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FLORA AND FAUNA ASSESSMENT AND NET LOSS REPORTING – HOT PLATE DRIVE HOTHAM HEIGHTS

Mountain Planning

Flora and Fauna Assessment and Net Loss Reporting – Hot Plate Drive, Hotham Heights

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Cover Photo: Looking south through the centre of the proposed development site.

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1. INTRODUCTION

In March 2019, HES was initially engaged by Incore Developments, through Mountain Planning, to undertake a flora and fauna assessment and determine the likely native vegetation loss across the property with a proposed chalet development, and prepare a Net Loss Report.

Dr. Steve Hamilton undertook the field evaluation of the site on the 3rd April 2019.

Now a new development (referred to as Hotham Houses) is proposed for the Hot Plate Drive leasehold sites by Magnus Floden.

Since the initial Reporting was completed by the previous developer, the new project proposes three freestanding residences with a reduced footprint, and this report outlines the reduced Net Loss of native vegetation proposed, the process followed in terms of native vegetation loss avoidance and minimisation, and arrangements put in place to meet the offset requirements.

2. BACKGROUND

2.1 Site Location and Description

The assessed area is found 200 m west of the Mount Hotham Resort Management Centre (VicRoads 50 D9; see Fig. 2-1) bordered by an elevated Hot Plate Drive (relative to the leasehold property) on the southern boundary, Playground Trail on the northern boundary, and existing chalets on both the western and eastern boundaries (Fig. 2-2).

It is proposed that the roughly rectangular proposed development area of 0.070 ha (698 m^2) and maximum dimensions of approximately 39 m east-west and 24 m north-south, be developed into four freestanding residences; there is a slice of the leasehold land on the western side of the proposed development that is part of another proposed development (Fig. 2-2).

The Site Survey Plan for the proposed development is shown in Fig. 2-3.

While the proposed development area has small areas that have been cleared of the tree canopy (Snow Gum; *Eucalyptus pauciflora*) where underground infrastructure has been established or which are rough tracks, the majority of the area retains a mixed-age indigenous tree canopy and dominant indigenous understorey dominated by a range of shrub and herbaceous species (Fig. 2-2). The small cleared areas are also predominantly indigenous in composition at ground level.

2.2 Bioregion and Ecological Vegetation Class

The assessed clearance area is within the Victorian Alps Bioregion (Department of Environment, Land, Water and Planning [DELWP] 2021a).

In Victoria, DELWP have developed an on-line mapping layer that categorises pre-1750 and 2005 natural vegetation communities into Ecological Vegetation Classes (EVCs), and have developed EVC Benchmark Statements for each of these EVCs that represent the best known example of this EVC.

Pre-1750 Ecological Vegetation Class (EVC) mapping suggests that prior to European settlement, the vegetation of the property would have wholly been Sub-alpine Woodland EVC (EVC 43; BCS Endangered (DELWP 2021a and 2021b); the area remains substantially vegetated and the species composition and structure indicates that this EVC allocation is correct.

The EVC Benchmark statement for this EVC can be found in Appendix C.

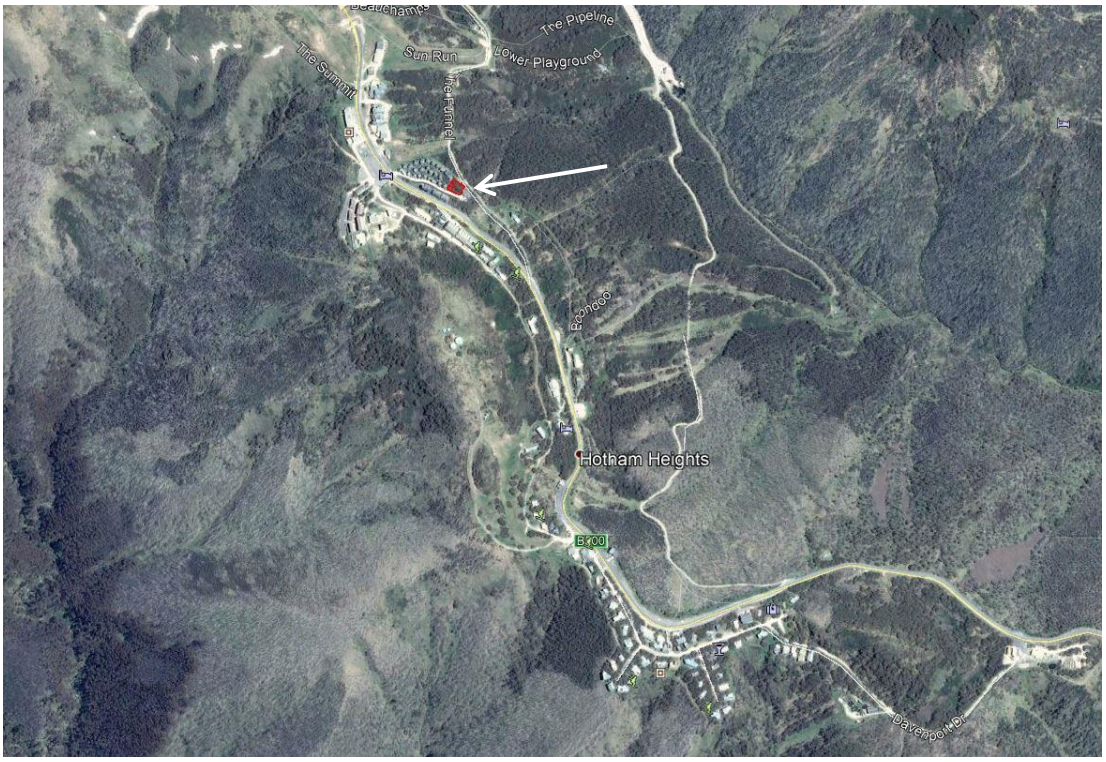

Figure 2-1 **Aerial image of the location of the assessed site within the district, with the assessed area outlined with a solid red border (Image from Google Earth 2019).**

2.3 Land Tenure and Planning Scheme

The proposed development area is part of one land parcel (Allotment 8A Section B within the Parish of Hotham).

The parcel is within the Mount Hotham Alpine Resort, and is wholly *Comprehensive Development Zone* and *Comprehensive Development Zone - Schedule 1*, and there is a *Bushfire Management Overlay* and *Bushfire Management Overlay – Schedule 1*, and an *Erosion Management Overlay* and *Erosion Management Overlay – Schedule 1* across the whole parcel (DELWP 2021d).

3. METHOD

3.1 Desktop Review

The following desktop information was gathered on the various land parcels assessed before field evaluation:

- Aerial imagery;
- Planning information;
- Both pre-1750 and current EVC mapping;
- Relevant EVC benchmark documents;
- Threatened species sightings within a 10 km radius of the site using the Victorian Biodiversity Atlas (DELWP 2021c), NatureKit (DELWP 2021b), and the Matters of National Environmental Significance search tool.

Figure 2-2 Aerial imagery of the assessed leasehold land on Hot Plate Drive, with the proposed development area outlined with a solid red line (Image from ESRI Australia 2021).

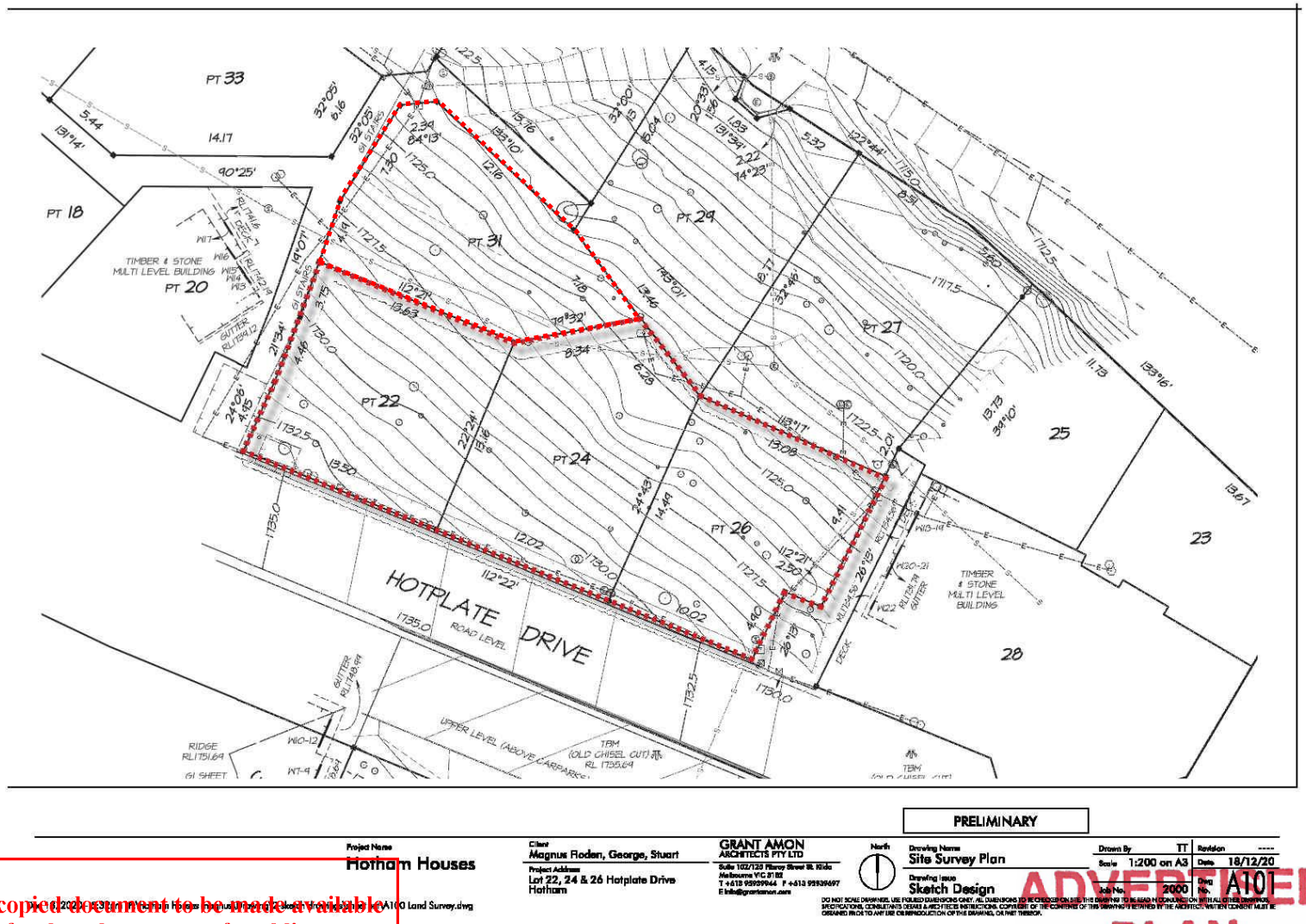

Figure 2-3 Site Survey Plan for Hotham Houses Mount Hotham – proposed development areas outlined in red (Grant Amon Architects, dated 18th December 2020).

Following assessments, derived flora and fauna lists were checked against reference lists of rare and threatened species in Victoria (DSE 2009 and 2013, and Department of Environment and Primary Industries [DEPI] 2014).

3.2 Site Assessment

On the 3rd April 2019, Dr. Steve Hamilton visited the site to undertake the assessment. On the day of observation, air temperatures were between 5 and 9°C, the sky was mostly clear, and the winds were light (Bureau of Meteorology 2019).

The freehold land was traversed by foot, with continuous active searching for flora and fauna conducted over a total period of 1 ½ hours, with the following assessments undertaken:

- Compilation of a detailed flora species list, by zone (native vegetation *Patch*), including the attribution of cover/abundance to each species in each zone;
- Casual sightings of fauna noted;
- The individual recording of any significant indigenous trees (i.e. > 3 m in height) across the site, including their geo-location by GPS, diameter at breast height (dbh), their health, and presence of hollows. The dbh of multi-trunk trees was determined using the square root of the sum of squares of all stems;
- A *Patch* of native vegetation is either: an area of vegetation where at least 25 % of the total perennial understorey plant cover is native, or any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or any mapped wetland included in the current wetlands map, available in DELWP systems and tools and these areas were mapped (DELWP 2017);
- A *Scattered Tree* is a native canopy tree that does not form part of a *Patch* (DELWP 2017);
- A Vegetation Quality Assessment was completed if any *Patches* were defined in order to determine the potential Net Loss under the *2017 Native Vegetation Removal Guidelines*;
- Recording and location of any specific instances related to land management, such as noxious weed or pest animal infestations, etc.;
- Digital images were taken from geo-located points.

Sixty eight (68) images were taken during the assessment.

3.3 Taxonomy

3.3.1 Flora

Specimens were identified using the *Flora of Victoria* (Walsh and Entwisle 1994, 1996 and 1999), and *Flora of Victoria On-line* (Royal Botanic Gardens Victoria 2019).

3.3.2 Fauna

A list of fauna present across the sites was compiled, with the nomenclature based variously on the compilations of Ilerc *et al.* (1991), Menkhorst (1995), Cogger (1996) and Simpson and Day (1998), and utilising Triggs (1996) for identification using indirect methods, such as the presence of scats or tracks.

4. FLORA AND FAUNA ASSESSMENT

4.1 Vegetation

The inventory of species noted across the area of evaluation is recorded in Appendix A.

A total of 25 vascular plant species were recorded across the proposed development area; 7 of these species were introduced and 18 indigenous (Appendix A).

Plate 4-1 Views of the proposed development area: looking along Hot Plate Drive with the edge of the assessed area on the right (top left), the northern section of the site seen from an elevated walkway on the western side (top right), looking west across the northern section (middle left), looking downslope through the centre of the site (middle right), looking through the site from the NW corner (bottom left), and looking through the site from the NE corner (bottom right).

There were four rare or threatened species observed at the site (all categorised as *Rare*, DEPI 2014): Alpine Wattle, Silver Snow-daisy, Dusty Daisy-bush, Alpine Bootlace Bush; Soft Crane's-bill (categorised as *Data Deficient*) was also probably found on the site, but a lack of floral material precluded definitive identification. None of these species are listed on the 'Protected Flora List' of the *Flora and Fauna Guarantee Act 1988*.

Victorian Biodiversity Atlas, NatureKit and Matters of National Environmental Significance searches revealed that there were records of seventy one (71) threatened flora recorded or likely to occur within a 10 km radius of the proposed development area; likelihood analysis based on the available habitat of the assessed area, proximity of records of the species and their habitat preferences, indicates that beyond the 5 threatened species observed on-site, there were a further 9 species – Mueller's Bent, Lilac Bitter-cress, Soft Crane's-bill, Sticky Fleabane, Long Podolepis, Eicher's Buttercup, Snowfield Groundsel, Mountain Dandelion and Austral Toadflax - that may be present at the proposed development site, but were not observed. Of the 57 remaining species, none are likely to be found on-site given: (a), the lack of record of the species locally or regionally in recent times, and (b), the lack of suitability of the habitat of the assessed site (DELWP 2021c, Department of Agriculture, Water and Environment [DAWE] 2021; Appendix E).

As indicated previously, while the proposed development area has small areas that have been cleared of the tree canopy (Snow Gum) where underground infrastructure has been established or which are rough tracks, the majority of the area retains a mixed-age indigenous canopy and a dominant indigenous understorey dominated by a range of shrub and herbaceous species, such as Alpine Wattle, Leafy Bossiaea, Mountain Pepper, Dusty Daisy-bush, Cascade Everlasting, Alpine Shaggy-pea, Fireweed Groundsel, Bidgee-widgee, Mountain Woodruff, Silver Snow-daisy, Button Everlasting, Soft Snow-grass, Common Trigger-plant and Mother Shield-fern (60 % projective foliage cover; Appendix A). There were some introduced plants found in these areas of canopy cover, such as Cocksfoot, Yarrow and Timothy Grass, but these were in low abundance (5 % projective foliage cover; Appendix A).

The small cleared areas are also predominantly indigenous at ground level in composition, notably with species such as Soft Snow-grass, Soft Crane's-bill and some low-growing shrubs (from those species listed above; 30 % projective foliage cover); introduced species were more common in these cleared areas, with species such as Sheep Sorrel, Cat's Ear, Spear Thistle, Soft Brome and Timothy Grass more common (30 % projective foliage cover; Appendix A).

4.2 Fauna

There were only 2 species of fauna observed across the assessed site – Australian Raven and Pied Currawong. Details of those species noted or inferred over the assessment period are detailed in Appendix B.

There were no rare or threatened species observed at the site at this time (DSE 2008 and 2013).

This lack of observed species diversity at that time was not surprising, given that:

- there was a limited survey time;
- the timing of observation (in early autumn) is clearly not conducive to observation of many fauna that utilise alpine regions seasonally in spring/summer;
- the prevailing environmental conditions were typical conditions for early autumn in the alpine area, and were not conducive to observation of many fauna;
- the small size of the assessed site given the extent of development surrounding it.

Notwithstanding the location of the proposed development area next to Hot Plate Drive and existing chalet complexes to the north-west and south-east, the site maintains high landscape connectivity to remnant native vegetation within the resort area.

Victorian Wildlife Atlas, NatureKit and Matters of National Environmental Significance searches revealed fourteen (14) significant fauna species previously recorded within 5 km of the proposed development site (excluding aquatic species; DELWP 2021c, DAWE 2021; Appendix E). Likelihood analysis reveals that twelve of these species are unlikely to because of the habitat preferences of the species, the assessed habitat characteristics of the site, landscape connectivity of the site, known records for the species, and the proximity and the timing of records. There were two species that were considered likely to utilise the site - Broad-toothed Rat and Mountain Pygmy-possum; there are recent records for both species in very close proximity to the site, and the site does provide suitable primary habitat for the Broad-toothed Rat, and secondary habitat for the Mountain Pygmy-possum (Appendix E).

4.3 EPBC listed threatened communities and species

Matters of National Environmental Significance searching also identified that the nationally endangered *Alpine Sphagnum Bogs and Associated* community, and the critically endangered *White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland* community could occur within a 10 km radius of the sites (DoEE 2019). These EPBC Act-listed threatened communities do not occur on the assessed site, which is wholly a modified Snow Gum (*Eucalyptus pauciflora*) woodland community.

There are 7 EPBC-listed threatened flora determined by Matters of National Environmental Significance searches or likely to occur within a 10 km radius of the proposed development area – Shining Cudweed, Thick Eyebright, Kelleria, Cobungra Leek-orchid, Blue-tongued Orchid, Austral Toadflax and Curtis' Colobanth (DAWE 2021; Appendix E). There are no records for any of these species within 10 km of the proposed development site (DELWP 2021c, Appendix E); however, while the available habitat of the assessed area does not match the habitat preferences for six of these seven species, the site is an appropriate habitat for the Austral Toadflax, and in the absence of a more detailed investigation, the species may be present at the site (Sec. 4.1).

As indicated in Sec. 4.2, there are two EPBC-listed threatened fauna species that are considered likely to utilise the proposed development site - Broad-toothed Rat and Mountain Pygmy-possum; there are recent records for both species in very close proximity to the site, and the site does provide suitable primary habitat for the Broad-toothed Rat, and secondary habitat for the Mountain Pygmy-possum. In addition, there are also records for the endangered Alpine She-oak Skink within 350 m of the proposed development site; however, the proposed development site is not an open tussocky grassland, which is the preferred habitat of the species, and so its utilisation of the site is less likely.

A pre-referral meeting request regarding the proposed development with the Commonwealth Department of Environment and Energy was made at the time of the completion of the initial report for the previous proposal (request made in May 2019), and while the Department acknowledged the receipt of this request, there has been no further response from them.

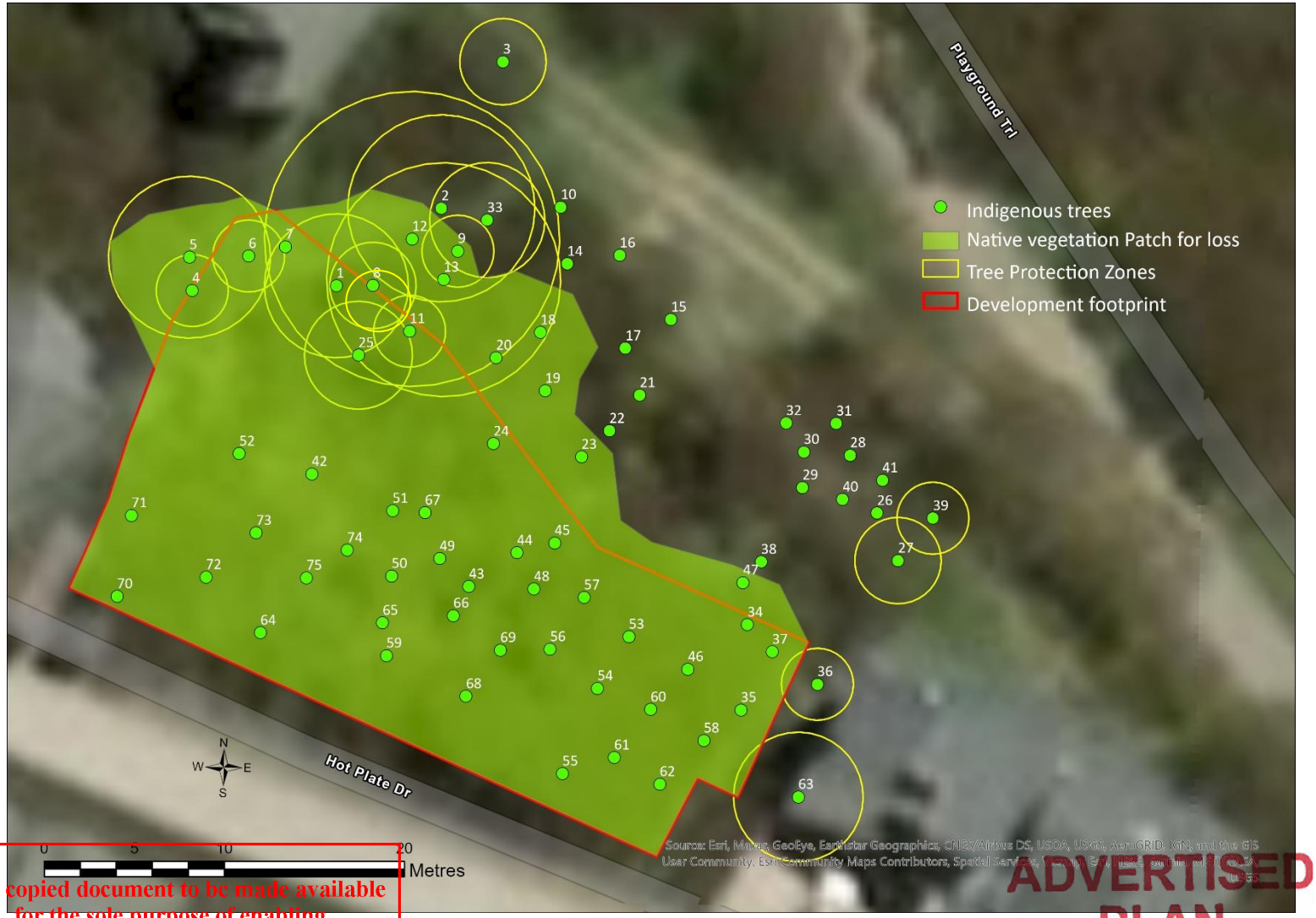

Figure 4-1 Aerial imagery of the assessed leasehold land on Hot Plate Drive, showing the proposed development footprint and location of assessed trees, trees are numbered according to the table in Appendix D (Image from DSE 2006).

4.4 Significant Trees

There were 76 trees > 3 m in height separately assessed across the proposed development area, and the details of these trees can be seen in Appendix D.

All of these trees were Snow Gums (Appendix D).

The location of all assessed trees can be seen in Fig. 4-1.

Construction projects that involve earthworks or soil disturbance can cause indirect losses of native vegetation that are retained during construction due to root damage and soil modification within the zone where roots occur. Of particular concern is the longer-term impact of soil compaction and excavation (e.g. trenching for pipelines) close to trees and the effects of this on immediate and longer-term tree health. The DSE (now DELWP) has provided guidance and clarity on this issue, and has defined an acceptable distance for tree retention in order to prevent indirect losses of native vegetation during and after construction activities as a guiding principle. These designated *Tree Protection Zones* (TPZs) should be implemented for the duration of construction activities (DSE 2011) as part of the development conditions. A TPZ is a specific area above and below the ground, with a radius 12 times the Diameter at Breast Height (dbh; 1.3 m) of any individual tree; the TPZ of trees should be no less than 2 m or greater than 15 m, and it is recommended that physical barriers be erected to delineate the TPZ during construction activities (DSE 2011). Should a development impinge on the TPZ area for > 10 % of its area, the tree shall be considered a loss, and will have to be offset (DSE 2011).

Under the *Guidelines for the removal, destruction or lopping of native vegetation* (DELWP 2017) there are two categories of native vegetation: *Scattered Trees* or *Patches*.

A *Patch* of native vegetation is either: an area of vegetation where at least 25 % of the total perennial understorey plant cover is native, or any area with three or more native canopy trees where the drip line of each tree touches the drip line of at least one other tree, forming a continuous canopy, or any mapped wetland included in the current wetlands map, available in DELWP systems and tools and these areas were mapped (DELWP 2017).

A *Scattered Tree* is a native canopy tree that does not form part of a *Patch* (DELWP 2017).

Of the 76 trees assessed, Trees 2, 3, 10, 14 to 17, 21, 22, 26 to 32, 33, 36, 38, 39, 40, 41 and 63 (23 trees) are outside of the proposed development area and their TPZs are not impinged by > 10 % and these will be retained; it should be noted that Trees 2, 3, 9, 12, 13 and 33 are within an adjacent Lot with a different landholder where development consent has been provided, and will be cleared (see Fig. 4-1).

There are no proposed *Scattered Tree* losses.

Therefore, of the assessed trees, 50 trees > 3 m in height are found within the proposed development area ,or have their TPZs impinged by > 10 %, within one contiguous native vegetation *Patch* of 0.088 ha; 18 of these trees are considered Large Trees (as determined using multi-trunk diameter calculation; Appendix D) - Trees 12, 13, 23, 35, 43, 46, 50, 52, 53, 58, 59, 60, 66, 68, 69, 71, 72 and 74 - according to the EVC benchmark for Sub-alpine Woodland EVC (40 cm dbh; Appendix C).

The proposed development must take care that there is no disturbance within the TPZs for those trees to be retained.

4.5 Patches

The entire proposed development site of 0.088 ha, and the canopy of adjacent trees where TPZ impingement was > 10 %, was determined to be a native vegetation *Patch* either due to the canopy cover and/or understorey plant cover.

Vegetation Quality Assessment scoring has been completed for this native vegetation *Patch*, and the results of this can be seen in Sec. 4.6.

4.6 Vegetation Quality Assessment

There were no *Scattered Trees* designated on the site, and as indicated in Sec. 4.5, all native vegetation on the site was found in one native vegetation *Patch* of 0.088 ha.

The Vegetation Quality Assessment was undertaken by Steve Hamilton (VQA Competency HH129).

The *Patch* has a high score for Landscape Context (landscape connectivity), Large Trees, Understorey, Logs and Organic Litter, and has an overall Habitat Score of 65 (Table 4-1).

Table 4-1 Calculated Habitat Score for the native vegetation *Patch* (after DSE 2004).

Zone	1
Ecological Vegetation Class (DELWP 2021a)	Sub-alpine Woodland
Bioregional Conservation Status (DELWP 2021a)	Least Concern
Area (ha)	0.088
Large trees	10
Tree canopy cover	3
Understorey	15
Lack of weeds	7
Recruitment	3
Organic litter	5
Logs	5
Landscape Context Score	17
Habitat Score	**65**

5. NET GAIN AND LOSS REPORTING

5.1 Quantification of Losses

A total of 0.088 ha is proposed for clearance across the proposed development site, which contains 18 Large Trees according to the EVC benchmark for Sub-alpine Woodland EVC (40 cm dbh; Appendix C).

The proposed loss is of relatively unmodified vegetation with significant biodiversity value:

- The extent of loss is low (< 0.1 ha), with the losses being of a high quality woodland;
- The proposal will result in the removal of 18 Large Trees;
- The Strategic Biodiversity Value (SBV) of all *Scattered Trees* proposed for loss is > 0.9, indicating a high SBV for the vegetation proposed for removal.

There are 104 threatened species that have habitat mapped to occur coincident with the proposed native vegetation to be removed. Forty one of these species have a mapped extent of habitat loss of ≥ 0.0001 % of the remaining habitat.

There were four rare or threatened species observed at the site - Alpine Wattle, Silver Snow-daisy, Dusty Daisy-bush, Alpine Bootlace Bush.

The likelihood of seventy one threatened flora species and fourteen threatened fauna species being found within the proposed development footprint or that would utilise the habitat of the property has been considered in Sections 4.1 and 4.2, and all species listed, with status, number of records within proximity, and likelihood of presence are outlined in Appendix E.

5.2 Avoid and Minimise

A total of 50 trees > 3 m in height found within the proposed development area or have their TPZs impinged by > 10 % within one contiguous native vegetation *Patch* of 0.088 ha; 18 of these trees are considered Large Trees (as determined using multi-trunk diameter calculation; Appendix D) - Trees 12, 13, 23, 35, 43, 46, 50, 52, 53, 58, 59, 60, 66, 68, 69, 71, 72 and 74 - according to the EVC benchmark for Sub-alpine Woodland EVC (40 cm dbh; Appendix C).

Given the nature of the development and the need for substantial footings to be established for construction of the structures, all 50 trees within the proposed development area and adjacent areas are likely losses.

However, of the 76 trees assessed, Trees 2, 3, 10, 14 to 17, 21, 22, 26 to 32, 33, 36, 38, 39, 40, 41 and 63 (23 trees) are outside of the proposed development area and their TPZs are not impinged by > 10 % and these will be retained; it should be noted that Trees 2, 3, 9, 12, 13 and 33 are within an adjacent Lot with a different landholder where development consent has been provided, and will be cleared.

The proposed development must take care that there is no disturbance within the TPZs for those trees to be retained.

5.3 Offset Requirements

A mapping file outlining the habitat scoring and precise location of the native vegetation *Patch* proposed for clearance was submitted to the EnSym NVR Team Support in the outlined format following scenario-testing to clarify the requirements for offset to develop the application. The Native Vegetation Removal Report for the proposed clearance areas was received on the 15th March 2021 (Appendix F; DELWP 2021e), and provided the following assessment:

- The outlined proposed clearance was assessed as being a Detailed Assessment Pathway;
- The *Location Category* for the losses are mapped as *Location 3*;
- The total extent of the clearance is one native vegetation *Patch* of 0.088 ha, which includes 18 Large Trees;
- A General Offset of 0.084 General Habitat Units (GHUs) is required for the proposed clearance based on a 1.5x multiplier, with 18 Large Trees;
- There are no Specific Offsets;
- The Offset Site must be within the North East Catchment Management Authority catchment (or Local Government Area – Mount Hotham Alpine Resort);
- The Offset must have a minimum overall Strategic Biodiversity Value of 0.776.

6. MEETING THE OFFSET REQUIREMENT

A third party offset quote to satisfy the offset requirement from a credit broker is attached in Appendix G.

7. REFERENCES

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APPENDIX A FLORA INVENTORY OF THE ROAD RESERVE AT HOT PLATE DRIVE, HOTHAM HEIGHTS

Vascular flora have been recorded for presence across the assessed site, using a cover-abundance scale that is shown in the Table immediately below.

An asterisk denotes an introduced species.

Each plant species present were assessed for cover-abundance using the scale outlined below. Nomenclature and taxonomy of plants based variously on Royal Botanic Gardens Victoria (2019) and Walsh and Entwisle (1994, 1996 and 1999).

Visual assessment of cover/abundance	
Symbol	*Description*
+	rare, cover < 5%
1	Uncommon, cover < 5 %
2	Very common, cover < 5 % or cover 5-25 % with any number of individuals
3	Cover 25-50 % with any number of individuals
4	Cover 50-75 % with any number of individuals
5	Cover 75-100 % with any number of individuals

Common name	Scientific name	Lifeform#	Assessed site
Alpine Wattle	*Acacia alpina*	MS	1
Bidgee-widgee	*Acaena novae-hollandiae*	MH	+
Sheep Sorrel	*Acetosella vulgaris**	MH	1
Yarrow	*Achillea millefolium**	MH	2
Mountain Woodruff	*Asperula gunnii*	MH	2
Leafy Bossiaea	*Bossiaea foliosa*	MS	3
Soft Brome	*Bromus mollis**	MTG	2
Silver Snow Daisy	*Celmisia tomentella*	SH	2
Spear Thistle	*Cirsium vulgare**	LH	+
Button Everlasting	*Coronidium scorpioides*	MH	1
Cocksfoot	*Dactylis glomerata**	LTG	2
Mountain Pepper	*Drimys lanceolata*	MS	1
Snow Gum	*Eucalyptus pauciflora*	T	3
Soft Crane's-bill	*Geranium potentilloides*	MH	2
Cat's Ear	*Hypochaeris radicata**	MH	2
Dusty Daisy-bush	*Olearia phlogopappa ssp. flavescens*	MS	2
Cascade Everlasting	*Ozothamnus secundiflorus*	MS	+
Timothy Grass	*Phleum pratense**	LTG	1
Alpine Bootlace Bush	*Pimelea axiflora* ssp. *alpina*	SS	+
Soft Snow-grass	*Poa hiemata*	MTG	2
Alpine Shaggy-pea	*Podolobium alpestre*	MS	2
Mother Shield-fern	*Polystichum proliferum*	GF	2
Prunus	*Prunus* sp.*	T	+
Fireweed Groundsel	*Senecio linearifolius*	LH	2
Common Trigger-plant	*Stylidium armeria*	MTG	+

abbreviations for lifeform for indigenous species are T = tree, MS = medium shrub, SS = small shrub, LH = large herb, MH = medium herb, SH = small herb, LTG = large tufted graminoid, MTG = medium tufted graminoid, STG = small tufted graminoid, MNG = medium non-tufted graminoid, SC = scrambler/climber, GF = ground fern, B/L = bryophyte/lichen, P = parasite.

APPENDIX B OBSERVED OR INFERRED FAUNA AT HOT PLATE DRIVE, HOTHAM HEIGHTS

Observed or inferred fauna at the site and surrounds between 9.30 and 11.30 am on the 3rd April 2019.

Common name	Scientific name	Mode of observation[1]
Birds		
Australian Raven	*Corvus coronoides*	A,V
Pied Currawong	*Strepera graculina*	A,V

* denotes introduced species

1. Identification method: A = audible call; V = visual; N = distinctive nest; S = scat

APPENDIX C EVC BENCHMARK DESCRIPTION

EVC/Bioregion Benchmark for Vegetation Quality Assessment

Victorian Alps bioregion

EVC 43: Sub-alpine Woodland

Description:
Grows on a wide range of geologies and aspects, in the higher altitudinal levels above 1200 m. Rainfall is relatively high and snow may persist for long periods over winter. Soils are generally skeletal sandy clay loams with a rich humus topsoil layer. A low, open woodland to 10 m tall dominated by Snow Gum *Eucalyptus pauciflora*, with the understorey variously consisting of a rich suite of grasses and herbs, or a dense layer of woody shrubs, depending on soil fertility.

Large trees:

Species	DBH(cm)	#/ha
Eucalyptus spp.	40 cm	15 / ha

Tree Canopy Cover:

%cover	Character Species	Common Name
15%	*Eucalyptus pauciflora*	Snow Gum

Understorey:

Life form	#Spp	%Cover	LF code
Immature Canopy Tree		5%	IT
Understorey Tree or Large Shrub	1	5%	T
Medium Shrub	5	20%	MS
Small Shrub	2	10%	SS
Large Herb	3	10%	LH
Medium Herb	8	20%	MH
Small or Prostrate Herb	2	5%	SH
Medium to Small Tufted Graminoid	4	20%	MTG
Medium to Tiny Non-tufted Graminoid	1	5%	MNG
Ground Fern	1	1%	GF
Bryophytes/Lichens	na	20%	BL
Soil Crust	na	10%	S/C

LF Code	Species typical of at least part of EVC range	Common Name
T	*Acacia obliquinervia*	Mountain Hickory Wattle
MS	*Podolobium alpestre*	Alpine Podolobium
MS	*Olearia phlogopappa*	Dusty Daisy-bush
MS	*Tasmannia xerophila*	Alpine Pepper
SS	*Leucopogon hookeri*	Mountain Beard-heath
LH	*Senecio gunnii*	Mountain Fireweed
MH	*Stellaria pungens*	Prickly Starwort
MH	*Oreomyrrhis eriopoda*	Australian Caraway
MH	*Viola betonicifolia ssp. betonicifolia*	Showy Violet
MH	*Asperula gunnii*	Mountain Woodruff
MTG	*Stylidium graminifolium s.l.*	Grass Trigger-plant
MTG	*Dianella tasmanica*	Tasman Flax-lily
MTG	*Poa australis spp. agg.*	Tussock Grass
MTG	*Carex breviculmis*	Common Grass-sedge
GF	*Polystichum proliferum*	Mother Shield-fern

EVC 43: Sub-alpine Woodland - Victorian Alps bioregion

Recruitment:
Continuous

Organic Litter:
20 % cover

Logs:
10 m/0.1 ha.

Weediness:

LF Code	Typical Weed Species	Common Name	Invasive	Impact
MH	*Acetosella vulgaris*	Sheep Sorrel	high	high
MH	*Hypochoeris radicata*	Cat's Ear	high	low

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APPENDIX D SIGNIFICANT TREES

Trees proposed for removal are highlighted in red.

Tree number	Common name[1]	Multi-trunk diameter[2]	Tree location[3]	
			Easting	*Northing*
1	Snow Gum	34	512890	5906970
2	Snow Gum	43	512896	5906972
3	Snow Gum	22	512899	5906980
4	Snow Gum	18	512881	5906967
5	Snow Gum	36	512883	5906966
6	Snow Gum	10	512885	5906969
7	Snow Gum	25	512888	5906970
8	Snow Gum	18	512894	5906970
9	Snow Gum	15	512897	5906970
10	Snow Gum	32	512903	5906972
11	Snow Gum	15	512895	5906965
12	Snow Gum	71	512893	5906968
13	Snow Gum	55	512897	5906967
14	Snow Gum	35	512903	5906969
15	Snow Gum	15	512909	5906966
16	Snow Gum	15	512906	5906970
17	Snow Gum	26	512907	5906964
18	Snow Gum	31	512902	5906965
19	Snow Gum	20	512902	5906962
20	Snow Gum	36	512899	5906964
21	Snow Gum	20	512907	5906962
22	Snow Gum	31	512906	5906960
23	Snow Gum	53	512904	5906958
24	Snow Gum	18	512900	5906960
25	Snow Gum	27	512891	5906963
26	Snow Gum	43	512924	5906955
27	Snow Gum	29	512922	5906957
28	Snow Gum	18	512919	5906959
29	Snow Gum	28	512917	5906957
30	Snow Gum	30	512917	5906959
31	Snow Gum	30	512918	5906960
32	Snow Gum	20	512916	5906960
33	Snow Gum	26	512900	5906971
34	Snow Gum	22	512914	5906949
35	Snow Gum	46	512917	5906946
36	Snow Gum	15	512914	5906944
37	Snow Gum	20	512915	5906948
38	Snow Gum	21	512914	5906953

Tree number	Common name[1]	Multi-trunk diameter[2]	Tree location[3]	
			Easting	*Northing*
39	Snow Gum	15	512922	5906955
40	Snow Gum	30	512919	5906956
41	Snow Gum	55	512924	5906954
42	Snow Gum	26	512889	5906957
43	Snow Gum	56	512898	5906951
44	Snow Gum	20	512901	5906953
45	Snow Gum	28	512903	5906954
46	Snow Gum	44	512910	5906947
47	Snow Gum	21	512913	5906952
48	Snow Gum	23	512902	5906951
49	Snow Gum	29	512896	5906952
50	Snow Gum	42	512894	5906951
51	Snow Gum	23	512894	5906955
52	Snow Gum	41	512885	5906958
53	Snow Gum	57	512907	5906948
54	Snow Gum	10	512905	5906945
55	Snow Gum	18	512904	5906941
56	Snow Gum	17	512903	5906948
57	Snow Gum	25	512905	5906951
58	Snow Gum	41	512909	5906944
59	Snow Gum	55	512894	5906947
60	Snow Gum	46	<Null>	<Null>
61	Snow Gum	38	512907	5906945
62	Snow Gum	30	512906	5906942
63	Snow Gum	38	512909	5906940
64	Snow Gum	39	512911	5906944
65	Snow Gum	30	512887	5906948
66	Snow Gum	45	512893	5906949
67	Snow Gum	25	512897	5906949
68	Snow Gum	60	512896	5906955
69	Snow Gum	40	512898	5906945
70	Snow Gum	36	512900	5906947
71	Snow Gum	50	512879	5906950
72	Snow Gum	47	512879	5906955
73	Snow Gum	15	512883	5906951
74	Snow Gum	46	512886	5906954
75	Snow Gum	32	512891	5906953
76	Snow Gum	20	512889	5906951

1 Snow Gum is *Eucalyptus pauciflora*;

2. Multi-trunk diameter at breast height over bark in cm (dbh; at 1.30 m above ground) dbh of multi-trunk trees was determined using the square root of the sum of squares of all stems;
3. Location data are northings and eastings of MGAz55 coordinates.

APPENDIX E EPBC AND VICTORIAN THREATENED SPECIES AND LIKELIHOOD OF OCCURRENCE

List of threatened flora species recorded by the Victorian Biodiversity Atlas and NatureKit in a 10 km radius around the property, and by Matters of National Environmental Significance search of the district, their status, and their likelihood of occurrence on the sites (DELWP 2021c; DAWE 2021).

Scientific name	Common Name	Victorian status[1]	Commonwealth status[2]	Records within 10 km[3]	Last record[4]	Appropriate habitat[5]	Likelihood of presence[6]
Acacia alpina	Alpine Wattle	r		29	2011	Yes	Present
Aciphylla glacialis	Snow Aciphyll	r		37	2011	No	Highly unlikely
Acrothamnus montanus	Snow Beard-heath	r		31	2011	No	Highly unlikely
Agrostis muelleriana	Mueller's Bent	r		3	1997	Yes	May be present
Alchemilla xanthochlora	Lady's Mantle	r		2	2012	No	Highly unlikely
Argyrotegium nitidulum	Shining Cudweed	v	V	0		No	Highly unlikely
Boronia algida	Alpine Boronia	r		24	2006	Yes	Unlikely
Bossiaea bracteosa	Mountain Leafless Bossiaea	r		1	1980	Yes	Unlikely
Brachyscome tadgellii	Tadgell's Daisy	r		1	1997	No	Highly unlikely
Cardamine lilacina s.s.	Lilac Bitter-cress	v		2	2011	Yes	May be present
Carex canescens	Short Sedge	r		2	1997	No	Highly unlikely
Carex raleighii	Raleigh Sedge	r		1	1997	No	Highly unlikely
Carpha nivicola	Broad-leaf Flower-rush	r		1	1997	No	Highly unlikely
Celmisia costiniana	Carpet Snow-daisy	r		27	2011	No	Unlikely
Celmisia sericophylla	Silky Snow-daisy	v,L		8	2016	No	Unlikely
Celmisia tomentella	Silver Snow-daisy	r		19	2011	Yes	Present
Colobanthus affinis	Alpine Colobanth	r		7	2006	No	Highly unlikely
Colobanthus curtisiae	Curtis' Colobanth	k	V	0		Yes	Unlikely
Craspedia aurantia var. *aurantia*	Orange Billy-buttons	r		6	2010	No	Highly unlikely
Craspedia aurantia var. *jamesii*	Green Billy-buttons	r		31	2011	No	Unlikely
Craspedia canens	Grey Billy-buttons	e,L		1	2016	No	Highly unlikely
Craspedia crocata	Crimson Billy-buttons	r		7	2005	No	Highly unlikely
Craspedia lamicola	Bog Billy-buttons	v,L		6	2007	No	Highly unlikely
Craspedia maxgrayi s.s.	Woolly Billy-buttons	v,L		3	2007	No	Highly unlikely

Scientific name	Common Name	Victorian status[1]	Commonwealth status[2]	Records within 10 km[3]	Last record[4]	Appropriate habitat[5]	Likelihood of presence[6]
Cystopteris tasmanica	Brittle Bladder-fern	r		1	2011	No	Highly unlikely
Deyeuxia carinata	Keeled Bent-grass	r		1	2005	No	Highly unlikely
Deyeuxia crassiuscula	Thick Bent-grass	r		1	2006	No	Highly unlikely
Drosera arcturi	Alpine Sundew	r		3	2016	No	Unlikely
Epilobium curtisiae	Bald-seeded Willow-herb	r		1	2012	No	Highly unlikely
Epilobium sarmentaceum	Mountain Willow-herb	r		4	2011	No	Highly unlikely
Euphrasia crassiuscula ssp. *eglandulosa*	Thick Eyebright	r		5	2011	Yes	Unlikely
Euphrasia crassiuscula ssp. *glandulifera*	Thick Eyebright	v,L	V	0		No	Highly unlikely
Ewartia nubigena	Silver Ewartia	r		3	2006	No	Unlikely
Geranium brevicaule	Alpine Crane's-bill	r		1	1983	No	Unlikely
Geranium potentilloides var. 1	Soft Crane's-bill	k		1	2006	Yes	Possibly present
Geranium potentilloides var. *abditum*	Soft Crane's-bill	r		6	2012	Yes	May be present
Grevillea victoriae ssp. *victoriae*	Royal Grevillea	r		11	2007	Yes	Unlikely
Juncus antarcticus	Cushion Rush	v,L		1	2016	No	Highly unlikely
Kelleria bogongensis	Kelleria	e,L	V	0		No	Highly unlikely
Leptorhynchos squamatus ssp. *alpinus*	Alpine Buttons	r		4	2011	No	Highly unlikely
Luzula acutifolia ssp. *acutifolia*	Sharp-leaf Woodrush	r		19	2009	No	Highly unlikely
Olearia brevipedunculata	Rusty Daisy-bush	r		6	2011	Yes	Unlikely
Olearia frostii	Bogong Daisy-bush	r		55	2016	Yes	Unlikely
Olearia phlogopappa ssp. *flavescens*	Dusty Daisy-bush	r		57	2012	Yes	Present
Oreobolus pumilio ssp. *pumilio*	Alpine Tuft-rush	r		1	2016	No	Highly unlikely
Oreomyrrhis brevipes	Branched Caraway	v,L		1	1996	No	Highly unlikely
Ozothamnus alpinus	Alpine Everlasting	r		62	2016	No	Unlikely
Pappochroma nitidum	Sticky Fleabane	r		5	2011	Yes	May be present
Pentachondra pumila	Carpet Heath	r		2	1997	No	Highly unlikely
Phebalium squamulosum ssp. *ozothamnoides*	Mountain Phebalium	r		5	2011	Yes	Unlikely

Scientific name	Common Name	Victorian status[1]	Commonwealth status[2]	Records within 10 km[3]	Last record[4]	Appropriate habitat[5]	Likelihood of presence[6]
Pimelea axiflora ssp. *alpina*	Alpine Bootlace Bush	r		43	2012	Yes	Present
Pimelea ligustrina ssp. *ciliata*	Fringed Rice-flower	r		10	2011	No	Unlikely
Plantago alpestris	Veined Plantain	r		2	2006	No	Highly unlikely
Podolepis hieracioides	Long Podolepis	r		1	1979	Yes	May be present
Podolepis laciniata	High-plain Podolepis	r		1	2006	No	Highly unlikely
Prasophyllum morganii	Cobungra Leek-orchid	x	V	0		Yes	Highly unlikely
Psychrophila introloba	Alpine Marsh-marigold	r		9	2016	No	Highly unlikely
Pterostylis oreophila	Blue-tongued Orchid	e	CE	0		No	Highly unlikely
Ranunculus eichlerianus	Eichler's Buttercup	r		37	2010	Yes	May be present
Ranunculus gunnianus	Gunn's Alpine Buttercup	r		1	1997	No	Highly unlikely
Ranunculus muelleri	Felted Buttercup	v,L		3	2007	No	Highly unlikely
Ranunculus victoriensis	Victorian Buttercup	r		26	2012	No	Highly unlikely
Rytidosperma alpicola	Crag Wallaby-grass	r		2	2006	No	Highly unlikely
Rytidosperma nivicola	Snow Wallaby-grass	r		2	2016	No	Highly unlikely
Scleranthus singuliflorus	Mossy Knawel	r		4	2004	No	Highly unlikely
Senecio pectinatus var. major	Alpine Groundsel	r		15	2012	No	Highly unlikely
Senecio pinnatifolius var. alpinus	Snowfield Groundsel	r		8	2011	Yes	May be present
Taraxacum aristum	Mountain Dandelion	r		2	1980	Yes	May be present
Thesium australe	Austral Toadflax	v,L	V	0		Yes	May be present
Trachymene humilis ssp. *breviscapa*	Alpine Trachymene	r		12	2009	No	Highly unlikely
Trochocarpa clarkei	Lilac Berry	r		1	1997	Yes	Unlikely

1. x = presumed extinct in Victoria; e = endangered in Victoria; v = vulnerable in Victoria; r = rare in Victoria; k = insufficiently known in Victoria; L = listed under the *Flora and Fauna Guarantee Act* (from DEPI 2014).
2. CE = critically endangered nationally; E = endangered nationally; V = vulnerable nationally (DAWE 2019);
3. As recorded in the Victorian Biodiversity Atlas (DELWP 2021c);
4. As recorded for the species in the Victorian Biodiversity Atlas (DELWP 2021c);
5. Determination based on known habitat preferences for the species and the assessed habitat characteristics of the site, from Royal Botanic Gardens Victoria (2019) and Walsh and

Entwisle (1994, 1996 and 1999);

6. Based on known habitat preferences for the species and the assessed habitat characteristics of the site, known records for the species, and their proximity and time of record.

List of threatened fauna species recorded by the Victorian Biodiversity Atlas and NatureKit in a 10 km radius around the property, and by Matters of National Environmental Significance search of the district, their status, and their likelihood of occurrence on the subject land (DELWP 2021c; DAWE 2021).

Scientific name	Common Name	Victorian status	Commonwealth status	Records within 10 km	Last record	Appropriate habitat	Likelihood of presence
Pseudemoia cryodroma	Alpine Bog Skink	e,L		15	2016	No	Highly unlikely
Cyclodomorphus praealtus	Alpine She-oak Skink	ce,L	E	24	2016	No	Unlikely
Thaumatoperla alpina	Alpine Stonefly	v,L	E	0		No	Highly unlikely
Litoria verreauxii alpina	Alpine Tree Frog	ce,L	E	7	2016	No	Highly unlikely
Mastacomys fuscus mordicus	Broad-toothed Rat	e,L	V	7	2017	Yes	Likely
Petauroides volans	Greater Glider	v	V	0		No	Unlikely
Litoria raniformis	Growling Grass Frog	e,L	V	0		No	Highly unlikely
Liopholis guthega	Guthega Skink	ce,L	E	0		Yes	Unlikely
Potorous longipes	Long-footed Potoroo	v,L	E	0		No	Highly unlikely
Burramys parvus	Mountain Pygmy-possum	cr,L	E	60	2017	Yes	Likely
Pseudomys fumeus	Smoky Mouse	e,L	E	0		Yes	Highly unlikely
Dasyurus maculatus maculatus (SE mainland population)	Spot-tailed Quoll	e,L	E	0		Yes	Highly unlikely
Litoria spenceri	Spotted Tree Frog	ce,L	E	0		No	Highly unlikely
Pseudemoia pagenstecheri	Tussock Skink	v		2	1999	No	Unlikely

1. x = presumed extinct in Victoria; e = endangered in Victoria; v = vulnerable in Victoria; r = rare in Victoria; k = insufficiently known in Victoria; L = listed under the *Flora and Fauna Guarantee Act* (from DEPI 2014).
2. CE = critically endangered nationally; E = endangered nationally; V = vulnerable nationally (DAWE 2021);
3. As recorded in the Victorian Biodiversity Atlas (DELWP 2021c);
4. As recorded for the species in the Victorian Biodiversity Atlas (DELWP 2021c);
5. Determination based on known habitat preferences for the species and the assessed habitat characteristics of the site, from various State and Commonwealth conservation advice and listings, recovery plans, etc.;
6. Based on known habitat preferences for the species and the assessed habitat characteristics of the site, landscape connectivity of the site, known records for the species, and their proximity and time of records.

APPENDIX F NATIVE VEGETATION REMOVAL REPORT FOR HOT PLATE DRIVE HOTHAM HEIGHTS (DELWP) 18TH MARCH 2021

Native vegetation removal report

This report provides information to support an application to remove, destroy or lop native vegetation in accordance with the *Guidelines for the removal, destruction or lopping of native vegetation*. The report **is not an assessment by DELWP** of the proposed native vegetation removal. Native vegetation information and offset requirements have been determined using spatial data provided by the applicant or their consultant.

Date of issue: **18/03/2021**
Time of issue: **2:52 pm**

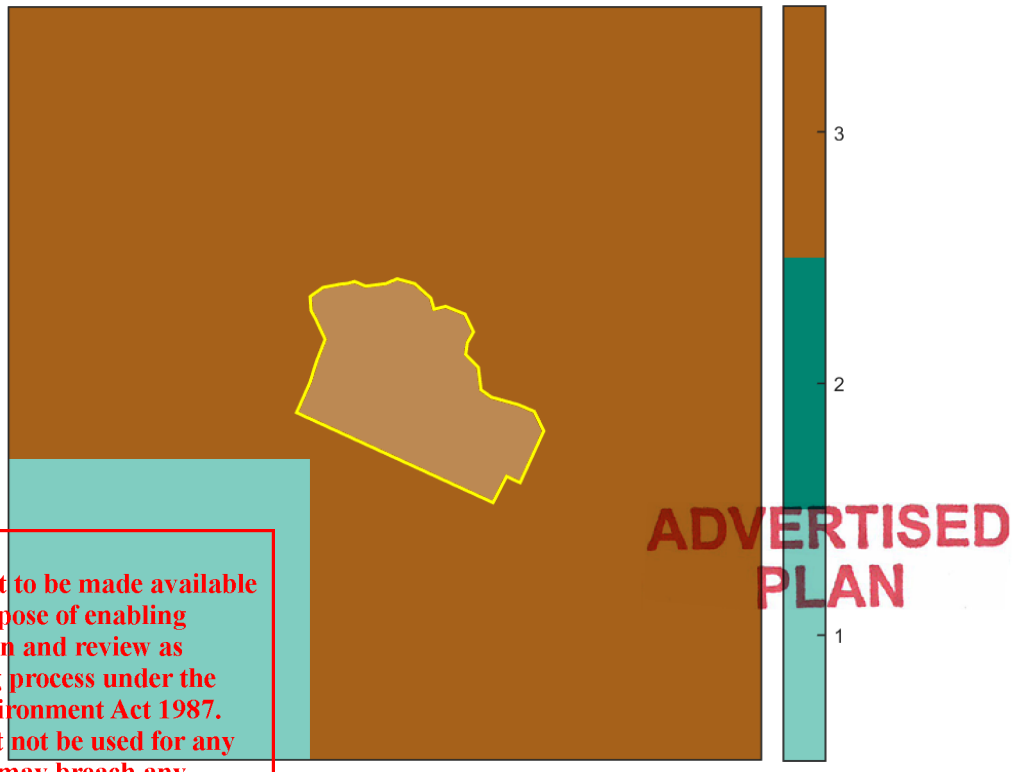
Report ID: HAE_2021_016

Project ID	Hot_Plate_Drive_Mount_Hotham_GDA94_170321

Assessment pathway

Assessment pathway	**Detailed Assessment Pathway**
Extent including past and proposed	0.088 ha
Extent of past removal	0.000 ha
Extent of proposed removal	0.088 ha
No. Large trees proposed to be removed	18
Location category of proposed removal	Location 3 The native vegetation is in an area where the removal of less than 0.5 hectares could have a significant impact on habitat for one or more rare or threatened species.

1. Location map



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Offset requirements if a permit is granted

Any approval granted will include a condition to obtain an offset that meets the following requirements:

General offset amount[1]	0.084 general habitat units
Vicinity	North East Catchment Management Authority (CMA) or Mount Hotham Alpine Resort (Unincorporated) Council
Minimum strategic biodiversity value score[2]	0.776
Large trees	18 large trees

NB: values within tables in this document may not add to the totals shown above due to rounding

Appendix 1 includes information about the native vegetation to be removed

Appendix 2 includes information about the rare or threatened species mapped at the site.

Appendix 3 includes maps showing native vegetation to be removed and extracts of relevant species habitat importance maps

1 The general offset amount required is the sum of all general habitat units in Appendix 1.

2 Minimum strategic biodiversity score is 80 per cent of the weighted average score across habitat zones where a general offset is required

Next steps

Any proposal to remove native vegetation must meet the application requirements of the Detailed Assessment Pathway and it will be assessed under the Detailed Assessment Pathway.

If you wish to remove the mapped native vegetation you are required to apply for a permit from your local council. Council will refer your application to DELWP for assessment, as required. **This report is not a referral assessment by DELWP.**

This *Native vegetation removal report* must be submitted with your application for a permit to remove, destroy or lop native vegetation.

Refer to the *Guidelines for the removal, destruction or lopping of native* vegetation (the Guidelines) for a full list of application requirements This report provides information that meets the following application requirements:

- The assessment pathway and reason for the assessment pathway
- A description of the native vegetation to be removed (partly met)
- Maps showing the native vegetation and property (partly met)
- Information about the impacts on rare or threatened species.
- The offset requirements determined in accordance with section 5 of the Guidelines that apply if approval is granted to remove native vegetation.

Additional application requirements must be met including:

- Topographical and land information
- Recent dated photographs
- Details of past native vegetation removal
- An avoid and minimise statement
- A copy of any Property Vegetation Plan that applies
- A defendable space statement as applicable
- A statement about the Native Vegetation Precinct Plan as applicable
- A site assessment report including a habitat hectare assessment of any patches of native vegetation and details of trees
- An offset statement that explains that an offset has been identified and how it will be secured.

Appendix 1: Description of native vegetation to be removed

The species-general offset test was applied to your proposal. This test determines if the proposed removal of native vegetation has a proportional impact on any rare or threatened species habitats above the species offset threshold. The threshold is set at 0.005 per cent of the mapped habitat value for a species. When the proportional impact is above the species offset threshold a species offset is required. This test is done for all species mapped at the site. Multiple species offsets will be required if the species offset threshold is exceeded for multiple species.

Where a zone requires species offset(s), the species habitat units for each species in that zone is calculated by the following equation in accordance with the Guidelines:

Species habitat units = extent x condition x species landscape factor x 2, where the species landscape factor = 0.5 + (habitat importance score/2)

The species offset amount(s) required is the sum of all species habitat units per zone

Where a zone does not require a species offset, the general habitat units in that zone is calculated by the following equation in accordance with the Guidelines:

General habitat units = extent x condition x general landscape factor x 1.5, where the general landscape factor = 0.5 + (strategic biodiversity value score/2)

The general offset amount required is the sum of all general habitat units per zone.

Native vegetation to be removed

Information provided by or on behalf of the applicant in a GIS file							Information calculated by EnSym					
Zone	**Type**	**BioEVC**	**BioEVC conservation status**	**Large tree(s)**	**Partial removal**	**Condition score**	**Polygon Extent**	**Extent without overlap**	**SBV score**	**HI score**	**Habitat units**	**Offset type**
1-A	Patch	valp0043	Least Concern	18	no	0.650	0.088	0.088	0.970		0.084	General

Appendix 2: Information about impacts to rare or threatened species' habitats on site

This table lists all rare or threatened species' habitats mapped at the site.

Species common name	Species scientific name	Species number	Conservation status	Group	Habitat impacted	% habitat value affected
Woolly Billy-buttons	*Craspedia maxgrayi s.s.*	505942	Vulnerable	Highly Localised Habitat	Habitat importance map	0.0045
Mountain Pygmy Possum	*Burramys parvus*	11156	Critically endangered	Dispersed	Top ranking map ; special site	0.0015
Rock Grevillea	*Grevillea willisii*	501554	Rare	Dispersed	Habitat importance map	0.0010
Wire-head Sedge	*Carex cephalotes*	500631	Vulnerable	Dispersed	Habitat importance map	0.0004
Dwarf Sedge	*Carex paupera*	500646	Vulnerable	Dispersed	Habitat importance map	0.0003
Silver Ewartia	*Ewartia nubigena*	501348	Rare	Dispersed	Habitat importance map	0.0003
Branched Caraway	*Oreomyrrhis brevipes*	502359	Vulnerable	Dispersed	Habitat importance map	0.0003
Shining Cudweed	*Argyrotegium nitidulum*	501467	Rare	Dispersed	Habitat importance map	0.0003
Compact Hook-sedge	*Carex austrocompacta*	505030	Vulnerable	Dispersed	Habitat importance map	0.0002
Alpine Pennywort	*Schizeilema fragoseum*	503032	Vulnerable	Dispersed	Habitat importance map	0.0002
Alpine She-oak Skink	*Cyclodomorphus praealtus*	12987	Critically endangered	Dispersed	Habitat importance map	0.0002
Thick Eyebright	*Euphrasia crassiuscula subsp. crassiuscula*	504473	Rare	Dispersed	Habitat importance map	0.0002
Carpet Heath	*Pentachondra pumila*	502454	Rare	Dispersed	Habitat importance map	0.0002
Alpine Tree Frog	*Litoria verreauxii alpina*	63907	Critically endangered	Dispersed	Habitat importance map	0.0002
Mountain Pygmy Possum	*Burramys parvus*	11156	Critically endangered	Dispersed	Habitat importance map ; special site	0.0002
Sharp-leaf Woodrush	*Luzula acutifolia subsp. acutifolia*	502064	Rare	Dispersed	Habitat importance map	0.0002
Reddish Bog-heath	*Epacris glabella*	501164	Rare	Dispersed	Habitat importance map	0.0001

Alpine Trachymene	*Trachymene humilis subsp. breviscapa*	505003	Rare	Dispersed	Habitat importance map	0.0001
Star Sedge	*Carex echinata*	500637	Vulnerable	Dispersed	Habitat importance map	0.0001
Bog Billy-buttons	*Craspedia lamicola*	505935	Vulnerable	Dispersed	Habitat importance map	0.0001
Felted Buttercup	*Ranunculus muelleri*	502896	Vulnerable	Dispersed	Habitat importance map	0.0001
Alpine Everlasting	*Ozothamnus alpinus*	501605	Rare	Dispersed	Habitat importance map	0.0001
Bogong Daisy-bush	*Olearia frostii*	502306	Rare	Dispersed	Habitat importance map	0.0001
Snow Beard-heath	*Acrothamnus montanus*	501985	Rare	Dispersed	Habitat importance map	0.0001
Alpine Colobanth	*Colobanthus affinis*	500793	Rare	Dispersed	Habitat importance map	0.0001
Tufted Hair-grass	*Deschampsia cespitosa*	501006	Rare	Dispersed	Habitat importance map	0.0001
Alpine Holy-grass	*Hierochloe submutica*	501689	Vulnerable	Dispersed	Habitat importance map	0.0001
Thick Eyebright	*Euphrasia crassiuscula subsp. eglandulosa*	504474	Rare	Dispersed	Habitat importance map	0.0001
Carpet Snow-daisy	*Celmisia costiniana*	504638	Rare	Dispersed	Habitat importance map	0.0001
Lady's Mantle	*Alchemilla xanthochlora*	500170	Rare	Dispersed	Habitat importance map	0.0001
Rusty Daisy-bush	*Olearia brevipedunculata*	504782	Rare	Dispersed	Habitat importance map	0.0001
Alpine Sundew	*Drosera arcturi*	501101	Rare	Dispersed	Habitat importance map	0.0001
Silky Snow-daisy	*Celmisia sericophylla*	500693	Vulnerable	Dispersed	Habitat importance map	0.0001
Crimson Billy-buttons	*Craspedia crocata*	504645	Rare	Dispersed	Habitat importance map	0.0001
Mountain Daisy	*Brachyscome foliosa*	500479	Vulnerable	Dispersed	Habitat importance map	0.0001
Alpine Sunray	*Leucochrysum alpinum*	504582	Rare	Dispersed	Habitat importance map	0.0001
Snow Aciphyll	*Aciphylla glacialis*	500113	Rare	Dispersed	Habitat importance map	0.0001
Alpine Groundsel	*Senecio pectinatus var. major*	503122	Rare	Dispersed	Habitat importance map	0.0001
Alpine Bootlace Bush	*Pimelea axiflora subsp. alpina*	504828	Rare	Dispersed	Habitat importance map	0.0001
Sky Lily	*Herpolirion novae-zelandiae*	501658	Rare	Dispersed	Habitat importance map	0.0001
Alpine Bog Skink	*Pseudemoia pryodroma*	12992	Endangered	Dispersed	Habitat importance map	0.0001

Rock Poa	*Saxipoa saxicola*	502607	Vulnerable	Dispersed	Habitat importance map	0.0001
Sticky Fleabane	*Pappochroma nitidum*	501215	Rare	Dispersed	Habitat importance map	0.0001
Dusty Daisy-bush	*Olearia phlogopappa subsp. flavescens*	504780	Rare	Dispersed	Habitat importance map	0.0001
Short Sedge	*Carex canescens*	500633	Rare	Dispersed	Habitat importance map	0.0001
Victorian Buttercup	*Ranunculus victoriensis*	503961	Rare	Dispersed	Habitat importance map	0.0001
High-plain Podolepis	*Podolepis laciniata*	505305	Rare	Dispersed	Habitat importance map	0.0001
Alpine Blown-grass	*Lachnagrostis meionectes*	500156	Rare	Dispersed	Habitat importance map	0.0001
Spreading Bitter-cress	*Cardamine astoniae*	505025	Vulnerable	Dispersed	Habitat importance map	0.0001
Mountain Leafless Bossiaea	*Bossiaea bracteosa*	500432	Rare	Dispersed	Habitat importance map	0.0000
Broad-leaf Flower-rush	*Carpha nivicola*	500653	Rare	Dispersed	Habitat importance map	0.0000
Silver Snow-daisy	*Celmisia tomentella*	504637	Rare	Dispersed	Habitat importance map	0.0000
Alpine Marsh-marigold	*Psychrophila introloba*	500601	Rare	Dispersed	Habitat importance map	0.0000
White Billy-buttons	*Craspedia alba*	500856	Vulnerable	Dispersed	Habitat importance map	0.0000
Snow Wallaby-grass	*Rytidosperma nivicola*	500971	Rare	Dispersed	Habitat importance map	0.0000
Eichler's Buttercup	*Ranunculus eichlerianus*	502888	Rare	Dispersed	Habitat importance map	0.0000
Alpine Wattle	*Acacia alpina*	500009	Rare	Dispersed	Habitat importance map	0.0000
Alpine Stork's-bill	*Pelargonium helmsii*	502445	Vulnerable	Dispersed	Habitat importance map	0.0000
Broad-toothed Rat	*Mastacomys fuscus mordicus*	11438	Endangered	Dispersed	Habitat importance map	0.0000
Snow Coprosma	*Coprosma nivalis*	500820	Rare	Dispersed	Habitat importance map	0.0000
Gunn's Alpine Buttercup	*Ranunculus gunnianus*	502892	Rare	Dispersed	Habitat importance map	0.0000
Snowy Everlasting	*Coronidium waddelliae*	504588	Rare	Dispersed	Habitat importance map	0.0000
Mossy Knawel	*Scleranthus singuliflorus*	503064	Rare	Dispersed	Habitat importance map	0.0000
Orange Billy-buttons	*Craspedia aurantia var. aurantia*	504642	Rare	Dispersed	Habitat importance map	0.0000
Tussock Skink	*Pseudemoia pagenstecheri*	12993	Vulnerable	Dispersed	Habitat importance map	0.0000

Carpet Sedge	*Carex jackiana*	500644	Rare	Dispersed	Habitat importance map	0.0000
Mueller's Bent	*Agrostis muelleriana*	500157	Rare	Dispersed	Habitat importance map	0.0000
Alpine Buttons	*Leptorhynchos squamatus subsp. alpinus*	505611	Rare	Dispersed	Habitat importance map	0.0000
Mat Cudweed	*Euchiton traversii*	501474	Rare	Dispersed	Habitat importance map	0.0000
Snowfield Groundsel	*Senecio pinnatifolius var. alpinus*	505108	Rare	Dispersed	Habitat importance map	0.0000
Veined Plantain	*Plantago alpestris*	502548	Rare	Dispersed	Habitat importance map	0.0000
Alpine Crane's-bill	*Geranium brevicaule*	501433	Rare	Dispersed	Habitat importance map	0.0000
Alpine Triggerplant	*Stylidium montanum*	504722	Rare	Dispersed	Habitat importance map	0.0000
Tussock Woodrush	*Luzula alpestris*	502065	Rare	Dispersed	Habitat importance map	0.0000
Fringed Rice-flower	*Pimelea ligustrina subsp. ciliata*	504841	Rare	Dispersed	Habitat importance map	0.0000
Alpine Sedge	*Carex blakei*	500626	Rare	Dispersed	Habitat importance map	0.0000
Soft Crane's-bill	*Geranium potentilloides var. abditum*	505339	Rare	Dispersed	Habitat importance map	0.0000
Royal Grevillea	*Grevillea victoriae subsp. victoriae*	505486	Rare	Dispersed	Habitat importance map	0.0000
Dwarf Buttercup	*Ranunculus millanii*	502895	Rare	Dispersed	Habitat importance map	0.0000
Thick Bent-grass	*Deyeuxia crassiuscula*	501014	Rare	Dispersed	Habitat importance map	0.0000
Raleigh Sedge	*Carex raleighii*	500649	Rare	Dispersed	Habitat importance map	0.0000
Spinning Gum	*Eucalyptus perriniana*	501309	Rare	Dispersed	Habitat importance map	0.0000
Keeled Bent-grass	*Deyeuxia carinata*	501012	Rare	Dispersed	Habitat importance map	0.0000
Green Billy-buttons	*Craspedia aurantia var. jamesii*	504647	Rare	Dispersed	Habitat importance map	0.0000
Benambra Club-sedge	*Isolepis gaudichaudiana*	504676	Vulnerable	Dispersed	Habitat importance map	0.0000
Mountain Dandelion	*Taraxacum aristum*	503334	Rare	Dispersed	Habitat importance map	0.0000
Bald-seeded Willow-herb	*Epilobium curtisiae*	501177	Rare	Dispersed	Habitat importance map	0.0000
Squat Picris	*Picris squarrosa*	504827	Rare	Dispersed	Habitat importance map	0.0000
Alpine Boronia	*Boronia algida*	500419	Rare	Dispersed	Habitat importance map	0.0000

Mountain Phebalium	*Phebalium squamulosum subsp. ozothamnoides*	502488	Rare	Dispersed	Habitat importance map	0.0000
Sickle-leaf Rush	*Juncus falcatus subsp. falcatus*	501816	Rare	Dispersed	Habitat importance map	0.0000
Brittle Bladder-fern	*Cystopteris tasmanica*	500944	Rare	Dispersed	Habitat importance map	0.0000
Swamp Violet	*Viola caleyana*	503527	Rare	Dispersed	Habitat importance map	0.0000
Dark-flower Rush	*Juncus phaeanthus*	501832	Rare	Dispersed	Habitat importance map	0.0000
Native Wintercress	*Barbarea grayi*	500368	Vulnerable	Dispersed	Habitat importance map	0.0000
Fine-leaf Snow-grass	*Poa clivicola*	502585	Rare	Dispersed	Habitat importance map	0.0000
Long Podolepis	*Podolepis hieracioides*	502616	Rare	Dispersed	Habitat importance map	0.0000
Mountain Willow-herb	*Epilobium sarmentaceum*	501181	Rare	Dispersed	Habitat importance map	0.0000
Spreading Knawel	*Scleranthus fasciculatus*	503062	Rare	Dispersed	Habitat importance map	0.0000
Narrow-wing Daisy	*Brachyscome willisii*	504797	Rare	Dispersed	Habitat importance map	0.0000
Australian Anchor Plant	*Discaria pubescens*	501072	Rare	Dispersed	Habitat importance map	0.0000
Tufted Knawel	*Scleranthus diander*	503061	Rare	Dispersed	Habitat importance map	0.0000
Cliff Cudweed	*Euchiton umbricola*	501475	Rare	Dispersed	Habitat importance map	0.0000
White-throated Needletail	*Hirundapus caudacutus*	10334	Vulnerable	Dispersed	Habitat importance map	0.0000

Habitat group

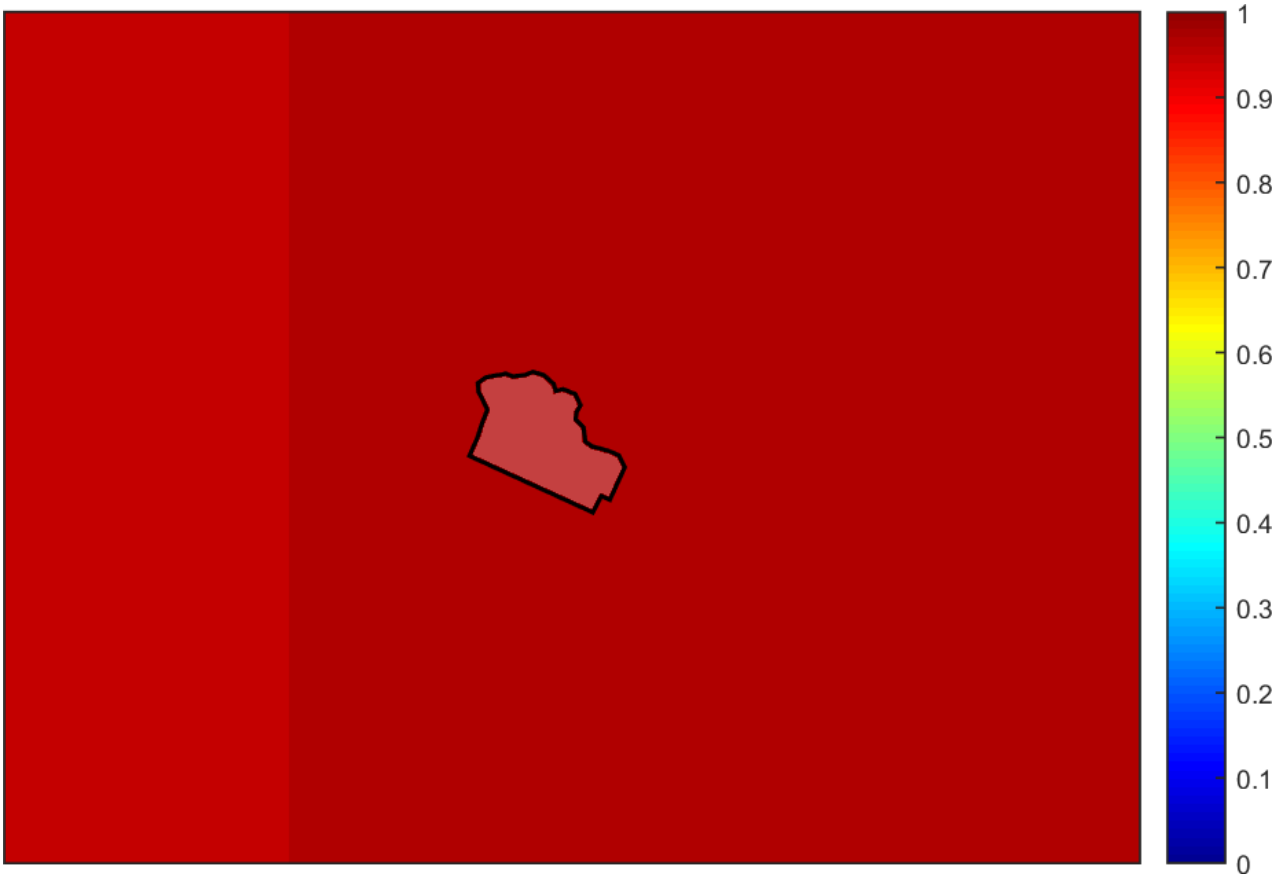
- Highly localised habitat means there is 2000 hectares or less mapped habitat for the species
- Dispersed habitat means there is more than 2000 hectares of mapped habitat for the species

Habitat impacted

- Habitat importance maps are the maps defined in the Guidelines that include all the mapped habitat for a rare or threatened species
- Top ranking maps are the maps defined in the Guidelines that depict the important areas of a dispersed species habitat, developed from the highest habitat importance scores in dispersed species habitat maps and selected VBA records
- Selected VBA records are areas in Victoria that represent a large population, roosting or breeding site etc.

Appendix 3 – Images of mapped native vegetation

2. Strategic biodiversity values map



3. Aerial photograph showing mapped native vegetation

4. Map of the property in context

Yellow boundaries denote areas of proposed native vegetation removal.

APPENDIX G THIRD PARTY OFFSET QUOTE FROM VEGETATION LINK

vegetationlink

Our reference: VLQ-6587-C

Your reference: Hot Plate Drive, Mount Hotham

18 March 2021

Steve Hamilton
Hamilton Environmental Services
hammys2345@bigpond.com

Dear Steve,

RE: Quotation for the supply of native vegetation credits

Vegetation Link is an accredited offset provider with the Department of Environment, Land, Water & Planning (DELWP). We offer a specialised brokerage service to enable permit holders and developers to identify suitable native vegetation credits to meet their planning permit offset requirements.

Based on the information you have provided, I understand you require the following native vegetation offset:

Offset type	Attributes	General habitat units (GHU)	Min. strategic biodiversity value (SBV)	Large trees
General	North East CMA	0.084	0.776	18

To meet your offset requirements, you can purchase native vegetation credits from a third party as per the options quoted below[1]. This quotation is valid for 14 days, subject to credit availability and landholder pricing.

Option 1: CTA pathway – offset site located in the Indigo Shire Council area (approx. 2-5 week turnaround from acceptance of quote)	
Cost of native vegetation credits – invoiced by DELWP	$28,800.00
Transaction fees – invoiced by Vegetation Link	$1,020.00
Total (ex. GST)	**$29,820.00**
Total (inc. GST)	**$32,802.00**

Option 2: TWO x CTA pathway – offset sites located in the Towong & Wangaratta Council areas (approx. 2-5 week turnaround from acceptance of quote)	
Cost of native vegetation credits – invoiced by DELWP	$21,450.00
Transaction fees for TWO (2) x contracts – invoiced by Vegetation Link	$1,810.00
Total (ex. GST)	**$23,260.00**
Total (inc. GST)	**$25,586.00**

[1] *Note that the transaction fee includes DELWP NVOR transfer and allocation fees and a Vegetation Link fee*

If you would like to purchase credits, let us know that you accept the quote and return the attached **purchaser details form** by email. If more than one quotation option is provided above, specify which option you choose.

Upon receipt of the form, we will begin the trade process. Further details of the process for credit allocation is in the FAQ below.

Should you have any queries, please do not hesitate to contact us on 1300 VEG LINK (1300 834 546) or email offsets@vegetationlink.com.au.

Sincerely,

Lisa Gormley

Biodiversity Offset Broker

FAQs

What is a third party offset?

A third party offset is an offset site owned by another landowner who manages and protects native vegetation on their land. Landowners who establish these offset sites are required to:

- Enter into a Landowner Agreement for the specified offset site. A landowner agreement is in perpetuity and is binding upon the current and future landowners of the site. It permanently restricts use of the site for many purposes.
- Implement a detailed 10-year Management Plan endorsed by the DELWP Native Vegetation Offset Register to manage and improve the biodiversity values of the site.

How is the price of native vegetation offset credit (GHUs, GBEUs etc.) determined?

Landowners who own offset sites set their own price for native vegetation credits. They determine the price based on numerous factors. This includes but not limited to site establishment, the cost to manage the site in perpetuity (e.g., maintain fencing, control pest species), foregone use cost, and administrative costs. Depending on how the site is registered, the credit fee may be paid to either DELWP or directly to the landowner.

Further information about the work some of our landowners are doing can be found on the Vegetation Link website.

What is the process after I accept the quote?

After you accept the quote and return the purchaser table, the following steps will be undertaken:

1. We will set up a contract between the parties involved and send the contract out for signing by all parties.
2. Once the contract is signed by all parties, invoices will be issued for the fees listed in the quotation. We will send you two invoices, one for our transaction fee invoiced by Vegetation Link and one for the credit fee, usually to be paid to DELWP or the landowner. We recommend providing remittances for your payments.
3. Once payments are received, Vegetation Link will send you an allocated credit extract from the Native Vegetation Offset Register and your executed contract as evidence that you have purchased the offset.

How long will the process take? When will I get my credits?

Generally the process from acceptance to having evidence of allocated credits takes between 2-4 weeks. This is dependent on a range of factors including the type of land, landowner and contract types and organisational workflows. We work as quickly as possible to get you within this time period.

We note that you cannot remove vegetation until you have been given permission by the Responsible Authority (usually the council that has issued your permit).

What happens if I don't have a permit yet?

When people are buying credits before a permit is issued, the following three options are most common:

4. You can pay for the offsets before the planning permit is available, and then the offsets are allocated to the permit when it is available. This will incur an additional $50 fee from DELWP. When considering this option, it is important to realise that your estimated offset requirements may be different than the actual permit requirements.
5. You can wait for the planning permit to be approved first and then request a quote to meet the requirements in your permit. Should credits be available, you can then start the offset purchase process. We then use the planning permit number for allocating the credits. Allocating credits to the permit is evidence that you have purchased your offset.
6. You can request a quote to confirm availability and to get an idea of the cost of offsetting before you apply for a permit. Once you receive the planning permit you can request an updated quote. It is at this point that you can then go through the offset purchase process.

We cannot guarantee credit availability until a) contracts are executed, or b) credits have been held via a pending trade lodged with DELWP Native Vegetation Offset Register.

We cannot guarantee price until a) a quote has been accepted within 14 days, and b) a Credit Trading Agreement is signed within 21 days, and c) the invoice for the credits is paid within 28 days of the date the invoice is issued.

If I sign the contract, does that mean I MUST pay for the credits?

Yes, you have entered into a contract agreeing to pay for the offset credits therein and are required to pay for those credits. The credits must be paid for within 28 days of the date of the invoice.

Can you hold the credits for me, as I want to pay later?

We are unable to hold credits for later payment. Please also see 'What happens if I don't have a permit yet?' above.

For further information, see our website or the DELWP website.