

- Silver Wattle*, Acacia dealbata*
- Prickly Box, *Bursaria spinosa*
- Broadleaf Hopbush, *Dodonaea viscosa*,
- Bulloak, *Allocasuarina littoralis,*
- Sheoak, *Allocasuarina verticillata*
- Blackwood, *Acacia melanoxylon*
- Dogwood, *Pomaderris apetala*

Away from infrastructure, Black Peppermints, *Eucalyptus amygdalina*, could be planted.

Closer to the clubhouse, to replace weedy mainland natives, some attractive local shrubs and small trees could be planted as well as those already listed. These species benefit from a little care and attention, but are also reasonably hardy:

- Banksia, *Banksia marginata*
- Cheesewood, *Pittosporum bicolor*
- Native Olive, *Notelaea ligustrina*

- Hop Bitterpea, *Daviesia latifolia*
- Native Indigo, *Indigofera australis*
- Red-stemmed Wattle, *Acacia myrtifolia*, and
- the local rare plant, Roundleaf Mintbush, *Prostanthera rotundifolia*.

Habitat Plants at Liffey is a local native nursery which sells these species (and they can deliver). It is advisable to use very tall plant guards and stakes, as wallaby browsing pressure is likely to be intense.

5 References

de Salas, M.F. and Baker, M.L. (2016), *A Census of the Vascular Plants of Tasmania*. Tasmanian Herbarium website, www.tmag.tas.gov.au/Herbarium/TasVascPlants.pdf

Department of Primary Industries, Parks, Water and Environment (2013), *Natural Values Atlas*. Website database of Department of Primary Industries, Parks, Water and Environment, Hobart. www.naturalvaluesatlas.tas.gov.au

Guidelines for the Listing of Species under the Tasmanian *Threatened Species Protection Act 1995*. www.dpiwe.tas.gov.au/inter.nsf/Attachments/LBUN-59X7G2?open

Jones, D., Wapstra, H., Tonelli, P and Harris, S. (1999), *The Orchids of Tasmania*. Melbourne University Press, Carlton South.

Threatened Species Unit (2003), *Threatened Species Listing Statements and Notesheets*, Threatened Species Unit, Department of Primary Industries, Water and Environment, Hobart.

6 Appendices

Appendix 1. Threatened flora recorded and possible

This table includes species which have been recorded within 5km of the site (Natural Values Atlas, 28/9/16) and could find suitable habitat here (i.e. grassy forest or grassland). None have been recorded within 500m of the site. Species which definitely do not occur here are not included in this table for simplicity (e.g. they are perennial and would be visible in a spring survey but were not found, or their habitat is riparian and this site is not suitable, or previous records are very old and they have not been found here since). Habitat comments from Threatened Species Notesheets (Threatened Species Unit, 2003) and Jones et al (1999).

Key:
Tasmanian status (*Threatened Species Protection Act 1995*):
en = Endangered; x = Presumed Extinct; v = Vulnerable; r = Rare
Commonwealth status (*Environment Protection and Biodiversity Conservation Act 1999*):
EX = extinct; CR = Critically Endangered; EN = Endangered; VU = Vulnerable.

pv/pr/PEN = protected as vulnerable/rare/Endangered (This taxon is either a component of a vulnerable/rare/Endangered taxon, or the name has changed from that which appears in the official legislation.)

Scientific name	Common name	Conservation Status		Comments
		State	Cwth	
Aphelia gracilis	slender aphelia	r		Inhabits damp, sandy ground and wet places, especially where there are bare spaces. Habitat is not ideal as there is no sandy ground
Aphelia pumilio	dwarf fanwort	r		Possible in open patches though most are too compacted, too dry or too shady. Tiny, annual plant that may not be visible at the time of this survey. Most likely habitat is that in the Practice Range, which is to be retained.
Brunonia australis	blue pincushion	v		Suitable grassy forest habitat here but prefers ironstone gravels. Populations on dolerite usually small. I have not known this area of the reserve to support Brunonia.
Caesia calliantha	blue grass lily	r		Suitable grassy woodland habitat on site, but this plant is extremely sparse in the reserve. No leaves or old seedheads found.
Calochilus campestris	Copper beard-orchid	e		Orchid leaves that appeared similar to *Calochilus* leaves were checked until flowers became visible, at which stage they were determined to be *Thelymitra pauciflora*, not a threatened species.
Carex gunniana	Mountain sedge	r		Suitable damp grassland habitat but no *Carex* found within areas affected.
Carex longebrachiata	drooping sedge	r		Suitable damp grassland habitat but no *Carex* found within areas affected.
Centipeda cunninghamii	erect sneezeweed	r		Not found and no creekline habitat on site. Probably too dry here.

Scientific name	Common name	Conservation Status		Comments
		State	Cwth	
Dianella amoena	Grassland flaxlily	r	EN	Grassy woodland habitat on site, but no flaxlilies found.
Epilobium pallidiflorum	Showy willowherb	r		Some suitable wet habitats but not found
Haloragis heterophylla	variable raspwort	r		Could occur in low numbers in grassy woodland in this area, but not found in these areas
Juncus amabilis	gentle rush	r		Few rushes on site were identified as *J.procerus*.
Poa mollis	soft tussockgrass	r		There are no tussock grasses here which have the features of this rare species: soft, velvety tussock grasses with purple leaf-bases.
Pterostylis grandiflora	superb greenhood	r		Not found. Occurs mostly in heathy and shrubby open eucalypt forest, or grassy coastal sheoak woodland. Some *Pterostylis pedunculata* were found.
Ranunculus pumilio var. pumilio	ferny buttercup	r		Grows in wet places in grasslands. Site could provide suitable habitat but no buttercups found.
Rytidosperma indutum	tall wallabygrass	r		Suitable habitat here of open dry sclerophyll woodland on dolerite. Species is a robust grass with tall culms. No such wallaby grass was found.
Scutellaria humilis	dwarf scullcap	r		Prefers moist, shady places. Not found.
Senecio squarrosus	leafy fireweed	r		Suitable habitat but no senecios found.
Siloxerus multiflorus	small wrinklewort	r		Tiny, annual herb that appears to prefer open areas, free of competition from dense grasses. Gaps here are probably too compacted or too shady. No dried remains found.
Triptilodiscus pygmaeus	dwarf sunray	v		Suitable dry sclerophyll and grassy habitat here. Tiny, annual herb that probably requires space free of competition from grasses, so may occur in open patches. Gaps here are probably too compacted or too shady No dried remains were found.
Velleia paradoxa	spur velleia	v		Grassland and grassy woodland habitat present, but requires fire or other gap-forming disturbance. Not found.
Veronica plebeia	trailing speedwell	r		Damp sclerophyll habitat. Not found.