Natural Values Assessment

For the proposed Rocky Wheelin' MTB track (Track 1), Wellington Park

For City of Hobart

July 2020

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environmental solutions for a changing world

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Contents

1. Introduction

City of Hobart proposes to construct a new mountain bike track – Rocky Wheelin' (named 'Track 1' in the CoH *Riding the Mountain* plan). The 3 km track will ascend from O'Gradys Falls Fire Trail to the Pinnacle Road at Shoobridge Bend. This will provide a link between existing MTB trails below O'Gradys Falls Fire Trail to the North-South Track.

This report details the results of an on-ground assessment of natural values along the route of the proposed track. It follows a previous report which provided a desktop analysis of natural values (Enviro-dynamics, May 2020).

This natural values assessment and report considers the natural values and implications for track location, design and construction. Findings from the on-ground assessment combined with the previous desktop assessment provide a basis for making recommendations to minimise impacts on significant natural values.

2. Methods

The field survey was undertaken by a single observer on 8th July 2020. The survey assessed all natural values within a predetermined assessment area and in particular along the proposed track alignment and directly below Pinnacle Road (in consideration of a future track parallel to and below the road). The vegetation communities in the survey area were determined and compared to previous vegetation mapping of the area.

All vascular plant species encountered were recorded, with an emphasis on detecting rare and threatened species. Searches for potential threatened fauna habitat e.g. tree hollows and den sites, and other evidence e.g. scats, diggings and tracks were also undertaken. No species-specific fauna surveys were conducted.

Locations of threatened flora species, environmental weeds and significant trees were mapped with a handheld GPS. Geographic datum used for mapping was GDA94 Zone 55. Taxonomic nomenclature for flora follows the latest Census of Vascular Plants of Tasmania (de Salas & Baker 2019). Classification of vegetation communities is in accordance with Kitchener and Harris (2013) and TASVEG 3.0.

2.1 Limitations of the survey

Whilst every effort was made to compile a complete list of vascular plants for the site, a single survey is unlikely to detect all species present due to seasonal/temporal variations. Some plants could not be identified to a species level and some species may have been overlooked due to a lack of fertile material. It is also likely that additional species are present but were dormant at the time of survey e.g. annuals, ephemerals.

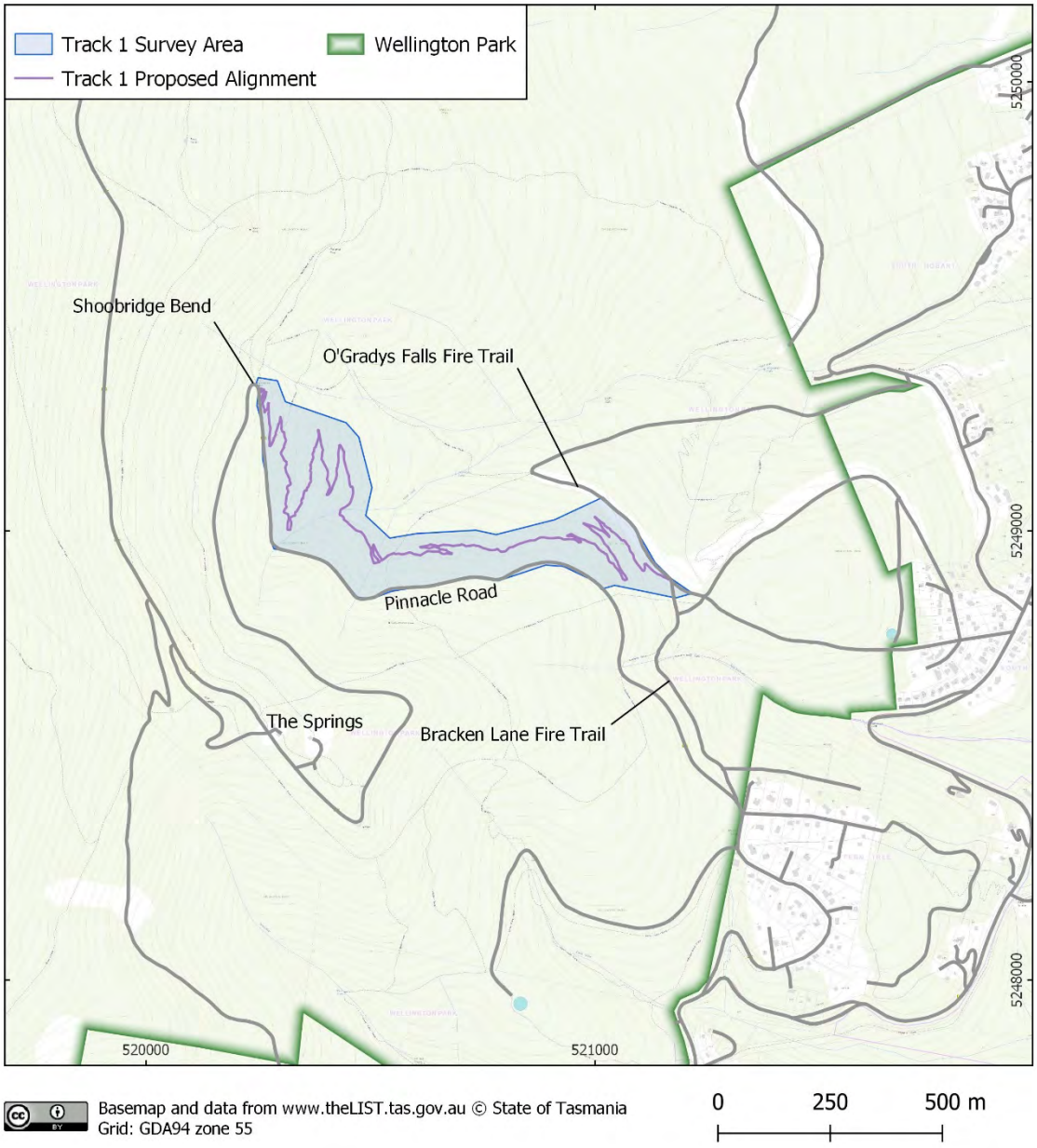


Figure 1 – Location of Rocky Wheelin' survey area in Wellington Park

3. Site description

The proposed track will commence at the O'Gradys Falls Fire Trail near Bracken Lane Fire Trail at 460 m a.s.l. and gradually climb as it traverses in a generally northwesterly direction to Shoobridge Bend at 600 m a.s.l. (Figure 1). Two small creek gullies and a minor drainage line, tributaries of Hobart Rivulet, will be crossed.

The survey area is moderately sloping, with aspect ranging from easterly to northerly (Figure 2). The bedrock is Permian sandstone and siltstone, overlain by Pleistocene deposits of dolerite boulders in most of the northern part of the sturdy area (on east-facing slopes).

The survey area is within Wellington Park and is therefore subject to the *Wellington Park Management Plan 2013*.

4. Native vegetation

The survey area is dominated by eucalypt forest which was burnt in the 1967 bushfires. Most of the canopy trees are regrowth following this event, although there are some older trees present which survived the fire.

The forest in this area is dominated by the three closely related eucalypt species, stringybark (*E. obliqua*), mountain ash (*E. regnans*) and gum-topped stringybark (*E. delegatensis*). Tasveg mapping units for wet eucalypt forest are determined by the dominant canopy species. In the western part of the survey area near Shoobridge Bend, the three species co-occur and the communities intergrade, making delineation of communities difficult. In the eastern half of the survey area the dominant species is stringybark but the community is somewhat intermediate between typical wet and dry *E. obliqua* communities.

In the present survey, three forest communities have been mapped in the survey area (Figure 2). These differ somewhat from previous vegetation maps of the area, but the conservation status of the vegetation is unchanged since no threatened vegetation communities have been identified in any of the mapping projects.

4.1 Vegetation communities

Three native vegetation communities were recorded during the field survey as per the TASVEG 3.0 classification system:

- *Eucalyptus regnans* wet forest (WRE),
- *Eucalyptus obliqua* wet forest with broadleaf understorey (WOB),
- *Eucalyptus obliqua* dry forest (DOB).

The distribution of vegetation communities is shown in Figure 2. A description of the native vegetation community is provided below.

Eucalyptus regnans wet forest (WRE)

This forest type occurs in the northwestern corner of the survey area. The canopy is dominated by mountain ash (*E. regnans*) with stringybark (*E. obliqua*) subdominant. Large old emergent trees are infrequent.

There is a dense tall shrub layer of dogwood (*Pomaderris apetala*), blanket leaf (*Bedfordia salicina*) and other broad-leafed shrubs. Sassafras (*Atherosperma moschatum*), a rainforest tree, occurs occasionally as immature plants in the northwesternmost part of the survey area.

Smaller shrubs, including mountain correa (*Correa lawrenceana*) and cherry riceflower (*Pimelea drupacea*), are infrequent. The ground layer features patches of ferns such as soft treefern (*Dicksonia antarctica*) and mother shield-fern (*Polystichum proliferum*), along with cutting grass (*Gahnia grandis*). Mosses and liverworts are common on the ground and as epiphytes. Large fallen logs are common.

The vegetation is in good condition with no weeds and a healthy canopy.

Eucalyptus obliqua wet forest with broadleaf understorey (WOB)

This forest type (Figure 3) has a similar structure and species composition to the WRE forest, differing mostly in the dominant canopy species. Stringybark is the only canopy species in the eastern part of this community where it intergrades with *E. obliqua* dry

forest (DOB). In the west and north there is a mixed canopy of stringybark and mountain ash or gum-topped stringybark.

The riparian zones along the small creeks support some fern species not found elsewhere in the survey area, such as ray waterfern (*Blechnum fluviatile*) narrow spleenwort (*Asplenium appendiculatum*) and common forkfern (*Tmesipteris obliqua*).

Eucalyptus obliqua dry forest (DOB)

This community is dominated by stringybark with occasional white gums (*E. viminalis*). Most of the community is post-1967 regrowth but patches of older trees remain, including some old-growth eucalypts (Figure 5).

Best described as 'damp' *E. obliqua* forest, this community is not dry enough to develop a typical DOB understorey of diverse heathy shrubs. There is a dense tall shrub layer comprising varnished wattle (*Acacia leprosa*) across most of this forest (Figure 4). A mix of smaller dry and wet forest shrubs occur sporadically. There is little groundcover vegetation and few mosses and liverworts.

Disturbance-induced species such as bracken (*Pteridium esculentum*) and parrot food (*Goodenia ovata*) suggest some low intensity burning or other disturbance has occurred in places. Apart from one established holly plant, the community appears to be free of weeds.

4.1.1 Conservation status of the vegetation communities

No vegetation communities listed as threatened under Schedule 3A of the *Nature Conservation Act 2002* are present in the survey area.

No vegetation communities listed as Moderate or High Priority Biodiversity Value under the Biodiversity Code (Section E10.0) of the *Hobart Interim Planning Scheme 2015* are present.

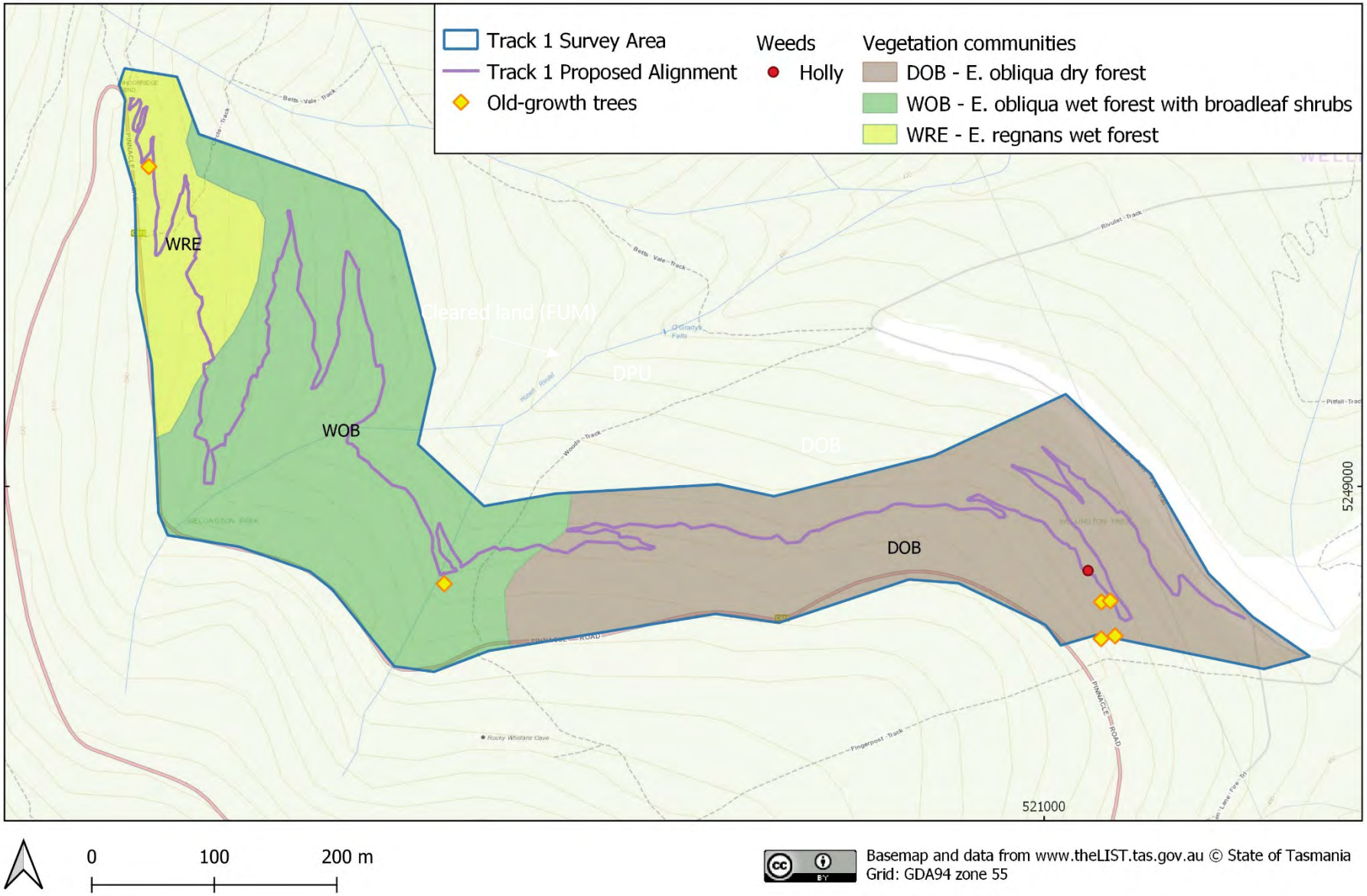


Figure 2 – Vegetation communities of the survey area, with old-growth trees and weeds mapped during survey.

Figure 3 – Wet eucalypt forest with dense shrub layer and large fallen log.

Figure 4 – Dry E. obliqua *forest with* Acacia leprosa *understorey.*

Figure 5 – Old-growth Eucalyptus obliqua *trees in east of survey area near Fingerpost Track.*

4.2 Flora

A total of 56 vascular plants were recorded during the survey, of which only one is an introduced species. Additional flora species will occur within the survey area but could have been overlooked due to the inherent limitations of the survey (e.g. timing). Refer to Appendix 1 for the list of species recorded on the site.

4.2.1 Threatened flora

No threatened flora species listed under the *Threatened Species Protection Act 1995* (TSPA) or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) were observed.

The previous desktop survey identified no records of threatened flora species from within the survey area and a low likelihood of any occurring in the area (Refer to Appendix 2).

4.2.2 Introduced plants and pathogens

One introduced plant was recorded during the survey: Holly (*Ilex aquifolium*), which is listed as a declared weed under the *Weed Management Act 1999*. A single established shrub was observed (Figure 6). This environmental weed can be highly invasive in this environment.

No indications of *Phytophthora cinnamomi* (Pc) infection were observed and most of the vegetation present is not susceptible to this pathogen.

Figure 6 – Holly (Ilex aquifolium) *in east of survey area.*

4.3 Fauna

4.3.1 Threatened fauna

No threatened fauna species listed under the *Threatened Species Protection Act 1995* or under the *Environment Protection and Biodiversity Conservation Act 1999* were recorded during the survey.

4.3.2 Threatened fauna habitat

There is suitable habitat for several threatened species in the area, including wide-ranging fauna such as the grey goshawk, Tasmanian devil, spotted-tail quoll and eastern quoll.

The wet forest communities contain many large fallen logs in varying states of decay which are potential habitat for the Mount Mangana stag beetle (*Lissotes menalcas*), although this species has not been confirmed to occur in the survey area. Destructive sampling of logs would be required to survey for this species. There is a low likelihood of this species being occurring in the survey area, based on the lack of records from Wellington Park.

No suitable foraging habitat for the swift parrot was observed (i.e. no *E. ovata* or *E. globulu*s trees). Old-growth eucalypt trees in the survey area may provide suitable nesting habitat for swift parrots and other hollow-nesting fauna. Several mature and old-growth trees were mapped during the survey (Figure 2) but there may be others in the survey area.

Potential threatened fauna species in the survey area are listed and considered in the previous natural values desktop assessment report (Refer to Appendix 2). Based on the desktop and field assessments, there is not anticipated to be any significant threatened species habitat within the track corridor.

5. Potential impacts of proposed works

No threatened communities occur in the survey area. There is a low likelihood of threatened flora species occurring within the area.

Wide-ranging mobile threatened fauna species, such as raptors and marsupial carnivores, are likely to visit the survey area and may nest in the area. Removal of trees with hollows will impact actual or potential nesting habitat for hollow-nesting threatened species such as the swift parrot and masked owl. Earthworks or removal of large fallen logs has the potential to destroy or disturb denning sites for threatened mammal species (e.g. Tasmanian devil, quolls).

Impacts on habitat for threatened fauna species are expected to be negligible, unless nesting or denning sites are disturbed or destroyed. However, this is unlikely since no such sites were detected during the on-ground survey. If the Mount Mangana stag beetle is present in the area, some cutting and disturbance of fallen logs is unlikely to negatively impact the population of the species in the area.

Impacts on non-threatened species and other natural values is likely to be minimal given the small spatial extent of works. There may be no need to remove living or dead trees. If necessary, removal of some smaller live or dead trees (under 50 cm DBH) would have little impact since the forest is at an age which is undergoing natural stand thinning.

Minor excavations will be required with consequent impacts on soils and drainage. These will be confined to the footprint of the works, which at an average width of under 1.5 m (including batters on cross slopes) and a track length of around 3000 m, is expected to be less than 4500 m^2. Previously constructed tracks in similar environments (e.g. North – South Track) have displayed good natural revegetation of track margins.

At least two creek crossings and one drainage line crossing will be necessary. These may have small localised impacts but should not alter the riparian environment.

Vegetation clearing, earthworks, machinery use and importation of materials such as gravel pose a risk of introducing weeds to the area.

6. Summary and recommendations

An on-ground survey of the proposed alignment of Track 1 (Rocky Wheelin' Track) found no significant natural values that will be impacted by track construction or use by walkers and cyclists. No species or communities protected by legislation are anticipated to be impacted.

There is no need to alter the track alignment for protection of natural values. This assessment of natural values impacts, and recommendations also applies to alternative track alignments within the survey area.

6.1 Recommendations

- Do not remove or damage large trees (>100 cm DBH in wet forest; > 70 cm DBH in dry forest) or old-growth trees.
- For large trees (as above), ensure spacing of at least 1.5 m between base of tree trunk and track edge.
- If any evidence of raptor nesting, swift parrot nesting or marsupial denning is observed, work must stop immediately and seek advice from DPIPWE Threatened Species Section.
- Vegetation clearance and soil disturbance should be kept to a minimum.
- Do not remove coarse woody debris from the site.
- Minimise disturbance of large fallen logs, recognising that some cutting or moving of logs will be unavoidable due to the abundance of logs in some areas.
- Minimise impacts on natural drainage lines by avoiding creek crossings where possible, and construction methods which avoid impeding drainage and prevent erosion and siltation.

- Avoid importing foreign aggregates. If surfacing is required, it should be sourced from a weed-free source.
- Follow standard weed hygiene procedures during track construction.
- Control the holly (*Ilex aquifolium*) in the survey area to prevent further spread.

References

de Salas, M.F. and Baker, M.L. (2019) *A Census of the Vascular Plants of Tasmania, including Macquarie Island*. Tasmanian Herbarium, Tasmanian Museum and Art Gallery, Hobart. www.tmag.tas.gov.au

Environment Protection and Biodiversity Conservation Act 1999. Available at http://www.environment.gov.au/epbc

Kitchener, A. and Harris, S. (2013). *From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation. Edition 2*. Department of Primary Industries, Parks, Water and Environment, Tasmania. https://dpipwe.tas.gov.au/conservation/flora-of-tasmania/from-forest-to-fjaeldmark-descriptions-of-tasmanias-vegetation

Nature Conservation Act 2002. Available at http://www.thelaw.tas.gov.au/index.w3p

Threatened Species Protection Act 1995. Available at http://www.thelaw.tas.gov.au/index.w3p

Appendix 1 – Plant species list for Track 1 survey area

Recorder: Nick Fitzgerald **Date:** 8/07/2020

e = endemic i = introduced d = declared weed

Dicotyledons		
AQUIFOLIACEAE		
i d	*Ilex aquifolium*	Holly
ASTERACEAE		
e	*Bedfordia salicina*	Tasmanian Blanket Leaf
	Olearia argophylla	Musk
CARYOPHYLLACEAE		
	Stellaria flaccida	Forest starwort
ELAEOCARPACEAE		
e	*Aristotelia peduncularis*	Heart Berry
ERICACEAE		
e	*Cyathodes glauca*	Cheeseberry
	Epacris impressa	Common Heath
e	*Leptecophylla parvifolia*	Pink Mountain Berry
	Monotoca glauca	Golden Wood
FABACEAE		
	Pultenaea juniperina	Prickly Beauty
GERANIACEAE		
	Geranium sp.	
GOODENIACEAE		
	Goodenia ovata	Parrot's Food
HALORAGACEAE		
	Gonocarpus teucrioides	Raspwort
LAMIACEAE		
	Prostanthera lasianthos var. lasianthos	
MIMOSACEAE		
	Acacia dealbata subsp. dealbata	Silver Wattle
MONIMIACEAE		
	Atherosperma moschatum	Sassafras
MYRTACEAE		
	Eucalyptus delegatensis	Gum-topped Stringybark
	Eucalyptus obliqua	Stringybark
	Eucalyptus regnans	Swamp Gum, Mountain Ash
	Eucalyptus viminalis subsp. viminalis	White Gum

PITTOSPORACEAE		
e	*Billardiera longiflora*	Climbing Blue berry
	Pittosporum bicolor	Cheesewood
PROTEACEAE		
	Hakea lissosperma	Needle Bush
RANUNCULACEAE		
	Clematis sp.	Clematis
RHAMNACEAE		
	Pomaderris apetala subsp. apetala	Dogwood
e	*Pomaderris elliptica var. elliptica*	Yellow Pomaderris
RUBIACEAE		
	Coprosma hirtella	Coffee-berry
	Coprosma quadrifida	Native Currant
RUTACEAE		
	Correa lawrenceana var. lawrenceana	Mountain Correa
e	*Nematolepis squamea subsp. squamea*	Lancewood
	Zieria arborescens subsp. arborescens	Stinkwood
SANTALACEAE		
	Exocarpos cupressiformis	Native Cherry
THYMELAEACEAE		
	Pimelea drupacea	Cherry Rice-flower
URTICACEAE		
	Urtica incisa	Stinging Nettle
WINTERACEAE		
	Tasmannia lanceolata	Native Pepper
Monocotyledons		
CYPERACEAE		
	Gahnia grandis	Cutting Grass
	Uncinia sp.	Hook Sedge
HEMEROCALLIDACEAE		
	Dianella tasmanica	Flax lily
LUZURIAGACEAE		
	Drymophila cyanocarpa	Turquoise Berry
ORCHIDACEAE		
	Pterostylis stenochila	Green-lip Greenhood
	Pterostylis sp.	Greenhood
POACEAE		
	Microlaena stipoides	Weeping Grass

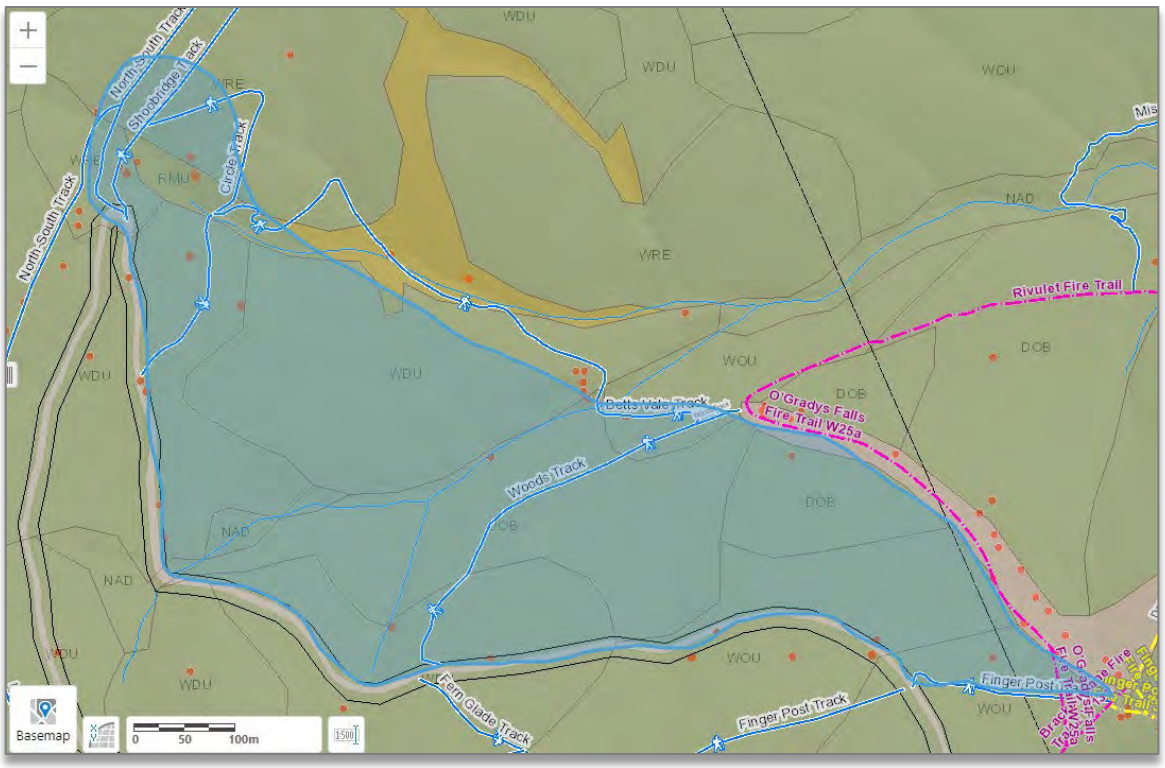
Pteridophytes

ASPLENIACEAE		
	Asplenium appendiculatum	Spleenwort
BLECHNACEAE		
	Blechnum fluviatile	Ray Water-fern
	Blechnum wattsii	Hard Water-fern
DENNSTAEDTIACEAE		
	Histiopteris incisa	Bat's Wing
	Hypolepis rugosula	Ruddy Ground-fern
	Pteridium esculentum	Bracken
DICKSONIACEAE		
	Dicksonia antarctica	Soft Tree-fern
DRYOPTERIDACEAE		
	Polystichum proliferum	Mother Shield Fern
	Rumohra adiantiformis	Leathery Shield-fern
GRAMMITIDACEAE		
	Notogrammitis billardierei	Finger-fern
	Notogrammitis angustifolia subsp. nothofageti	Beech Finger-fern
HYMENOPHYLLACEAE		
	Hymenophyllum rarum	Narrow Filmy-fern
POLYPODIACEAE		
	Microsorum pustulatum subsp. pustulatum	Kangaroo Fern
PSILOTACEAE		
	Tmesipteris obliqua	Common Fork Fern

Appendix 2 – Natural Values Desktop Assessment, March 2020

Natural Values Desktop Analysis

For the proposed Rocky Wheelin' MTB track, Wellington Park



For City of Hobart

March 2020

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Contents

1. Introduction

City of Hobart proposes to construct a new mountain bike track – Rocky Wheelin' – linking O'Gradys Falls Fire Trail to the Pinnacle Road at Shoobridge Bend. This will provide a link between existing MTB trails below O'Gradys Falls Fire Trail to the North-South Track.

This desktop analysis identifies known and potential locations of natural values (threatened species and important vegetation) within the nominated study area and assesses the potential for impacts on these values from track construction. This desktop assessment will identify potential risks to natural values, legislative implications and considerations for track route planning, noting that on-ground assessment will be required prior to construction.

By identifying any potential ecological constraints, this report will provide guidance for detailed design of the track alignment and for on-ground assessment of natural values once the proposed track alignment has been determined.

2. Methods

The natural values assessment involved reviewing existing data on flora, fauna and vegetation values for the study area (Figure 1). Since there may be significant natural values within the study area that have not been observed or mapped, the desktop analysis considered all natural values mapped within 2 km of the area. No on-ground assessment was undertaken for this project.

The desktop analysis involved extracting data and information from a variety of sources, including:

- Natural Values Atlas (DPIPWE 2020);
- Protected Matters Search Tool (DEE 2020);
- LIST map;
- published literature;
- previous unpublished reports.

Taxonomic nomenclature for flora follows the latest *Census of Vascular Plants of Tasmania* (Baker & de Salas 2019). Classification of vegetation communities is in accordance with Kitchener and Harris (2013) and TASVEG 3.0.

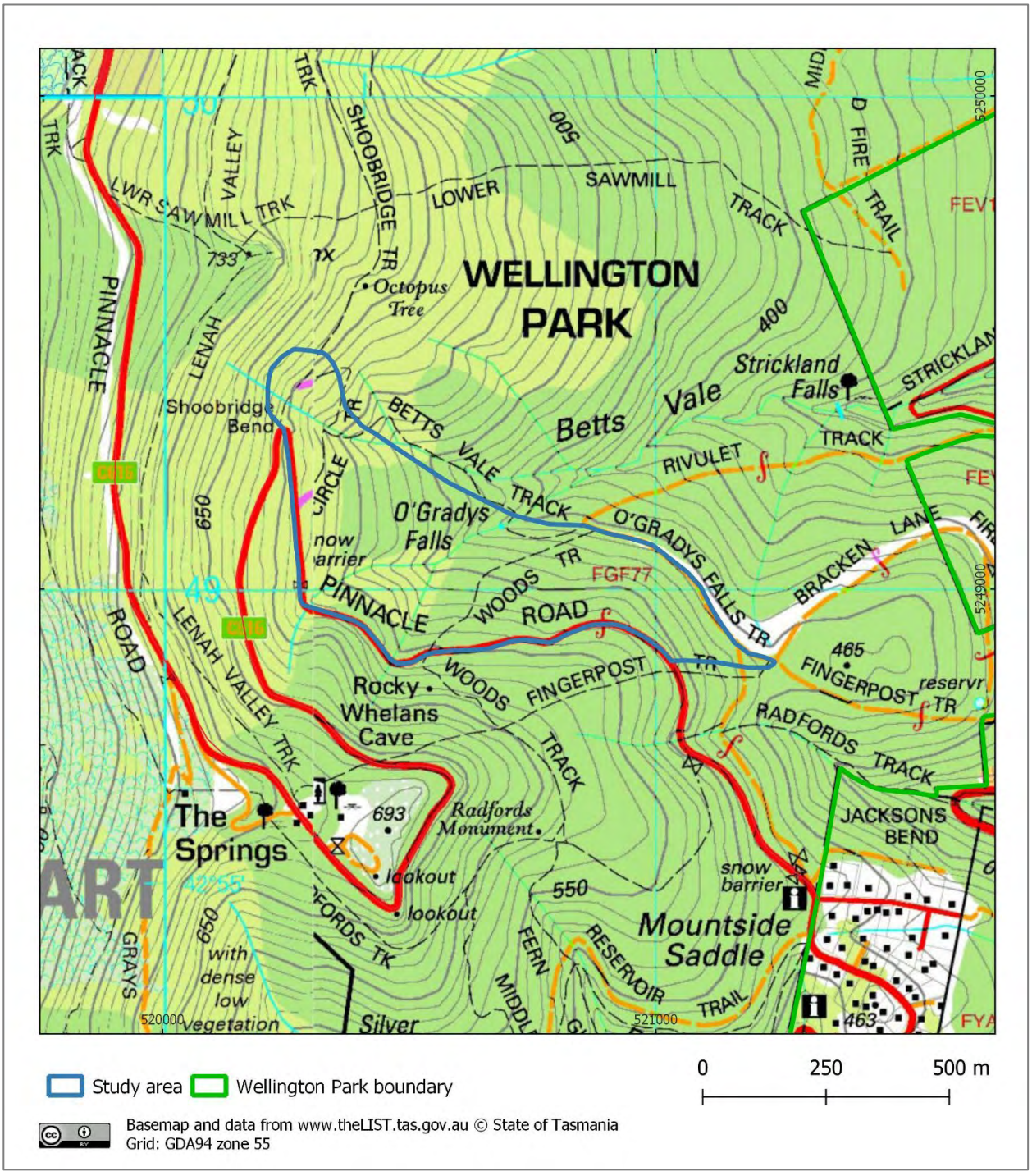

Figure 1 – Location of Rocky Wheelin' study area in Wellington Park

3. Site description

The proposed track will commence at the O'Gradys Falls Fire Trail near Bracken Lane Fire Trail at 460 m a.s.l. and gradually climb as it traverses in a generally northwesterly direction to Shoobridge Bend at 600 m a.s.l. (see indicative potential track alignments in Appendix A). Two small creek gullies, tributaries of Hobart Rivulet, will be crossed.

The study area is moderately sloping, with aspect ranging from easterly to northerly (Figure 1). The bedrock is Permian sandstone and siltstone, overlain by Pleistocene deposits of dolerite boulders in most of the northern part of the sturdy area (on east-facing slopes).

The study area is within Wellington Park and is therefore subject to the *Wellington Park Management Plan 2013*.

4. Native vegetation

Five vegetation communities are mapped within the project area (Figure 2) according to Tasveg 3.0:

- *Eucalyptus obliqua* wet forest (undifferentiated) (WOU)
- *Eucalyptus delegatensis* dry forest (DDE)
- *Eucalyptus regnans* wet forest (WRE)
- *Acacia dealbata* forest (NAD)
- Extra-urban miscellaneous (FUM)

City of Hobart has more detailed vegetation mapping, ground-truthed in 2004, which includes similar Tasveg mapping units but with different boundaries and with the addition of a small area of rainforest in the north (Figure 3).

Most of the study area is eucalypt-dominated sclerophyll forest. The exceptions are small patches of forest dominated by silver wattle (*Acacia dealbata*) in the north and the open firebreak on the edge of the study area in the southeast (mapped as FUM). Silver wattle forest (NAD) is a disturbance-induced vegetation type that is generally short-lived, ultimately being replaced by eucalypt forest or rainforest. The firebreak is mapped as 'Extra-urban miscellaneous' (FUM) because it is not predominantly native vegetation,

although it is likely to contain a number of native plant species and provide habitat for native fauna.

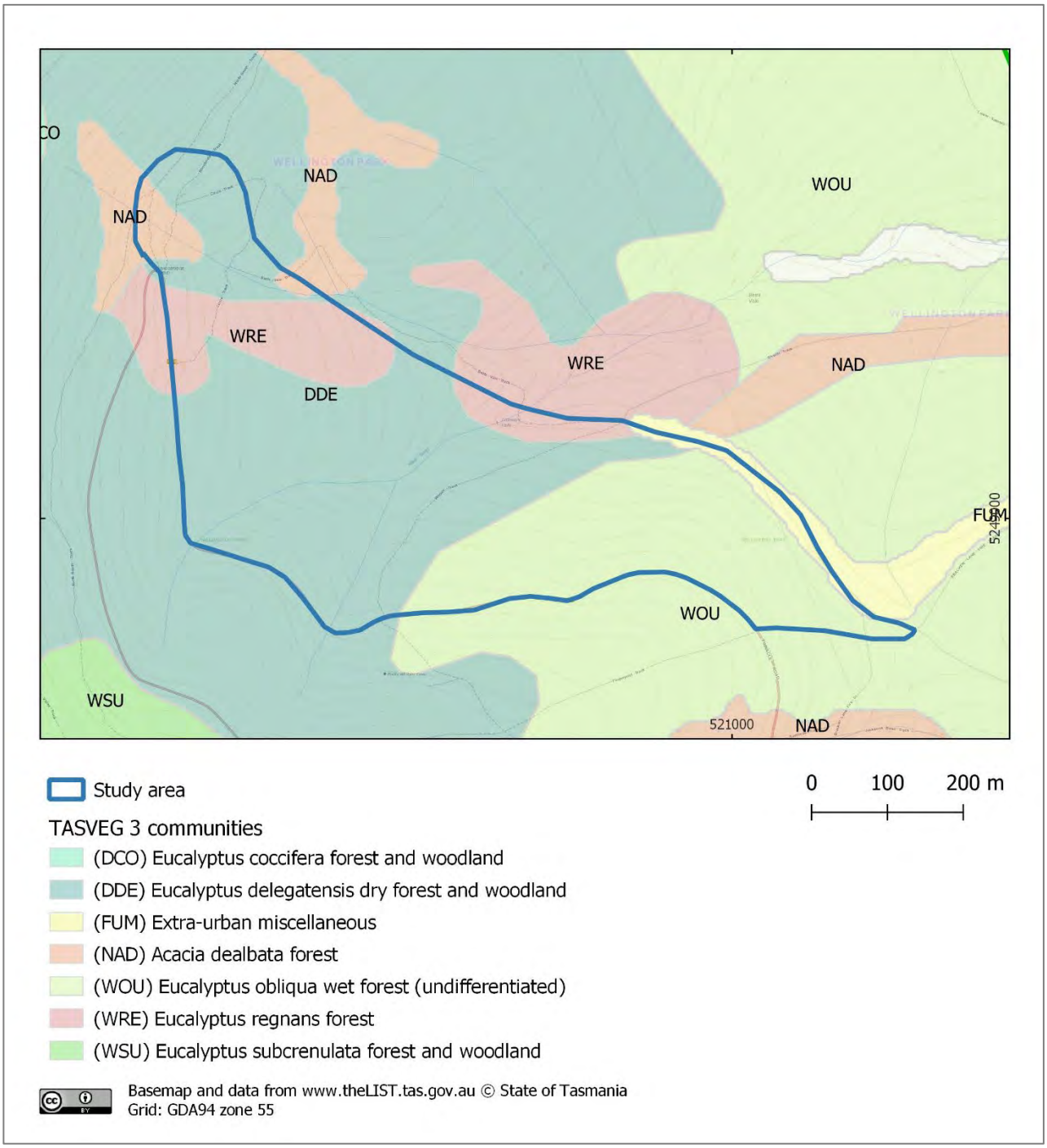

Figure 2 – Vegetation communities of study area as mapped in TASVEG 3.0.

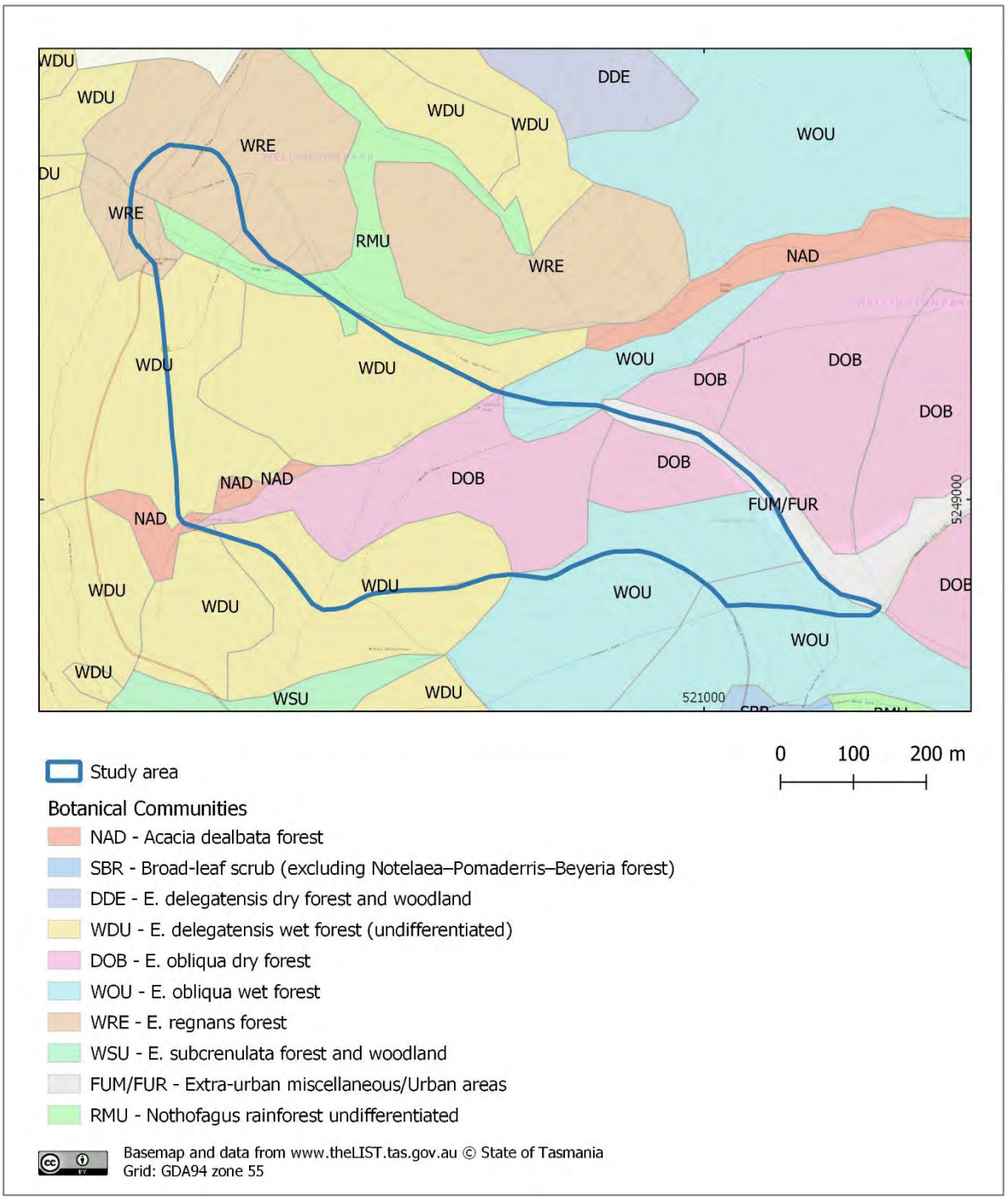

Figure 3 – Vegetation communities of study area, 2004 mapping

The undifferentiated *Eucalyptus obliqua* wet forest (WOU) community, which is mapped from aerial photography, would likely be assigned to *Eucalyptus obliqua* wet forest with broadleaf understorey (WOB) following ground-truthing, with some areas of *E. obliqua* dry forest (DOB) indicated in the alternative vegetation mapping. The mapped *Eucalyptus delegatensis* forest (DDE) is a dry forest community but in this situation is likely to have

strong similarities with wet forest communities and in the alternative mapping is largely mapped as *E. delegatensis* wet forest (WDU). These differences would not change the reservation status or conservation status.

No threatened vegetation communities under the Tasmanian *Nature Conservation Act 2002* or threatened ecological communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* have been mapped within the study area. Given the large number of ecological studies and surveys undertaken on Mount Wellington, it is highly unlikely that any threatened communities are present and have not been documented.

Rainforest or wet eucalypt forest with rainforest elements (e.g. myrtle beech or sassafras trees) is uncommon on the eastern face of Mt Wellington and may occur in wetter parts of the study area, particularly along creeks. This vegetation is locally significant given its small extent and vulnerability to bushfire and climate change.

5. Threatened flora

The Natural Values Atlas records 15 threatened plant species from within 2 km of the study area (Table 1; Figure 4). Two species have not been recorded since the 1800s and these observations have poor spatial accuracy so are not considered relevant. No threatened plant species are known from within the study area. Three are recorded from within a 500 m buffer. All of the threatened flora species recorded from within 2 km have low or very low likelihood of occurring in the study area based on available habitat, known distribution ranges and results of past surveys in Wellington Park and adjacent foothills.

Table 1 – Threatened flora species recorded from within 2 km of study area (Natural Values Atlas, March 2020). Comments indicate likelihood of occurrence in project area, potential habitat and optimum timing for surveys. Records prior to 1950 omitted.

Species	Status TSPA	Status EPBCA	Comments
Species recorded within 500 m of study area			
Tasmanian daisytree *Centropappus brunonis*	r		**Very low** – Occurs above 700 m elevation in open forest on boulderfields or in subalpine forest.
wispy clubsedge *Isolepis habra*	r		**Low** – Not recorded in the area since 1970. Possible habitat present. Ideal survey timing is January-March.
tall wallabygrass *Rytidosperma indutum*	r		**Medium –** Occurs in dry forest. Flowers in summer. Under consideration for delisting.
Species recorded within 2 km of study area			
conical sheoak *Allocasuarina duncanii*	r		**Low –** Occurs on shallow soils in open forest and scrub.
mountain sedge *Carex gunniana*	r		**Very low –** Only one record from Mt Wellington and exact location not known.
tiny midge-orchid *Corunastylis nuda*	r		**Low** – Occurs in a range of habitats including wet sclerophyll forest. All records within 2 km of the site are on dry north-facing slopes. Flowering January – March.
bare midge-orchid *Corunastylis nudiscapa*	e		**Low** – Occurs in dry open forest, typically on north-facing slopes. Flowering December – April (usually late Feb – early April).
Mt Wellington eyebright *Euphrasia gibbsiae* subsp. *wellingtonensis*	r		**Very low** – Occurs in alpine vegetation at elevations over 1100 m.
dainty leek-orchid *Prasophyllum amoenum*	v	EN	**Very low -** Occurs in alpine vegetation at elevations over 1100 m.
ferny buttercup *Ranunculus pumilio* var. *pumilio*	r		**Low -** Single record in Wellington Park from Guy Fawkes Rivulet in 1984. Potential habitat in damp areas such as creeks.
leafy fireweed *Senecio squarrosus*	r		**Low –** Occurs in dry forest. flowering October-December.
montane ivy-leaf violet *Viola curtisiae*	r		**Very low** – Alpine species restricted to high elevations.
fuzzy new-holland daisy *Vittadinia cuneata var. cuneata*	r		**Very low** – One record from Mount Wellington in 1984. Exact location not known. Occurs in drier habitats.

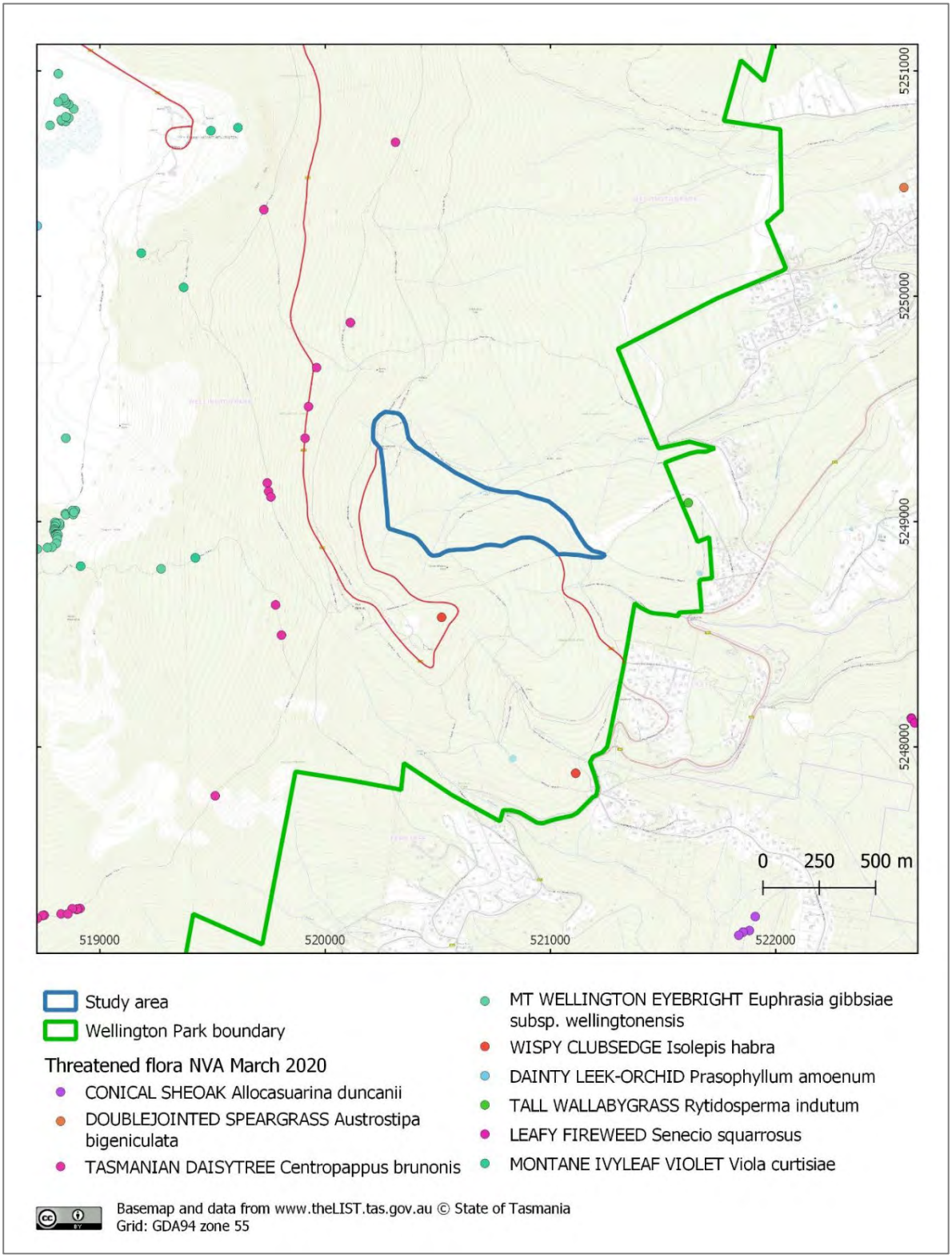

Figure 4 – Threatened flora records from Natural Values Atlas.

6. Threatened fauna

The Natural Values Atlas records 14 threatened animal species from within 2 km of the study area (Table 2; Figure 5). Several wide-ranging mammal and bird species are likely to utilize the study area as part of their wider foraging habitat and may also have breeding sites (nests or dens) in the area.

The desktop analysis does not indicate the extent or abundance of blue gum (*E. globulus*) trees or old growth trees in the study area, both of which are likely to be present. Consequently, the habitat value for swift parrots is unclear. Old growth eucalypt trees within the area would be potential nesting habitat for swift parrots and other hollow-nesting fauna. Any mature blue gum trees or old growth eucalypt trees should be considered swift parrot habitat, noting that swift parrots may only visit in certain years. One swift parrot nest site has been recorded within 2 km and several within 2.5 km. No raptor nests have been recorded within 2 km of the study area.

Given the mix of dry and wet forest habitat in the study area, the habitat values for threatened species favours the spotted-tail quoll, Tasmanian devil, grey goshawk and Mount Mangana stag beetle, with potential masked owl nesting habitat if large tree hollows are present.

The study area is within the known range of the Mount Mangana stag beetle and contains extensive suitable habitat in the form of large decaying logs in wet forest (Meggs & Taylor 1999). However, the distribution of the Mt Mangana stag beetle is patchy within areas of potential habitat (TSS 2020) and there are only three records of the species from Mt Wellington over more than 100 years. Given the difficulty of detecting the species, which spends its life inside rotting logs and is only reliably detected by extensive destructive sampling of logs (Meggs & Taylor 1999), it is possible that it is more widespread in Wellington Park.

Table 2 – Threatened fauna species recorded from within 2 km of study area (Natural Values Atlas, March 2020). Comments indicate likelihood of occurrence in project area and potential habitat.

Species	Status TSPA	Status EPBCA	Comments
Species recorded within 500 m of study area			
grey goshawk *Accipiter novehollandiae*	e		Several records within 2 km. Likely to forage across the area. Nests in wet forest, typically near watercourses. Potential nesting habitat in creek gullies in study area, including Betts Vale in the north of the site.
Tasmanian wedge-tailed eagle *Aquila audax subsp. fleayi*	e	EN	Nests in tall forest on sheltered slopes away from disturbances such as roads. No nests known within 2 km of study area. Unlikely to nest in the area.
spotted-tail quoll *Dasyurus maculatus*	r	VU	Several records within 2 km including one on the edge of the study area. Likely to forage across the study area. Potential den sites including hollow logs, caves and rock crevices are likely to be present.
Eastern quoll *Dasyurus viverrinus*		EN	Several records within 2 km. Likely to forage across the study area. Potential den sites including hollow logs, caves and rock crevices are likely to be present.
white bellied sea-eagle *Haliaeetus leucogaster*	v		Nests close to rivers, waterbodies or coastline. No potential nesting habitat. Last recorded in the area in 1980.
white-throated needletail *Hirundapus caudacutus*		VU	Does not breed in Australia. Species is mostly aerial in the non-breeding season, but roosts in trees. Last recorded in the area in 1981.
swift parrot *Lathamus discolor*	e	CR	Nearest recorded nest sites are at Summerleas Road, 1.7 – 2.2 km from study area. There is likely to be potential foraging habitat (blue gum trees) in the study area. There is likely to be potential nesting habitat present (i.e. old growth trees with hollows).
Mount Mangana stag beetle *Lissotes menalcas*	v		Recorded from Fern Tree. Inhabits decaying logs in wet forest. Preferred habitat is below 650 m elevation. Likely to be suitable habitat in study area.
forty-spotted pardalote *Pardalotus quadragintus*	e	EN	Dependent on white gum (*E. viminalis*). Last recorded in the area in 1980 and the species is not currently known to occur in the Hobart or Mount Wellington region. White gum trees may be present but the site is not suitable habitat for the species.
eastern barred bandicoot *Perameles gunnii*		VU	Numerous records within 2 km. Prefers a mosaic of vegetation types including open grassy habitats. Eastern end of study area where open firebreak is adjacent to forest with dense understorey is good quality habitat.
Silky snail *Roblinella agnewi*	r		Numerous records within 2 km. Endemic to Mount Wellington at elevations above ~600 m. Potential

Species	Status TSPA	Status EPBCA	Comments
			habitat is rocky ground with open vegetation (Bonham 2017). Unlikely to be suitable habitat in study area, given lack of dolerite boulderfields and relatively low elevation.
Tasmanian devil *Sarcophilus harrisii*	e	EN	Several records within 2 km including one on the edge of the study area. Likely to forage across the study area. Potential den sites including hollow logs, caves and rock crevices are likely to be present.
masked owl *Tyto novaehollandiae*			Several records within 2 km. Requires large tree hollows for nesting. Area likely to be used for foraging. Suitable nesting trees may be present.
Species recorded within 2 km of study area			
azure kingfisher *Alcedo azurea* subsp. *diemensis*	e	EN	Riparian species. No suitable habitat in study area since the creeks present are very small.

7. Geoconservation values

No geoconservation features on the Tasmanian Geoconservation Database occur in the study area.

8. Weeds and disease

Eleven weeds listed on the Tasmanian *Weed Management Act 1999* are recorded from within 500 m of the study area (excluding weeds recorded prior to 1970). None have been recorded within the study area and it is likely to be almost entirely free of weeds.

Blackberry (*Rubus fruticosus*) and Spanish heath (*Erica lusitanica*) are widespread along the O'Gradys Fire Trail and adjacent fire break along the eastern edge of the study area (LISTmap, March 2020). Other weeds mapped within 500 m include orange hawkweed (*Pilosella aurantiaca* subsp. *aurantiaca*), holly (*Ilex aquifolium*), sweet pittosporum (*Pittosporum undulatum*) and montpellier broom (*Genista monspessulana*). These and other environmental weeds have suitable habitat in the project area and pose a threat to the natural environment in the area if they become established.

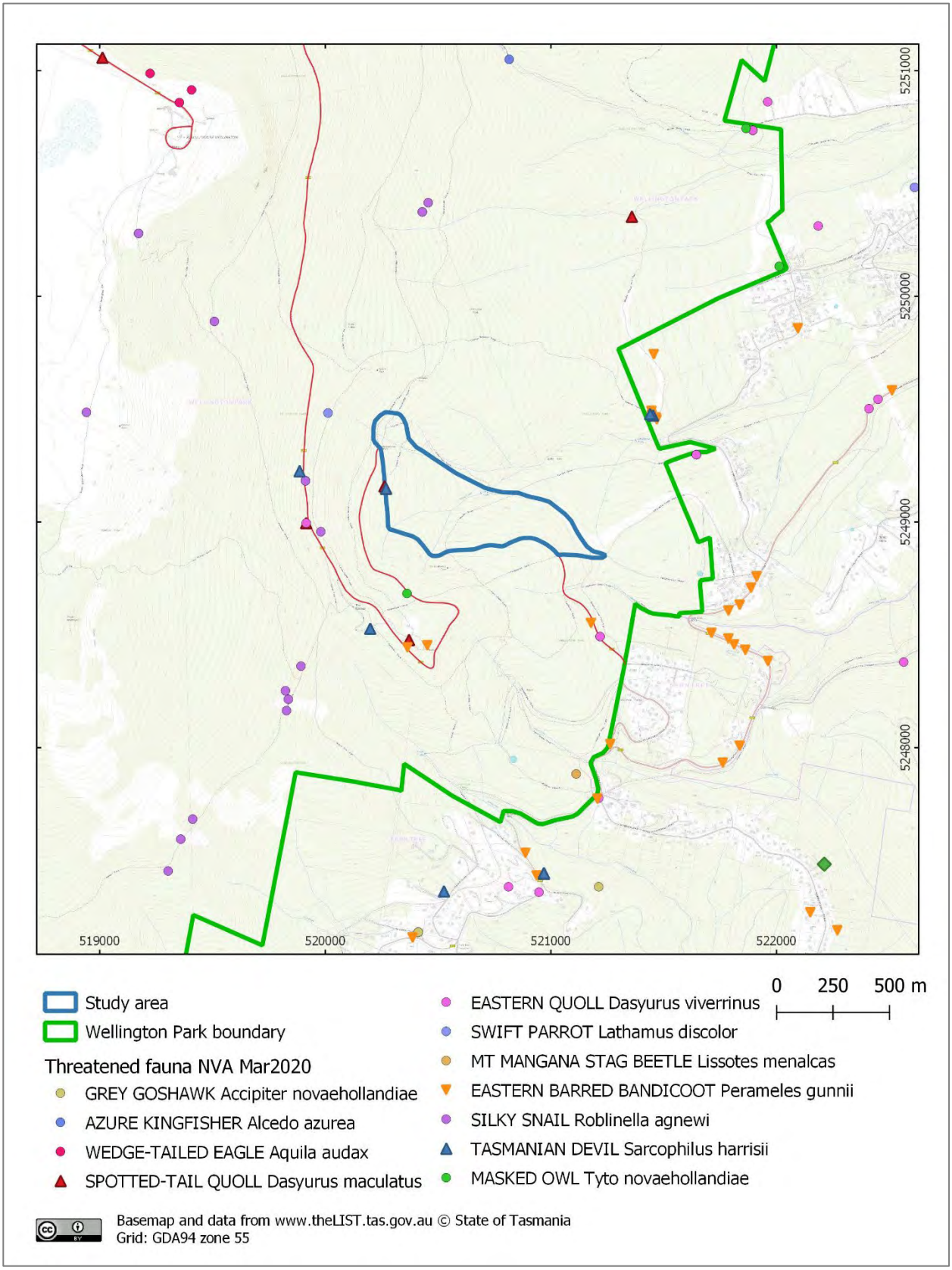

Figure 5 – Threatened fauna records from Natural Values Atlas.

9. Matters of National Environmental Significance

No threatened ecological communities under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC) are known from or likely to occur within the project area.

Threatened species listed under the *Environment Protection and Biodiversity Conservation Act 1999* known from or likely to occur within the project area are considered in Sections 5 & 6. There are unlikely to be significant impacts on any such species, unless critical habitat (e.g. nesting or denning sites) is found during on-ground survey or works and cannot be avoided.

There is suitable habitat for one listed migratory species, the satin flycatcher (*Myiagra cyanoleuca*), which favours mature wet forest. However, impacts on mature forest habitat are expected to be negligible given the small amount of vegetation clearing that may be required and therefore this species will not be significantly impacted.

10. Potential impacts of proposed works

There is a low likelihood of threatened flora species occurring within the project area. No impacts on threatened vegetation are anticipated but there may be locally significant rainforest species in the Betts Vale gully in the north of the study area.

Wide-ranging mobile threatened fauna species, such as raptors and marsupial carnivores, are likely to visit the study area and may nest in the area. Removal of trees with hollows may impact actual or potential nesting habitat for hollow-nesting threatened species such as the swift parrot and masked owl. Earthworks or removal of large fallen logs has the potential to destroy or disturb denning sites for threatened mammal species (e.g. Tasmanian devil, quolls).

Given the small footprint of works, the impact on foraging habitat for these species will be negligible, provided no mature blue gums are removed. Any removal or damage to mature blue gum (*Eucalyptus globulus*) trees is potentially reducing foraging habitat for swift parrots.

It is not practical to determine the presence of Mount Mangana stag beetle without destructive sampling of suitable habitat. Although the stag beetle is unlikely to be directly impacted by the proposed track construction, given the patchy and localised distribution of the species, there is likely to be some impact on potential decaying log habitat, albeit a very small proportion of the available habitat in the study area. It is unclear what the impact of cutting logs would have on habitat quantity and quality for this species. In drier situations, cutting logs may promote drying of the wood and reduce rot. Conversely, cutting logs may promote decay and therefore improve habitat quality. Meggs and Taylor (1999) note that Mount Mangana stag beetles occur near the surface of slightly rotten logs and deep within the core of logs with advanced decay. This suggests the species is adaptable to different classes of decaying logs and to changes within a log. Furthermore, the species is known to survive or recolonise sites following clearfell logging and regeneration burning (Meggs and Taylor 1999), which is much more severe disturbance than track construction.

Impacts on non-threatened species and other natural values is likely to be minimal given the small spatial extent of works. Vegetation clearing, earthworks, machinery use and importation of materials such as gravel pose a risk of introducing weeds to the area.

11. Summary and recommendations

A desktop assessment of the natural values of an area encompassing the proposed location of the Rocky Wheelin' MTB track on kunanyi / Mount Wellington was undertaken to identify values which may be impacted by proposed track construction works.

11.1 Recommendations

The following considerations should guide planning of the track alignment on the ground:

- Removal of large (>100 cm DBH in wet forest; > 70 cm DBH in dry forest) or old-growth eucalypt trees should be avoided. If any such trees are required to be removed an inspection by an arborist should be undertaken to determine the presence of tree hollows and evidence of occupation by hollow-nesting fauna.

- Removal of any blue gum (*Eucalyptus globulus*) trees should be avoided.

- If any evidence of raptor nesting, swift parrot nesting or marsupial denning is observed, document the location and seek advice from DPIPWE Threatened Species Section.

- Track alignment should seek to minimize the need to cut or damage standing dead trees and decaying logs and other coarse woody debris on the ground. Coarse woody debris should not be removed from the site.

- Minimize impacts on natural drainage lines by avoiding creek crossings where possible, and construction methods which avoid impeding drainage and prevent erosion and siltation.

- Conduct an on-ground natural values survey of the marked tracked corridor after the preliminary alignment has been established and prior to construction works commencing.

Track construction should take these measures to minimise impacts on flora and fauna values:

- If any evidence of raptor nesting, swift parrot nesting or marsupial denning is observed, work should stop immediately and seek advice from DPIPWE Threatened Species Section.

- Follow standard weed hygiene procedures during track construction.

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