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Falls to Hotham Alpine Crossing

Environmental Assessment Report

October 2025

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Cover image: Westons Hut

Inside cover image: View from Cope Hut Overnight Node

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1 Introduction

The proposed Falls to Hotham Alpine Crossing (FHAC) is a four-day/three-night hiking experience through Victoria's Alpine National Park, between Falls Creek and Mount Hotham. This project will involve re-defining the existing route between Falls Creek and Mount Hotham, to connect people with some of the region's most outstanding landscape features, including Victoria's second highest peak, Mount Feathertop. Trail upgrades and new trail infrastructure will be required to improve the visitor experience and sustainability of trails on this route, and three Overnight Nodes will be established to support hikers along the FHAC. The Overnight Nodes will provide hikers with new and upgraded camping infrastructure, including elevated camping platforms, communal shelter and gathering spaces, and amenities. The re-defined FHAC offers hikers a wider range of experience options, with opportunities to vary or expand their route and connect to surrounding alpine townships.

This report provides a summary of the environmental values within the project area and broader landscape and provides an assessment of the potential environmental impacts of the project.

1.1 Project background

The FHAC project aims to simultaneously create a unique and iconic walking experience, support people with varying hiking ability and experience, and to strengthen the regional nature-based tourism sector. The project is supported by investment from the Victoria Government to improve the attraction of the Victorian High Country and support the region's economic and social recovery from recent catastrophic events, through the nature-based visitor economy.

Visitors can currently walk independently between Falls Creek and Mount Hotham along the existing Falls to Hotham route which makes use of the current track network within the Alpine National Park. However, the current route does not feature some of the area's most iconic landmarks. The existing route is a 37-km, three-day/two-night hike, predominantly along the Australian Alps Walking Trail, starting at the Heathy Spur Carpark at Falls Creek and ending at the Mount Loch Carpark at Mount Hotham Alpine Resort. Current users of this walk are a mix of day walkers and overnight adventurers seeking a self-sufficient experience. The tent-based accommodation attracts experienced walkers who are fully independent and outdoor educational groups.

In 2016, Parks Victoria received funding to develop a Master Plan to improve the walking experience between Falls Creek and Mount Hotham. The Master Plan was completed and released to the public in 2018, and in November 2020, following the Black Summer bushfires and the onset of the COVID-19 pandemic, the Victorian Government announced \$15 million of funding for implementation of the new FHAC, as an economic stimulus initiative.

1.1.1 FHAC Master Plan

The FHAC Master Plan (FHAC MP) was developed in 2018 to guide the future development of the experience (McGregor Coxall 2018). The master plan articulated a new vision and framework to convert the existing FHAC into a world-class hiking experience that enriches the current walking offerings, drives increased visitation to the Victorian High Country, and encourages overnight stays, to benefit the regional economy.

The FHAC MP was developed in partnership with Tourism North East, Regional Development Victoria, Visit Victoria, and the Victorian Department of Economic Development, Jobs, Transport and Resources. The FHAC MP identified an alternative FHAC route that captured the quintessential elements of the alpine region, along with accommodation offerings that would make walking in the Victorian Alps accessible to a wider range of visitors. The FHAC MP also identified opportunities for walkers to extend their trip or modify their journey, through the surrounding network of trails, to connect to the surrounding townships of Harrietville to the west or Dinner Plain to the south. These communities, along with Mount Beauty and Bogong Village to the north, accessible by vehicle, were identified as being well-positioned as nature-tourism hubs, to offer supporting services or tour-operations (McGregor Coxall 2018).

The FHAC MP originally proposed:

- A 57-km, five-day/four-night walking experience on a realigned and expanded route to incorporate some of the region's most iconic features, including the Diamantina Spur and The Razorback, with an optional ascent to the summit of Mount Feathertop.
- Four new Overnight Nodes along the new route, separate from existing dispersed camping areas, providing both camping areas and roofed accommodation, to improve the diversity of offerings and to meet the needs of an expanded set of walker groups.

Each of the new overnight nodes was proposed to include both Hiker Camps and Operated Huts. The proposed new Hiker Camps were to offer environmentally sound, and more convenient, tent-based camping on elevated platforms, and new shelters to enable weather-protected social engagement after the day's walk. Operated Huts (i.e. roofed accommodation) were tailored to less experienced walkers, and those who may not wish, or be able, to carry full packs and equipment. The operated huts were also intended to provide opportunities for guided tour operators and education groups to provide a range of curated experiences and tourism products.

1.1.2 FHAC Business Case

The FHAC Business Case (Business Case) was completed in 2022, building on the work undertaken for the FHAC MP, to assess the merit of the financial investment in the project, and to develop a plan for implementation (GHD 2022). The Business Case, developed in accordance with the guidelines set by the Victorian Department of Treasury and Finance, identified the problems to be addressed, outlined expected benefits and provided justification for the investment. Detailed cost estimates and financial analysis were included, along with assessments of feasibility and deliverability. It also included a review of demand for multi-day hiking experiences, supported by an assessment of similar products nationally and internationally to provide insight into the optimum level of investment and target market (GHD 2022).

The Business Case assessed three options:

1. Base case (business as usual / do nothing)
2. Project option 1 (investment in trail infrastructure, camping platforms and supporting infrastructure)
3. Project option 2 (investment in trail infrastructure, camping platforms, roofed accommodation / huts and supporting infrastructure).

The Business Case identified 'Project option 2' as the option that would deliver the greatest benefits for enhancing visitor experience, increasing accessibility of the walking experience and economic benefits for the region (GHD 2022).

1.1.3 Planning and implementation

The FHAC MP and Business Case have provided the basis for the planning and assessment of the FHAC project. However, planning for the project has also been subject to detailed investigations, including environmental and cultural heritage assessments, as well as other site-based considerations. As planning has progressed, the project scope has been amended on the basis of:

- Environmental surveys and assessments that identified areas of high environmental sensitivity within the original scope, and the likelihood of significant environmental impacts.
- Cultural heritage assessments that identified areas of high Aboriginal Cultural Heritage value.
- Community consultation and feedback on the project scope proposed in the FHAC MP and Business Case.
- Cost plans prepared during the concept design phase, updating estimates from the Business Case that were based on the costs of similar projects delivered in 2017, factoring in:
 - Increased material and labour costs.
 - Increased structural and material requirements to meet the conditions of the alpine environment.

Options for the FHAC were re-assessed using a Multi-criteria Analysis (see Section 3.10). The proposed scope for the FHAC now aligns more closely with 'Project option 1' identified in the Business Case. An overview of the currently proposed FHAC project is provided in Section 1.2, below.

1.2 Project overview

The proposed FHAC project scope now includes:

- A 52-km revised FHAC route on existing trails, incorporating Mount Feathertop, with track upgrades and new track infrastructure proposed along priority sections of the trail along with wayfinding signage. Track works are aimed at improving track condition, resilience, and visitor access, and will include:
 - Boardwalks
 - Steps and stepping stones
 - Stone pitching
 - Track reformation and re-surfacing
 - Drainage works
- Establishment of hiker camps at three Overnight Nodes — Cope Hut, Westons Hut and High Knob — to provide a consistent offering and end-to-end product. Upgraded and/or new camping facilities will be provided at each Overnight Node. The proposal includes:
 - Camping platforms to provide a stable and comfortable surface for campers to pitch tents. A total of eight elevated camping platforms will be provided at each Overnight Node, which includes:
 - Installation of three new timber-decked camping platforms at Cope Hut and replacement of five-existing camping platforms, to enhance comfort and amenity.
 - Installation of eight new timber-decked camping platforms at Westons Hut.
 - Installation of eight new timber-decked camping platforms at High Knob.
 - A formal communal gathering space at each Overnight Node, comprising of a gravelled area with boulder seating to provide outdoor gathering spaces for campers to socialise and enjoy the outdoors.
 - An enclosed shelter at High Knob, modelled on the historic Federation Hut, to offer hikers an indoor gathering space for hikers to share meals, connect and shelter from weather.
 - Toilet facilities at Westons Hut and High Knob (N.B. There are existing toilet facilities at Cope Hut).
 - Formal pathways to connect camping platforms, communal areas and amenities to existing trails to improve accessibility and reduce impacts within the hiker camps from trampling.
- Conservation works on High Country Huts along the FHAC, to maintain heritage values at:
 - Wallace Hut
 - Cope Hut
 - Cope Saddle Hut
 - Langford Gap Hut
 - Westons Hut
 - Blairs Hut

In addition, Dibbins Hut, Pretty Valley Hut, Tawonga Hut and Ryders Yards may be considered for restoration works; although not located along the FHAC, these huts are closely linked to the broader visitor experience on the Bogong High Plains. Conservation works will be funded by the FHAC but will be undertaken in collaboration with the Victorian High Country Huts Association (VHCHA).

Further detail on the proposed works is provided in Section 5.

2 Project location

The FHAC is located in the high-country of north-eastern Victoria, approximately 380 km north-east of Melbourne. The FHAC connects the two Alpine Resorts of Falls Creek and Mount Hotham, utilising the existing track network through the Alpine National Park, and can be easily accessed from the towns of Harrietville to the west, Mount Beauty to the north, and Omeo via Dinner Plain to the south.

2.1 Landscape context

The Victorian high-country forms part of the Great Dividing Range that extends from western Victoria (Grampians) along the east coast of mainland Australia to northern Queensland, separating streams draining north to the Murray Darling Basin, from streams draining south to the sea. Formed by an uplifting of the earth's crust, the Great Dividing Range forms a series of mountain ranges, plateaus, escarpments and gently undulating slopes, although for much of its length there is not a prominent and distinct mountain range. A dendritic pattern of narrow ridges and valleys characterise much of the deeply dissected landscape on either side of the Great Dividing Range (VRO 2025). The Victorian Alps in the north-east of Victoria constitute some of the highest-altitude sections of the Great Dividing Range (together with the alpine regions of New South Wales and the Australian Capital Territory), characterised by mountain peaks, extensive high-elevation plateaus (commonly referred to as 'high plains') and escarpments.

Alpine environments are unique and naturally highly restricted in Australia, where the average elevation is only 330 m above sea level (ASL); sub-alpine and alpine environments (>1500 m ASL) make up just 0.08% of the country (Geoscience Australia 2025). These areas, therefore, support some of the rarest ecosystems in Australia and a unique assemblage of cold-climate specialist flora and fauna species that have evolved unique physiological adaptations and are naturally restricted or endemic to alpine and sub-alpine environments.

The FHAC is located entirely within the Victorian Alps Bioregion and the majority of the area is located within the Alpine National Park, the largest of Victoria's alpine parks and reserves. The Alpine National Park protects some of Victoria's most spectacular and intact natural country, nationally listed spectacular and distinctive landscapes and geology, and a diverse range of flora and fauna, including many threatened species and communities (Parks Victoria 2016). It is one of 11 National Parks across Victoria, New South Wales and the Australian Capital Territory, which form part of the Australian Alps National Parks and Reserves National Heritage Place and were included on the National Heritage List of Australia in 2008 under the *Environment Protection and Biodiversity Conservation (EPBC) Act 1999*.

The proposed FHAC traverses the high-elevation plateaus and slopes of the Bogong High Plains, ranging from c.1600 m to 1800 m ASL, to the steeply intersected gullies and high, exposed ridgelines west of the Bogong High Plains to Mount Hotham. It incorporates Mount Feathertop – Victoria's second highest peak at 1922 m ASL, which is located to the north of the Great Divide, on the ridge between the Kiewa and Ovens Rivers and Mount Buller (VRO 2025). The FHAC passes through largely intact expanses of native vegetation from treeless alpine communities, through to sub-alpine communities, and descends through montane areas. However, the area is intersected by an extensive track network, including sealed roads (Bogong High Plains Road and the Great Alpine Road), gravel management vehicle tracks and formal and informal walking tracks. Numerous waterways also intersect the proposed FHAC, ranging from small drainage lines and headwaters across the Bogong High Plains, to aqueducts, creeks and rivers such as the Diamantina River along the West Kiewa Logging Road.

The Alpine National Park is largely surrounded by Crown land, which primarily includes State Forest but also includes other parks and reserves, such as Historic Areas and Wilderness Parks. The Victorian alpine parks and reserves, and surrounding State Forest offer a diverse range of destinations and recreational activities that are supported by a wide network of access roads and tracks, facilities and services. These include, walking, camping, horse-riding and snow sports, as well as short journeys from local townships and Alpine Resorts that make significant contributions to the local and broader Victorian economy (Parks Victoria 2016). The Alpine National Park and surrounding reserves also protect large expanses of remote and largely untracked environments that also provide the opportunity for challenging and self-reliant recreational activities, such as bushwalking and camping.

2.2 Falls to Hotham Alpine Crossing project area

The proposed FHAC product starts at Lakeside Car Park, on the eastern side of the Rocky Valley Dam, at Falls Creek and ends at the Mount Loch Car Park at the Mount Hotham Alpine Resort. The re-aligned FHAC is designed as a three-night/four-day walk with three Overnight Nodes along the route. The proposed route (Figure 1) is described below.

Day 1 — Falls Creek to Cope Hut (16.3 km): The FHAC commences at the Falls Creek Alpine Resort Lakeside carpark. Walkers can follow an informal an unnamed track below the northern wall of Rocky Valley Dam, before joining Heathy Spur Track for 5.2 km. The FHAC trail then continues south along the Big River Firetrail and Australian Alps Walking Track, and then joins the Langford East Aqueduct Road, skirting the edge of the Bogong High Plains Plateau and passing Wallace’s Hut. At Langford Gap Hut, the trail continues south-west along Langford West Aqueduct Road, joining with Cope Hut Track to the Cope Hut Overnight Node.

Day 2 — Cope Hut to Westons Hut (11.3 km): The second day takes walkers across the Bogong High Plains, characterised by gentle slopes and unique alpine ecosystems. From Cope Hut, the FHAC continues west along Cope Hut Track, crossing Cope Creek, and at the intersection with Bogong High Plains Road, continues south-west along the Australian Alps Walking Track for 9.3 km, passing Cope Saddle Hut. At the well-known marker, Pole 333, the trail continues west on Westons Spur Track, crossing a basalt cap and escarpment to Westons Hut Overnight Node.

Day 3 — Westons Hut to High Knob (8.5 km): From Westons Hut, the FHAC trail descends into the Kiewa West Valley along Westons Spur Track until it reaches the West Kiewa Logging Road. The trail then continues north along the West Kiewa Logging Road, passing Blair’s Hut at the bottom of the valley to Diamantina Horse Yards on the east side of the Kiewa River West Branch. The trail then continues west, ascending the Diamantina Spur Walking Track which has steep slopes with numerous sections of rock scrambling. The track then traverses the rounded ridgeline at the top of the spur, with steep slopes dropping away on both the north and south sides before reaching High Knob Overnight Node.

Day 4 — High Knob to Mount Hotham (15.8 km): The last day of the FHAC takes walkers to Mount Hotham with an optional ascent to Mount Feathertop. From High Knob, the Diamantina Spur Walking Track reaches the Razorback. Walkers can choose to continue north to ascend Razorback Track to Mount Feathertop (5.2 km return). Walkers can also continue south along Razorback Track towards Mount Hotham (10.6 km), joining the Diamantina Link Track at the intersection with the Great Alpine Road to reach the Mount Loch Carpark at the Mount Hotham Resort.

2.2.1 Assessment areas

Assessments for the FHAC have been undertaken on the proposed FHAC trail alignment and Overnight Nodes as well as on a number of other areas investigated as part of the FHAC Master Plan, which included potential alternative trail alignments and Overnight Nodes. These areas are referred to throughout the report as follows:

- **Assessment area:** The assessment area encompasses all areas that have been subject to environmental and other assessments, including all areas in the FHAC MP, additional alternative Overnight Node locations and alternative trail alignments (Figure 2) identified during the planning and assessment stages (see Sections 2.2.3 and 2.2.5), and associated buffers.
- **Project area:** The project area includes only those areas that form part of the currently proposed FHAC trail alignment and Overnight Node offering (Figure 1). The project area is described in more detail in Sections 2.2.2 and 2.2.4, below.
- **Works area:** The works area includes all areas within the project area where works will be undertaken as part of the proposed FHAC, including main works areas (Overnight Nodes and trail treatment areas), construction laydown areas and construction access.

A more detailed description of the FHAC Trail and Overnight Nodes are provided in the following sections, including the currently proposed trail alignment and Overnight Nodes, and alternative trails and node locations that were assessed as part of planning for the FHAC.

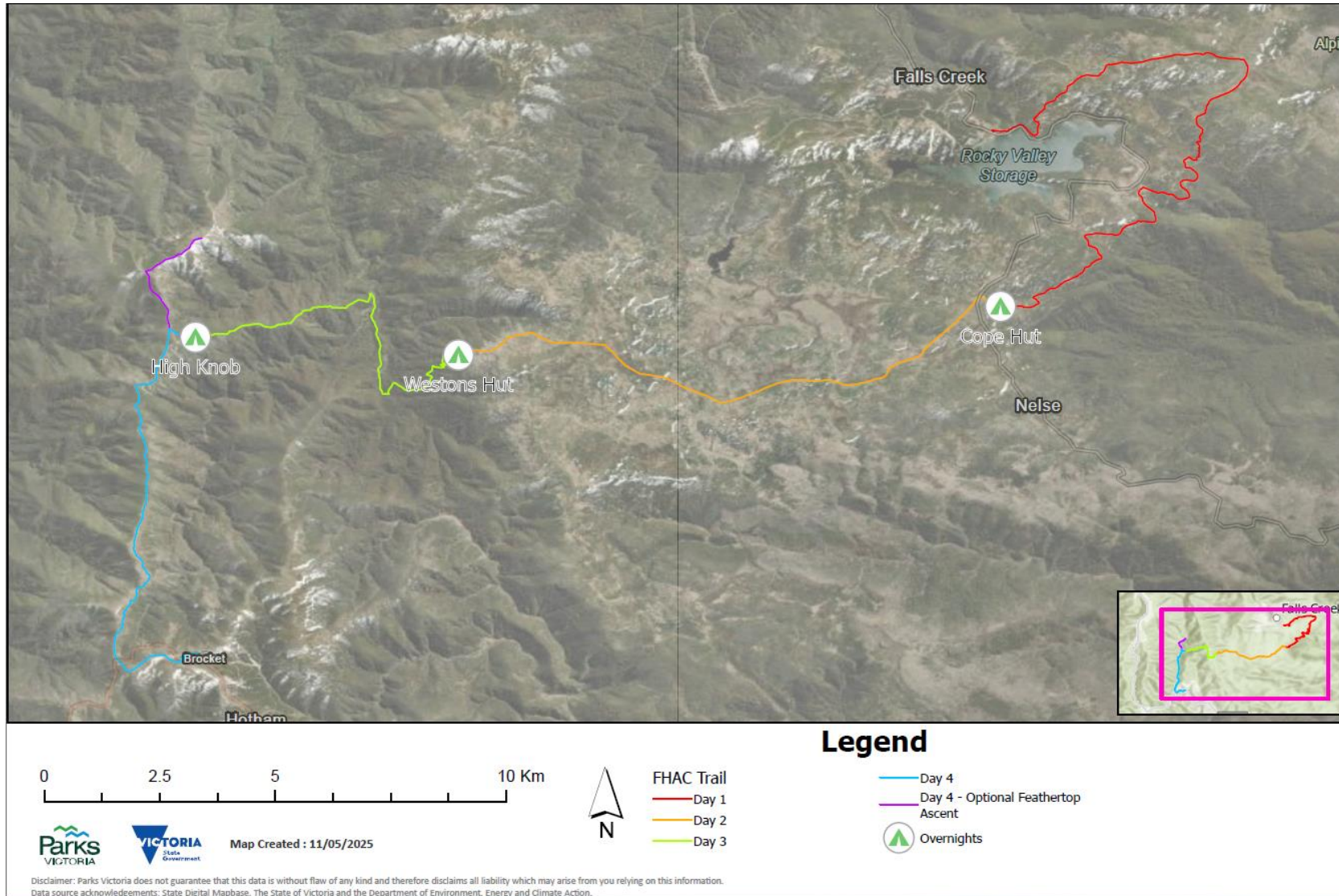


Figure 1 Proposed Falls to Hotham Alpine Crossing trail alignment and Overnight Nodes

2.2.2 Proposed trail alignment

The proposed re-aligned FHAC trail alignment has been divided into sections to assist with planning, assessment and delivery of this project (see also Section 3.1). Abzeco (2021, 2025) identified 18 Trail Sections (plus four sub-sections) across the FHAC assessment area (Figure 2), based on track type, location/altitude and native vegetation types. Some of these trail sections (and/or sub-sections) have been removed from the current scope. Trail Sections are given in Table 1; trail sections that are no longer in scope are listed in Section 2.2.3.

Table 1 FHAC Trail sections within the assessment area

Trail Section	Track name	Track type	Distance (km)	Track width (m)
1a	Unnamed track below Rocky Valley Dam wall	Informal track	0.60	n/a
2	Heathy Spur Track	Walking track	5.23	0.4
3	Big River Firetrail	Vehicle track	0.95	3.0
4	Australian Alps Walking Track	Walking track	1.88	0.45
5	Langford East Aqueduct Road	Vehicle track	7.01	3.0
	Langford West Aqueduct Road	Vehicle track		
	Cope Hut Track	Vehicle track	1.00	3.0
6	Australian Alps Walking Track	Walking track	6.38	0.4
7	Australian Alps Walking Track. NB Section 7 north of Westons Spur Track is cancelled.	Walking track	3.09	0.3
8	Cancelled — see Section 2.2.2	Vehicle track	0.81	3.0
9	Cancelled — see Section 2.2.2	Walking track	1.46	0.35
10	Cancelled — see Section 2.2.2	New	2.55	n/a
11	Westons Spur Track	Walking track	3.00	0.3 – 0.4
12	Westons Spur Track	Walking track	1.54	0.4
	NB: Trail Section 12 south of Weston's Spur Track to Red Robin Battery has been removed.			
	West Kiewa Logging Road	Vehicle track	3.71	4.0
	Diamantina Spur Walking Track	Walking track	0.83	0.3
13	Diamantina Spur Walking Track	Walking track	4.13	0.3
14	Razorback North Walking Track to Mount Feathertop	Walking track	1.31	0.5
15	Razorback Track, Razorback North	Walking track	9.12	0.4
16	Diamantina Link Track	Walking track	2.43	0.3
17	Cancelled — see Section 2.2.2	Vehicle track	3.27	3.0
18	Cancelled — see Section 2.2.2	Walking	8.99	0.5

Existing trail condition

The FHAC trail alignment utilises existing walking tracks and 4WD tracks that are of variable width and condition. Walking tracks along the FHAC are generally narrow (0.3 – 0.5 m wide, occasionally up to 0.7 m wide) and usually formed from bare earth. Poor drainage, and ongoing visitor impacts have degraded the condition of the track and surrounding habitat in many areas. Various treatments have previously been installed in parts to improve the condition of the trails, including basalt stepping-stones, river pebbles or gravel to manage wetter sections, as well as rubber matting and logs that have been used to improve the resilience of tracks. These treatments have had varying success; in some cases, erosion has made it difficult for walkers to traverse the tracks, despite the treatments, particularly where basalt stones or logs have become dislodged. Off-track walking also remains an issue in some areas and has resulted in track braiding. Crossings of waterways and wetland areas are often at-grade, but steel bridge waterway crossings have been installed in some places. In some steep and wet areas of track with no surface treatments, track edges have become degraded by horses and off-track pedestrian traffic. Trampling has led to vegetation damage and loss resulting in bare ground, soil compaction, and erosion forming deep channels, particularly where the track intersects damp areas or wetter vegetation communities (see Abzeco 2025). Trail sections 2, 6 – 9 and 11 are generally in the poorest condition.

Vehicle tracks are unsealed 4WD tracks, up to 3 m wide, and while vegetation often regrows in the middle of the track (between tyre tracks), they are managed and maintained for vehicle access. Vehicle tracks are generally in good condition.

2.2.3 Alternative trail alignments

The majority of the FHAC follows existing walking trails and Management Vehicle tracks. Consideration of alternative alignments has, therefore, been limited. However, a number of new and connecting tracks within the existing track network, were considered. These were intended to provide alternate connecting routes and loop track options between different sections of track and nodes. Consideration was also given to tracks requiring widening and/or resurfacing for emergency access. The tracks that have been removed from the proposed FHAC include:

- **Section 1 (Rocky Valley Dam wall):** The start of the FHAC initially followed Bogong High Plains Road, along the northern Rocky Valley Dam wall, from the maintenance hut to the start of Heathy Spur Track. This section has been replaced with 1a to remove the need for pedestrians to walk along the road.
- **Section 8 (Fainter Firetrail):** The Fainter Firetrail 4WD track extending north from Section 7 to Tawonga Hut.
- **Section 9 (Fainter Firetrail):** Proposed loop extending west from Tawonga Hut along the Fainter Firetrail 4WD track to alternative Overnight Node '2 Preferred' and continuing west along a proposed new walking track.
- **Section 10 (unnamed):** New track proposed for construction, approximately 2.5 km long, along the ridgeline from Section 9 west of Tawonga Huts to Westons Spur Track (Section 11), bringing walkers closer to the dramatic drop into the Kiewa Valley. Much of this section could not be accessed on-ground.
- **Section 10a (Valley Views Track):** Proposed reopening of a previously constructed track between the Fainter Firetrail and Westons Track, to provide a shorter route link or turnback, bypassing Tawonga Huts.
- **Section 12a (unnamed):** New loop track at the lower section of the Diamantina Spur, proposed to provide a more accessible Grade 4 Trail connection, which circumnavigated rocky terrain, and to help reduce erosion on the existing track section. This section could not be assessed on-ground due to inaccessible terrain.
- **Section 12b (unnamed):** New loop track proposed for the northern side of the Diamantina River to minimise walking time on the West Kiewa Logging Road and provide an improved walking experience. This section could not be assessed on-ground due to inaccessible terrain.
- **Section 17 (Fainter Fire Trail to Pretty Valley Pondage):** The Fainter Firetrail between Tawonga and the Pretty Valley Pondage. This section was an existing 4WD track proposed for upgrade and widening to support emergency access and egress associated with roofed accommodation proposed in the FHAC Master Plan.
- **Section 18 (Bungalow Spur):** Bungalow Spur from Federation Hut to Harrierville. This section was an existing walking track, proposed for upgrade and widening to support emergency access and egress associated with roofed accommodation proposed in the FHAC Master Plan.

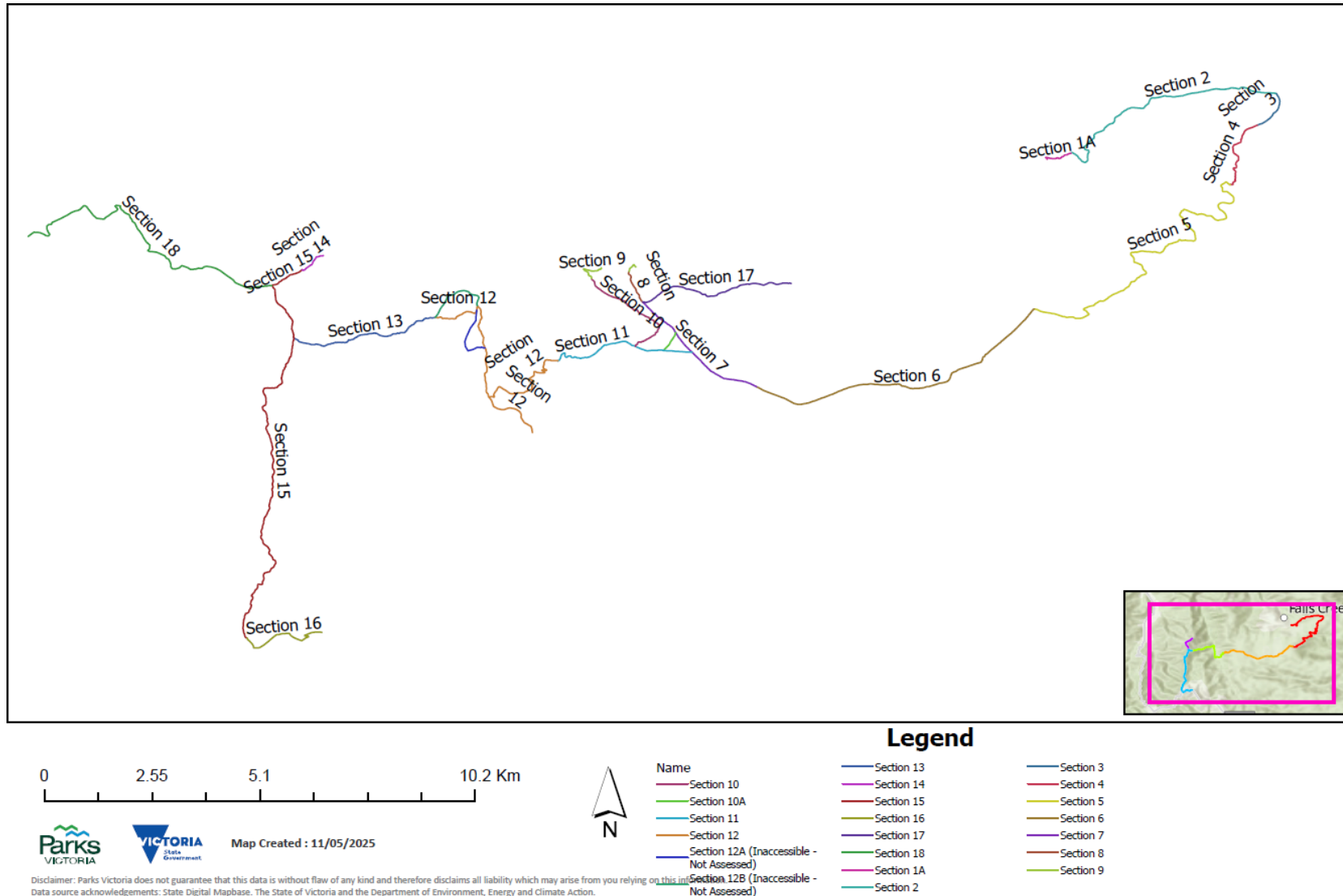


Figure 2 Falls to Hotham Alpine Crossing assessment area Trail Sections

2.2.4 Overnight nodes

Three Overnight Nodes are proposed as part of the upgraded FHAC. The FHAC Overnight Nodes will make use of existing camping areas, strategically located along the alignment, where existing infrastructure can be upgraded and additional facilities installed to provide an end-to-end hiking experience.

Cope Hut

Cope Hut Overnight Node is approximately 16 km from the start of the proposed FHAC at Lakeside Carpark (along Trail Section 5), located off Cope Hut Track, approximately 400 m east from the Bogong High Plains Road. The area is already used for camping and offers spectacular views across the high plains, on a clear day as far as Benambra on the other side of the Great Dividing Range. The historic Cope Hut, built by the Ski Club of Victoria in 1929, is located nearby, approximately 65 m west from the proposed Overnight Node along Cope Hut Track.

Existing facilities at Cope Hut include five camping platforms and a toilet that were constructed in the early-2000s. The existing camping platforms feature Fibre Reinforced Polymer (FRP) mesh decking. Over the years, feedback from users has indicated that the mesh platforms allow wind to penetrate from beneath, making them uncomfortably cold; the existing platforms will, therefore, be replaced as part of this project. The toilet is a sealed-vault system that is periodically pumped-out and sewage is transported by truck to a treatment plant. The Cope Hut area is also used for dispersed camping (i.e., camping outside of designated campsites). Dispersed camping has led to trampling and degradation of vegetation in large parts of this node; these areas at Cope Hut have been identified for new camping facilities (camping platforms, gathering area, and internal paths).

Westons Hut

Westons Hut Overnight Node is located on Lake Spur, approximately 2.5 km west of the well-known marker pole 333 and 1.5 km from the Kiewa West Logging Road. This Overnight Node is an approximately 11-km hike across the Bogong High Plains from Cope Hut, located midway through a spur (Trail Section 11). Weston's Hut camping area is within a natural clearing providing a tranquil setting for campers and featuring spectacular view of Mount Feathertop. Westons Hut is located here — the original Westons Hut was constructed in 1932 but has been reconstructed twice following fire; rebuilt in 1939 it was destroyed by fire again in 2007. The hut that stands today was rebuilt in 2010 through the efforts of dedicated volunteers.

This location currently supports camping but no visitor facilities, other than the hut. To enhance the visitor experience, Parks Victoria is proposing to construct timber-decked camping platforms (to provide additional space for campers and provide a comfortable and stable surface to pitch tents), toilet facilities, a communal gathering space and formal pathways.

High Knob

From Westons Hut, walkers will embark on an 8.5-km hike down the West Kiewa Valley, before ascending the challenging Diamantina Spur to reach the High Knob overnight location. This area is currently used for dispersed camping and is located within a natural clearing surrounded by Snow Gums.

High Knob currently lacks visitor infrastructure. However, given the difficulty of the Diamantina Spur, which constitutes the toughest section of the FHAC, High Knob is an ideal location to rest before continuing on to Mount Feathertop. Since the area offers no facilities or shelter from the elements, Parks Victoria proposes to construct eight timber-decked camping platforms, toilet facilities, a shelter, communal gathering space and formal pathways.

2.2.5 Alternative overnight node locations

A total of 19 potential alternative Overnight Node locations have been considered during the planning and assessment of the FHAC project, which were removed from scope for various reasons (Table 2). Thirteen of these are locations that were identified in the FHAC MP due to their proximity to areas of natural beauty or cultural interest, such as mountain peaks, river valleys or High Country Huts, and intervening hiking distances. The remaining alternative locations were identified iteratively during the planning and assessment process. All options in Table 2 have since

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been removed due to the presence of sensitive and/or highly restricted environmental or cultural heritage values, and the potential for significant impacts, or due to potential safety risk to visitors. Appendix 1 shows the locations of these nodes and provides a summary of values and constraints identified at alternative node locations and outcomes.

Table 2 Alternative Overnight Node locations investigated for the proposed FHAC

Node	Proposed facility [^]	Location	Figure	Assessed area (ha)
<i>Bogong High Plains area</i>				
1A	Hiker Camps	Cope Hut Track , 180 m east of the existing Cope Hut dispersed camping area.	Figure 30	1.5
1B & E	Hiker Camps / Operated Huts	Langford West Aqueduct Road , 150 m east of the intersection with Cope Hut Track.	Figure 30	10.6
1C	Hiker Camps	Langford West Aqueduct Road , 150 m south of the intersection with Wallace's Track.	Figure 31	2.4
1D	Operated Huts	Langford West Aqueduct Road , 100 m north of the intersection with Wallace's Track.	Figure 31	4.9
1F	Operated Huts / Hiker Camps	Langford West Aqueduct Road , 1.7 km south of the Bogong High Plains Road intersection.	Figure 32	3.6
1G	Operated Huts / Hiker Camps	Langford West Aqueduct Road , 1 km south of the Bogong High Plains Road intersection.	Figure 32	2.1
1 Preferred	Undesignated	Langford West Aqueduct Road , 1 km east of Bogong High Plains Road.	Figure 33	0.8
1 Alternate	Undesignated	Langford West Aqueduct Road , 700 m east of Bogong High Plains Road.	Figure 33	2.1
<i>Tawonga Huts area</i>				
2A	Hiker Camps	Tawonga Hut Creek , 140 m east of the Fainter Fire Trail.	Figure 34	1.5
2B, B (2)	Operated Huts	Fainter Fire Trail to Mt Jaithmathang , 350 m west of the existing Tawonga Huts camping area.	Figure 34	2.9
2C	Operated Huts	Fainter Fire Trail , 250 m north of the existing Tawonga Huts camping area.	Figure 34	1.4
2D	Operated Huts / Hiker Camps	Fainter Fire Trail , 300 m west of the existing Tawonga Huts camping area.	Figure 34	1.5
2 Preferred	Undesignated	New track , 200 m west of Tawonga Hut and Fainter Firetrail.	Figure 35	2.8
2 Alternate	Undesignated	Fainter Fire Trail , 270 m north-east of Tawonga Hut.	Figure 35	2.0
<i>West Kiewa Valley area</i>				
Red Robin	Operated Huts	Dungey Track , at the intersection with the West Kiewa Logging Road.	Figure 36	0.9
Diamantina	Hiker Camp	Diamantina River , 300m upstream of the existing Diamantina Horse Yards camping area, and 250 m west of the West Kiewa Logging Road.	Figure 37	1.7
Blairs Hut	Hiker Camps	West Kiewa Logging Road , south of Blairs Hut on the eastern side of the Kiewa River.	Figure 38	2.2
<i>High Knob area</i>				
High Knob	Hiker Camps	Diamantina Spur Walking Track (northern side) approx. 350 m east of the intersection with Razorback Track.	Figure 38	1.0
High Knob	Operated Huts	Diamantina Spur Walking Track (southern side) approx. 450 m east of the intersection with Razorback Track.	Figure 38	1.1

[^] As proposed in the FHAC Master Plan (McGregor Coxall 2018). Green shading indicates Nodes identified in the Master Plan.

2.3 Planning context

2.3.1 Land tenure and management

The FHAC is located within the Alpine National Park, with the exception of the final 2.3 km of the trail, from the end of Trail Section 15 to the Mount Loch carpark, which is located within the Mount Hotham Alpine Resort area.

Alpine National Park

The Alpine National Park is Victoria's largest National Park, covering 661,777 ha, and is renowned for its unique alpine ecosystems and as a popular recreational destination (Parks Victoria 2016). The Alpine National Park is reserved under Schedule 2 of the Victorian *National Parks Act 1975* and is managed in accordance with the Act to preserve and protect the natural environment, including flora, fauna and features of scenic, archaeological, ecological, geological, historic or other scientific interest, water resources and water quality, and for the study of ecology, geology and other sciences. Subject to this, National Parks may be used for enjoyment, recreation, education and appropriate study related to conservation of the natural environment (Parks Victoria 2016).

Two Public Land Management Overlays designated under the *National Parks Act 1975* provide additional management direction for proclaimed areas:

- **Wilderness Zones** – Areas of wilderness value, proclaimed under Schedule 5, for self-reliant recreation and solitude, in the absence of facilities and public roads, the construction of which are prohibited along with commercial activity and development, and any forms of motorised or mechanical transport. There are six Wilderness Zones within the Alpine National Park.
- **Remote and Natural Areas** – Areas recognised for their natural and relatively undisturbed condition, proclaimed under Schedule 6 to prevent new and incremental developments, including the construction of vehicular tracks and new structures that may adversely impact the remote and natural values. There are eight Remote and Natural Areas within the Alpine National Park.

The FHAC passes through the **Bundara – Cobungra Remote and Natural Area** (RNA), which covers 13,700 ha within the Alpine National Park, and is bounded by the Bogong High Plains Road, Mount Cope Divide and minor fire trails to the north. The Cobungra River, and its headwaters, form the western and southern boundaries and the National Park boundary forms the south-eastern boundary. The RNA encompasses part of the Bogong High Plains and includes the largest area of untracked alpine vegetation and high plains in Victoria (LCC 1991).

Remote and Natural Areas allow people to experience the feeling of remoteness from settlements and roads and enjoy self-reliant recreation. The Bundara – Cobungra RNA is therefore managed to protect the area's remote and natural attributes, including the low density of tracks and opportunities for self-reliant recreation, including snow-based activities (LCC 1991).

The Alpine National Park also contains 18 Reference Areas designated under the *Reference Areas Act 1978*, and two Heritage Rivers and six Natural Catchment Areas designated under the *Heritage Rivers Act 1992*. None of these are near to the FHAC.

Greater Alpine Parks Park Management Plan

The Alpine National Park is managed in accordance with the Greater Alpine Parks Management Plan (Parks Victoria 2016), which includes seven National Parks reserved under the *National Parks Act 1975* and five adjacent Historic Areas, reserved and unreserved, under the *Crown Land (Reserves) Act 1978* and *Forests Act 1958*.

Park management zoning is used to define areas of the Alpine National Park where different management priorities apply. Five Park Management Zones apply to the Alpine National Park (Parks Victoria 2016):

- **Conservation Zone** – Areas of high conservation value, including sensitive ecological communities, habitat for threatened species and other important environmental attributes. Recreation and nature-based tourism are permitted in these areas but are subject to close management to minimise the impact on park and reserve values and natural processes. Permitted uses predominately involve low-key, dispersed recreation with basic facilities.

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- **Conservation and Recreation Zone** – Areas where the management emphasis is on protecting environmental and cultural values while allowing for low-impact recreation. Dispersed recreation and nature-based tourism activities are encouraged as long as they do not have a significant impact on natural processes.
- **Reference Area Zone** – Areas proclaimed under the *Reference Areas Act 1978*, which requires minimum human interference, with change driven by natural processes. No access is permitted except for emergency operations and approved research.
- **Wilderness Zone** – Areas proclaimed under the *National Parks Act 1975* to protect and manage wilderness values, to be used for self-reliant recreation and solitude.
- **Education Zone** – Small areas in a relatively undisturbed area as recommended by the Victorian Environment Assessment Council and accepted by government as education areas. These areas are available for environmental and cultural education activities.

The FHAC spans across both the Conservation and Conservation and Recreation Zones of the Alpine National Park.

Overlays have also been developed to provide additional management direction for areas where specified activities or values require special management. For the Alpine National Park, they include Remote Natural Areas and 'Visitor Experience Areas' (VEAs). The goals of the VEAs that relate to the FHAC include (Parks Victoria 2016):

- **Mount Feathertop VEA**
 - Maintain Mount Feathertop as a premier hiking and winter destination, retaining its remote and natural character.
 - Investigate linking Mount Feathertop into the Falls to Hotham Alpine Crossing while protecting the area's character.
- **Red Robin VEA**
 - Provide the opportunity for walking, basic camping, cycling and horse riding, with some camping with horses.
- **Bogong High Plains VEA**
 - Provide the opportunity (non-winter) for scenic driving and a range of easily accessible recreation opportunities, such as short to medium walks to areas with significant historic values.
 - Support the development of the FHAC, including new types of accommodation and linkages between Falls Creek Alpine Resort and the Park.

VEA – Journey is an additional VEA within the Greater Alpine Parks Management Plan for the FHAC. This VEA supports the following goals:

- Provide for a range of walking experiences throughout the planning area, from self-reliant walking in remote areas to opportunities for easier and guided walks.
- Ensure local communities benefit from walker-related visitation.

Mount Hotham Alpine Resort

The Mount Hotham Alpine Resort is one of six areas in Victoria managed by Alpine Resorts Victoria, in accordance with the *Alpine Resorts (Management) Act 1997*. It covers 3,450 ha and is bound by Alpine National Park on all sides. Approximately 11% of the total resort area is utilised for ski field area. Alpine Resorts Victoria acts as the Crown's representative for leasing and other land management functions and provides services such as water, sewerage, and other services. The key management priorities for Alpine Resorts Victoria are (ARV 2025):

- Planning and responding to the impacts of climate change
- Supporting the growth and development of the Victorian alpine tourism sector.

2.3.2 Local Planning Schemes

The majority of the FHAC falls within the Alpine Shire Local Government Area (LGA), with only small sections of the trail alignment falling within the East Gippsland Shire LGA and Mount Hotham Alpine Resort. The relevant Planning Schemes are the Alpine, East Gippsland and Alpine Resorts Planning Schemes. For the Mount Hotham Alpine Resort Planning Scheme, the Minister for Planning is the responsible authority and Alpine Resorts Victoria is the referral authority under Section 55 of the *Planning and Environment Act 1987*.

The project area is covered by three Public Land Zones and one Special Purpose Zone (DTP 2025):

- **Public Conservation and Resource Zone** – The purpose of this zone is to protect and conserve the natural environment and natural processes for their historic, scientific, landscape habitat or cultural values, whilst providing for appropriate resource-based uses. This Zone covers the Alpine National Park.
- **Public Park and Recreation Zone** – Recognises areas for public recreation and open space, whilst protecting and conserving areas of significance, where appropriate, and providing for commercial uses, where appropriate. This Zone applies to sections of the FHAC within the Mount Hotham Alpine Resort area.
- **Transport Zone 2** – Identifies land required for transport services and facilities to ensure the efficient and safe use of transport infrastructure. Provides for the use and development of land that complements, or is consistent with, the transport system or public land reservation. This Zone covers the Great Alpine Road.
- **Comprehensive Development Zone 2 (Alpine Recreation)** – Provides for a range of uses and the development of land in accordance with a comprehensive development plan incorporated in the relevant Planning Scheme. Schedule 2 identifies areas associated with the development and use of an alpine resort on which passive and active recreation occur (Mount Hotham Alpine Resort). It enables the development and use of land which is in accordance with sound environmental management and land capability practices, and which takes into account the significance of the environmental resources.

The Planning Scheme Overlays within the project area include (DTP 2025):

- **Bushfire Management Overlay (BMO)** – Identifies areas where the bushfire hazard warrants bushfire protection measures to be implemented. The BMO ensures that the development of land prioritises the protection of human life and strengthens community resilience to bushfire and ensures that development is only permitted where the risk to life and property from bushfire can be reduced to an acceptable level.
- **Erosion Management Overlay (EMO1)** – Identifies and protects areas prone to erosion, landslip, other land degradation or coastal processes by minimising land disturbance and inappropriate development. Schedule 1 is to ensure that development can be undertaken at a tolerable risk to human life and property from landslide and slope instability.
- **Heritage Overlay (HO)** – Identifies and conserves heritage places of natural or cultural significance and conserves those elements that contribute the significance of heritage place. A Heritage Overlay ensures that development does not adversely affect the significance of heritage places, or allows otherwise prohibited uses that will demonstrably assist with the conservation of the heritage place. Heritage Places are specified in the Schedule to the Overlay and may also be shown on the Planning Scheme map.

The BMO applies to the entire project area, and the EMO applies to parts of the Mount Hotham Alpine Resort area. A Heritage Overlay applies over Wallace Hut (HO266) under the East Gippsland Planning Scheme and over Blairs Hut and Tawonga Huts (HO2) under the Alpine Planning Scheme.

Table 3 shows the Planning Zones and Overlays that apply to the project area for trail sections and Overnight Nodes. There are no proposed changes to the zoning or overlays as part of this project.

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Table 3 Local Planning Schemes, Zones and Overlays for the FHAC Trail and Overnight Nodes

Local Planning Scheme	Planning Zones	Planning Overlay	Trail sections / Overnight Nodes
Alpine Shire	<ul style="list-style-type: none"> Public Conservation and Resource Zone 	<ul style="list-style-type: none"> Bushfire Management Overlay 	<ul style="list-style-type: none"> Trail Sections 1 – 15 Westons Hut and High Knob
East Gippsland Shire	<ul style="list-style-type: none"> Public Conservation and Resource Zone 	<ul style="list-style-type: none"> Bushfire Management Overlay 	<ul style="list-style-type: none"> Trail Sections 4 and 5 Cope Hut
Mount Hotham Alpine Resort (UNINC)	<ul style="list-style-type: none"> Public Park and Recreation Zone Transport Zone 2 	<ul style="list-style-type: none"> Bushfire Management Overlay 	<ul style="list-style-type: none"> Trail Section 15 (southern end)
	<ul style="list-style-type: none"> Public Park and Recreation Zone Transport Zone 2 Comprehensive Development Zone Schedule 2 	<ul style="list-style-type: none"> Bushfire Management Overlay Erosion Management Overlay 1 	<ul style="list-style-type: none"> Trail Section 16

3 Assessment methods

This section provides an overview of the assessments and site investigations undertaken for the proposed FHAC, which have informed the planning for this project and this report.

3.1 Ecological assessment

Ecological assessments of the FHAC project area have been undertaken by Abzeco, in four stages, between 2020 and 2025, and The Ecology Office in 2025, to document the ecological values of the project area, identify potential impacts and to inform the scope and design of the project (see Table 4). Assessment methods are summarised below.

3.1.1 Desktop assessment

A desktop assessment of the FHAC Master Plan area was undertaken by Abzeco in 2020 to identify ecological values that may be present within the project area, and to inform and guide subsequent field surveys. The assessment was updated in 2022, 2024 and 2025 to incorporate new assessment areas and included a review of the following literature and data (Abzeco 2020, 2021, 2024 a, b):

- Records of flora and fauna species held within the Victorian Biodiversity Atlas from within a 2.5 km buffer for flora, and 5 km buffer for fauna species.
- Matters of National Environmental Significance listed under the *Environment Protection and Biodiversity Conservation Act 1999* from within a 2.5 km buffer, using the Protected Matters Search Tool.
- Ecological Vegetation Class (EVC) modelling (pre-1750 and extant) of the area using Nature Kit and associated EVC benchmarks and conservation status.
- Sites of Geological and Geomorphological Significance from Victorian Resources Online.
- Geological and hydrological data from VicMap Data.
- Greater Alpine National Parks Management Plan (Parks Victoria 2016).
- National Heritage List citation (National Heritage Places) — Australian Alps.

Data from the desktop assessment was used throughout the environmental assessment process and updated as required, throughout project planning.

3.1.2 Field surveys

The proposed track alignment and overnight nodes were surveyed on-foot between November 2020 and March 2024, with surveys in 2020, 2022 and 2024 covering variations in the proposed track alignment and locations of overnight nodes; see Abzeco (2021, 2024, 2025) and TEO (2025) for further detail. The survey timing and locations are shown in Table 4. In total, 64 km of trail and 21 potential locations for overnight nodes were surveyed.

The survey area encompassed the proposed track alignment with a 20 m buffer either side of the track (i.e., 40 m-wide assessment corridor), to enable a more thorough assessment of environmental values surrounding the trail, as well as the various overnight node options, as identified throughout the project planning process. To facilitate the assessment and data recording process, the track alignment was divided into 18 sections. Track sections were determined based on track type (walking track or vehicle track), location and associated changes in vegetation type (Abzeco 2021, 2024a, b). Data collected during the field assessments are detailed below and were recorded separately for each section of track and overnight nodes.

Ecological Vegetation Classes

Native vegetation within the project area and determination of Ecological Vegetation Classes (EVCs) was undertaken in accordance with DELWP (2017) and using EVC benchmarks for the Victorian Alps Bioregion, Benchmarks for wetland EVCs in Victoria (DELWP 2022), the Victorian Wetland Classification Framework (DELWP 2016a) and the Index of Wetland Condition Assessment Procedure (DELWP 2020). Determination and mapping of EVC boundaries was based

on defining characteristics, including floristic composition, vegetation structure, lifeforms, and ecological characteristics, such as geology and soils, altitude, aspect and landscape position (e.g., valley, slope, areas with extended snow cover). In sections of the FHAC where EVCs occur in fine-scale mosaic patterns, with multiple EVCs intersecting the alignment, or where two different EVCs were recorded along each side of the track, combinations of EVCs have been mapped in 20 m-long sections (Abzeco 2025).

Listed Ecological Communities

Ecological communities listed under the EPBC Act and/or FFG Act (or otherwise considered significant) were identified and mapped based on defining characteristics, such as floristic composition, vegetation structure, location in the landscape, soil type and microclimate. Assessments of defining characteristics were made against relevant descriptions and criteria in associated policy documents (DEECA n.d., TSSC 2006, DEWHA 2009).

Flora surveys

Flora surveys recorded the following data within each section of the proposed trails and overnight nodes:

- An inventory of flora species, including indigenous and exotic species.
- Suitable habitat for threatened flora species.
- Locations of long-unburnt Snow Gums *Eucalyptus pauciflora*.

Targeted surveys for threatened flora species were undertaken within the three current Overnight Node locations only. Location coordinates of threatened species and high-threat weeds along the trail alignment were only recorded opportunistically if they were encountered during the assessments.

Fauna surveys

Fauna surveys recorded the following data within each section of the proposed trail alignment and overnight nodes:

- An inventory of vertebrate fauna species, including indigenous and exotic species.
- Suitable habitat for threatened fauna species.

Targeted surveys for threatened fauna species were generally outside of the scope of these assessments. However, limited surveys were undertaken for a number of threatened fauna species where opportunity presented, along with identification and mapping of areas of suitable habitat (see Table 5). The surveys were generally limited to observational surveys or searches for individuals of the species or their scats, burrows, nests, or other indicators of presence.

Table 4 FHAC assessment areas and survey schedule (Abzeco 2021, 2025)

Survey dates		FHAC assessment areas		Reference
Flora	Fauna	Overnight Nodes	Trail sections	
30 November – 12 December 2020	23 November – 4 December 2020	1A, 1B/E, 1C, 1D, 1F, 1G, 2A, 2B 2C, 2D, Diamantina River, Red Robin Battery, High Knob 1 & 2	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 12a, 12b	Abzeco (2021)
1 December – 22 December 2022	19 December – 22 December 2022	1 Preferred, 1 Alternate, 2 Preferred, 2 Alternate, Blair’s Hut, High Knob (new)	1a, 10a, 17, 18	Abzeco (2024)
28 February – 1 March 2024	28 February – 1 March 2024	Cope Hut, Westons Hut	N/A	Abzeco (2025)
10 – 12 February 2025		Cope Hut, Westons Hut	N/A	Abzeco (2025)
17 – 18 February 2025		High Knob	N/A	TEO (2025)

Table 5 Targeted survey effort for threatened fauna species within the FHAC assessment area

Target species	Survey method	Timing	Survey locations
Broad-toothed Rat <i>Mastacomys fuscus mordicus</i>	Visual Searches: Searches for evidence indicating the presence of the Broad-toothed Rat (i.e., scats, nests, runways) were undertaken in areas of suitable habitat within the project area.	All survey periods	Areas of damp grassland, woodland and wet heathland, particularly along waterways and locations with dense ground vegetation or boulders, as identified by Walter and Broome (1998) and Green and Osborne (2012).
Sooty Owl <i>Tyto tenebricosa</i>	Spotlighting and call play-back: Call-playback for the Sooty Owl comprised broadcast of the Sooty Owl 'falling bomb' whistle call for 2 minutes, followed by 3 minutes of listening for a response, 2 minutes of repeated call-playback, 2 minutes of listening, and 2 minutes of playing the Sooty Owl trilling call (Loyn et al. 2011). Spotlighting was then carried out to search for owls called-in and arboreal mammals, by two zoologists along 500 m sections of the track alignment, using a 30-watt hand-held spotlight [dimmed with a coloured filter to reduce potential impacts on the vision and natural behaviour of nocturnal fauna (see Abzeco 2024 for further detail)].	November 2020	Areas of Montane Damp Forest along: <ul style="list-style-type: none"> ▪ Westons Spur Track in the vicinity of Blair's Hut ▪ West Kiewa Logging Road at Diamantina Horse Yards Area on the south-western boundary of the existing Tawonga Huts camping area, where the taller tree cover provides potential habitat for nocturnal arboreal fauna.
Greater Glider <i>Petauroides volans</i>			
Yellow-bellied Glider <i>Petaurus australis</i>			
Latham's Snipe <i>Gallinago hardwickii</i>	Visual searches: Opportunistic searches for Latham's Snipe were undertaken by two observers walking along the edges of tributaries and wet habitats within the assessment area supporting suitable habitat, to flush any Latham's Snipe that may have been present. Areas of potential habitat for this species were also noted. N.B: Targeted surveys for Latham's Snipe in accordance with EPBC survey guidelines (DoEE 2017) were outside of the scope of the field surveys.	All survey periods	Wet areas supporting dense, grassy or sedgy vegetation, within the project area.
Guthega Skink <i>Liopholis guthega</i>	Visual searches: Known colonies of Guthega Skink in the assessment area were mapped, and location co-ordinates for observations of Guthega Skink individuals or possible burrows were also recorded. As removal or movement of surface rock in areas supporting Guthega Skink can cause habitat disturbance, no rocks were lifted during searches for Guthega Skink (Abzeco 2024).	All survey periods	Areas known to support colonies of Guthega Skink, as well as rocky areas in relatively open Snow Gum Woodland, heathland, and tussock grassland, as well as cuttings and track edges in habitats with, and without, rock.

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Target species	Survey method	Timing	Survey locations
<p>Alpine Water Skink <i>Skink Eulamprus kosciuskoi</i></p> <p>Alpine Bog Skink <i>Pseudemoia cryodroma</i></p>	<p>Visual searches: Surveys for the Alpine Water Skink and Alpine Bog Skink were conducted concurrently, as they both live in and near wet or damp environments. Surveys were limited to visual searches and passive observation, and hand capture of <i>Pseudemoia</i> species when closer inspection was required for identification.</p>	All survey periods	Bogs, fens and wet heaths were surveyed visually, when conditions were suitable, scanning habitat on both sides the track alignment.
<p>Alpine She-oak Skinks <i>Cyclodomorphus praealtus</i></p> <p>Tussock Skink (high country) <i>Pseudemoia pagenstecheri</i></p>	<p>Visual searches and habitat assessment: Surveys for Alpine She-oak and Tussock Skinks were limited to visual searches. Although observations of Alpine She-oak Skinks are very infrequent, habitat preferences in the assessment area are well understood. The location and extent of suitable habitat for this species was recorded. Location co-ordinates for any observations of Tussock Skink and Alpine Sho-oak Skinks were also recorded.</p>	All survey periods	Areas of alpine grassland and alpine heathland.
<p>Spotted Tree Frog <i>Litoria spenceri</i></p>	<p>Spotlighting: Surveys involved spotlighting and listening for calling males. Surveys undertaken on the West Kiewa River at Blair’s Hut involved surveyors walking in-stream for approximately 350 m, using head torches to scan the banks, vegetation, logs and rocks for frogs (see Abzeco 2024). Hygiene protocols followed Murray et al. (2011).</p>	29 & 30 November 2020	Diamantina River at Diamantina Horse Yards. West Kiewa River at Blair’s Hut.
<p>Mountain Galaxias (<i>Galaxias</i> species complex)</p>	<p>Bait Trapping: Eight nylon funnel traps, baited with yellow glow sticks, were set within a short (10 m-long) section of stream and left overnight.</p> <p>Dip Netting: Dip netting was undertaken for 20 – 30 minutes at each site, using a flat-bottomed Dip-net (bag 35 cm wide, 60 cm deep, 0.9 mm mesh).</p>	25 – 27 November 2020	Single stream crossing the trail alignment north of Langford West Aqueduct Road (Trail Section 4). N.B: Traps were not set in other stream crossings in the assessment area due to the high abundance of trout. Headwater tributary of Tawonga Hut Creek and bog system on the Bogong High Plains (Trail Section 6).
<p>Alpine Stonefly <i>Thaumatoperla alpina</i></p> <p>Stonefly <i>Riekoperla intermedia</i></p> <p>Alpine Darner <i>Austroaeschna flavomaculata</i></p>	<p>Dip netting: Approximately 10 m of stream or pond edge was sampled at each of the six sites, taking between 10–15 sweeps. Kick netting sampled riffles at the same locations.</p> <p>Kick samples: Ten kick samples were taken from each site over 10 – 30 m. Any invertebrates caught were noted before voucher specimens were taken for further identification of taxa of interest.</p>	2020 2022	Six locations at pools and runs within streams and bogs crossing the track alignment (Trail Sections 6, 9, 12 and around Diamantina Horse Yards).

3.1.3 Likelihood of occurrence

An assessment of the likelihood of occurrence within the project area was undertaken for threatened flora and threatened and/or migratory fauna species that were identified from the Desktop Assessment. The likelihood of occurrence assessment was initially undertaken in 2020 (see Abzeco 2020) and updated in 2023 to incorporate changes in the project area and changes to the conservation status of flora and fauna species. The assessments were used to inform field assessments and recommendations for targeted surveys. The following criteria were used:

- Proximity of past records to the project area in three categories
 - Within the proposed project area
 - Within 200 m of the project area
 - Between 200 m and 2.5 km for flora and 5 km for fauna
- The number of historical records within 2.5 km for flora and 5 km for fauna, and date of records
- The known distribution and habitats of the species and presence of suitable habitat within the project area
- Detectability of the species during the field survey

3.1.4 Nomenclature and taxonomy

The use of common and scientific names in this report follows the Victorian Biodiversity Atlas (DEECA 2025a). In general, scientific and common names are given for all species when first referenced, with only common names used thereafter, unless both names are required for clarity.

Where an asterisk (*) precedes a plant or animal name, it signifies non-native taxa (i.e., those species considered introduced to Australia). A hash (#) is used to denote Australian (including Victorian) native plant or animal species that are not indigenous to the area and may become invasive.

3.1.5 Conservation status

The conservation status of flora and fauna species and ecological communities was determined in accordance with listings under the:

- Commonwealth EPBC Act 1999
- Victorian FFG Act 1988

The conservation status of species listed under the FFG Act has recently been re-assessed using International Union for the Conservation of Nature (IUCN) categories, criteria and thresholds, as part of an intergovernmental agreement to establish a Common Assessment Method (CAM) for listing threatened species. In accordance with the CAM agreement, the FFG Act Threatened Species List is intended to function as a 'Single Operational List' for Victorian species. However, not all threatened species that occur in Victoria have been re-assessed to-date. In some cases, there is inconsistency between a species' listed status under the EPBC Act and FFG Act. This is due to: a) the EPBC Act list including taxa that occur in Victoria and other States or Territories, but which lack a compliant assessment; b) the FFG Act list including Victorian endemic taxa recently re-assessed but not yet listed under the EPBC Act; or c) species that are highly restricted or threatened in Victoria but with populations in other States or Territories (DELWP 2021). This report, therefore, includes listings under both legislative instruments. The conservation status of ecological communities listed under the FFG Act has not been re-assessed.

The conservation status of EVCs is determined at the bioregional level. The Bioregional Conservation Status reflects the remaining extent and quality for each EVC when compared to the original (pre-1750) extent and quality.

3.2 Geomorphological assessment

Geomorphological assessments of the FHAC assessment were undertaken in three stages.

A high-level geomorphic assessment of the FHAC assessment area was undertaken by waterway engineers and fluvial geomorphologists in December 2020 and January 2021; this assessment focused on overnight nodes as proposed in the FHAC Master Plan and areas of track alignment identified as most susceptible to change based on the Desktop Assessment (see Abzeco 2021). Field surveys included the collection of the following data:

- Key physical features
- Geomorphic values
- Stream processes
- Threats and risks

A detailed geomorphological assessment of the additional project areas (identified in 2022) and alternative overnight node locations and trail alignment was undertaken in December 2022 by two geomorphologists (Rosengren 2023, Webb 2023). This included a desktop review of data and reports, and assessment of these areas, followed by a visual inspection undertaken on-foot to record the following information and data:

- Location and description of geomorphic features
- Identification of areas or features of geoscience significance and landform sensitivity
- Georeferenced photos
- Potential threats and risks to areas or features of geoscience significance.

In 2024, a review of available historic and georeferenced aerial photography, Digital Elevation Models (DEM) (LiDAR) and site photographs was undertaken (Rosengren and Webb 2024) to supplement the 2022 desktop and field assessments of Nodes and selected sections of track (Rosengren 2023, Webb 2023). The review was based on recently available (2023) airborne LiDAR generated digital elevation model (DEM) and concurrent True Colour aerial photography of the area and incorporates data from the 2022 desktop and field inspections reports, and interpretations of terrain gained from the LiDAR and aerial photography.

The derived elevation LiDAR GeoTIF raster models (DEM, DHM, DSM) covering the FHAC proposed tracks and node areas and buffers were displayed using Blue Marble Graphics GIS software Global Mapper V22.1 LiDAR module. The DEM was displayed as elevation and slope using coloured (flat [0 degree] green) to very steep [50+ degree] red) and grey scale (flat [0 degree] white) to very steep [50+ degree] dark grey) relief shaders with slope increments of 1 degree (Figure 1-3 coloured model).

A long profile of each Track Section was constructed using the Global mapper facility to record elevation at one metre intervals along the overlain track line. This is an approximation for some lengths of track as the track location in the GIS files provided differed in places from the location of the existing track as seen on the LiDAR DEM. All sections of track, totalling 63km, and 11 discrete areas identified as potential or alternate overnight nodes were visually traversed in segments approximately 250 long (varied according to terrain complexity), using the shaded raster LiDAR models, vertical aerial photograph and the 1:50,000 digital geology layer. The images were compared with ground details recorded and photographed during previous site visits for track and node site assessment (in December 2022). To better represent the form — rather than just slope— of the ground surface for interpretation in some areas, contours were constructed from the DEM at intervals of 0.1m, 0.2m and 0.5m.

The following surface details were recorded along the traverse:

- individual boulders
- groups of boulders-gravel
- breaks of slope
- closed depressions
- wet surfaces

- drainage lines
- landslides and other evidence of slope movement.
- anomalous topography indicated by the DEM compared with the aerial photograph, DSM and previous ground-truthing.

The LiDAR models of the broader environment—upslope, downslope and catchment area— beyond the immediate buffer zones enclosing the components of the proposal were also examined for evidence of geomorphic activity that could impact tracks or Overnight Node sites (Rosengren and Webb 2024).

3.3 Geotechnical assessment

A preliminary geotechnical assessment of the FHAC was undertaken by Golder Associates in 2022 to help inform site selection for the Overnight Nodes and the scope of works. This involved a desktop assessment of the expected geological and geomorphological conditions at proposed Overnight Nodes and select locations along the trail alignment considered to be more susceptible to geotechnical hazards (Golder 2022). A more detailed site investigation was carried out in late 2022 to assess existing ground conditions within the vicinity of the proposed structures and to provide recommendations for the design and location of earthworks and infrastructure footings (Golder 2023a), followed by a Geotechnical Hazard and Risk Assessment (Golder 2023b). An updated Geotechnical Hazard and Risk Assessment and was completed in 2024 to encompass the current FHAC project area, along with an updated geotechnical assessment following the acquisition of 0.5-m LiDAR DEMs and site assessments at Cope Hut and Westons Hut (Golder 2024). A consolidated report of findings is presented in Golder (2025).

3.3.1 Desktop assessment

The following information was reviewed as part of the desktop assessment in 2022:

- Published geological information
 - 1:50,000 scale Victorian Seamless Geology (2014), published by the Geological Society of Victoria (GSV).
 - 1:63,000 scale 'Feathertop' and 'Falls Creek' mapsheets (2005) published by the GSV.
 - 1:100,000 map area geological report of Bogongs (Morand et al. 2005), GSV report 125.
- Victorian Alpine Resorts Geotechnical Risk Assessment Program 2018 – 2022 (Golder Associates).
- Satellite and aerial imagery.
- VicMap Elevation Digital Terrain Model (DTM), 10 m grid, obtained from the Department of Environment, Land, Water and Planning.
- Modelled Ecological Vegetation Classes (DELWP 2022).

Preliminary maps were produced showing the relative susceptibility of the terrain in the vicinity of the route, due to landslide hazards, based on VicMap 10 m grid DTM (Golder 2022).

Following the acquisition of LiDAR DEMs, further geotechnical desktop analysis was undertaken in ESRI GIS software ArcMap, using 0.5-m resolution LiDAR terrain data to identify any features which may indicate additional geohazards present within the final proposed FHAC alignment and Overnight Nodes (Golder 2024).

3.3.2 Site investigation

The geotechnical investigation for proposed Overnight Nodes was undertaken using portable equipment due to the remote terrain. Two engineers from WSP Golder, along with representatives from K2LD and Parks Victoria, visited each site to (Golder 2023):

- Photograph and document key site features (e.g., slope, surface soil and rock type, evidence of slope instability, rock outcrops, watercourses and drainage lines).
- Conduct Dynamic Cone Penetrometer (DCP) tests to assess near-surface material strength.

- Drill hand auger boreholes to evaluate shallow subsurface conditions, except for at High Knob due to impenetrable ground.
- Collect soil samples for laboratory testing, which included:
 - Moisture content
 - Atterberg Limits
 - Linear shrinkage
 - Particle size distribution
 - Emerson class dispersion

Geotechnical site investigation works were subsequently undertaken at the currently proposed Cope Hut and Westons Hut Overnight Nodes in May 2024; site investigations at High Knob were undertaken in 2023 (Golder 2024).

3.3.3 Geotechnical hazard and risk assessment

Geotechnical hazard and risk assessments were undertaken to Australian Geomechanics Society guidelines (AGS 2007) and the New South Wales Parks and Wildlife Guidelines for Rockfall Risk Assessment (NSW NPWS 2020); initial assessments were undertaken in 2022, and updated again in 2024 to cover the currently proposed trail alignment and Overnight Nodes and areas of potential hazards identified by Rosengren and Webb (2024). The combined results of these assessments are presented in Golder (2025).

The Geotechnical Hazard and Risk Assessment identified potential landslide and rockfall hazards that may impact the proposed FHAC trail alignment and Overnight Nodes. Where these hazards were identified to pose a credible risk to life or to property, a landslide risk assessment was undertaken. Landslide Risk assessments were undertaken in accordance with AGS (2007a) and NSW NPWS (2020) for Trail Sections 11 and 12, where rockfall run-out could intersect the trail between Pole 333 and Westons Hut. Detailed methods are provided in Golder (2024, 2025).

3.4 Aboriginal Cultural Heritage assessment

A Cultural Heritage Management Plan (CHMP) is required for this project under Part 4 of the *Aboriginal Heritage Act 2006*, which includes archaeological assessments to determine the tangible and intangible cultural values and to identify potential impacts to cultural values associated with the proposed works. A CHMP is developed in partnership with Traditional Owners and involves three key stages of assessment — desktop, standard and complex assessment.

A CHMP was prepared in accordance with the requirements of the *Aboriginal Heritage Act 2006*, the Aboriginal Heritage Regulations 2018, and relevant guidelines, practice notes, and approved forms issued by First Peoples State Relations (FPSR) regarding the preparation of CHMPs. A Notice of Intent (NOI) was submitted to FPSR on 2 June 2022 for CHMP 18890.

Traditional Owners were engaged during all processes of the CHMP. Cultural Heritage Management Plan (CHMP) 18890 Falls to Hotham Alpine Crossing Project was completed at complex assessment stage in 2025.

3.4.1 Desktop assessment

Under Part 3 of the Aboriginal Heritage Regulations 2018, standards for the preparation of a CHMP include a desktop assessment. The purpose of the desktop assessment is to gain an understanding of the cultural landscape and predict the likelihood of Aboriginal cultural heritage within the proposed activity area. The desktop assessment was undertaken by Extent Heritage and included a review of:

- The Victorian Aboriginal Heritage Register (VAHR) across the activity area and greater geographic region.
- Relevant reports and published works about Aboriginal cultural heritage within the geographic region.
- Landforms and geomorphology of the activity area.

- Land use history of the activity area.
- Ethnohistory of the area
- Recorded Aboriginal heritage places within the activity area and geographic region.

The desktop assessment reviewed a geographic region comprising a 3-km buffer around the activity area, which allowed for a detailed sensitivity model of the activity area to be created. The desktop assessment found that a standard assessment was required in accordance with regulation 62(1) of the Aboriginal Heritage Regulations 2018.

3.4.2 Standard assessment

The standard assessment was undertaken over three weeks in early 2023 by Extent Heritage and involved a pedestrian and vehicle survey of the entire activity area, divided into nine survey areas based on location. The survey involved participants from five Traditional Owner groups, along with Heritage Advisors from Extent Heritage and Parks Victoria to visually assess the presence of Aboriginal heritage and identify areas of archaeological potential. Dense vegetation, which covers much of the activity area, limited effective survey, while steep terrain prevented survey of some of the activity area away from the main track. Despite these limitations, survey participants were able to undertake a comprehensive landform assessment of the activity area and identify areas of cultural heritage sensitivity throughout. In particular, the locations proposed for the overnight nodes (chosen for their suitability) were highlighted as being of moderate to very high sensitivity precisely due to their suitability for encampment.

The standard assessment concluded that a complex assessment was required in accordance with regulation 64(1) of the Aboriginal Heritage Regulations 2018.

3.4.3 Complex assessment

Complex assessment involves a targeted assessment to understand the presence of subsurface Aboriginal cultural heritage in areas of archaeological potential within the activity area. The investigation usually involves the excavation of test pits and analysis of any materials found. It is typically conducted by Heritage Advisors, Parks Victoria staff and Traditional Owners representatives.

Cultural Heritage Management Plan (CHMP) 18890 for the FHAC Project was resumed to complex assessment stage by Latitude Heritage in January 2025. Complex assessment fieldwork was undertaken between 10 February – 21 February 2025. Twenty-one subsurface test pits were excavated using a combination of 50cm x 50cm and 1m x 1m pits. A post-complex meeting was held with Traditional Owners to work on management conditions and contingencies to protect the three Aboriginal Places within the activity area of the project before, during and after works take place.

The CHMP 18890 for the FHAC was submitted to First Peoples — State Relations on 10 June 2025 and was subsequently returned on 7 July 2025 with a recommendation to withdraw for amendment. The CHMP was updated and resubmitted to First Peoples — State Relations on 15 August 2025, and again on 16 September 2025.

3.5 Landscape visual impact assessment

A Landscape Visual Impact Assessment (LVIA) for the FHAC was undertaken by Hansen Partnership in 2022 and updated in 2024 to reflect the current project scope. The scope of the LVIA focused on an assessment of the potential for landscape and visual impacts resulting from project infrastructure to be detrimental to the National Heritage values of the Australian Alps National Parks and Reserves, which is included in the National Heritage List under the EPBC Act. The LVIA was informed by recognised industry benchmark documents, including:

- Guidelines for Landscape and Visual Impact Assessment, UK Landscapes Institute 2023
- Visual Landscape Planning in Western Australia, Western Australian Planning Commission 2007.

The assessment of the currently proposed FHAC included four stages, as outlined below — further information is provided in Hansen (2024):

- **Phase 1 — Background review:** A review of the relevant policy and physical context was undertaken to determine the background to the National Heritage List values and key parameters to inform the scope of the LIVA (i.e., key physical attributes or identified viewpoints).
- **Phase 2 — Viewshed mapping:** DEMs and 3D modelling were used to undertake a viewshed analysis (or Zone of Visual Influence) to determine the potential visual exposure relative to the surrounding landscape. Viewshed analysis was also undertaken from known vantage points. Based on this assessment, potential view locations were established for further investigation and photomontage preparation.
- **Phase 3 — Photomontage preparation:** Site photography was positioned in the 3D model to create photomontages that provide an accurate representation. Each photomontage consisted of three view variations:
 1. Existing view.
 2. Wireframe view with the proposed structures accurately placed in the view represented in coloured outline and no allowance for screening by landform or vegetation.
 3. Photomontage view with modelled built form accurately placed in the view with allowance for screening by landform and vegetation.
- **Phase 4 — Final landscape and visual impact assessment:** An assessment of the severity, extent and duration of potential impacts of the FHAC on landscape values was undertaken through consideration of landscape visual sensitivity, the magnitude of visibility of proposed infrastructure (as depicted in photomontages) and the nature, number and frequency of visual receptors. The significance of impacts was assessed in accordance with applicable legislation, policy and standards.

3.6 Historical archaeology assessment

A desktop historical archaeology assessment for the FHAC project was prepared by Extent Heritage in July 2022. The desktop assessment reviewed the historical development of the area, identifying four phases: Aboriginal land use, grazing and ephemeral use (1860s–1920s), gold prospecting and mining (1930s–1970s), and recreational use (1970s–present) (Extent Heritage 2022).

The results of this assessment informed a pedestrian and vehicular survey of the FHAC project area which was undertaken in conjunction with the Standard Assessment for CHMP 18890 in early 2023 (Extent Heritage 2023a). The purpose of these assessments was to determine whether the proposed works within the FHAC project would impact any historical archaeological values. The survey was carried out over 14 days and conducted in accordance with Heritage Victoria's *Guidelines for Conducting Archaeological Surveys*. It focused on transect surveys at the proposed overnight node locations. The survey included the three known heritage places. No new archaeological sites were located within the project area during the survey.

The results of these assessments are summarised in a summary report prepared by Extent Heritage (2023b).

3.7 National Heritage values assessment

An assessment of the project's likely impact on values relevant to the Australian Alps National Parks and Reserves National Heritage Place, and a heritage impact assessment was undertaken by GML (2025). The heritage impact assessment involved screening of heritage values identified from ecological, Aboriginal and non-Aboriginal heritage assessment reports and identification of potential impacts to heritage values. Potential impacts were graded based on the likely scale, intensity and permanence of impacts, as:

- Severe/significant
- Moderate
- Minor

The assessment was undertaken in accordance with the EPBC Act Significant Impact Guidelines 1.1 (DoE 2013), EPBC Act Self-Assessment Guidelines – World Heritage Properties and National and Commonwealth Heritage Places, and the National Heritage management principles. The assessment was also in accordance with the relevant principles and guidelines of *The Burra Charter: The Australian ICOMOS Charter for Places of Cultural*

Significance 2013 (Australia ICOMOS 2013). The methodology also incorporated guidance from the Department of Climate Change, Energy, the Environment and Water's publication *Working Together: Managing National Heritage Places* (2008), which outlines best-practice heritage management under the EPBC Act. The assessment process included consultation of the official National Heritage values, relevant management plans, and consideration of the proposed action in its broadest context, including related infrastructure and potential future effects.

3.8 Bushfire planning assessment

A bushfire planning assessment was undertaken by Terramatrix in 2025 for the elements of the project that trigger a planning permit under the Bushfire Management Overlay (BMO) under the Alpine and East Gippsland Planning Schemes. The buildings and works that trigger a planning permit are limited to the new camping platforms and associated formal pathways in the Overnight Nodes. The other elements of the project meet permit exemptions available under the Planning Schemes general provisions.

In accordance with Clause 44.06-3 of the Planning Schemes, the bushfire planning assessment included a:

- Bushfire Hazard Landscape Assessment (including a plan) that describes the bushfire hazard of the general locality more than 150 m from the proposed development.
- Bushfire Hazard Site Assessment (including a plan) that describes the bushfire hazard within 150 m of the proposed developments in accordance with the site assessment methodology of *AS 3959:2018 Construction of buildings in bushfire-prone areas* and Clause 44.06
- Bushfire Management Statement, being the development response section that describes how the development responds to the applicable bushfire planning controls, including the requirements, objectives and design guidelines of Clause 13.02-1S, 44.06 and 53.02.

3.9 Assumptions and limitations

The following assumptions and limitations relate to the assessments undertaken as part of this project.

Ecological assessment:

- Mapping of native vegetation, threatened flora and fauna species was undertaken using a combination of hand-held GPS units and DGPS units. The accuracy of the mapping is, therefore, subject to the accuracy of the GPS units at the time of assessment (0.3 – 7 m), influenced by factors such as cloud cover and satellite access.
- The seasonality and limited growth period of some flora species may have affected their probability of detection. For example, much of the assessment was undertaken in early summer, when some species were not flowering or had not set seed. During the 2022 surveys, unseasonably low temperatures persisted throughout spring and into early summer, resulting in snowfall through part of December including much of the survey period for flora. This is likely to have suppressed the emergence and flowering of some plant species, making them undetectable at the time of the surveys (Abzeco 2025). In addition, some species may be present in low numbers at certain sites or across the assessment area, so may not have been detected during the brief survey periods.
- The likelihood of occurrence for threatened flora species across the assessment area has been assessed on their known distribution, presence of habitat and suitable habitat characteristics and previous survey records. However, the distribution and habitat requirements for many flora species is poorly known, due to a limited number of records and past survey effort.
- Targeted fauna surveys were undertaken for a limited number of species. Targeted surveys for some cryptic and/or seasonally active species (e.g., Alpine She-oak Skink) have not been undertaken as habitat is widespread across the project area, and extensive surveys efforts across multiple survey seasons would have been required to determine presence or absence, and lack of detection may not necessarily indicate the absence; the results were therefore, unlikely to materially alter the results of the assessment. For these species, their presence is assumed in areas of suitable habitat. Qualitative habitat assessments have been undertaken across the assessment area.

The limitations identified here are unlikely to affect the major findings of this assessment in relation to potential impacts from the proposed project on significant flora, vegetation communities, and fauna habitats. A

precautionary approach has been undertaken, which assumes the presence of threatened species based on the presence of suitable habitat characteristics, as described above.

Geomorphological assessment:

- Site investigations undertaken for this project were visual only; no invasive sampling or testing was undertaken.
- The resolution of available aerial photography was insufficient to allow identification of detailed ground features (e.g., outcrops or boulders). LiDAR data was reviewed but could not be cross-referenced against aerial photography.
- Detailed field surveys would be required to provide a detailed mapping of geoscience and hydrological features within the assessment area. However, these limitations are unlikely to affect the general findings provided for geomorphological features (Abzeco 2025).

Landscape Visual Impact Assessment:

- For the purposes of the LVIA, all changes to views as a result of the FHAC are assumed to constitute negative impacts.
- The existing conditions on which the study area was formed was based on 10 m DEM map data from Elevation and Depth – Foundation Spatial Data (ELVIS). These data are assumed to be a current representation of existing conditions.
- Viewshed extents are determined based on the geographical extent of the DEM map data provided by ELVIS. Where the geographical extents of these data are limited, and are also within the LVIA study area, a ‘worst case’ parameter approach has been adopted and these areas are assumed to fall within viewshed extents, i.e. assumed to be ‘potentially visible’.

3.10 Assessment of alternative options

As part of planning and assessment for the FHAC, a Multi-criteria Analysis (MCA) was undertaken to re-assess the project options and scope. The MCA assessed the scope of the FHAC as outlined in the FHAC MP and Business case, comparing infrastructure options and Overnight Node locations. The MCA considered key values that may be impacted by the project, including environment, heritage, community expectations, visitor experience and tourism offerings, and project delivery and operational implications. The MCA, undertaken in 2023, utilised three years of data collected for the project by Parks Victoria and by external consultants as part of survey and assessment of the project. The criteria used as part of the MCA are shown in Table 6.

Table 6 Multi-criteria Analysis for the FHAC

Values	Overall Weighting	Criteria
Environmental values	20%	Threatened flora species
		Threatened fauna species
		Listed Ecological Communities
		Rare or threatened vegetation types
		Sites and features of geological or geomorphological significance
		Waterways
Aboriginal Cultural Heritage values	20%	Identified Aboriginal Cultural Heritage
		Areas of Cultural Heritage sensitivity
Non-Aboriginal Cultural Heritage values	20%	National Heritage Listing Values
		Other heritage values
Community expectations	15%	Community feedback/sentiment
		Increased accessibility
		Impacts on existing hikers
Visitor experience and tourism offerings	15%	Attraction of new user groups
		Increased overnight visitation to the FHAC

Values	Overall Weighting	Criteria
		Enables alternative usage models
		Licensed Tour Operator opportunities
		Economic growth opportunities for local communities
		FHAC user experience
Project delivery and operation	10%	Constructability
		Operational access requirements
		Operational maintenance requirements
		Operating cost recovery
		Stage 1 viability
		Mitigation of current visitor impacts

3.11 Prioritisation of trail works

Trail works along the FHAC route have been prioritised based on a comprehensive assessment of existing trail conditions and environmental values. The entire trail alignment was surveyed multiple times between 2022 and 2025 to inform the design and staging of works.

Internal trail specialists from Parks Victoria conducted detailed on-ground assessments during two site visits in December 2022 and December 2023. Local rangers inspected the full trail alignment between January and April 2025, providing seasonal insights into trail use, vegetation growth, and infrastructure condition. Environmental values identified during on-ground ecological assessments were also used to guide planning.

The prioritisation process incorporated a wide range of trail condition indicators, including:

- Physical degradation such as ruts, track braiding and erosion
- Vegetation encroachment, identifying sections with overgrowth affecting trail visibility and encroachment
- Condition of the existing infrastructure, including stepping stones, water bars, culverts, boardwalks and signage.
- Drainage performance, noting areas with poor track drainage design and signs of pooling or run-off damage
- User safety and experience, evaluating trail width, surface stability and exposure risks.

Following the comprehensive assessment and inspections conducted between 2022 and 2025, the project team, working closely with local rangers, identified specific trail segments requiring improvement or maintenance. These findings informed a suite of targeted trail treatments designed to address both environmental sensitivities and user experience.

Treatments were selected to ensure that trail upgrades are durable, low-impact and aligned with best-practice sustainable design principles.

4 Existing environment

4.1 Landscape values

The landscape values of the FHAC study area, as recognised under the National Heritage List (NHL), are deeply embedded in the broader cultural and ecological significance of the Australian Alps National Parks and Reserves. These values are not confined to isolated features but are expressed through the continuity of land use, the layering of history, and the visual and experiential qualities of the terrain. The NHL listing acknowledges the Australian Alps as a unique mountainous bioregion that displays a mosaic of interactions between its natural and cultural environments and recognises its ongoing role in recreation and conservation.

Within the FHAC corridor, the landscape is characterised by expansive alpine plains, rugged ridgelines, and secluded valleys. The area forms part of a rich Aboriginal cultural landscape that has been used and occupied by the Bangerang, Gunaikurnai, Maneroo and other Indigenous peoples for thousands of years. The Aboriginal cultural landscape embodies the human story of use and change in the context of the physical landscape, including landforms, granite outcrops, waterways and springs, which have cultural meanings and associations, together with recorded tangible heritage places, such as artefact scatters, and intangible heritage places that are associated with the history, stories and traditions of the broader area. The Aboriginal cultural landscape can also include elements of the landscape that have a high likelihood of Indigenous association (historical or contemporary) — for example, ridge lines, tracks that appropriate traditional Aboriginal pathways, and granite platforms with cultural associations with food preparation. It can include cultural uses and modification of the landscape, such as the use of fire for food harvesting and cooking food. Plants and animals are part of this landscape, in terms of their cultural importance culturally to Aboriginal people in providing food and other resources, as totems, as messengers, and as part of the spirit world. Further information on the Aboriginal cultural and landscape values is provided in the CHMP.

Following the arrival of Europeans, the region was used for seasonal grazing, gold mining, water harvesting, and recreational walking. These activities have left a legacy of built and natural features—such as cattlemen’s huts, stock routes, aqueducts, and walking tracks—that contribute to the cultural landscape. Wallace Hut, although not located along the FHAC route, is recognised for its significance to Victoria through its listing on the Victorian Heritage Register. Sites like Cope Hut and the Tawonga Huts Complex, although not individually listed under statutory heritage registers, are recognised by the National Trust and are considered representative of early alpine settlement and recreation. Their presence within the landscape reinforces the historical narrative of human interaction with the high country.

The visual and spatial qualities of the landscape are also central to its heritage value. The Landscape and Visual Impact Assessment (LVIA) illustrates how the terrain’s openness, elevation, and remoteness contribute to a sense of nature and continuity. Panoramic views across the Bogong High Plains, the visibility of historic structures in natural settings, and the alignment of trails with topographic features all enhance the experiential connection to the landscape. These elements are not only aesthetically significant but also serve as tangible links to the region’s layered history, making the landscape itself a living archive of alpine post-European-contact heritage.

Together, the historical and visual attributes of the FHAC study area affirm its contribution to the NHL values.

4.2 Vegetation

The vegetation of the Australian Alps is characterised by a series of communities with distinct altitudinal zones, from the lower slopes and tablelands, to montane, sub-alpine and alpine zones. The vegetation across these zones is defined by changes in species composition and structure, including height and understorey characteristics, growth forms, and the dominance of eucalypts, which reflects changing climatic factors, soils, topography and slope.

The lower elevation slopes at the foothills of the ranges support grassy woodlands and dry open forests, which gradually transition to wetter forests of the montane zone where the steeper slopes emerge, from approximately 300 – 800 m ASL, up to approximately 1300 m ASL. The montane zone is characterised by higher rainfall, which together with aspect, influences vegetation types. Open forests with a shrubby and grassy understorey occur on the drier north and west-facing slopes, while the wetter and more sheltered south and east-facing slopes support tall eucalypt forests with ferns and small trees in the understorey, growing on deep, organic soils.

The sub-alpine zone (from 1300 – 1750 ASL) supports low-growing sub-alpine woodland communities, typically dominated by Snow Gums *Eucalyptus pauciflora* with low-growing shrubs, grasses and herbs in the understorey, and heathlands and shrublands in more exposed areas. The most abrupt change is marked by the transition to the alpine zone, which occurs above the treeline (> 1800 m ASL). In the alpine zone, low temperatures, severe frosts and persistent snow cover, strong winds, and shallow soils restrict tree growth. As a result, vegetation at this altitude is characterised by dwarfed shrub and ground cover species, forming a mosaic of treeless heathlands, herbfields and grasslands. However, cold air drainage can lead to temperature inversions in valleys and upland plains, which can also produce alpine conditions at lower elevations, that support treeless vegetation.

Native vegetation along the proposed FHAC varies along the altitudinal gradient, from alpine treeless vegetation communities on the higher peaks of the Bogong High Plains (c. 1600 to 1800 m ASL), descending through sub-alpine areas around Langford Aqueduct, to the montane forests around Diamantina River (1050 m ASL), climbing back through sub-alpine woodland along Diamantina Spur to treeless alpine vegetation near High Knob and Mount Feathertop, and tracking back down through sub-alpine and up to alpine environments around Mount Hotham Resort.

4.2.1 Ecological Vegetation Classes (EVCs)

A total of 21 EVCs have been mapped across the entire FHAC assessment area (Table 7). Ten of these EVCs are classified as threatened within the bioregion (Endangered, Vulnerable or Rare). Three EVCs do not have an assigned bioregional conservation status; these may be considered Rare, as the default status for Sub-alpine Treeless Vegetation. The remaining EVCs have a status of Least Concern.

Twelve of the 21 EVCs recorded occur within the final proposed FHAC alignment and/or Overnight Nodes (i.e. the project area); the remaining nine EVCs were recorded along trail sections and/or in Overnight Nodes that no longer form part of the FHAC project scope. Of the 12 EVCs within the project area, 10 occur within areas currently proposed for works. EVCs within the proposed works areas, their locations and condition across the project area are discussed in more detail below. See Abzeco (2024, 2025) for descriptions and mapping of all EVCs recorded within the FHAC assessment area. Mapping of EVCs within areas proposed for works as part of the FHAC project are shown in Attachment 1.

Table 7 Ecological Vegetation Classes recorded within the FHAC assessment area, their Bioregional Conservation Status (BCS) and locations within the assessment area (Abzeco 2021, 2025)

Ecological Vegetation Class	EVC No.	BCS	Trails	Overnight Nodes
Alpine Conifer Shrubland	156	Vulnerable	17	
Alpine Damp Grassland	1002	Rare	6, 7, 10, 10a, 11, 13	
Alpine Dwarf Heathland	170	NS	6, 7, 10, 10a, 11, 13, 16	
Alpine Grassland	1001	Rare	2, 3, 4, 5, 6, 7, 8, 9, 10, 10a, 11, 13, 15, 16, 17, 18	1A, 1 Preferred, 1 Alternate, 2B, 2D, 2 Preferred, Cope Hut, HK HC, 1 Alternate,
Alpine Grassy Heathland	1004	Rare	2, 3, 4, 5, 6, 7, 8, 10, 10a, 11, 13, 14, 15, 16, 17, 18	1A, 1F, 2A, 1 Preferred, 1 Alternate, 2 Preferred, 2 Alternate, Cope Hut
Alpine Fen	171	Endangered	17	
Alpine Rocky Outcrop Heathland	1013	NS	7, 10, 10a, 11, 13, 15	
Alpine Rocky Outcrop Heathland / Alpine Dwarf Heathland Mosaic	1105	Rare	10a, 11, 16	
Alpine Valley Peatland	288	Endangered	1a, 2, 3, 4, 5, 6, 7, 17	1 Alternate, 2 Preferred, 2 Alternate

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Ecological Vegetation Class	EVC No.	BCS	Trails	Overnight Nodes
Damp Forest	29	Least Concern	18	
Grassy Dry Forest	22	Least Concern	18	
Herb-rich Foothill Forest	23	Least Concern	18	
Montane Damp Forest	38	Least Concern	11, 12, 18	Diamantina Horse Yards, Red Robin, Blair's Hut
Montane Riparian Thicket	41	Least Concern	12	
Shrubby Dry Forest	21	Least Concern	18	
Snowpatch Grassland	1012	Vulnerable	14	
Sub-alpine Pond Herbland	913	NS#	7, 10a	
Sub-alpine Shrubland	42	Rare	1a, 2, 3, 4, 5, 10, 13, 14, 15, 17, 18	1B/E, 1F, 1G, 2A, 2B, 1 Alternate, 2 Preferred, 2 Alternate
Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic	211	Endangered	5, 9	2B (directly adjoining)
Sub-alpine Woodland	43	Least Concern	2, 4, 5, 8, 9, 10, 11, 13, 15, 16, 17, 18	1A, 1B/E, 1C, 1D, 1F, 1G, 2B, 2C, 2D, High Knob HC & OH, 1 Preferred, 1 Alternate, 2 Preferred, 2 Alternate, High Knob, Cope Hut, Westons Hut
Wet Forest	30	Least Concern	18	

NS No status; default status for Sub-alpine Treeless Vegetation is Rare

Sub-alpine Pond Herbland has not been mapped across the State and therefore, has not been assigned a Bioregional Conservation Status or EVC Benchmark.

Alpine Damp Grassland (EVC 1002)

Description:	A dense, tussock grassland subject to seasonal waterlogging, which occurs in high altitude valleys (in and around wet heathland and peatlands) and on plains or plateaus with basalt derived soils, above 1600 m ASL. This EVC is typically dominated by Bog Snow-grass <i>Poa constiniana</i> , with a variety of forbs and graminoids.
Location and extent within the assessment area:	Alpine Damp Grassland was recorded in a number of locations along the FHAC (Photo 1), across the Bogong High Plains such as Weston Spur track, where it was also present as a mosaic with other vegetation types.
Condition within the assessment area:	This EVC was generally in good condition, except for some locations along the existing tracks, where off-track walking by hikers has created bare areas and channelisation. Examples of this EVC were dominated by Bog Snow-grass, with Victorian Buttercup <i>Ranunculus victoriensis</i> , Australian Caraway <i>Oreomyrrhis eriopoda</i> , Bitter-cress <i>Cardamine</i> spp., Silver Snow-daisy <i>Celmisia tomentella</i> , Plantain <i>Plantago</i> spp., Southern Woodrush <i>Luzula modesta</i> , Daisies <i>Brachyscome</i> spp., Alpine Yam-daisy <i>Microseris lanceolata</i> and Spreading Rope-rush <i>Empodisma minus</i> . Common weeds included Sheep Sorrel <i>*Acetosella vulgaris</i> and Flatweed <i>*Hypochaeris radicata</i> , as well as scattered Sweet Vernal-grass <i>*Anthoxanthum odoratum</i> , Common Mouse-ear Chickweed <i>*Cerastium vulgare</i> , White Clover <i>*Trifolium repens</i> , Dandelion <i>*Taraxacum</i> spp. and Forget-me-not <i>*Myosotis discolor</i> (Abzeco 2025).
Listed Community equivalent:	None.



Photo 1 Alpine Damp Grassland along the FHAC (Source: Abzeco, 2020)

Alpine Dwarf Heathland (EVC 170)

Description: A very low, open heathland to 0.2 m tall, occurring on exposed peaks and ridges above 1700 m ASL, where it is subject to strong winds, frosts and high temperatures during summer. This EVC is characteristically located on rocky pavements with minimal soil development, and the shrub layer is notably wind-pruned. It is amongst the rarest vegetation communities in the state, confined to Mount Nelse and Mount Nelse North area on the Bogong High Plains.

Location and extent within the assessment area: This community was located in the Bundara-Cobungra RNA along the FHAC Trail Section 7 north-east of Mount Jim on the Bogong High Plains, at the western end of Weston Spur track where it merges with Alpine Grassland (Photo 2). It was also recorded along a large proportion of alternative trail alignment Section 10, between Tawonga Huts and Weston Spur track, where an exposed ridgeline supports a mosaic of Alpine Dwarf Heathland with Alpine Grassland and Rocky Outcrop Heathland. Small areas of Alpine Dwarf Heathland were also present in the Hotham Heights track area south of the Great Alpine Road.

Condition: The vegetation in this EVC was in good condition, with very low weed cover other than scattered *Sheep Sorrel and *Flatweed. The common species within the assessment area included Ace of Spades *Epacris gunnii*, Yellow Kunzea *Kunzea muelleri*, Alpine Grevillea *Grevillea australis*, Soft Snow-grass *Poa hiemata*, Carpet Heath *Pentachondra pumila*, Silver Ewartia *Ewartia nubigena*, White Purslane *Montia australasica*, Sharp-leaf Woodrush *Luzula acutifolia* subsp. *acutifolia* and Alpine Stackhousia *Stackhousia pulvinaris*.

Listed Community equivalent: None.



Photo 2 Alpine Dwarf Heathland along the FHAC (Source: Abzeco, 2020)

Alpine Grassland (EVC 1001)

Description: A high-altitude tussock grassland with a high cover and diversity of forbs. It generally occurs on free-draining soils above 1500 m ASL, where it is exposed to cold air drainage, severe frosts and snow, and sheltered from high winds. It dominates high altitude valleys and saddles, and occurs extensively across high plains, such as the Bogong High Plains and Howitt Plains, often between heathland and shrublands on the higher ground, and wetland vegetation types on the valley floors.

Location and extent within the assessment area: Alpine Grassland within the assessment area was recorded in scattered locations across Bogong High Plains (Photo 3), as well as along parts of the Razorback track and on Mount Feathertop, at the western end of Diamantina Spur Track, and the eastern most end of Bungalow Spur Track.

Condition: Alpine Grassland in the project area is in good condition. On the Bogong High Plains, it is characterised by a dense cover of low tussock grasses interspersed with a variety of herbs. Dominant grasses include Soft Snow-grass and Horny Snow-grass *Poa fawcettiae*. Dominant herb species include Daisies *Brachyscome* spp., Woodrush *Luzula* spp., Billy-buttons *Craspedia* spp., Buttercups *Ranunculus* spp., Alpine Buttons *Leptorhynchos squamatus* subsp. *alpinus*, Snow-daisies *Celmisia* spp. and Showy Violet *Viola betonicifolia* subsp. *betonicifolia*. Weeds are scattered and confined to areas of disturbance, such as along the edges of the walking track, maintenance vehicle tracks, and around existing camping areas. The main weeds species are *Sheep Sorrel and *Flatweed, as well as Milfoil **Achillea millefolium* toward the southern end of the Razorback track.

Listed Community equivalent: None.



Photo 3 Alpine Grassland along the FHAC (Source: Abzecco, 2020)

Alpine Grassy Heathland (EVC 1004)

- Description:** A low heath, typified by a variably open structure of alpine heath species to 1 m tall, interspersed with tussock grasses and forbs, although localised areas of dense shrub cover may occur in more exposed settings. This EVC generally occurs on slopes above 1400 m ASL where tree growth is limited by frost and exposure.
- Location and extent within the assessment area:** Alpine Grassy Heathland is the most commonly occurring EVC in the assessment area on the Bogong High Plains (Photo 4) and was also scattered along sections of Diamantina Spur Track, two sections along Bungalow Spur Track, and Razorback track where it consisted of low closed tussock grassland interspersed with scattered heath species.
- Condition:** This vegetation is in good condition with few weeds, mainly *Sheep Sorrel and *Flatweed along the existing trail, aqueduct, other vehicle tracks and existing camping areas. Dominant heath species in the assessment area include Alpine Rusty Pods *Hovea montana*, Yellow Kunzea, Silky Bossiaea *Bossiaea sericea*, Leafy Bossiaea *Bossiaea foliosa*, Alpine Grevillea, Alpine Phebalium *Phebalium squamulosum* subsp. *alpinum*, and Alpine Mint-bush *Prostanthera cuneata*. The dominant grass species were Soft Snow-grass and Horny Snow-grass, with a mix of herbs, including Billy-buttons, Buttercups, Bidgee-widgee *Acaena novae-zelandiae*, Snow-daisies, Alpine Buttons, and Australian Caraway.
- Listed Community equivalent:** None.



Photo 4 Alpine Grassy Heathland along the FHAC at Heathy Spur Track (Source: Abzeco, 2020)

Alpine Rocky Outcrop Heathland (EVC 1013)

Description: Alpine Rocky Outcrop Heathland consists of low (<0.5 m) sparse to dense heathland with scattered forbs and grasses on shallow soils of exposed peaks and ridges, typically in eroded areas where rock is at or near the surface, above 1400 m ASL.

Location and extent within the assessment area: This EVC is located in the Bundara-Cobungra RNA along the track section north-east of Mount Jim on the Bogong High Plains, as well as the western end of Westons Spur track, and in discrete sections along the Razorback track and as a mosaic with Sub-alpine Woodland midway along the Diamantina Spur Track (Photo 5).

Condition: This EVC is in good condition within the project area. Common species recorded in this EVC include Alpine Grevillea, Alpine Rusty Pods, Alpine Phebalium, Yellow Kunzea, Soft Snow-grass, Horny Snow-grass, Bristle Grass *Trisetum spicatum* subsp. *australiense*, Leafy Daisy *Brachyscome rigidula*, Mountain Everlasting *Coronidium monticola* and Alpine Podolepis *Podolepis robusta*.

Listed Community equivalent: None.



Photo 5 Alpine Rocky Outcrop Heathland (foreground) with sub-alpine Woodland (background) (Source: Abzeco, 2020)

Alpine Valley Peatland (EVC 288)

Description: Bogs of alpine valley floors, comprising mosses (*Sphagnum* spp.), sedges (*Carex* spp.), forbs, and scattered shrubs typically <0.5 m tall. On the Bogong High Plains, this EVC occurs in valleys from 1600 to 1700 m ASL, often in old meander channels with deep humic alluvium.

Location and extent within the assessment area: Alpine Valley Peatland was recorded as multiple small patches and in a mosaic with other vegetation types through the Bogong High Plains along Sections 1a, 2, 3, 4, 5, 6, 7 and 11, where it occurs adjacent to, or is intersected by the FHAC (Photo 6). The longest section (approx. 1 km) of Alpine Valley Peatland within the project area occurs along Section 7 around the intersection of Westons Spur Track and the Australian Alps Walking Track, where the trail intersects Alpine Valley Peatland in a fine-scale mosaic with Alpine Damp Grassland. Within the broader assessment area, Alpine Valley Peatland was also recorded in Section 9, along the Fainter Fire Trail, along Section 17 on Pretty Valley Road, and at Overnight Nodes 1 Alternate, 2 Preferred and 2 Alternate; these areas are no longer within the project area.

Condition: Most examples of this EVC in the Victorian Alps have been subject to past disturbances from infrastructure, cattle grazing or fire. Within the assessment area, this EVC shows evidence of disturbance where it is intersected by existing tracks and at Watchbed Creek, where the creek has been diverted through a pipe beneath the track that intersects the peatland. Common species forming part of this EVC in the assessment area include Spreading Rope-rush, Candle Heath *Richea continentis*, Fen Sedge *Carex gaudichaudiana*, Tall Sedge *Carex appressa*, peat mosses *Sphagnum* spp., Alpine Trachymene *Trachymene humilis* subsp. *breviscapa*, Thyme Speedwell *Veronica serpyllifolia*, Southern Woodrush, Silver Snow-daisy, Mountain Woodruff *Asperula gunnii*, Lilac Bitter-cress *Cardamine lilacina*, Victorian Buttercup, Bog Billy-buttons *Craspedia lamicola*, Alpine Baeckea *Baeckea gunniana*, Ashen Billy-buttons *Craspedia gracilis*, Alpine Club-rush *Isolepis crassiuscula*, Bog Snow-grass, Alpine Rusty-pods and Ace of Spades.

Listed Community equivalent: Consistent with the EPBC Act-listed Alpine Bogs and Associated Fens and FFG Act-listed Alpine Bog Communities



Photo 6 Alpine Valley Peatland along the FHAC (Source: Abzeco, 2020)

Montane Damp Forest (EVC 38)

Description: Montane Damp Forest generally occurs on well-developed colluvial soils on a variety of aspects at montane elevations, from approximately 700-1500 m ASL. It is dominated by a tall eucalypt tree layer to 30 m tall over a medium to tall dense shrub layer of broad-leaved species typical of wet forest mixed with elements from dry forest types. The ground layer includes herbs and grasses as well as a variety of moisture-dependent ferns.

Location and extent within the assessment area: Montane Damp Forest occurs in one long reach between the area around Weston Hut and the western end of Diamantina Spur Track below approximately 1500 m ASL and an extensive stretch along middle section of Bungalow Spur Track (Photo 7).

Condition: This community is typically characterised by a canopy of Mountain Gum *Eucalyptus dalrympleana* subsp. *dalrympleana* and Alpine Ash *Eucalyptus delegatensis* to approximately 30 m tall, over a dense shrub layer including species such as Silver Wattle *Acacia dealbata*, Mountain Hickory Wattle *Acacia obliquinervia*, Tree Lomatia *Lomatia fraseri*, Dusty Daisy-bush *Olearia phlogopappa* subsp. *flavescens* and Tall Oxylobium *Oxylobium arborescens*. The ground layer includes a variety of herbs, grasses and ferns such as Tasman Flax-lily *Dianella tasmanica*, Slender Tussock-grass *Poa tenera*, Weeping Grass *Microlaena stipoides* var. *stipoides*, Sword Tussock-grass *Poa ensiformis*, Mother Shield-fern *Polystichum proliferum*, Austral Bracken *Pteridium esculentum* subsp. *esculentum*, Fishbone Waterfern *Blechnum nudum*, Mountain Fireweed *Senecio gunnii* and Common Trigger-plant *Stylidium armeria* (Abzeco 2025). This vegetation type was in good condition, with low weed cover in most areas, although it supported a variety of exotic species, particularly along road edges and near camping areas. Exotic weed species included *Sweet Vernal-grass, Yorkshire Fog **Holcus lanatus*, St John's Wort **Hypericum perforatum* subsp. *veronese*, Apple **Malus pumila*, Creeping Buttercup **Ranunculus repens*, Blackberry **Rubus* spp. and Rusty Sallow **Salix cinerea* subsp. *oleifolia*.

Listed Community equivalent: None.

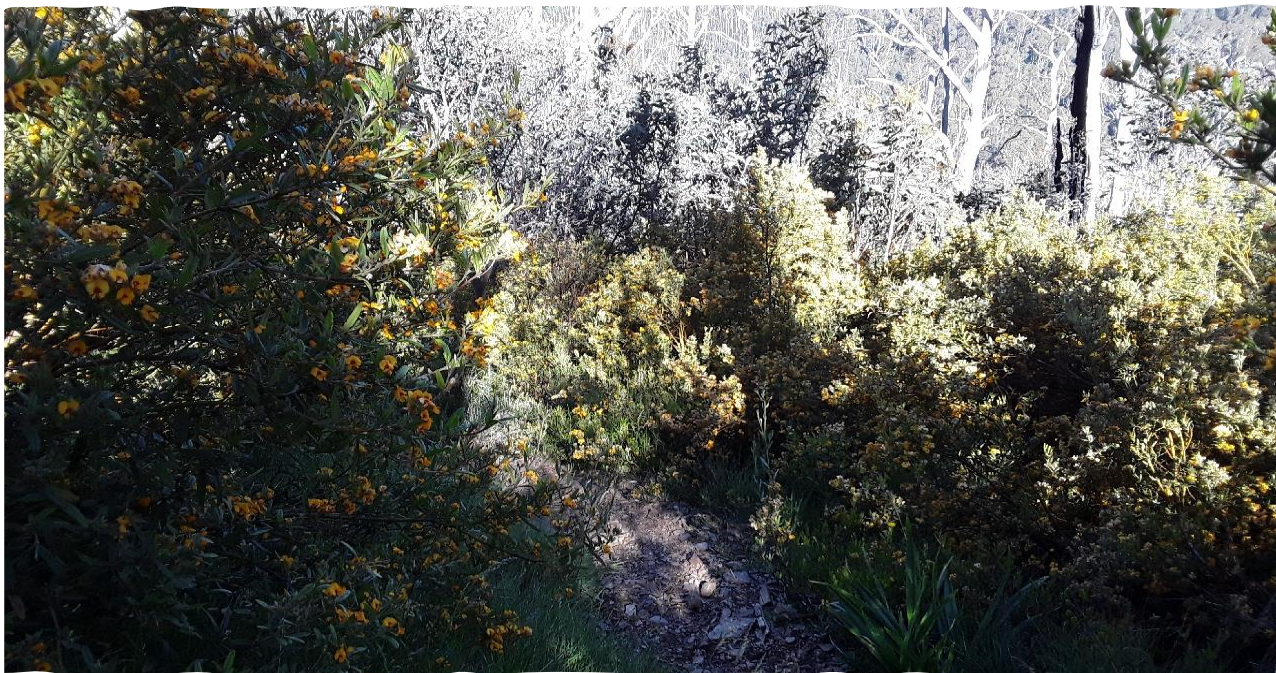


Photo 7 Montane Damp Forest along the FHAC (Source: Abzeco, 2020)

Snowpatch Grassland (EVC 1012)

Description:	Snowpatch Grassland occurs in alpine areas above 1600 m ASL and is restricted to the sheltered slopes on southerly or easterly (lee) aspects where snow cover persists beyond the general thaw into early summer, thereby reducing the growing season. It is characterised by a short turf or sward (to 0.1 m tall) of sedges and grasses, dominated by Mountain Sedge <i>Carex hebes</i> , Alpine Wallaby-grass <i>Rytidosperma nudiflorum</i> and Ledge Grass <i>Poa hothamensis</i> , and a range of forbs.
Location and extent within the assessment area:	Within the assessment area, this community is entirely restricted to the upper section of Mount Feathertop, more specifically, the southern face. It was recorded on Track Section 14, along the Razorback Track to Mount Feathertop.
Condition:	Snowpatch Grassland in the assessment area was in good condition, with very low weed cover apart from scattered *Sheep Sorrel and *Flatweed. Dominant species included the characteristic Mountain Sedge, Alpine Wallaby-grass and Ledge Grass. Other common components include Slender Snow-daisy <i>Celmisia pugioniformis</i> , Victorian Snow-daisy <i>Celmisia latifolia</i> , Alpine Woodruff <i>Asperula pusilla</i> , Tufted Knawel <i>Scleranthus diander</i> , Prickly Starwort <i>Stellaria pungens</i> and Showy Violet.
Listed Community equivalent:	Consistent with the FFG Act-listed Alpine Snowpatch Community (see Section 4.5.2).

Sub-alpine Shrubland (EVC 42)

Description:	This EVC ranges from dense to sparse shrubland above 1200 m ASL in locations that experience extreme conditions including long periods of snow cover, shallow soils, and large areas of exposed rock. It generally occurs in alpine and sub-alpine areas fringing, or in a mosaic with, Sub-alpine Woodland and can include scattered mallee-form eucalypts (typically Snow Gum), often with a high abundance and diversity of forbs and graminoids. This EVC is widespread in alpine and sub-alpine Victoria.
Location and extent within the assessment area:	Patches of Sub-alpine Shrubland were scattered throughout the assessment area across the Bogong High Plains (Photo 8) and along sections of Diamantina Spur Track, Bungalow Spur Track and Razorback track.
Condition:	Within the assessment area, the condition of this EVC was good. Structure varied from low, closed vegetation up to 1 m high, with and without Snow Gums (e.g. Snow Gums were present in this EVC along parts of the Langford Aqueduct). Common species included Beard-heath <i>Acrothamnus</i> spp., Alpine Star-bush <i>Asterolasia trymalioides</i> , Silky Bossiaea, Alpine Bottlebrush <i>Callistemon ptyoides</i> , Yellow Kunzea, Alpine Grevillea, Alpine Orites <i>Orites lancifolius</i> , Everlasting <i>Ozothamnus</i> spp. Alpine Phebalium, Alpine Podolobium <i>Podolobium alpestre</i> , Alpine Rusty Pods and Alpine Mint-bush. Forbs included daisy bushes, Speedwell <i>Veronica</i> spp., Victorian Buttercup, Woodruff <i>Asperula</i> spp. and Soft Crane's Bill <i>Geranium potentilloides</i> . Along the aqueduct there was a high cover of Royal Grevillea <i>Grevillia victoriae</i> in some locations. Few weeds were recorded; they included *Sheep Sorrel and *Flatweed, particularly along the aqueduct.
Listed Community equivalent:	None.



Photo 8 Sub-alpine Shrubland along the FHAC (Source: Abzeco, 2020)

Sub-alpine Woodland (EVC 43)

Description:	Sub-alpine Woodland occurs on a wide range of geologies and aspects above 1200 m ASL, in areas of high rainfall and where snow persists over winter.
Location and extent within the assessment area:	These environs are widespread across the Bogong High Plains and stands of Sub-alpine Woodland were scattered throughout this part of the assessment area (Photo 9). This EVC was also present along the more elevated western section of Diamantina Spur Track, and in discrete sections of the Razorback Track.
Condition within the assessment area:	Most patches of Sub-alpine Woodland within the project area appear to have been recently burnt but are regenerating well. A few stands of long unburnt woodland were located along Heathy Spur Track, the Langford West Aqueduct Road, and between Cope Hut and the Bogong High Plains Road, and along Diamantina Spur Track. This vegetation primarily consisted of a canopy of either White Sally <i>Eucalyptus pauciflora</i> subsp. <i>pauciflora</i> or Alpine Sally <i>Eucalyptus pauciflora</i> subsp. <i>niphophila</i> , although within the High Knob region of Diamantina Spur Track, some of the canopy appears to be Bogong Sally <i>Eucalyptus pauciflora</i> subsp. <i>hedraia</i> , which is endemic to the local area. The understorey is variously dominated by a mix of shrubs and grasses and forbs, including Alpine Star-bush, Silky Bossiaea, Alpine Rusty-pods, Tangled Shrub-violet <i>Melicytus angustifolius</i> subsp. <i>divaricatus</i> , Alpine Orites, Alpine Podolobium, Alpine Mint-bush, Daisy-bush <i>Olearia</i> spp., Everlasting <i>Ozothamnus</i> spp., Alpine Pepper, <i>Tasmannia xerophila</i> subsp. <i>xerophila</i> , Alpine Phebalium, and Alpine Grevillea. Forbs and graminoids included: Bidgee-widgee, Woodruffs <i>Asperula</i> spp., Daisies <i>Brachyscome</i> spp. and <i>Celmisia</i> spp., Billy-buttons, Tasman Flax-lily, Soft Cranes's-bill, Buttercups, Twin-flower Knawel <i>Scleranthus biflorus</i> , Prickly Starwort <i>Stellaria pungens</i> , Alpine Buttons, Soft Snow-grass and Ledge-grass <i>Poa hothamensis</i> var. <i>hothamensis</i> . Few weeds are present in this EVC; they include the ubiquitous *Sheep Sorrel and *Flatweed, as well as scattered *Common Mouse-eared Chickweed, Self-heal * <i>Prunella vulgaris</i> and *White Clover. The occasional Apple * <i>Malus</i> spp. and *Rusty Sallow (Willow) were observed primarily in association with camping and hut locations, and one Sweet Briar * <i>Rosa rubiginosa</i> was found in close proximity to Weston Hut (Abzeco 2025).
Listed Community equivalent:	None.



Photo 9 Sub-alpine Woodland along the FHAC (Source: Abzeco, 2020)

4.3 Flora

A total of 329 native flora species were recorded in the project area during on-ground assessments, many of which are characteristic of sub-alpine and alpine environments, and have evolved with the harsh conditions of high altitudes (see Abzeco 2025). They include 60 threatened flora species recorded immediately adjacent to the tracks, or within the 20m-wide assessment buffer along the proposed trail alignment, and/or at proposed Overnight Nodes.

4.3.1 Threatened flora

A total of 150 threatened flora species has been identified by Abzeco (2025) as potentially occurring in the project area based on the species known distributions, database records and presence of suitable habitat within or directly adjoining the project area (Table 8). Of these, 60 species were recorded within the project area incidentally, during flora and fauna assessments along the proposed trail alignment, and from targeted surveys of the proposed Overnight Nodes. A further seven threatened species were recorded along alternative sections of trail, which have since been removed from the proposed FHAC trail alignment [Table 8, see also Abzeco (2025)]. Threatened flora species recorded within the project area include one species listed under the EPBC Act, Shining Cudweed *Argyrotegium nitidulum*, which was recorded along four sections of trail, and 59 species listed as threatened under the FFG Act. Many of these species are associated with alpine treeless vegetation, and are considered to be restricted to the Bogong High Plains in Victoria (Table 8).

Overall, the highest numbers of threatened species were recorded along the FHAC trail alignment through the Bogong High Plains and the Bundara-Cobungra RNA. Of all track sections, the highest number of threatened species was recorded along Trail Section 6 (30 species), followed by Trail Sections 2, 3, 7 and 11, which were all found to each support more than 20 threatened species. However, as no targeted surveys have been undertaken along the trail alignment, it is possible that additional species occur along various sections of the FHAC trail, which were not recorded during site assessments. Surveys at the three Overnight Nodes recorded nine threatened species at Cope Hut, four threatened species at Westons Hut and eight threatened species at High Knob (see Table 8).

Threatened flora species recorded, and/or identified as potentially occurring within the project area, are given in Table 8, along with their conservation status, known distribution, and general habitat requirements. However, it should be noted that information on the distribution and habitat for many species is limited and often informed by a small number of known records, due to a general lack of survey effort. Field surveys for the FHAC recorded a number of species outside of their currently known area of occupancy, and/or outside of areas of modelled habitat (see Abzeco 2025). The likelihood of occurrence for threatened flora species has therefore been conservatively estimated based on vegetation within the project area; Table 8 lists the EVCs within the assessment area that each species may be associated with (based on habitat descriptions); EVCs within which they were recorded are in bold text.

Table 8 Threatened flora species recorded and/or identified as potentially occurring within the FHAC assessment area

Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Known distribution	Habitat	Associated EVCs	Recorded locations
<i>Acacia alpina</i>	Alpine Wattle		En		Confined to alpine and sub-alpine areas of Victoria and New South Wales.	Exposed sites on shallow rocky soils at 1300 m to 1800 m ASL; often associated with granite and sometimes thrives in windswept areas. Can be locally common and occasionally forms thickets. Likely to have strong post-fire recruitment (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland 	Trail Sections: 13 and 15
<i>Acacia dallachiana</i>	Catkin Wattle		Vu		Near-endemic to Victoria, where it is largely confined to the Buffalo Range, eastern and western slopes of Mt Bogong, the Bogong High Plains and near Sassafras Gap north of Benambra. Records in New South Wales are tightly circumscribed (DELWP 2021).	Restricted to sub-alpine and montane forests.	<ul style="list-style-type: none"> Montane Damp Forest Sub-alpine Woodland 	Trail Sections: 12 Overnight Nodes: Blairs Hut
<i>Aciphylla glacialis</i>	Snow Aciphyll		En		Occurs in the sub-alpine and alpine areas of Victoria, through the Central Victorian Uplands, Highlands Northern Fall, Highlands Southern Fall and Victorian Alps bioregions, as well as in New South Wales (DELWP 2021).	Tussock grassland and tall herbfields in alpine and higher subalpine areas; rarely recorded in Snow-gum woodland. Can be locally common (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Grassland Alpine Grassy Heathland Sub-alpine Woodland Snowpatch Grassland 	Trail Sections: 5, 6, 7, 10a, 11, 14 and 18
<i>Aciphylla simplicifolia</i>	Mountain Aciphyll		En		Scattered but locally common through suitable habitat in alpine and sub-alpine areas through the East Gippsland Uplands, Highlands – Southern Fall, Highlands – Northern Fall, and Victorian Alps bioregions, and in Monaro Tablelands and Snowy Mountains (DELWP 2021).	Sub-alpine and alpine grasslands, tall herbfield, Sphagnum bog edges and eucalypt woodlands (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Alpine Grassy Heathland Sub-alpine Woodland Alpine Grassland 	Not recorded
<i>Acrothamnus montanus</i>	Snow Beard-heath		En	Restricted	Confined to high-alpine areas on and near the Bogong High Plains (Mount Bogong, Nelse, Jim, Hotham, Loch). There are VBA records from Mt Buller, Wonnangatta, Moroka, and Cobberas. However, only the Bogong High Plains records are supported by contemporary data (DELWP 2021). Also occurs in New South Wales and Tasmania.	Grows in high-alpine areas, specifically, heath, grassland and on rocky slopes above 1800 m where it is often locally common, forming near-pure stands (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Rocky Outcrop Heathland Alpine Conifer Shrubland Alpine Dwarf Heathland Sub-alpine Woodland 	Trail Sections: 1, 2, 3, 4, 5, 6, 7, 9, 10, 10a, and 15 Overnight Nodes: Cope Hut & High Knob
<i>Agrostis australiensis</i>	Tiny Bent		En		Occurs in Victoria, New South Wales, Australian Capital Territory and Tasmania. In Victoria, it is considered restricted to the alpine region (e.g. Cobberas, Bogong High Plains, Nunniong Plateau, Dargo High Plains, Mount Buffalo) but apparently absent from Baw Baw (DELWP 2021).	Locally common in moist alpine grasslands (VicFlora 2025) and alpine bogs and wetlands that are often strongly dominated by Sphagnum. Sometimes associated with damp herbfields or wet heathlands and rarely extends to Sub-alpine Woodland (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Grassland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Snowpatch Grassland Alpine Valley Peatland 	Not recorded
<i>Agrostis muelleriana</i>	Mueller's Bent		En		Occurs from Mount Buller and the Snowy Range east to the New South Wales border at Mount Tingaringy, with an outlier in the Strathbogie ranges, as well as the Australian Capital Territory and Tasmania. Restricted in Victoria to the alpine region, including Mount Buller, Mount Buffalo, Bogong High Plains, and Cobberas, but absent from Baw Baw (DELWP 2021).	Occupies a large habitat range from Sphagnum bogs and heathy wetlands through to dense grasslands, including Snowpatch vegetation, to elevated rocky dryland habitats. Sometimes occurring in Sub-alpine Woodlands (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Grassland Alpine Grassy Heathland Alpine Dwarf Heathland Alpine Rocky Outcrop Heathland Sub-alpine Woodland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Snowpatch Grassland Alpine Valley Peatland 	Not recorded
<i>Alchemilla xanthochlora</i>	Lady's Mantle		En		Occurs in New South Wales and Victoria where it is scattered across the Snowy Range, Bogong High Plains, and Mount Hotham (DELWP 2021).	Alpine and subalpine regions mainly along watercourses or seepage lines	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 11 Overnight Nodes: adjoining Weston's Hut
<i>Argyrotegium mackayi</i>	Silver Cudweed		En	Restricted	Occurs in New South Wales, Australian Capital Territory, Victoria and Tasmania. In Victoria, mainly known from the Bogong High Plains and Mount Loch with additional records from the Snowy Range and Baw Baw (DELWP 2021).	Mainly known from Mount Hotham and Bogong High Plains. This species colonises bare ground in grassland communities (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland 	Trail Sections: 17

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Known distribution	Habitat	Associated EVCs	Recorded locations
<i>Argyrotegium nitidulum</i>	Shining Cudweed	Vu		Restricted	Occurs in alpine and sub-alpine areas of Victoria, New South Wales, and Tasmania. Extremely localised in Victoria on the Bogong High Plains, typically between Mount Cope and Mount Nelse. May also occur on the Dargo High Plains and Mount Bogong.	Occurs on open wet ground, near streams and bogs or in damp open grasslands and heathland on the Bogong High Plains (Vicflora 2019). It can be found in disturbed areas such as along roadsides suggesting that it is a good coloniser of bare patches, potentially even needing some disturbance to promote germination.	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Dwarf Heathland Alpine Damp Grassland Alpine Rocky Outcrop Heathland 	Trail Sections: 1a,2, 3 6 and 7
<i>Argyrotegium poliochlorum</i>	Grey-green Cudweed		En		Known from Victoria, New South Wales and Tasmania. In Victoria, known from the Snowy Range, Mount Buffalo, Bogong High Plains and the Nunniong and Baw Baw Plateaus (DELWP 2021).	Known from the Bogong High Plains where it occurs in Sphagnum moss beds, wet heathland or wettish grassland communities (typically between 1400 and 1850 m ASL) (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Australopyrum velutinum</i>	Mountain Wheat-grass		Vu		In Victoria, confined to the alpine regions of Mount Buffalo, Dargo High Plains, Bogong High Plains, Nunniong Plateau and the Snowy Range between Mount Wellington and Mount Howitt. Also occurs in New South Wales, and Tasmania (DELWP 2021).	Damp alpine and subalpine grasslands. Can be locally common (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Grassland Alpine Grassy Heathland 	Not recorded
<i>Austrostipa nivicola</i>	Alpine Spear-grass		En		Occurs in Victoria, New South Wales and Tasmania. In Victoria, it occurs on the Howitt Plains, Mount Buffalo, Bogong and Dargo High Plains, and through the Snowy Range, Cobberas and the Nunniong Plateau (DELWP 2021).	Grassland, heathland, Sow Gum (<i>Eucalyptus pauciflora</i>) woodland at altitudes above 1500 m. Shows a strong post-fire flowering response (flowering is otherwise irregular) (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	Overnight Nodes: Cope Hut
<i>Barbarea grayi</i>	Native Wintercress		Vu		Occurs discontinuously from Mount Buller and the Snowy Range in the west, to Mount Hotham, the Bogong and Dargo High Plains, the Nunniong Plateau, and the headwaters of the Buchan River in the east. Also occurs in New South Wales and the Australian Capital Territory (DELWP 2021).	Typically grows in damp areas near high-altitude streams, but it is rather rare. Quadrat and monitoring data indicate that the taxon is consistently associated with taxa which characterise a range of moist to wet forest and woodland communities, high elevation riparian thickets and wetland habitats. Can be locally common after fire (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Woodland (near waterways) Sub-alpine Shrubland (near waterways) Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Montane Damp Forest Damp Forest Wet Forest 	Not recorded
<i>Bartramia subsymmetrica</i>	Bogong Apple-moss		Cr	Restricted	Known in Victoria only from the Bogong High Plains, with the only known extant populations from the Watchbed Creek catchment and a north-facing boggy flush north of Heathy Spur; other populations around Mount Nelse and Falls Creek are considered extinct (DELWP 2021).	Occurs in pools and boggy sites in treeless zones. Co-occurs with other moss species <i>Blinda robusta</i> . Habitat has been significantly impacted by fires, feral animals, wet invasion and changed hydrology (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Alpine Fen Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Sub-alpine Pond Herbland 	Not recorded
<i>Boronia algida</i>	Alpine Boronia		Vu		Occurs in Tasmania, New South Wales and Victoria, where it is known from Mount Hotham, Mount Buffalo and the Nunniong Plateau and surrounds (DELWP 2021).	Occurs on shallow soils derived from igneous rock in heath or open eucalypt woodland communities (Vicflora 2019).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland Alpine Grassy Heathland Alpine Rocky Outcrop Heathland 	Trail Sections: 13 and 15 Overnight Nodes: adjoining High Knob
<i>Bossiaea bracteosa</i>	Mountain Leafless Bossiaea		En	Endemic	Considered endemic to Victoria where it is known from very few localities in the alpine region, at the Black Range, southern Dargo High Plains, near Mount Howitt, between Mount Hotham and Mount St Bernard, and north-west of Maffra (DELWP 2021).	The taxon is found in drier upper montane to subalpine forest or subalpine woodland, where it is almost entirely recorded in Snow Gum (<i>Eucalyptus pauciflora</i>) woodland, rarely with Alpine Ash (<i>E. delegatensis</i>), and rarely extending above the tree line at Mt Hotham to 1565 m elevation (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland (where in a mosaic with woodland) 	Not recorded
<i>Brachydontium intermedium</i>	Bogong Bristle-leaf Moss		Cr	Endemic, Restricted	Endemic to Victoria where it is known only from the Bogong High Plains (DELWP 2021).	Occurs in sheltered rocky areas of the Bogong High Plains. The taxon is lithophytic on schist and basalt, always in dry situations such as the upper surfaces of rock overhangs. Main known location is around Falls Creek - Mt McKay (DELWP 2021).	No specific EVC	Not recorded
<i>Brachyscome foliosa</i>	Mountain Daisy		En		Confined to a few locations on the Bogong and Dargo High Plains and the Cobungra area in Victoria, as well as New South Wales (DELWP 2021).	Typically occurs in tussock grassland and alpine herfields, often on basaltic soils, above 1200 metres altitude (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland 	Trail Sections: 6, 14 and 17

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<i>Brachyscome tadgellii</i>	Tadgell's Daisy		En	Endemic	Considered endemic to Victoria, known from the Dargo and Bogong High Plains, Mount Hotham and Cobberas. Records from the Snowy Range between Mounts Wellington and Howitt are mis-determined records of <i>B. barkerae</i> (VicFlora 2025).	Commonly grows in open grasslands and herblands with poor drainage (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Grassy Heathland Alpine Dwarf Heathland 	Trail Sections: 6, 7, 11 and 14 Overnight Node: 2 Preferred
<i>Cardamine astoniae</i>	Spreading Bitter-cress		Cr		Known from disjunct localities in Victoria, New South Wales and Tasmania. Recorded in Victoria from Lake Mountain to the New South Wales border, including the Snowy Range, Mount Loch, Falls Creek area, Bucketty Plain and Nunniong Plateau (DELWP 2021).	Forms small to large colonies and grows amongst <i>Poa</i> or <i>Empodisma</i> tussocks, or Sphagnum moss in open, moist to boggy alpine and subalpine environment in Victorian Alps (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Alpine Fen Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Cardamine franklinensis</i>	Franklin Bitter-cress		Cr		Known in Victoria from collections in three sub-alpine area, the Bogong High Plains, Mount Wellington and Wonnangatta – Macalister River divide. Also known to occur in New South Wales and Tasmania (VicFlora 2025).	Occurs in Sub-alpine Woodland on rocky scree slopes or amongst <i>Poa</i> (Snow Grass) tussocks where it forms small colonies (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland 	Not recorded
<i>Cardamine lilacina</i> s.s.	Lilac Bitter-cress		En		Appears to be widely distributed across Victoria, New South Wales, Australian Capital Territory and Tasmania. However, the distribution is poorly known due to taxonomic uncertainty.	Lower altitude forests, Sub-alpine woodland and various alpine habitats. This species is taxonomically unclear and comprises a complex of species, making habitat attributes difficult to describe. Responds well to disturbance (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Valley Peatland Sub-alpine Shrubland Sub-alpine Woodland 	Trail Sections: 2, 3, 4, 6, 7 and 17 Overnight Nodes: 1 Preferred, 2 Preferred, 2 Alternate
<i>Carex archeri</i>	Archer's Sedge		En		Recorded in Victoria, New south Wales and Tasmania. Scattered and apparently rare, found in higher alpine areas of Victoria, including Mount Hotham, Mount Feathertop and Mount Bogong, with isolated occurrences on the Snowy Range and near Cravensville (VicFlora 2025).	A habitat specialist restricted to wet, sheltered and typically rocky sites including amongst wet rocks along creeks and cliff faces near waterfalls. Recorded elevations include 1320 metres, 1500 metres, 1540 metres, and 1580 metres. Associated species include <i>Blechnum penna-marina</i> , <i>Cystopteris tasmanica</i> , <i>Isolepis subillissima</i> and <i>Poa fawcettiae</i> (DELWP 2021).	<ul style="list-style-type: none"> Alpine Conifer Shrubland Alpine Pond Herbland Alpine Rocky Outcrop Heathland 	Not recorded
<i>Carex austrocompacta</i>	Compact Hook-sedge		En		Confined to the alpine region in Victoria where it has been recorded near Mount Baw Baw and on the Baw Baw Plateau, on the Bogong High Plains at Mount Hotham, and Mount Loch, near the Cope West Aqueduct and at New Species Gully north-east of Mount Cope (DELWP 2021). Also occurs in New South Wales and Tasmania.	Grows in sub-alpine and alpine herbfields (including heath and damp herbfields) and Snow Gum woodlands. Often associated with basalt soils. Around the Cope West Aqueduct, it has been recorded in grassy Snow Gum woodland and Snow Gum dominated woodland with a closed heath understorey on basalt soils. (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Sub-alpine Shrubland Sub-alpine Woodland 	Not recorded
<i>Carex blakei</i>	Alpine Sedge		En		Occurs in Victoria, New South Wales, Australian Capital Territory and Tasmania. Recorded in Victoria around Lake Mountain, the Baw Baws, Mount Buffalo, Snowy Range and Bogong High Plains (VicFlora 2025).	Locally common in the alps and sub-alps, particularly in sodden grassland and at the margins of Sphagnum bog communities (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Carex canescens</i>	Short Sedge		En		Restricted to the alpine region in Victoria where it is locally common on the Bogong High Plains, near Mount Cope, and the Baw Baw Plateau. It also occurs in New South Wales, Tasmania and globally, has a bipolar distribution (DELWP 2021).	Locally common near pools and streams on the Bogong High Plains e.g. near Mt Cope and Baw Baw Plateau.	<ul style="list-style-type: none"> Alpine Valley Peatland Alpine Fen Sub-alpine Pond Herbland 	Trail Sections: 1, 2 and 4
<i>Carex capillacea</i>	Hair Sedge		En		Restricted to alpine areas in Victoria, including the Snowy Range, Bogong High Plains, Nunniong Plateau, Davies Plain and the Cobberas. Also occurs in New South Wales, Australian Capital Territory and Tasmania (DELPW 2021).	Scattered occurrences in alpine areas bordering high-altitude swamps and wet alpine heathlands, usually associated with Sphagnum moss (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Valley Peatland Alpine Fen Sub-alpine Pond Herbland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Carex cephalotes</i>	Wire-head Sedge		Cr	Restricted	Considered to be very rare in Victoria, where it occurs on the summits of the highest mountains, where it has been reliably recorded from Mount Bogong and Mount Nelse at 1820 – 1880 m ASL. Records near Mount Feathertop are thought to be misidentified <i>C. archeri</i> (DELWP 2021).	A habitat specialist, apparently confined to sheltered, rocky areas on the summits of the highest mountains, near late-lying Snowpatch areas (DELWP 2021).	<ul style="list-style-type: none"> Snowpatch Grassland 	Not recorded

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<i>Carex echinata</i>	Star Sedge		En		Confined to the higher alps where it is known from the Bogong High Plains and Buckety Plain. It also occurs in New South Wales, and is native to New Guinea, New Zealand, Eurasia and North America (VicFlora 2025).	Occurs in higher alpine areas on wet valley-floor bogs and heaths (VicFlora 2025). Site and specimen data indicate the taxon is consistently associated with Fen Sedge <i>Carex gaudichaudiana</i> and frequently also with Peat Moss <i>Sphagnum cristatum</i> . Spreading Rope-rush <i>Empodisma minus</i> is often dominant (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Alpine Fen Sub-alpine Pond Herbland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Carex hypandra</i>	Alpine Fen-sedge		Cr		Recorded in New South Wales, Tasmania and Victoria. It is known by only a few collections in Victoria, from Mount Hotham, Mount Nelse and Mount Willis, however, is likely to be more widespread and most-likely overlooked for similar species (VicFlora 2025).	Restricted to soaks in alpine wetlands, including alpine swamps, fens and slow flowing streams (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Alpine Fen Sub-alpine Pond Herbland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Carex jackiana</i>	Carpet Sedge		En		Locally common in alpine areas through Victoria and New South Wales (VicFlora 2025). In Victoria, it occurs on the Baw Baw Plateau, Mount Buller, The Bluff, Mount Howitt, Mount Buffalo and the Bogong and Dargo High plains, with outliers at Mount Gibbo and the Nunniong Plateau (DELWP 2021).	Locally common in alpine areas usually bordering bogs and/or within damp grassland communities (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic Alpine Damp Grassland Alpine Grassland Alpine Grassy Heathland (appears to be near a drainage-line) 	Trail Sections: 6
<i>Carex paupera</i>	Dwarf Sedge		En	Endemic	Endemic to Victoria where it is known only from the Bogong High Plains near Mount Jim, the Mount Hotham area, the Dargo High Plains, Snowy Range and Nunniong Plateau (VicFlora 2025).	A habitat specialist strictly confined to shallow depressions ('snow-pools') in alpine and sub-alpine grassland over an altitudinal range of between 1200 metres and 1760 m ASL. All known records are located on Tertiary basalt. Often recorded on track margins and other areas prone to disturbance (on basaltic soils) and devoid of dense tussock grasses (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Sub-alpine Pond Herbland 	Not recorded
<i>Carpha alpina</i>	Small Flower-rush		En		Occurs in New South Wales, Australian Capital Territory, Tasmania and Victoria. In Victoria, it is confined to areas on the Baw Baw and Bogong Ranges, where it is locally common in alpine and higher sub-alpine areas (DELWP 2021).	Often dominant (with <i>Poa</i> spp.) in tall alpine herbfield and forms extensive carpets. It is also found in open heaths, herbfields, grasslands, in cold-air drainage valleys and along gravelly stream banks.	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Grassy Heathland 	Not recorded
<i>Carpha nivicola</i>	Broad-leaf Flower-rush		En		Widespread in in treeless alpine and sub-alpine areas above 1400 m, through Victoria, New South Wales and the Australian Capital Territory (VicFlora 2025).	Alpine – sub-alpine species occurring in and on the margins of Sphagnum Bogs and wet heaths above 1400m (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland Alpine Grassy Heathland 	Not recorded
<i>Celmisia costiniana</i>	Carpet Snow-daisy		En		Occurs in alpine and upper subalpine areas of the Australian Alps in New South Wales and Victoria. In Victoria, mainly restricted to the Snowy Range from Mount Wellington north to Mount Cobbler, with short extensions west to Mount Buller and environs, and east along the Barry Mountains toward Mount Hotham (DELWP 2021).	Locally common in alpine and higher sub-alpine areas, often dominant (with <i>Poa</i> spp.) in tall alpine herbfields, and can form extensive carpets, often in association with <i>C. pugioniformis</i> . It is also found in open heaths, Grasslands, and along stream banks (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland Alpine Grassland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Grassy Heathland Snowpatch Grassland 	Trail Sections: 1, 2, 3, 4, 5, 10a, 17 and 18 Overnight Nodes: High Knob, 1 Preferred, 1 Alternate, adjoining Cope Hut
<i>Celmisia latifolia</i>	Victorian Snow-daisy		En	Endemic	Endemic to Victoria, mainly restricted to the Snowy Range from Mount Wellington north to Mount Cobbler, with short extensions west to Mount Buller and environs, and east along the Barry Mountains toward Mt Hotham (DELWP 2021).	Confined to higher sub-alpine meadows, margins of wet heaths and bogs, and Snow Gum woodlands. It sometimes forms pure stands up to c. 10 m diameter (VicFlora 2019).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	Trail Sections: 11, 14, and 15
<i>Celmisia sericophylla</i>	Silky Snow-daisy		En	Endemic, Restricted	Endemic to Victoria and restricted to the Bogong High Plains, especially between Mount Bogong and Mount Cope, with small outlying occurrences between Mount Loch and Mount Hotham (VicFlora 2025).	Typically forming extensive carpets along rocky stream banks or tufted among boulders and on rocks overhanging water, occasionally in Sphagnum bogs and wet areas below snow patches (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland Sub-alpine Woodland Sub-alpine Shrubland 	Trail Sections: 5 and 17

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<i>Celmisia tomentella</i>	Silver Snow-daisy		vu		Occurs in Victoria and New South Wales and the Australian Capital Territory. In Victoria, it is most common in sub-alpine areas around Mount Buffalo, the Bogong High Plains, and south to the Baw Baw Plateau (DELWP 2021, VicFlora 2025).	Most common in sub-alpine areas. It forms more or less open patches or scattered colonies in Snow Gum woodland, heaths, herbfields and Sphagnum bogs. It also occurs in lower alpine and higher-altitude montane bogs (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	Trail Sections: 1, 2, 3, 4, 5, 6, 7, 10a, 17 and 18 Overnight Nodes: Cope Hut, Westons Hut and High Knob, 1 Preferred, 2 Preferred, 2 Alternate
<i>Chenopodium erosum</i>	Papery Goosefoot	en			Restricted in Victoria to the Upper Snowy district, and in the Victorian Alps on Mount Buffalo and the Bogong High Plains. It also occurs in South Australia, Queensland, New South Wales, and New Zealand (DELWP 2021).	Grassland, heathland and Snow Gum woodland where it can be locally common, particularly following fire (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	Not recorded
<i>Colobanthus affinis</i>	Alpine Colobanth	en			Distributed in alpine areas of Victoria, New South Wales, Tasmania, and New Zealand above 1600 m; Victorian populations extend from the Snowy Range to Mount Bogong (DELWP 2021, VicFlora 2025).	Alpine plant occurring in alpine grassland and open heathland above 1600 m, in peaty soils. Readily colonises track and road verges (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Grassland Alpine Grassy Heathland 	Trail Sections: 17
<i>Coprosma moorei</i>	Turquoise Coprosma	en			Occurs in Tasmania and Victoria, where it is located on the Baw Baw Plateau, Lake Mountain, Snowy Range, Mount Buffalo and Bogong High Plains, near Mt Mackay (VicFlora 2025).	Confined to high altitude, moist peaty heaths and Sphagnum bogs (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland 	Not recorded
<i>Coprosma nivalis</i>	Snow Coprosma	en			Found in Victoria on the Baw Baw Plateau, Bogong and Dargo High Plains, Mount Hotham, Mount Cobberas, Nunniong Plateau, and Snowy Range. Also occurs in New South Wales (VicFlora 2025).	In Victoria, occasionally recorded in rocky places in dry shallow soils, including on the Bogong High Plains, Dargo High Plains and Mount Hotham (DELWP 2021).	<ul style="list-style-type: none"> Alpine Rocky Outcrop Heathland Alpine Dwarf Heathland 	Not recorded
<i>Coronidium waddelliae</i>	Snowy Everlasting	vu			Occurs in Victoria, New South Wales and the Australia Capital Territory. In Victoria, it is restricted to the eastern ranges and confined to high-altitude areas (VicFlora 2025).	Locally common in Snow Gum woodland and treeless communities, often in dry, rocky sites (DELWP 2021).	<ul style="list-style-type: none"> Montane Damp Forest Sub-alpine Woodland Sub-alpine Shrubland Alpine Grassland Alpine Grassy Heathland 	Trail Sections: 12
<i>Craspedia adenophora</i>	Sticky Billy-buttons	En			Occurs in Victoria and New South Wales. It occurs throughout most of the Victorian Alps, including The Bluff, Mount Buffalo, Mount Stirling and Snowy Plains, and is considered rare on the Bogong High Plains (DELWP 2021).	Alpine plant (typically above 1500 m) which is locally common in dry to damp grassland and open heaths, often around exposed rock (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Damp Grassland Sub-alpine Woodland 	Trail Sections: 3 and 18 Overnight Nodes: adjoining High Knob
<i>Craspedia alba</i>	White Billy-buttons	Cr	Restricted		Occurs in Victoria and New South Wales, but considered very rare in Victoria, restricted to Mount Bogong, Pretty Valley and around Mount Cope in the Bogong High Plains (DELWP 2021, VicFlora 2025).	Occurs in seasonally inundated pools and gravelly pavements of short alpine herbfield near Mt Cope/Pretty Valley.	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Craspedia aurantia sl</i>	Orange/Green Billy-buttons	En			Occurs In Victoria, New South Wales and the Australian Capital Territory; locally common in alpine and sub-alpine areas throughout Victoria (VicFlora 2025).	Refer varieties below.	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Shrubland Sub-alpine Woodland 	Trail Sections: 2, 3, 4, 5, 6, and 11 Overnight Nodes: Cope Hut and Westons Hut
<i>Craspedia aurantia var. aurantia</i>	Orange Billy-buttons	En	Restricted		Known from the Bogong High Plains and adjacent uplands (DELWP 2021).	Can be locally common in higher subalpine grassland, and occasionally extends above the treeline in sheltered places. It tends to occur in native vegetation but not on road verges (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Sub-alpine Shrubland Sub-alpine Woodland 	Trail Sections: 1, 10a, 11, 14, 15, 16 and 17
<i>Craspedia aurantia var. jamesii</i>	Green Billy-buttons	En			Locally common in suitable habitat throughout Victoria (DELWP 2021).	Found in grassland and low open heathland in alpine and higher subalpine areas. It tends to occur in native vegetation but not on road verges (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Shrubland 	Trail Sections: 14 and 17
<i>Craspedia crocata</i>	Crimson Billy-buttons	En			Occurs in Victoria, New south Wales and the Australian Capital Territory. It is known only from the Falls Creek area on the Bogong High Plains but is probably more widespread. The precise distribution is unknown due to uncertain taxonomy and presence of two forms (DELWP 2021).	Usually occurs in alpine grassland (often moist grasslands), herbfields, Snow Gum Woodland near or below the (inverted) treeline in frost hollows (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Damp Grassland Sub-alpine Shrubland Sub-alpine Woodland 	Trail Sections: 17

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<i>Craspedia lamicola</i>	Bog Billy-buttons		En		Restricted in Victoria to the Bogong High Plains, and a few alpine sites further west, at Mount Buller and Lake Mountain. Also found in New South Wales (DELWP 2021).	Associated with alpine bogs and wet heathlands on the Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 2, 3, 4, 7 and 17
<i>Craspedia maxgrayi</i> s.s.	Woolly Billy-buttons		Cr	Restricted	Common on the Main Range of Kosciuszko National Park in New South Wales. Outside the Main Range, it appears to occur only on the Mount Bogong plateau in Victoria, where it is rare (DELWP 2021).	Apparently restricted in Victoria to alpine grassland, herbfield, and open heath and shrubland, usually in drier sites (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Damp Grassland Sub-alpine Woodland 	Trail Sections: 1, 2, 3, 11 and 13
<i>Deschampsia cespitosa</i>	Tufted Hair-grass		En		This species has a widespread global distribution, and occurs in Victoria, South Australia, New South Wales, and Tasmania. In Victoria, it is confined to the eastern alps (e.g., Bennison, Bogong, Dargo and Nunniong Plains, Omeo district), with disjunct lowland occurrences near Woodend, Colac, and Dartmoor (DELWP 2021).	Uncommon grass largely confined to damp to wet, peaty sites at both low and high elevations. Can tolerate inundation by shallow water (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Alpine Fen Sub-alpine Pond Herbland 	Not recorded
<i>Deyeuxia affinis</i>	Allied Bent-grass		Cr	Restricted	Known in Victoria only from the vicinity of Mt Cope on the Bogong High Plains (3 sites); two at the headwaters of Middle Creek and one site on Cope Creek about 25 km north of Mount Cope. Also known from Kosciuszko in New South Wales (DELWP 2021).	Grows in nearly permanently wet silty, peaty or pebbly sites, mostly between open shallow pools and fringing heath at high altitudes (above 1600 m). Sometimes recorded amongst wet alpine herbfield or mossbeds (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Deyeuxia carinata</i>	Keeled Bent-grass		En		Occurs in most of the higher alpine areas of Victoria (e.g. Baw Baws, Mount Buffalo, Mount Buller, Mount Wellington, Mount Nunniong, Mount Hotham, Mount Cobberas, Bogong and Dargo High Plains), but not apparently Lake Mountain. It also occurs in New South Wales and Tasmania (DELWP 2025).	Occurs in moist, higher subalpine grasslands, heathlands or rocky drainage areas predominately above 1500 m. Most commonly associated with Sphagnum bogs, often at their periphery, or in an ecotone between bogs and Poa-dominated grassland (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Grassland Alpine Grassy Heathland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland 	Not recorded
<i>Deyeuxia crassiuscula</i>	Thick Bent-grass		En		Occurs in New South Wales and in Victoria on the higher summits and plains of the Victorian alps (e.g. The Bluff, Mount Buller, Mount Stirling, Mount Hotham, Bogong High Plains, The Cobberas, Mount Wombargo) (DELWP 2021).	Occurs in rocky summit areas and grassy plains above ca 1600 m mostly in drier sites rather than those associated with wet heath/bog associations (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Rocky Outcrop Heathland Alpine Dwarf Heathland 	Not recorded
<i>Diplaspis nivis</i>	Snow Pennywort		En		Occurs in alpine areas of Victoria, New South Wales and Tasmania (VicFlora 2025).	Confined to Sphagnum bogs, relic bogs, gravel pavements, and wet heaths and herbfields in the alps. Can be locally common and often forming small colonies (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Damp Grassland 	Not recorded
<i>Drepanocladus polygamus</i>	Shore Feather-moss		Vu		Occurs in streams, swamps and pools throughout southern Victoria and in the Victorian Alps, as well as South Australia, New South Wales, the Australian Capital Territory and Tasmania (VicFlora 2025).	Occurs in and around shallow freshwater ponds and streams in a variety of vegetation types, from sea level to the treeless alpine zone.	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Sub-alpine Pond Herbland Alpine Fen 	Not recorded
<i>Drosera arcturi</i>	Alpine Sundew		En		Occurs in upland areas of Victoria, New South Wales and Tasmania.	Usually occurs in or adjoining moist shallow depressions of wet heaths and herbfields, late lying snow patches and bogs often association with Sphagnum (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Snowpatch Grassland 	Not recorded
<i>Epacris celata</i>	Cryptic Heath		En		Found in New South Wales and Victoria where it is locally common on higher mountains of the alps, such as Mount Reynard, Mount Wellington, Bogong High Plains, Mount Hotham, Nunniong Plateau, and Davies Plain (DELWP 2021).	Locally common on higher mountains of the alps, occurring in damp to wet heathlands and bogs, often co-occurs with <i>Epacris breviflora</i> and/or <i>E. glacialis</i> (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 1, 2, 3, 5, 6, 7, 10a, and 17 Overnight Nodes: 2 Alternate
<i>Epacris glacialis</i>	Reddish Bog-heath		En	Restricted	Restricted to the Bogong High Plains in Victoria, and New South Wales (DELWP 2021).	Occurs in Wet Heath, and in and around the margins of subalpine-alpine bogs, along creeks, through moss beds, and in gravelly soaks, where it can be locally common (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Waterway edges 	Trail Sections: 10a
<i>Epacris petrophila</i>	Snow Heath		En		Known only from Lake Mountain, the Baw Baw Plateau, and Mount Howitt in Victoria; however, there are also numerous VBA records on the Bogong High Plains. Also found in New South Wales, Australian Capital Territory and Tasmania.	In alpine areas and often locally common in subalpine heathland on the margins of pools, in bogs and in frost hollows (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded

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<i>Epilobium curtisiae</i>	Bald-seeded Willow-herb		En		Occurs in New South Wales, Victoria and Tasmania. Confined to alpine and sub-alpine areas in Victoria where it is reliably known from the Snowy Range, Dargo High Plains, Mount Hotham, Bogong High Plains, Nunniong Plateau and the Cobberas (DELWP 2021, VicFlora 2025).	Typically confined to alpine and subalpine areas in moist peaty depressions in grassland or in ephemeral shallow pools.	<ul style="list-style-type: none"> Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Damp Grassland Sub-alpine Pond Herbland 	Trail Sections: 1, 6 and 7
<i>Epilobium sarmentaceum</i>	Mountain Willow-herb		Vu		Recorded from alpine and higher subalpine areas of Victoria (Mt Buffalo, The Bluff, Bogong High Plains, Cobberas). Also occurs in New South Wales and Tasmania (VicFlora 2025).	Confined to alpine and sub-alpine areas where it grows on dry slopes amongst rocks (DELWP 2021).	<ul style="list-style-type: none"> Alpine Rocky Outcrop Heathland Alpine Grassland Alpine Grassy Heathland 	Not recorded
<i>Epilobium tasmanicum</i>	Snow Willow-herb		Cr	Restricted	Confined in Victoria to the Bogong High Plains and nearby peaks between Mount Jim and Mount Bogong. Also occurs in New South Wales and Tasmania (VicFlora 2025).	Grows in moist gravelly places, often in out-wash areas below areas of late lying snow (DELWP 2021).	<ul style="list-style-type: none"> Snowpatch Grassland Alpine Dwarf Heathland 	Not recorded
<i>Erigeron conyzoides</i>	Daisy Fleabane		En		Occurs in New South Wales and Victoria, where it is confined to rocky alpine sites (e.g. Mount Howitt area, Mount Hotham, Bogong High Plains, Mount Cobberas no. 2) (VicFlora 2025).	A habitat specialist consistently associated with basalt scree, typically on steep slopes on protected south-easterly aspects, or on ridgelines or saddles, often in the shelter of boulders.	<ul style="list-style-type: none"> Alpine Conifer Shrubland 	Not recorded
<i>Eucalyptus pauciflora</i> subsp. <i>hedraia</i>	Bogong Sally		Cr	Endemic, Restricted	Endemic to Victoria and altitude-dependent, restricted to Falls creek, the Bogong High Plains, and peaks near to and including Mount Bogong (DELWP 2021).	Sub-alpine Woodland areas. It is known to grow in pure stands except along its boundaries where it mixes with <i>E. pauciflora</i> ssp. <i>niphophila</i> .	<ul style="list-style-type: none"> Sub-alpine Woodland 	Trail Sections: 18
<i>Eucalyptus perriniana</i>	Spinning Gum		En		Occurs in New South Wales, Australian Capital Territory, Tasmania and Victoria, scattered through high-altitude areas, west from Nunniong Plateau to the Blue Range, east of Buxton to Mount Bowen, and north from the Baw Baws to the Bogong High Plains (DELWP 2021, VicFlora 2025).	Occurs in high altitude sub-alpine localities on the sheltered sides of ridges, or adjoining swamps and bogs. It typically grows in deep soils, with good moisture availability throughout summers (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland Montane Damp Forest 	Not recorded
<i>Euchiton traversii</i>	Mat Cudweed		Vu		Found in New South Wales, Victoria, and Tasmania. Restricted in Victoria to the eastern Alps — Snowy Range, The Bluff, Bogong High Plains, Nunniong Plateau and the Cobberas (DELWP 2021).	Dry and damp grassland communities of the eastern alps, and occasional occurrences in (wet and dry) heathland, sometimes in wet peaty sites. Has also been recorded in disturbed areas (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Grassland Alpine Grassy Heathland Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic 	Not recorded
<i>Euchiton umbricola</i>	Cliff Cudweed		En		Occurs across the higher country of eastern Victoria, with an outlier at lower altitudes at Kinglake National Park and in New South Wales and Tasmania (VicFlora 2025).	Confined exclusively to shaded cliff faces (often near waterfalls) and boulders above 1000 m (DELWP 2021).	Habitat very specialised - no specific EVC. Recorded during site assessments	Trail Sections: 12
<i>Euphrasia crassiuscula</i> subsp. <i>crassiuscula</i>	Thick Eyebright		Vu	Endemic	Endemic to mountain areas of the Victorian Alps; confined to Mount Feathertop – Mount Hotham – The Twins ridge, with an outlier on the Mount Buffalo Plateau (DELWP 2021).	Occurs in high-subalpine to alpine locations, especially grassy areas, in or near Snow gum woodland, also in low alpine heath (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland Alpine Grassy Heathland Alpine Grassland 	Trail Sections: 6, 11, and 13
<i>Euphrasia crassiuscula</i> subsp. <i>eglandulosa</i>	Thick Eyebright		Vu	Endemic, Restricted	Endemic to mountain areas of the Victorian Alps; localised to habitat east of the Kiewa River, from the Bogong High Plains to Mount Bogong, with occurrences also on Mount Feathertop (DELWP 2021).	Occurs in low alpine heath and alpine herbfields usually in grassy areas, but occasionally in stony tracts. It has also been collected within areas of shrubs in sparse Snow Gum woodland or in wide areas of heathland between Snow Gums (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassy Heathland Alpine Grassland Sub-alpine Shrubland 	Trail Sections: 14 and 15
<i>Euphrasia crassiuscula</i> subsp. <i>glandulifera</i>	Thick Eyebright	VU	Cr	Endemic, Restricted	Endemic to mountain areas of the Victorian Alps; near Mount Bogong and Mount Nelse at high altitudes, ranging from 1800 to 1950 m ASL (DELWP 2021).	Confined to higher mountain treeless areas at an altitude above 1650 metres. It has been recorded in tall alpine herbfield (alpine meadow), margins of low alpine heath and open grassy sites, sometimes on stony terrain. Associated species present at all known sites include <i>Asterolasia trymalioides</i> , <i>Celmisia pugioniformis</i> , <i>Grevillea australis</i> and <i>Poa hiemata</i> . Other associated species include <i>Aciphylla glacialis</i> , <i>Craspedia aurantia</i> , <i>Craspedia maxgrayi</i> , <i>Kunzea muelleri</i> , <i>Leucopogon montanus</i> and <i>Orites lancifolia</i> (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Dwarf Heathland 	Not recorded

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<i>Euphrasia eichleri</i>	Bogong Eyebright	VU	En	Endemic	Endemic to Victoria, confined to alpine and higher sub-alpine tracts between the Bogong High Plains and Mount Bogong and on the Dargo High Plains (DELWP 2021).	Confined to alpine and subalpine areas. Occurs in low open grassland, heath and Sphagnum bogs. On the Bogong High Plains this includes low open damp sites typically associated with <i>Poa costiniana</i> and <i>Empodisma minus</i> (D. Froid pers. comm.)	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Sub-alpine Wet Heathland/ Alpine ▪ Valley Peatland Mosaic ▪ Alpine Valley Peatland ▪ Alpine Grassy Heathland ▪ Alpine Grassland 	Not recorded
<i>Ewartia nubigena</i>	Silver Ewartia		En		Apparently confined in Victoria to higher parts of the alps on the Bogong High Plains and adjacent areas, and Mount Buffalo, and Mount Cobberas. Also found in New South Wales (DELWP 2021).	Found in low herbfields, often amongst rocks (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland ▪ Alpine Grassland ▪ Alpine Dwarf Heathland 	Trail Sections: 7, 10a, 11, 14, 16 and 17
<i>Geranium brevicaule</i>	Alpine Crane's-bill		En		The Victorian distribution is restricted to the Victorian Alps, notably Snowy Range, Mount Hotham and the Bogong High Plains, Cobungra, Benambra, the Nunniong Plateau, the Cobberas, Mount Ellery and the Coast Range. It also occurs in New South Wales, Australian Capital Territory and Tasmania (DELWP 2021).	Typically occurs in grasslands and herbfields of treeless sub-alpine and alpine areas. Database records also indicate it has been found in Sub-alpine Woodland and Damp Grassland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Damp Grassland ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland 	Not recorded
<i>Geranium potentilloides</i> var. <i>abditum</i>	Soft Crane's-bill		En		Restricted in Victoria to montane and sub-alpine areas throughout the Victorian Alps, including on the Bogong High Plains around Falls Creek and Mount Hotham. It also occurs in New South Wales and Australian Capital Territory (DELWP 2021).	Typically grows in or adjoining subalpine woodlands, often in areas with exposed rock. Records indicate it also extends to both drier and wetter forests at lower elevations including Wet Forest (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Damp Montane Forest ▪ Wet Forest 	Not recorded
<i>Grevillea victoriae</i> subsp. <i>victoriae</i>	Royal Grevillea		En	Endemic	Endemic to alpine and sub-alpine regions of Victoria (DELWP 2021).	Grows at altitudes between 1400 – 1900 m. Typically recorded in Sub-alpine Woodland, but can extend into montane forests. Often recorded on boulder strewn sites.	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Alpine Conifer Shrubland ▪ Montane Damp Woodland 	Trail Sections: 1, 5, 11, 12, 15 and 18 Overnight Nodes: Westons Hut 1 Preferred
<i>Hakea lissosperma</i>	Mountain Needlewood		Vu		Occurs in high-subalpine to alpine areas of Victoria (e.g., Mount Buffalo, Snowy Range, Mount Hotham area, the Cobberas), as well as in New South Wales, the Australian Capital Territory and Tasmania (DELWP 2021).	Scattered in rocky, high sub-alpine to alpine areas. Can be locally common (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Alpine Grassy Heathland 	Not recorded
<i>Herpolirion novae-zelandiae</i>	Sky Lily		En		Occurs throughout alpine areas of Victoria, from Lake Mountain to Davies Plain near the Cobberas, as well as in New South Wales and Tasmania (DELWP 2021).	Moist peaty herbfields and grasslands above 1200 m throughout the alps. Difficult to detect unless in flower (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Sub-alpine Wet Heathland/ Alpine ▪ Valley Peatland Mosaic ▪ Alpine Valley Peatland 	Trail Sections: 17
<i>Hierochloe submutica</i>	Alpine Holy-grass		En		Occurs in New South Wales and Victoria, where it is confined to the higher alps, around the Bogong High Plains, Mount Feathertop and the Cobberas (DELWP 2021).	Occurs on boggy sites at high altitudes (e.g., soaks at gully heads) (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Sub-alpine Wet Heathland/ Alpine ▪ Valley Peatland Mosaic ▪ Alpine Valley Peatland 	Not recorded
<i>Hookerochloa eriopoda</i>	Snow Fescue		Vu		Largely confined to the montane north-east in Victoria, with outlying occurrences near Woodend and far-east Gippsland.	Occurs in montane to subalpine woodlands and forests (including damp forests) with grassy understories on a variety of geological substrates (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Montane Damp Forest 	Not recorded
<i>Huperzia australiana</i>	Fir Clubmoss		En		Occurs in Victoria, New South Wales and Tasmania, including Macquarie Island. Restricted in Victoria to the Snowy Range, Mount Buller, Baw Baw, Bogong High Plains and Nunniong Plateau (VicFlora 2025).	Restricted alpine or subalpine areas to 2000 m in scrubs or wet heathlands e.g. the Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Wet Heathland/ Alpine ▪ Valley Peatland Mosaic ▪ Alpine Valley Peatland 	Overnight Nodes: adjoining Westons Hut
<i>Isolepis gaudichaudiana</i>	Benambra Club-sedge		Vu		Scattered across Victoria from the coast to the sub-alps, as well as in New South Wales, Australian Capital Territory and Tasmania (DELWP 2021).	Occurs in moist open situations at alpine and subalpine elevations, and sometimes at lowland elevations. Most records are from wet depressions in subalpine to alpine herbfields and heathy wetlands, typically on black peaty loam (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Wet Heathland/ Alpine ▪ Valley Peatland Mosaic ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	Not recorded
<i>Isolepis montivaga</i>	Fog Club-sedge		En		Occurs through alpine and sub-alpine areas of Victoria, including the Bogong High Plains, with disjunct occurrences at lower elevation east of Buchan and north of Orbost. Also occurs in New South Wales, the Australian Capital Territory and Tasmania (DELWP 2021).	Occasional in alpine and subalpine areas, usually colonising bare earth e.g. track margins and drying pools. It is typically associated with wet depressions in herbfields or wet grasslands, including on the margins of fens dominated by <i>Carex gaudichaudiana</i> (Fen Sedge) or bogs dominated by Sphagnum.	<ul style="list-style-type: none"> ▪ Sub-alpine Wet Heathland/ Alpine ▪ Valley Peatland Mosaic ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland ▪ Alpine Fen 	Not recorded

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<i>Juncus antarcticus</i>	Cushion Rush		En	Restricted	Restricted in Victoria to the Bogong High Plains, and uncommon. Also occurs in Tasmania and New Zealand (VicFlora 2025).	Occurs on late-lying snowpatches and the margins of bogs and creeks in alpine short herbfields (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Snowpatch Grassland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	Not recorded
<i>Juncus falcatus</i> subsp. <i>falcatus</i>	Sickle-leaf Rush		En		Occurs in Tasmania and Victoria, where it is restricted to the alpine and sub-alpine areas, rarely below 800 m ASL in cold air drainage valleys (VicFlora 2025).	Margins of Sphagnum bogs, streams and other swampy places in the alps and sub-alps (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland ▪ Sub-alpine Pond Herbland 	Not recorded
<i>Kelleria bogongensis</i>	Snow Daphne	VU	Cr	Endemic, Restricted	Endemic to Victoria and known from a single location on the Bogong High Plains, near Mount Jim at 1800 m ASL.	Found on basalt-derived soil, growing between snow-grass tussocks in slight depressions within alpine grassland on shallow organic loams overlaying basalt. The sites are typically dominated by <i>Poa costiniana</i> . Plants can form discontinuous mats on the edges of seasonally inundated pools, or between <i>Poa</i> tussocks, and are nearly always in association with Shining Cudweed <i>Argyrotegium nitidulum</i> and Mud Pratia <i>Lobelia surrepens</i> . Other associated taxa include <i>Rytidosperma nudiflorum</i> , Alpine Stackhousia, and <i>Luzula alpestris</i> (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Damp Grassland ▪ Alpine Grassy Heathland 	Not recorded
<i>Lachnagrostis meionectes</i>	Alpine Blown-grass		En		Found in New South Wales and alpine and sub-alpine areas of Victoria, including Mount Buffalo, the Bogong High Plains, Snowy Range toward Mount Howitt (DELWP 2021, VicFlora 2025).	Occurs in alpine and subalpine grasslands and heaths. It commonly colonises damp ground of shallow depressions and drying, ephemeral pools (VicFlora 2025). It occasionally occurs in mossy areas on sloping rock faces and in, or adjoining, densely vegetated soaks or bogs (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Dwarf Heathland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Damp Grassland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Valley Peatland 	Not recorded
<i>Leptorhynchus squamatus</i> subsp. <i>alpinus</i>	Alpine Buttons		En		In Victoria, it is found in alpine and sub-alpine regions north-east of Melbourne.	Found in grassland, herbfields and open heath communities in alpine and subalpine regions. Can be locally common.	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Damp Grassland ▪ Alpine Grassy Heathland 	Trail Sections: 2, 3, 4, 6, 11, 13, 14, 15 and 17 Overnight Nodes: 1 Alternate, 2 Alternate
<i>Leucochrysum alpinum</i>	Alpine Sunray		En		Occurs in New South Wales and Victoria in alpine areas including The Bluff, around Mount Buller and Mount Bogong (DELWP 2021).	Restricted to higher peaks of the Victorian Alps, usually in feldmark and low heathland on shallow rocky soils (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Dwarf Heathland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Rocky Outcrop Heathland 	Trail Sections: 11 and 14
<i>Luzula acutifolia</i> subsp. <i>acutifolia</i>	Sharp-leaf Woodrush		En	Restricted	Known from Tasmania and Victoria, on the Bogong High Plains and adjacent peaks, including Mounts Bogong, Nelse, Jim, Loch and Basalt Hill, and Mount Hotham (DELWP 2021).	Occurs on shallow soils in areas where patches of late-lying snow regularly occur (DELWP 2021).	<ul style="list-style-type: none"> ▪ Snowpatch Grassland ▪ Alpine Grassland ▪ Alpine Damp Grassland 	Trail Sections: 11 and 14 Overnight Nodes: 2 Alternative
<i>Luzula alpestris</i>	Tussock Woodrush		Vu		Occurs in the Snowy Mountains of New South Wales and the Bogong High Plains in Victoria, with outlying occurrences on the Dargo Plains. It is possibly more widespread, but overlooked, in the higher alpine areas of Victoria (DELWP 2021).	A coloniser of bare soil, particularly the margins of bogs and soaks and in shallow depressions. Also, an occasional component of grassland and heath communities (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Valley Peatland 	Trail Sections: 6, 7, 10a and 17
<i>Luzula atrata</i>	Slender Woodrush		Cr	Restricted	Occurs in New South Wales and Tasmania and is considered to be very rare in Victoria, known from only a few locations on the Bogong High Plains, near Mount Cope, Mount Nelse and Spion Kopje (DELWP 2021).	Bogong High Plains on gravelly peat seepages and damp grassland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Valley Peatland 	Not recorded
<i>Lycopodium scariosum</i>	Spreading Clubmoss		Cr		Occurs in Victoria, Tasmania and New Zealand. Confined in Victoria to high altitude sits at Lake Mountain, Baw Baw Plateau and the Bogong High Plains (DELWP 2021).	Occurs in alpine and subalpine areas in Sphagnum bogs, wet heathland and edges of gravelly creeks (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Valley Peatland 	Not recorded

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<i>Myriophyllum alpinum</i>	Alpine Water-milfoil		En		Restricted to the alpine region in Victoria, in areas such as the Snowy Range, Nunniong Plateau, Bogong High Plains and Cobberas. Also occurs in New South Wales and the Australian Capital Territory.	Subalpine and alpine streams, often in relatively deep water.	<ul style="list-style-type: none"> Sub-alpine Pond Herbland Alpine Fen 	Not recorded
<i>Notogrammitis crassior</i>	Alpine Finger-fern		En		Restricted to the alpine region in Victoria, where it has been recorded at Mount Buller, the Snowy Range, Mount Hotham, the Bogong High Plains and the Cobberas.	Forms mats on rocks and in rock crevices, often near water in alpine and subalpine areas	(not associated with a particular EVC; most records are from subalpine areas near waterways)	Not recorded
<i>Olearia brevipedunculata</i>	Rusty Daisy-bush		En		Occurs in New South Wales and Victoria. In Victoria, it has been recorded on the Bogong High Plains and adjacent alpine areas, with isolated records from Mount Buffalo and near Mount Kent (VicFlora 2025).	Occurs in shrubland and heathland, as well as in alpine areas in open heath and on the margins of grassland, often near rocky sites or the edges of tree lines. It is generally associated with reasonably damp areas.	<ul style="list-style-type: none"> Alpine Grassy Heathland Sub-alpine Shrubland Sub-alpine Woodland 	Trail Sections: 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15 and 17 Overnight Nodes: High Knob, 1 Preferred, 1 Alternative, 2 Preferred, 2 Alternative
<i>Olearia frostii</i>	Bogong Daisy-bush		Vu	Endemic, Restricted	Endemic to Victoria, confined to the Bogong High Plains and nearby peaks – Mount Hotham, Mount Loch, Mount Feathertop, where it is locally common (VicFlora 2025).	Typically occurs alpine heathland, and grassland, but can extend into Snow Gum Woodland	<ul style="list-style-type: none"> Alpine Grassy Heathland Alpine Grassland Sub-alpine Shrubland Sub-alpine Woodland 	Trail Sections: 1, 2, 3, 4, 5, 10a, 11, 13, 15, 17 and 18 Overnight Nodes: Cope Hut and High Knob, 1 Preferred, 1 Alternative, 2 Preferred, 2 Alternative
<i>Olearia phlogopappa</i> subsp. <i>flavescens</i>	Dusty Daisy-bush		En		Occurs across eastern and north-eastern Victoria through the East Gippsland Uplands, Highlands Northern Fall and Highlands Southern Fall, Snowy Mountains and Victorian Alps (DELWP 2021).	Common throughout alpine and sub-alpine areas above 1300 m, often in rocky areas and usually growing in heath, shrubland and Snow Gum Woodland (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassy Heathland Sub-alpine Shrubland Sub-alpine Woodland Alpine Grassland 	Trail Sections: 2, 4, 5, 10a, 11, 12 and 17 Overnight Nodes: Cope Hut, Westons Hut and High Knob, 2 Preferred
<i>Oreobolus pumilio</i> subsp. <i>pumilio</i>	Alpine Tuft-rush		En		Occurs in New South Wales, Victoria and Tasmania. Confined in Victoria to broad drainage areas of the Bogong High Plains and Baw Baw Plateau (VicFlora 2025).	Broad cold-air drainage areas and seepage zones above the treeline of the Bogong High Plains, i.e., wet heath, on peaty substrates, usually with Sphagnum present. Often the habitat is seasonally snow-covered for several months.	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland 	Not recorded
<i>Oreomyrrhis argentea</i>	Silver Caraway		En		Occurs in alpine and sub-alpine areas of New South Wales, Victoria and Tasmania (VicFlora 2025).	Locally common in grassland and herbfield, often on dark, basalt-derived soils (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland 	Not recorded
<i>Oreomyrrhis brevipes</i>	Branched Caraway		En		Occurs in Victoria and New South Wales, but is very rare in Victoria, where it is reliably recorded only from the Bogong High Plains and the Cobberas (VicFlora 2025).	Occurs on the Bogong High Plains on basalt outcrops in open wet heath or herbfields.	<ul style="list-style-type: none"> Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic Alpine Grassy Heathland Alpine Grassland Alpine Damp Grassland 	Trail Sections: 17
<i>Oreomyrrhis pulviniflora</i>	Cushion Caraway		En	Restricted	Extremely rare in Victoria, known only from the Bogong High Plains. Also known from New South Wales (VicFlora 2025).	Known from low herbfield communities in drainage or seepage areas typically below late-lying snowpatches (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland 	Trail Sections: 6
<i>Orthotrichum rupestre</i>	Granite Bristle-moss		En		Known from New South Wales, the Australian Capital Territory, Tasmania and a small number of alpine and sub-alpine locations in Victoria (DELWP 2021).	Grows on granite and other non-calcareous rock, and less commonly on trees and shrubs (DELWP 2021).	(no specific EVC - may occur on basalt and granite rocks in alpine and subalpine areas)	Not recorded
<i>Ozothamnus alpinus</i>	Alpine Everlasting		En	Restricted	Occurs in New South Wales, the Australian Capital Territory and Victoria. Recorded in Victoria from Mount Feathertop, Mount Hotham Mount Bogong, Mount Loch and the Bogong High Plains (VicFlora 2025).	Confined to the margins of wet alpine heathland and shrubland, and can be an important component of wet heathland (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland Subalpine Shrubland Sub-alpine Woodland 	Trail Sections: 2, 3, 4, 6, 15 and 18 Overnight Nodes: High Knob
<i>Ozothamnus stirlingii</i>	Ovens Everlasting		En		Occurs in New South Wales, the Australian Capital Territory and Victoria. In Victoria, it is locally common in montane areas east of Mount Buller (VicFlora 2025).	Grows in montane forest above 1000 m, usually with Mountain Ash <i>Eucalyptus regnans</i> , Mountain Gum <i>E. dalrympleana</i> , Candlebark <i>E. rubia</i> , Peppermint Gums <i>E. radiata</i> , and Snow Gum (DELWP 2021).	<ul style="list-style-type: none"> Montane Damp Forest Sub-alpine Woodland 	Not recorded
<i>Pappochroma nitidum</i>	Sticky Fleabane		Vu		Largely confined to the Bogong High Plains in Victoria, but also recorded at Mount Hotham, the Dargo High Plains and Snowy Range. Also occurs in New South Wales and the Australian Capital Territory.	Occurs in grassland and open heathland communities.	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland 	Trail Sections: 10a, 14 and 17

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<i>Parantennaria uniceps</i>	Parantennaria		Cr	Restricted	Known to occur in Victoria, New South Wales and the Australian Capital Territory. Considered to be extremely rare in Victoria where it is apparently confined to moist alpine herbfields on the Bogong High Plains (VicFlora 2025).	Low, moist alpine herbfields on the Bogong High Plains. Often associated with the EVC 905 – Alpine Short Herbland (this EVC was not recorded in the project area).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Pentachondra pumila</i>	Carpet Heath		En		Occurs in alpine areas of New South Wales, Victoria and Tasmania (VicFlora 2025).	Occurs in higher alps, predominantly in moist open grassland or heathland communities (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 3, 6, 7, 10a and 17
<i>Persoonia subvelutina</i>	Velvety Geebung		En	Restricted	Occurs in New South Wales, the Australian Capital Territory and Victoria, where it is restricted to the north-east, between Bright and Mount Hotham, and from Bogong Village to Falls Creek (DELWP 2021).	Typically confined to shaded slopes in montane and subalpine forests. It is frequently associated with tall open-forests dominated by Alpine Ash, less frequently with Mountain Gum, and sometimes extending into stands of Mountain Tea-tree <i>Leptospermum grandifolium</i> (DEECA 2021).	<ul style="list-style-type: none"> Montane Damp Forest 	Not recorded
<i>Phebalium squamulosum</i> subsp. <i>alpinum</i>	Alpine Phebalium		En		Locally common on Mount Buffalo, Mount Wellington and the Bogong High Plains in Victoria, and also occurs in New South Wales.	Typically occurs rock areas in subalpine and alpine woodlands and shrublands below the treeline. Extends into treeless areas on the Bogong High Plains.	<ul style="list-style-type: none"> Sub-alpine Shrubland Sub-alpine Woodland Alpine Grassy Heathland Alpine Grassland Alpine Rocky Outcrop Heathland 	Trail Sections: 1, 2, 3, 4, 5, 6, 7, 10a, 11, 15, 16 and 17 Overnight Nodes: Cope Hut, 1 Preferred, 1 Alternative, 2 Preferred, 2 Alternative
<i>Pimelea axiflora</i> subsp. <i>alpina</i>	Alpine Bootlace Bush		Vu		Restricted in Victoria to the alpine region, extending from Mount Buller to the Beloka Range and from Mount Buffalo and Mount Bogong to Mount Hotham and Dinner Plain, extending through to Kosciuszko National Park (DELWP 2021).	Grows in alpine to subalpine habitats above 1500 m, predominately in rocky areas (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Shrubland Sub-alpine Woodland Alpine Grassland 	Trail Sections: 1, 2, 3, 4, 5, 6, 7, 8, 12, 15, 17 and 18
<i>Pimelea biflora</i>	Matted Rice-flower		En		Found in sub-alpine and alpine areas of New South Wales, the Australian Capital Territory and Victoria (DELWP 2021).	In dry alpine and sub-alpine <i>Poa</i> tussock dominated grassland and open herbfields, heathland or woodland at altitudes of c. 1500 m (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Shrubland Sub-alpine Woodland Alpine Grassland Alpine Grassy Heathland 	Not recorded
<i>Pimelea ligustrina</i> subsp. <i>ciliata</i>	Fringed Rice-flower		En		In alpine and sub-alpine areas of north-east Victoria, New South Wales and the Australian Capital Territory (VicFlora 2025).	In alpine or subalpine areas at altitudes over 1400 m, often in Snow-gum woodland (VicFlora 2025, DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Shrubland Sub-alpine Woodland Alpine Grassy Heathland Alpine Conifer Shrubland 	Trail Sections: 2, 4, 5, 8, 11, 17 and 18 Overnight Nodes: 2 Alternative
<i>Plantago alpestris</i>	Veined Plantain		Vu		Found in Victoria and New South Wales. In Victoria, confined to high-altitude areas, including the Baw Baw Plateau, Bogong High Plains, Mount Buffalo, the Cobberas and Snowy Plains (DELWP 2021).	Confined to higher altitude regions, where it grows in grassland or herbfield, often beside streams or around bogs (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Valley Peatland 	Not recorded
<i>Plantago glacialis</i>	Small Star-plantain		En	Restricted	Occurs in New South Wales and Victoria, where it is apparently confined to seepage areas below snow patches near Mount Cope and Nelse on the Bogong High Plains.	Occurs in short alpine herbfield in seepage areas below snow patches (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland 	Not recorded
<i>Podolepis laciniata</i>	High-plain Podolepis		En		Found in alpine habitats in New South Wales, the Australian Capital Territory and Victoria (notably the Bogong High Plains, and Cobberas) at 1200 – 1700 m ASL (DELWP 2021, VicFlora 2025).	Mostly occurs in grassy habitats near the treeline (Snow Gum Woodland) or below (1200 – 1700m ASL). It occasionally occurs with <i>P. robusta</i> , but is usually at lower altitudes (VicFlora 2025).	<ul style="list-style-type: none"> Sub-alpine Shrubland Sub-alpine Woodland Alpine Grassland Alpine Grassy Heathland 	Trail Sections: 2, 3, 5 and 6
<i>Poranthera oreophila</i>	Mountain Poranthera		En		Occurs in New South Wales and in Victoria on the Bogong High Plains, Nunniong Plain, and the Cobberas (DELWP 2021).	Occurs in grassland and Snow Gum woodland, at over 1400 m ASL (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Shrubland Sub-alpine Woodland Alpine Grassland 	Trail Sections: 2, 3, 4 and 6 Overnight Nodes: 1 Preferred, 1 Alternative
<i>Prasophyllum sphacelatum</i>	Large Alpine Leek-orchid		En		Known from New South Wales, the Australian Capital Territory, Victoria and Tasmania. In Victoria, confined to alpine and sub-alpine areas of eastern Victoria (DELWP 2021, VicFlora 2025).	Confined to alpine plains and sub-alpine meadows, herbfields and Snow Gum woodlands, often in moist to wet areas among tussock grasses e.g. around sphagnum bog margins and along creek lines (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded

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<i>Psychrophila introloba</i>	Alpine Marsh-marigold		En		Found on the higher ranges of the Baw Baws, Snowy Range, the Bogong and Dargo High Plains and on Mount Buffalo (DELWP 2021, VicFlora 2025).	Locally common in areas of late-lying snow, wet grasslands and in alpine bogs on the higher ranges. Can also form a herbfield community on stony pavements, including steep slopes at the head of wetlands or on flat ground (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Snowpatch Grassland Alpine Rocky Outcrop Heathland Alpine Grassland Alpine Grassy Heathland 	Trail Sections: 6, 7 and 17
<i>Pterostylis crassicaulis</i>	Alpine Swan Greenhood		En		Occurs in high altitude areas (1100 – 1600 m ASL) of eastern and north-eastern Victoria, as far west as Lake Mountain. Also occurs in New South Wales and the Australian Capital Territory (DELWP 2021).	Alpine and subalpine grasslands and herbfields on well-drained to seasonally moist loam or peaty soils (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Grassy Heathland 	Not recorded
<i>Pultenaea capitellata</i>	Hard-head Bush-pea		En		Occurs in New South Wales and Victoria. It is uncommon in Victoria, found in the Bendoc – Delegate area, the Bogong High Plains and Mount Cobberas (DELWP 2021).	Confined to wet areas adjacent to sub-alpine woodland and in alpine heath on the Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassy Heathland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Pultenaea fasciculata</i>	Alpine Bush-pea		En		Occurs in alpine regions of New South Wales, the Australian Capital Territory, Victoria and Tasmania (VicFlora 2025).	Alpine herbfields, margins of bogs and subalpine woodlands (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> Alpine Grassland Alpine Valley Peatland Sub-alpine Woodland Sub-alpine Shrubland 	Not recorded
<i>Ranunculus eichlerianus</i>	Eichler's Buttercup		En	Endemic	Endemic to Victoria and confined to alpine and sub-alpine areas on Mount Hotham, the Dargo High Plains, and Mount Feathertop, with outliers near Mount Bogong, Mount Buller, and The Bluff at 1400 – 1880 m ASL (DELWP 2021).	Occurs in alpine grassland and herbfields, open heaths, alpine marsh communities (in running water) and hillside soaks, as well as Snow Gum Woodland; sites may be rocky or without surface soaks (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Sub-alpine Woodland Sub-alpine Shrubland 	Trail Sections: 6, 7, 8, 13, 17 and 18 Overnight Nodes: 2 Preferred, 2 Alternative
<i>Ranunculus gunnianus</i>	Gunn's Alpine Buttercup		En		Found throughout the alpine areas of Victoria, including Mounts Howitt, Wellington, Buller, Buffalo, Hotham, the Cobberas and Bogong High Plains. Also found in New South Wales and Tasmania (DELWP 2021).	Is locally common in damp grassland, herbfields and bogs throughout the higher alps (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 2 and 6 Overnight Nodes: 1 Alternative, adjoining Westons Hut
<i>Ranunculus millanii</i>	Dwarf Buttercup		En		Found scattered, and not uncommon, throughout alpine areas New South Wales, the Australian Capital Territory and Victoria (VicFlora 2025).	Restricted to shallow (often ephemeral) pools and depressions prone to inundation (VicFlora 2025).	<ul style="list-style-type: none"> Subalpine Pond Herbland Alpine Fen Alpine Valley Peatland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 2, 5, 7, 10a and 17
<i>Ranunculus muelleri</i>	Felted Buttercup		En	Restricted	Considered to have a very restricted occurrence in Victoria on the Bogong High Plains (around Mount Bogong, Mount Jim and Basalt Hill areas). Also occurs in New South Wales (DELWP 2021)	Favours exposed sites usually with shallow soils overlying basalt. Herbarium notes indicate that this species occurs in wetter sites, such as damp herbfield and swampy grasslands (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 7, 10a and 11
<i>Ranunculus victoriensis</i>	Victorian Buttercup		En	Endemic	Endemic to Victoria, found on the Bogong High Plains where it is common, and apparently rare on the Nunniong Plateau, Dargo High Plains, and the plains between Mount Howitt and Mount Wellington (DELWP 2021).	Largely confined to damp grassland and open heathlands (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland Sub-alpine Woodland 	Trail Sections: 1, 2, 3, 4, 5, 6, 7, 10a, 11, 14, 17 and 18 Overnight Nodes: Cope Hut, 1 preferred, 1 Alternative, 2 Preferred, 2 Alternative, adjoining Westons Hut
<i>Rytidosperma alpicola</i>	Crag Wallaby-grass		Vu		Characteristic of the Australian Alps, occurring across New South Wales, the Australian Capital Territory and Victoria, including the Bogong High Plains and Mount Hotham (DELWP 2021).	A characteristic species of exposed rock crags and ledges of the higher alps. Although considered a habitat specialist, the habitat can be quite extensive, locally. These areas are often inaccessible on very steep slopes (DELWP 2021).	<ul style="list-style-type: none"> Snowpatch Grassland Alpine Rocky Outcrop Heathland Alpine Dwarf Heathland 	Trail Sections: 14
<i>Rytidosperma australe</i>	Southern Sheep-grass		Cr	Restricted	Very rare, and known in Victoria only from the Bogong High Plains near Mount Cope. Also occurs in New South Wales and Tasmania (DELWP 2021).	Occurs in broad, wet, gravelly creek beds and margins on the Bogong High Plains near Mt Cope. Associated species can include <i>Oreobolus pumilo</i> , <i>Deschampsia caespitosa</i> , <i>Sphagnum</i> and <i>Carex gaudichaudiana</i> (DEECA 2021)	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland 	Not recorded

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<i>Rytidosperma nivicola</i>	Snow Wallaby-grass		En		Occurs in New South Wales, Victoria and Tasmania. Scattered and not uncommon, but restricted in Victoria to the Bogong High Plains, Baw Baw Plateau, Mount Buffalo and the Snowy Range area north of Licola (DELWP 2021).	Occurs in wet alpine heathland and sphagnum and other alpine bog communities (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland 	Trail Sections: 11
<i>Rytidosperma oreophilum</i>	Mountain Wallaby-grass		En		Occurs in New South Wales, the Australian Capital Territory, Victoria and Tasmania across the higher alpine areas. In Victoria, also occurs in the Grampians on the Major Mitchell Plateau (DELWP 2021).	Typically grows in rocky areas above 1300 m in the eastern ranges (DELWP 2021).	<ul style="list-style-type: none"> Alpine Rocky Outcrop Heathland Sub-alpine Woodland Sub-alpine Grassland Alpine Grassland 	Not recorded
<i>Saxipoa saxicola</i>	Rock Poa		En		Rare in Victoria where it occurs in the alps from the Cobberas to the Bogong High Plains. There is one record from near Mount Hotham and two isolated records from the Snowy Range, south of Mount Howitt, and a disjunct occurrence on and near the Bennison Plain north of Licola (VicFlora 2025).	Inhabits heathland/grassland communities, mostly above c. 1500 m and is usually associated with rocks. Sites tend to be more damp than dry, and occasionally support closed heaths that include <i>Richea continentis</i> (but not sphagnum-dominated). It has been collected from the margin of a large snowpatch community at Mt Hotham (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Damp Grassland Alpine Rocky Outcrop Heathland Snowpatch Grassland 	Not recorded
<i>Schizeilema fragoseum</i>	Alpine Pennywort		En		Found in New south Wales and in Victoria, where it is rare, recorded on Mount Buller, Mount Bogong, Mount Hotham and the Cobberas (VicFlora 2025)	Moist alpine herbfields, rock crevices and near streams (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Damp Grassland 	Not recorded
<i>Scleranthus brockiei</i>	Brock Knawel		En		Largely restricted in Victoria to alpine and montane districts in the east, with disjunct occurrences at lower elevations in central western Victoria. In the east, the species extends from Lake Mountain east to Haydens Bog near the New South Wales border, and from the Bogong High Plains south to Mount Useful. It is also found in New South Wales, the Australian Capital Territory and Tasmania (VicFlora 2025).	Typically found in sub-alpine to alpine grasslands (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> Alpine Grassland Sub-alpine Shrubland 	Not recorded
<i>Scleranthus diander</i>	Tufted Knawel		En		In Victoria, almost exclusively restricted to alpine and montane areas of the east, from the Snowy Range to the New South Wales border, between the Cobberas and Bendoc. It is also found in South Australia, New South Wales and Tasmania (DELWP 2021).	Extends from montane areas to the highest alpine areas. Occurs in montane grasslands and open woodlands (above 500 m) often in stony soils. Is typically associated with skeletal soils on dry rocky slopes, ridgelines, cliffs, summits, or flat basalt pavements (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Snowpatch Grassland Alpine Grassy Heathland Sub-alpine Shrubland Sub-alpine Woodland Alpine Rocky Outcrop Heathland Alpine Dwarf Heathland 	Trail Sections: 11 and 14
<i>Scleranthus singuliflorus</i>	Mossy Knawel		En		Found in New South Wales and alpine regions of Victoria (DELWP 2021).	Grows in alpine and subalpine herbfields and tussock grasslands, usually above 1600 m (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Shrubland Sub-alpine Woodland 	Trail Sections: 3, 4, 5, 6, 7, 10a and 17 Overnight Nodes: Cope Hut, High Knob, 1 Preferred, 1 Alternative, 2 Preferred, 2 Alternative
<i>Senecio extensus</i>	Alpine Fireweed		En		Occurs on the Dargo High Plains, Bogong High Plains, the Snowy Range, and The Playgrounds near the Cobberas (VicFlora 2025).	Confined to alpine grasslands, usually <i>Poa</i> dominated, above 1,500 m, as well as open grassy cold air drainage lines at around 800 m ASL (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Damp Grassland 	Not recorded
<i>Senecio pectinatus</i> var. <i>major</i> (now <i>Scapisenecio pectinatus</i>)	Alpine Groundsel		En		Alpine ranges in Victoria above 1600 m, including Mount Buffalo, Mount Hotham, the Bogong High Plains, the Cobberas, Baw Baw Plateau and Snowy Range (DELWP 2021). Also, New South Wales and Tasmania (VicFlora 2025).	Restricted to the higher ranges, occurring on damp ground in herbfields open heath communities and fringing Sphagnum dominated communities (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic Alpine Valley Peatland 	Not recorded
<i>Senecio pinnatifolius</i> var. <i>alpinus</i>	Snowfield Groundsel		En		Alpine and sub-alpines areas throughout Victoria (DELWP 2021).	Occurs in sub-alpine forest and woodland, as well as above the treeline in damp herbfields and grasslands (DELWP 2021)	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland Alpine Damp Grassland Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 2, 3, 4, 5, 6, 7, 8 and 17 Overnight Nodes: 2 Preferred, 2 Alternative
<i>Stackhousia pulvinaris</i>	Alpine Stackhousia		En		Known from New South Wales, Tasmania and Victoria where it is mainly restricted to the Bogong High Plains and Snowy Range (DELWP 2021).	Occurs in alpine herbfields and alpine-sub alpine grasslands, often in small depressions that are inundated following snow melt (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Shrubland Alpine Damp Grassland Alpine Grassland 	Trail Sections: 2, 3, 6, 7, 10a, 11 and 17

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Known distribution	Habitat	Associated EVCs	Recorded locations
<i>Stylidium montanum</i>	Alpine Triggerplant		En		Occurs above 800 m in north-east Victoria, including Mount Buffalo, Snowy Range, Dargo High Plains, Bogong High Plains, Nunniong Plateau and Mount Cobberas.	Occurs in montane, sub-alpine and alpine herbfields in at least seasonally wet habitats, including cold-air drainage lines, spring soaks, and swamp margins. The substrate is often peaty or organic-rich (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Valley Peatland ▪ Subalpine Shrubland ▪ Subalpine Woodland 	Not recorded
<i>Taraxacum aristum</i>	Mountain Dandelion		En		Recorded from New South Wales, Tasmania and in Victoria, in alpine and sub-alpine areas east from Matlock (DELWP 2021).	Grasslands and Grassy Woodlands in alpine and sub-alpine areas (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Woodland ▪ Alpine Shrubland 	Not recorded
<i>Trachymene humilis</i> subsp. <i>breviscapa</i>	Alpine Trachymene		En		Occurs east from the Moroka and Wonnangatta River catchments to the New South Wales border at the Cobberas and extends into New South Wales. Also occurs in Tasmania (DELWP 2021).	Locally common in moist alpine and higher sub-alpine grasslands and herbfields, often bordering streams and seepage zones between the Baw Baw Plateau and Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Valley Peatland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Trail Sections: 1, 2, 3, 4, 5, 6, 7, 10a and 17 Overnight Nodes: 1 Preferred, 1 Alternative, 2 Alternative
<i>Usnea acromelana</i>	Black-beard Lichen		Cr	Restricted	Recorded from numerous locations in Tasmania. It has been reliably recorded in Victoria from only one site on Basalt Hill (DELWP 2021), although there are additional records near Falls Creek (Fungimap 2023).	On the mainland, it is likely a habitat specialist, restricted to basalt outcrops. It is distinctive among lichens in its combination of morphology and basalt substrate and is neither small nor cryptic and therefore very unlikely to have been overlooked by those familiar with the species (DEECA 2021).	<ul style="list-style-type: none"> ▪ Alpine Conifer Shrubland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Dwarf Heathland 	Not recorded
<i>Utricularia monanthos</i>	Tasmanian Bladderwort		En		Occurs in New South Wales and Tasmania. Known with certainty in Victoria only from high altitudes on the Bogong High Plains and near Mount Nunniong (DELWP 2021, VicFlora 2025).	Found in very wet soil by streams and pools (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic 	Not recorded
<i>Veronica nivea</i>	Milfoil Speedwell		En		Recorded from alpine and sub-alpine areas on the Baw Baw and Buffalo Plateaus, Lake Mountain and Falls Creek areas in Victoria. Also occurs in New South Wales and Tasmania (DELWP 2021, VicFlora 2025).	Scattered in alpine and subalpine grassland, heath, bogs and woodlands often in disturbed habitats (e.g. track margins). Large post-fire recruitment was recorded after the 2009 fires around the edges of wet heathland/bog. It is considered to be rare in older vegetation but appears to regenerate profusely after fire (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Sub-alpine Wet Heathland/ Alpine Valley Peatland Mosaic ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Woodland 	Not recorded
<i>Viola fuscoviolacea</i>	Dusky Violet		En		Occurs in montane to alpine locations in eastern Victoria (including the Bogong High Plains), as well as in the lowlands east from Wilsons Promontory to the Gippsland Lakes. Also occurs in New South Wales and Tasmania (VicFlora 2025).	Occurs on permanently moist peaty substrates around montane swamps and cold air drainage lines to treeless alpine herbfields and peatlands. Also recorded in high-rainfall subalpine Snow Gum Woodlands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic ▪ Sub-alpine Woodland 	Not recorded
<i>Westringia senifolia</i>	Alpine Westringia		En	Endemic	Endemic to Victoria, where it is locally common on high, rocky mountains (Mount Buffalo, The Razor, Mount Wellington), with a disjunct lower altitude occurrence (800 m ASL) on Mount Donna Buang (VicFlora 2025).	Usually occurs on shallow soils amongst rock in exposed shrubland communities, or in Snow Gum woodlands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassy Heathland ▪ Alpine Rocky Outcrop Heathland 	Not recorded

4.3.2 Long-unburnt Snow Gums

Snow Gums are an important component of the alpine landscape and are specifically recognised within the National Heritage listing. Snow Gums are sensitive to fire, being slow to grow and recover because of their short growing season, which is limited by temperature. Due to increasing frequency of fire, over 90% of Snow Gum stands in Victoria have been burnt at least once since 2003 (RCAAE 2020). Repeated burns, which have occurred over the past two decades, negatively impact on Snow Gums' ability to resprout, and changes their structure from old-growth single-stem woodlands to denser, multi-stemmed stands (Coates et al. 2012; see Abzeco 2025).

Long-unburnt Snow Gums are becoming increasingly rare in Victoria, and were therefore, mapped within the project area. Stands of long-unburnt Snow Gums were recorded in seven locations across the assessment area, along Trail Sections 4 (one patch), 5 (three patches), 18 (one patch), and at Cope Hut and High Knob Overnight Nodes (Abzeco 2025).

4.3.3 Introduced flora

A total of 52 introduced flora species (including one species of uncertain origin) was recorded within the FHAC project area, largely along the edges of tracks and roads; an additional 15 species were recorded within the broader assessment area (see Abzeco 2025). Within the project area, the largest numbers of weed species were recorded along Trail Sections 1a, 2, 5, 11 and 12, and at Westons Hut. Section 1a, below the Rocky Valley Dam wall, which has experienced the most significant disturbance also supported the highest number of weeds (32 species). The most common weed species were Sheep Sorrel **Acetosella vulgaris* and Flatweed **Hypochaeris radicata* which were recorded in every section of trail and all three proposed Overnight Nodes (Abzeco 2025).

Eight declared noxious weed species were recorded in the project area, including three weeds classified as 'Restricted', and five species classified as 'Regionally Controlled' under the *Catchment and Land Protection (CaLP) Act 1994* in the North East Catchment Management Authority area (Table 9). Four of these are also classified as Weeds of National Significance (WoNS), based on their invasiveness, potential for spread and environmental, social and economic impacts (IPAC 2016), and are considered a serious threat to the Alpine National Park (Parks Victoria 2016). Nineteen of the weed species are otherwise classified as 'High Risk' environmental weeds in the Advisory List of Environmental Weeds in Victoria (White et al. 2022). Other priority weed species for the Alpine National Park, which include highly invasive and newly emerging weeds such as Hawkweeds **Pilosella* spp., (PV 2016) were not recorded within the assessment area.

Table 9 Weed species recorded within the FHAC project area which are declared noxious weeds within the North East Catchment Management area under the CaLP Act 1994, and weeds identified as Weeds of National Significance (WoNS)

Scientific name	Common name	CaLP Act 1994 status	WoNS	Recorded locations
<i>Cirsium vulgare</i>	Spear Thistle	Regionally Controlled		Section 1a
<i>Hypericum perforatum</i> subsp. <i>veronense</i>	St John's Wort	Regionally Controlled		Sections 1a, 12
<i>Reseda luteola</i>	Weld	Restricted		Section 1a
<i>Rosa rubiginosa</i>	Sweet Briar	Regionally Controlled		Section 11
<i>Rubus anglocandicans</i>	Common Blackberry	Regionally Controlled	✓	Sections 11, 12, 13
<i>Rubus polyanthemus</i>	Forest Blackberry	Regionally Controlled	✓	Sections 12, 13, Westons Hut
<i>Salix cinerea</i>	Grey Sallow	Restricted	✓	Section 2
<i>Salix cinerea</i> subsp. <i>oleifolia</i>	Rusty Sallow	Restricted	✓	Sections 11, 12, Westons Hut

4.4 Fauna

A total of 78 fauna species were recorded throughout the FHAC assessment area during field assessments completed between 2020 and 2024, comprising 73 native species and five introduced species. They included 12 mammal, 30 bird, 14 reptile, two frog, two fish, and 17 invertebrate species (see Abzeco 2025). Fish in the Mountain Galaxias *Galaxias olidus* complex, caddisflies, stonefly nymphs and mayfly nymphs were recorded but their identification and taxonomic status remains uncertain, requiring specialised techniques to identify individuals to species level (Abzeco 2025).

4.4.1 Threatened fauna

A total of 30 threatened fauna species has been identified by Abzeco (2020, 2021, 2025) as potentially occurring within the project area based on the species known distributions, database records and unpublished data, and the presence of suitable habitat within or directly adjoining the project area (Table 10). Eleven of these were recorded during flora and fauna assessments and the limited targeted surveys that were undertaken across the assessment area, which includes eight species listed under the EPBC Act (refer Table 10; species recorded during the assessments are highlighted in green). Four of these species are also habitat specialists with a distribution that is restricted to sub-alpine and alpine environments in Victoria.

Of the 30 threatened fauna species known and/or considered likely to occur within the project area, 12 species are restricted to sub-alpine and alpine environments (Table 10). These species are adapted to cold climates with highly specialised habitat requirements that are naturally restricted and fragmented, and often referred to as 'sky islands'. Many rely on habitat features such as rocks (scattered rock or outcrops) and logs for shelter and thermoregulation and/or construct burrows or tunnels to survive extreme conditions. Alpine bogs, permanently wet drainage lines and streams also provide habitat for aquatic invertebrates (e.g., stoneflies, crayfish), fishes, amphibians and reptiles.

Eight species are associated with the lower-elevation montane forests, which occur in the West Kiewa valley at the western end of the FHAC. These species occupy damp and wet eucalypt forest habitats, with a dense and complex understorey. A number of these species rely on stands of mature forest with large, hollow-bearing trees; they include the arboreal mammals and forest owls. These habitats also support small and medium-sized mammals including the Smoky Mouse *Pseudomys fumeus*, Long-nosed Potoroo *Potorous longipes* and Spot-tailed Quoll *Dasyurus maculatus maculatus*, which rely on dense vegetation cover for shelter and protection from predators.

Threatened fauna species recorded, and/or identified as potentially occurring within the project area, are given in Table 10, along with their conservation status, known distribution, and general habitat requirements. For a number of these species, however, the distribution and current status of populations within the assessment area is unknown, due to a lack of contemporary data, cryptic nature of the species, and difficulties with survey and monitoring. The likelihood of occurrence for threatened fauna species has therefore been conservatively estimated, based on the presence of suitable habitat within the project area; Table 10 lists the habitats and locations within the FHAC assessment area that each species may occur within.

4.4.2 Migratory fauna

Two species listed as Migratory under the EPBC Act 1999, were identified by Abzeco (2025) as having the potential to occur within the FHAC assessment area – the White-throated Needletail *Hirundapus caudacutus* and Latham's Snipe *Gallinago hardwickii*. These species are also listed as threatened species under the EPBC Act 1999. The White-throated Needletail is a large, migratory swift that is widespread in Victoria, but more common on and south of the Great Dividing Range. Latham's Snipe is a migratory shorebird, which unlike other shorebirds, does not aggregate in large flocks, and occurs from sea level to alpine areas. The distribution, habitat requirements and potential occurrence of these species within the FHAC project area are given in Table 10.

Table 10 Fauna species listed under the EPBC Act 1999 and/or FFG Act 1988 recorded or considered likely to occur within the FHAC assessment area

Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Know distribution	Habitat	Occurrence within the FHAC assessment area
<i>Austroaeschna flavomaculata</i>	Alpine Darner Dragonfly		vu	Alpine specialist	The distribution of the Alpine Darner Dragonfly is poorly known. It is considered to be restricted to snow areas of the southern alps and has been recorded from Mount Bogong and Mount Buffalo. However, distributional data are limited due to a lack of survey effort (DELWP 2021).	Larvae inhabit alpine streams and run-off waters, and have been found sheltering in sphagnum and under rocks (Theischinger and Hawking 2006). Adults have been observed to perch overnight on large boulders in stream beds (G. Theischinger, pers. comm. cited in Dow 2017).	Suitable habitat for the Alpine Darner was identified in drainage lines and Alpine Bog communities along Trail Sections 6 and 7, as well as Sections 9, 17 and 18 (Abzeco 2025) which are no longer part of the FHAC project scope.
<i>Burramys parvus</i>	Mountain Pygmy Possum	En	en	Alpine specialist	The Mountain Pygmy Possum is endemic to alpine and sub-alpine areas of mainland south-eastern Australia, where it is restricted to three geographically separated alpine regions: Kosciuszko National Park (New South Wales), Mount Buller (Victoria) and Mount Bogong – Mount Higginbotham (Victoria). Populations in each of the three regions are genetically distinct. Around Mount Bogong, there are three sub-populations at Mount Bogong, the Bogong High Plains and Mount Higginbotham/Mount Loch which are effectively isolated by low-elevation valleys. Local populations are patchily distributed, restricted by the natural distribution of core habitat and fragmentation by ski-field and road developments (DELWP 2016b).	Inhabits boulder fields, rock screes and outcrops associated with shrubby heathy vegetation in alpine and subalpine environments, particularly where Mountain Plum-pine <i>Podocarpus lawrencei</i> is present (Menkhorst et al. 2016). Mountain Plum-pine, which provides nectar, seeds and fruit from spring through to autumn, is an important food source and habitat component. Bogong Moths <i>Agrotis infusa</i> are also a vital food source; females tend to occur in higher elevation boulder fields with higher densities of Bogong Moths, while males are apparently excluded from these areas post-breeding. Deep boulder fields are crucial as winter habitat, providing insulation during hibernation (DELWP 2016B).	Suitable habitat for the Mountain Pygmy Possum within the FHAC assessment area was identified along parts of trail Section 5, and on part of the Fainter Firetrail along Section 17, in the form of basalt block streams in Alpine Conifer Shrubland, dominated by Mountain Plum-pine (Abzeco 2025). Boulder fields providing potential habitat were also identified in parts of alternative Overnight Node 1G (Abzeco 2021). Trail Section 17 and Overnight Node 1G are no longer part of the FHAC project area.
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	En	en		The Gang-gang Cockatoo occurs primarily in the temperate forests and woodlands of mainland south-eastern Australia. In Victoria, it is widespread through north-east and southern regions (Higgins 1999, Menkhorst et al. 2017). Gang-gang Cockatoos are partial altitudinal migrants, predominantly inhabiting mature wet sclerophyll forests in summer and dispersing into more open woodland at lower altitudes in winter (Menkhorst et al. 2017).	In summer, Gang-gang Cockatoos occupy wet sclerophyll forests dominated by eucalypts, with a dense understorey of wattles <i>Acacia</i> and banksia, as well as more open eucalypt woodlands, such as Sub-alpine Woodland (DAWE 2022a). In winter, birds tend to range beyond montane areas, dispersing into drier woodland communities at lower altitudes. However, overlap of winter and summer ranges is common (DAWE 2022a).	A pair of Gang-gang Cockatoos was observed towards the western end of Bungalow Spur Track (Section 18) and at Blairs Hut; these areas are no longer in the project area. Suitable habitat in the project area occurs in Montane Damp Forest in Section 12. They may also make use of Sub-alpine Woodland habitats throughout the project area, for foraging.
<i>Canis lupus dingo</i>	Dingo		vu		The contemporary distribution of Dingoes in Victoria is unclear due to hybridisation; however, wild dog populations with Dingo representation are found in forested areas of the Eastern Highlands and East Gippsland, including the Alpine National Park (DELWP 2021).	Prior to European settlement, Dingoes are likely to have occurred in most habitat throughout Victoria, but are now likely restricted to dry and wet forests, sub-alpine woodland, coastal heaths and some mallee environments (Menkhorst 1995). They are considered to occur most commonly below the winter snowline (Newsome and Catling 1979), but may travel through and seasonally take up residence at higher altitudes (Green and Osborne 2012).	The Dingo is expected to potentially occur throughout the FHAC assessment area. Dingoes range widely and individuals are expected to at least pass through most of the area; some parts of the FHAC may fall within the core range of some individuals. However, not all areas will be occupied or visited consistently throughout the year (Abzeco 2025).
<i>Colubotelson joyneri</i>	Freshwater Isopod		cr	Endemic, Alpine Specialist	Endemic to Victoria and apparently restricted to alpine areas, the Freshwater Isopod <i>Colubotelson joyneri</i> is known from Mount Buffalo and the Bogong High Plains (a record from east Gippsland is doubtful). This species has been collected from 14 locations at the headwaters of six streams on the Bogong High Plains: Cope, Rocky valley (upstream of the Rocky Valley Dam), Buckety Plains, Middle, White Rocks and McKay Creeks. Genetic work has indicated there are two species of <i>Colubotelson</i> with overlapping distributions across the entire Bogong High Plains (DELWP 2021).	Freshwater Isopods <i>C. joyneri</i> have been collected from black ooze in shallow ditches and puddles, beneath <i>Sphagnum</i> in bogs and in flowing creeks; it appears to require sheltered habitats. It has also been recorded in small, groundwater-fed bryophyte pools, which support <i>Blindia</i> , <i>Bartramia</i> and <i>Brutelia</i> , but lack <i>Sphagnum</i> , and which occur upstream of the larger <i>Sphagnum</i> bog systems (Clements et al. 2016, DELWP 2021).	Suitable habitat for <i>C. joyneri</i> was identified Alpine Bog communities and small pools/drainage lines along Trail Sections 4, 6 and 7, as well as Sections 17 and 18 (Abzeco 2025) which are no longer part of the FHAC project scope.
<i>Cyclodomorphys praealtus</i>	Alpine She-oak Skink	En	cr	Alpine specialist	The Alpine She-oak Skink occurs in Victoria and New South Wales, where it is restricted to locations above 1400 m, from the Wellington Plains in Victoria, north to Kiandra in NSW (DELWP 2021). Suitable habitat within this range is highly fragmented. In Victoria, the species is known from four areas separated by valleys of unsuitable habitat and conditions, and some of these locations are further fragmented (DELWP 2021). The population at Mount Hotham is considered to be the most genetically rich but geographically the smallest and highly fragmented.	In Victoria, Alpine She-oak Skinks have primarily been recorded from alpine tussock grasslands, alpine heathland and alpine grassy heathland, usually above the tree line (N. Clemann unpub data), although it does occur in grassy areas of very sparse Snow Gums (DELWP 2021). Within these habitats, they shelter in tussocks or under rocks (Roberston and Coventry 2019). The species has not been observed in boulder fields or rocky outcrops despite considerable survey and research undertaken in NSW and Victorian alpine regions (Clemann, pers. comm., 2008 in DELWP 2021).	The Alpine She-oak Skink is known to occur below the Rocky Valley Dam Wall (Section 1a) and was recorded near Tawonga Huts, along Section 9, which has been removed from the project area, during the assessment (Abzeco 2025). Suitable for the Alpine She-oak Skink occurs broadly across the high plains within the FHAC project area, although not uniformly within Sections 2 – 11, 13, 14, 15 and 17, and at all three proposed Overnight Nodes.

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Know distribution	Habitat	Occurrence within the FHAC assessment area
<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll (south-eastern mainland)	En	en		The Spot-tailed Quoll (south-eastern mainland subspecies) has a patchy distribution from southern Queensland through to south-western Victoria and Tasmania. However, it has suffered a substantial decline in range and abundance since European settlement. Three important populations have been identified in Victoria in the Great Otway National Park, Budj Bim, and East Gippsland (DELWP 2016c), although, recent evidence suggests populations in the south-west of Victoria may be locally extinct (DELWP 2021). The only area in Victoria where Spot-tailed Quolls are regularly recorded is in the upper Snowy River and tributaries and the Errinundra Plateau area of East Gippsland (Nelson 2007).	The Spot-tailed Quoll is mainly a forest-dependent species, but has been recorded from a wide range of habitat types, including wet and dry sclerophyll forests, swamp forest, heathland, woodland and heathy woodland. The highest densities occur in wet and dry forests. In these habitats, Spot-tailed Quolls preferentially use gullies and escarpments, which is related to prey densities and den site availability. Suitable den sites include caves, rock crevices and hollow logs and tree buttresses (Menkhorst 1995). During the day they may shelter in fallen logs, boulder piles, burrows and tree hollows (DELWP 2016c)	Suitable habitat for the Spot-tailed Quoll occurs in forested areas of lower-elevation sections of the FHAC assessment area, including in Section 12, and Section 18, which has been removed from the FHAC trail alignment.
<i>Euastacus armatus</i>	Murray Spiny Crayfish	Vu	Th		Endemic to the waterways of the southern Murray-Darling Basin, the Murray Spiny Crayfish has been historically recorded from semi-arid to sub-alpine areas. It has been recorded from the main channel and tributaries of the Murray, Murrumbidgee, Mitta Mitta, Kiewa, Ovens and Goulburn rivers, including from the upper reaches over 800 m ASL to 50 m ASL (TSSC 2025).	Murray Spiny Crayfish appear to be tolerant of a wide range of habitat conditions, given their broad distribution and altitudinal range. However, they are considered to favour cool, deep, moderately-flowing waters proximal to clay banks for burrowing. Streams with beds dominated by boulders and gravel, a high cover of overhanging riparian vegetation and wood also appear to be important (McCormack 2012, TSSC 2025).	The Murray Spiny Crayfish has been recorded previously from the Kiewa River East Branch, c. 12 km north-west of Falls Creek, and from the Ovens River East Branch around Harrietville, c. 5 km west of Diamantina Spur and Razorback Tracks (DEECA 2025). Suitable habitat within the FHAC assessment area was identified in lower elevation waterways around Trail Sections 12 and 18 and around Blairs Hut (Abzeco 2024, 2025).
<i>Euastacus crassus</i>	Alpine Spiny Crayfish		en	Alpine specialist	A predominantly high-elevation species, the Alpine Spiny Crayfish occurs on both sides of the Great Dividing Range in Victoria, from the NSW border across the Upper Murray River systems to the headwaters of the Keiwa River system and to the upper, south-east of the Ovens River system (including the Snowy River system and headwaters of the Tambo River) (McCormack 2012).	The Alpine Spiny Crayfish is typically found in areas dominated by dry sclerophyll and heath-dominated vegetation types (Morgan 1997). Within these areas it occurs in cool, clear flowing large streams and small watercourses in alpine and subalpine areas, generally over 600 m ASL (McCormack 2012), which may be covered in snow during winter. The Alpine Spiny Crayfish builds extensive burrow systems and also shelters under rock ledges and instream woody habitat (McCormack 2012, DELWP 2021).	Suitable habitat for the Alpine Spiny Crayfish was identified in small waterways crossings that intersect the FHAC in Sections 4, 6, 7 and 12, as well as Sections 17 and 18, which have been removed from the trail alignment (Abzeco 2021, 2025).
<i>Eulamprus kosciuskoi</i>	Alpine Water Skink	VU	en	Alpine specialist	The Alpine Water Skink has a disjunct distribution, occurring exclusively in alpine areas of Victoria, New South Wales and the Australian Capital Territory, where it is restricted to areas of suitable habitat above 1300 m ASL (Robertson and Coventry 2019). In Victoria, it is known to occur across the Bogong High Plains, and has also been recorded from Dinner Plain, Davies Plain, the Playgrounds, east of Mount Murphy, Rocky Plains in the Cobberas region and Nunniong Plains (DSE 2003, DEECA 2025).	The Alpine Water Skink occurs predominantly near the margins of alpine bogs and fens, along small water courses and in areas of seepage and wet heaths. However, it has also been found away from typically wet habitats. Alpine Water Skinks construct and shelter in burrows beneath <i>Sphagnum</i> and may also shelter beneath large logs and rocks, where they overwinter (DSE 2003, Green and Osborne 2012). Alpine Water Skinks may also be found basking on granite boulders, tussocks and <i>Sphagnum</i> moss (Robertson and Coventry 2019).	The Alpine Water Skink was recorded along Cope Creek and smaller tributaries intersecting the FHAC trail on Cope Saddle as well as further West on the Southern Bogong High Plains between Mount Jim and Cope Saddle and at Tawonga Huts (Sections, 6, 7, and 9). Suitable for the Alpine Water Skink occurs in alpine bogs and small waterways/drainage lines which were identified in Sections 1a, 6, 7, 11, and Sections 9 and 17 which have been removed from the alignment.
<i>Galaxias olidus</i> (complex)	Mountain Galaxias		n/a	Alpine specialist	The Mountain Galaxias complex includes at least 15 species (up to 24) formerly considered <i>Galaxias olidus</i> , which occur in alpine and sub-alpine streams. Many are newly described and some are currently being described.	Headwater streams to the main reaches of rivers and creeks, including on forested slopes and in bog systems on the highland plains (Kuitert 2016).	The Mountain Galaxias <i>Galaxias olidus</i> was collected while dip-netting in a tributary of Tawonga Hut Creek. Galaxids belonging to the same species complex (<i>G. cf. olidus</i>) were also captured in a bog system between Cope Hut and Cope Saddle Hut (Section 6). Suitable habitat was also identified in Sections 17 and 18 which have been removed from the FHAC project area.
<i>Gallinago hardwickii</i>	Latham's Snipe	VU, Mi			Latham's Snipe breeds in Japan and far eastern Russia during the austral winter, and is a spring-summer migrant to Australia. It is thought that the entire world population migrates to Australia (predominantly south-eastern Australia) for the non-breeding season, arriving in Victoria from late-August (Higgins and Davies 1996, Weller et al. 2020). Latham's Snipe are widespread in Victoria, across all areas except for the north-west of the State. However, their distribution is naturally fragmented due to the patchy availability of habitat. In Victoria, they are thought to move from the high country when upstream habitat dries (before December), to more permanent wetlands nearer coast.	During the non-breeding season, Latham's Snipe occupies a wide range of permanent and ephemeral wetlands with low, dense vegetation, including marshes and flooded grasslands, brackish or saline wetlands and modified wetlands. They typically keep to dense cover during the day and venture to more open habitats, such as exposed mud, to forage at dawn or dusk (Menkhorst et al. 2017).	Suitable habitat for Latham's Snipe, including potential habitat for roosting, sheltering and foraging was identified in areas of grasses, sedges and rushes adjacent to alpine bogs and riparian areas along trail Sections 1a, 6, 7 and 9.

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Know distribution	Habitat	Occurrence within the FHAC assessment area
<i>Hirundapus caudacutus</i>	White-throated Needletail	Vu, Mi	vu		The White-throated Needletail is a large, migratory swift which breeds in north-east Asia and migrates to eastern Australia for the boreal winter, arriving between October and December and departing between March and April. In eastern Australia, it is recorded from the coast to the western slopes of Great Dividing Range, and occasionally on adjacent inland plains. It is widespread in Victoria but more common on and south of the Great Dividing Range.	Almost exclusively aerial in Australia, flying at between 1 and 1000 m, and sometimes > 1800 m above ground. Recorded flying over most habitat types, but most often over forests, hills and in coastal areas around cliffs and other areas with prominent updraughts such as ridges and sand dunes. It is rarely recorded roosting in Australia, but at least some roost in the crowns of tall trees on ridge-tops or on rockfaces, as darkness falls.	The White-throated Needletail ranges widely in Australia and has the potential to occur throughout the FHAC assessment area. Montane habitats with tall trees may provide suitable roosting sites for the species. However, the White-throated Needletail is transitory at most sites in Australia. It is therefore only expected to occasionally fly over the FHAC assessment area (Abzeco 2025).
<i>Liopholis guthega</i>	Guthega Skink	En	cr	Alpine specialist	The Guthega Skink is restricted to alpine ecosystems of the cold temperate zone. In Victoria, it occurs only on the Bogong High Plains where it has been recorded as isolated occurrences, usually associated with granite boulder fields (Robertson and Coventry 2019). There are 12 known colonies in Victoria around the Bogong High Plains (Atkins 2018).	Guthega Skink have been recorded in a range of vegetation types >1600 m ASL, including Snow Gum woodlands, heathlands and tussock grassland (Donnellan et al. 2002). Preferred habitats are usually rocky or have sub-surface boulders hidden beneath soil or thick vegetation. Guthega Skink are known to be colonial and construct complex burrow systems. Burrows are usually located under rocks or shrubs (Atkins et al. 2015).	The Guthega Skink is known to occur on Heathy Spur, and colonies were recorded along Section 2 of the FHAC trail. Additional potential colonies, indicated by the presence of burrows, were recorded along Trail Section 7 (Abzeco 2025).
<i>Liopholis montana</i>	Mountain Skink	En	en		The Mountain Skink occurs in montane and subalpine areas, from the Bimberi Range in the Australian Capital Territory, through the Snowy Mountains in New South Wales, into Victoria (Green and Osborne 2012). Populations also occur in the Wombat State Forest and Dandenong Ranges, north-west and north-east of Melbourne. Throughout its range it occurs in a series of apparently isolated subpopulations (DCCEE 2022a).	The Mountain Skink occurs in tall open forests, woodland and heathlands in montane and sub-alpine areas, and is often associated with granite and basalt boulders, rock screes, slabs and large logs, which provide shelter and basking sites (Robertson and Coventry 2019, DCCEE 2022a).	Suitable habitat for the Mountain Skink was identified along the Razorback and Diamantina Spur, along FHAC Sections 12, 13 and 15, with possible burrows located towards the eastern end of Section 13. Suitable habitat was also identified in Sections 16, 18 and High Knob.
<i>Litoria spenceri</i>	Spotted Tree Frog	Cr	cr	Alpine specialist	Spotted Tree Frogs are confined to the north-western side of the Great Dividing Range, between the Central Highlands in Victoria and Mount Kosciuszko in New South Wales (Gillespie and Hollis 1996). The Spotted Tree Frog is now known from only 13 discrete populations, 11 of which are in Victoria (DEECA 2023).	Spotted Tree Frogs inhabit naturally-vegetated, rocky, swift-flowing upland streams in dissected mountainous country, between 200 and 1110 m ASL. Distribution along streams is patchy; they are usually found amongst vegetation, rocks and fallen debris along the riffle sections of streams (Gillespie and Hollis 1996). Streamside vegetation is often used for sheltering and basking.	Spotted Tree Frogs are known from the West Kiewa River, downstream of the FHAC project area. Upstream reaches within FHAC project area are considered less likely to support Spotted Tree Frogs than the downstream reaches from which they are known (M. West pers. comm. in Abzeco 2025). However, potential habitat occurs where the FHAC (Section 12) crosses the Kiewa River West branch (Abzeco 2025).
<i>Litoria verreauxii alpina</i>	Alpine Tree Frog	Vu	cr	Alpine specialist	The Alpine Tree Frog is restricted to the alpine and sub-alpine zones of south-eastern New South Wales and Victoria, generally above 1100 m; it is the only frog species known to occur above the winter snowline (DoE 2014). In Victoria, the species is known to persist in only a few areas, which includes a known population around Mount Hotham to Dinner Plain, and potentially on the Dargo High plains, the Bluff near Mt Buller, and Mount Bullfight Nature Conservation Reserve (DELWP 2021).	The Alpine Tree Frog utilises natural and artificial wetlands, including alpine ponds and pools in creeks, alpine bogs and fens, dams and drainage channels with still or slow-flowing water (DoE 2014). Non-breeding habitat and overwintering refuges are poorly known but are likely to include flat rocks, fallen logs, leaf litter and other ground debris (NSW OEH 2012).	A known population of the Alpine Tree Frog persists around Mount Hotham, and there are historic records of this species on the Bogong High Plains (Abzeco 2025). No suitable breeding habitat for the Alpine Tree Frog occurs within the assessment area around Mount Hotham. Non-breeding habitat is poorly known (Clemann and Gillespie 2011) but potentially occurs in Sections 4, 5, 6, 7, 11, 17 (Abzeco 2025).
<i>Mastacomys fuscus mordicus</i>	Broad-toothed Rat	En	vu		The Broad-toothed Rat (mainland subspecies) has a highly fragmented and restricted distribution across the Great Dividing Range from near Warburton in Victoria to the Brindabella Range in the Australian Capital Territory and Barrington Tops in New South Wales, with at least one poorly-known population in far East Gippsland. Knowledge of current occupancy and population sizes is limited (DCCEE 2023a). In Victoria, populations have been identified in five regions. However, it is now only considered locally abundant in the alpine region (Menkhorst 1995, Seebeck and Menkhorst 2000, Green & Osborne 2003, Menkhorst et al. 2008).	Habitats occupied by the Broad-toothed Rat are characterized by high annual rainfall, a cool climate and a dense cover of sedges and grasses, particularly <i>Poa</i> species which form a major dietary component and are restricted to cool and wet environments (Menkhorst 1995, Green et al. 2014, Shipway et al. 2020). Suitable habitat is now largely restricted to high elevation areas with annual rainfall greater than 1000 mm and mean annual temperatures below 10°C (Green and Osborne 2003, Milner et al. 2015, Shipway et al. 2020).	Burrows and scats of the Broad-toothed Rat were recorded on an unnamed headwater tributary intersecting the FHAC trail between Cope Hut and Cope Saddle Hut (Section 6). Suitable habitat for this species also occurs along other waterways and damp habitats within the area, including the tributaries and bog systems of Tawonga Huts, along Trail Sections 1a, 9, 17 and 18.
<i>Ninox strenua</i>	Powerful Owl		vu		The Powerful Owl occurs across south-eastern Australia. It has been recorded from across most of Victoria, with the exception of the semi-arid north-west and most of riverine the River Red Gum forests. In wetter mountain forests, it is apparently replaced by the Sooty Owl <i>Tyto tenebricosa</i> .	The Powerful Owl occupies mature wet sclerophyll forests and some dry forests supporting good populations of mammalian prey. Powerful Owls rely on stands of large, hollow-bearing trees for breeding and dense vegetation, comprising smaller trees and shrubs for roosting, favouring dense gullies. They have occasionally been recorded in wetter mountain forests, drier Box-Ironbark forests and plantations, and dispersing juveniles have been recorded in woodland plains (Higgins 1999, DELWP 2021).	The Powerful Owl is generally absent from alpine areas (Green and Osborne 2012), but may occur in the lower-altitude montane forests. Within the FHAC assessment area, suitable habitat occurs in trail sections 12 and 18; trail section 18 is no longer part of the FHAC.

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Know distribution	Habitat	Occurrence within the FHAC assessment area
<i>Ornithorhynchus anatinus</i>	Platypus		vu		The Platypus is widely distributed in waterways throughout Victoria, apart from the drier northwest region, Mornington Peninsula and Wilson's Promontory.	Platypus inhabit a wide variety of permanent water bodies including rivers, creeks, lakes, as well as man-made dams, tarns and reservoirs. They require stable banks for burrowing, healthy benthic invertebrate prey populations and intact riparian vegetation. In particular, Platypus are associated with steep or undercut banks, complex benthic substrate (including large woody debris), overhanging riparian vegetation, reliable flow regimes and pool depth between 1m and 3m (see FFG SAC 2020).	A Platypus was observed in the Diamantina River beside the Horse Yards, along Trail Section 12. Suitable foraging habitat was also identified in Tawonga Huts Creek (Section 9) and an unnamed waterway on Bungalow Spur (Section 18) which are no longer in the project area (Abzeco 2025).
<i>Petauroides volans</i>	Greater Glider (Southern and Central)	En	en		The distribution of the Greater Glider (southern and central) extends from Proserpine in Queensland, through New South Wales and the Australian Capital Territory to central Victoria, up to 1200 m ASL (Kavanagh 2004).	The Greater Glider is an arboreal marsupial, restricted to the eucalypt forests and woodlands of eastern Australia. They are typically found in the highest abundances in taller, moist, montane eucalypt forests on fertile soils with an abundance of mature, hollow-bearing trees (DCCEEW 2022b). Individuals shelter in tree hollows, with both live and dead trees used for denning, and multiple dens sites may be used by an individual (DCCEEW 2022b).	Three Greater Gliders were observed whilst spotlighting at the Diamantina Horse Yards, one of which was recorded along the FHAC trail Section 12. Suitable habitat occurs elsewhere along Section 12, as well as Section 18 and Blairs Hut (Abzeco 2025), which are no longer in scope.
<i>Petaurus australis australis</i>	Yellow-bellied Glider (South-eastern)	Vu	vu		The Yellow-bellied Glider (south-eastern subspecies) has a disjunct distribution from south-eastern Queensland to far south-eastern South Australia, and occurs at altitudes of up to 1400 m ASL. In Victoria, it occurs primarily in the east half of the State with a distribution that extends from the ranges east of Melbourne to far East Gippsland and the Victorian Alps; isolated populations occur in western Victoria around Edenhope, Portland, Timboon and the Otway Ranges (DCCEEW 2022c).	The Yellow-bellied Glider is an arboreal marsupial that occupies eucalypt-dominated woodlands and forests, including both wet and dry forests. Habitat suitability is determined by forest age and composition; this species shows a preference for large patches of mature or old growth forests with hollow-bearing trees for den sites, and a high proportion of winter-flowering and smooth-barked eucalypts which provide foraging resources (Woinarski et al. 2014, DCCEEW 2022c).	Yellow-bellied Gliders were observed whilst spotlighting at Diamantina Horse Yards (Trail Section 12) and Blairs Hut, with two individuals recorded at each location. Suitable habitat was also identified in forested areas along Section 18 (Abzeco 2025).
<i>Potorous longipes</i>	Long-footed Potoroo	En	en		The Long-footed Potoroo is currently known from two core sub-populations in Victoria, and a much smaller sub-population in New South Wales. In Victoria, the Long-footed Potoroo is mainly known from near-coastal East Gippsland and the adjacent uplands east of the Snowy River. The second sub-population occurs on the Great Dividing Range around the Barry Mountains, the Wonnangatta, Buffalo, Ovens and Buckland Rivers (DAWE 2022b).	The Long-footed Potoroo occupies a range of dense forest vegetation types — primarily Wet Forest, Damp Forest and Riparian Forest, from 100 to 1500 m ASL. Secondary habitat types include Montane Damp Forest, Herb-rich Foothill Forest and Shrubby Dry Forest, usually close to primary habitat types. Key habitat requirements for this species are a diverse and abundant supply of hypogeous fungi throughout the year, as well as dense cover to provide shelter and protection from predators (DAWE 2022b).	The Long-footed Potoroo has recently been recorded (2019 – 2024) north of Falls Creek at Roper Saddle, and on the western side of the Kiewa River West Branch, north and south of the Diamantina River, 0.25 – 1.3 km from the FHAC. Suitable habitat within the FHAC assessment area was identified along Trail Section 12, which supports Montane Damp Forest, and Trail Section 18, which is no longer in scope (Abzeco 2025).
<i>Pseudemoia cryodroma</i>	Alpine Bog Skink	En	en	Alpine specialist	The Alpine Bok Skink is restricted to alpine and sub-alpine areas of Victoria and adjacent alpine areas of New South Wales, where it occurs almost exclusively within protected areas, including the Bogong High Plains and Mount Hotham area of the Alpine National Park. In Victoria, it has been recorded from Lake Mountain, Mount Baw Baw, Bennison High Plains, Dargo High Plains, Mount Buller, Mount Buffalo, Mount Higginbotham, Mount Hotham and the Bogong High Plains, Cobberas and Tom Groggin (DCCEEW 2023b).	The Alpine Bog Skink occurs primarily in dense, low-growing (often treeless) vegetation in bogs, along drainage lines and adjoining habitats, and wet heaths above 1100 m. Alpine and sub-alpine grasslands and dry, treeless heaths, drainage lines in sub-alpine meadows, and Snow Gum woodlands are less commonly used (DCCEEW 2023b). Alpine Bog Skinks can occasionally be found basking and foraging on rocks, low shrubs and grass tussocks (Robertson and Coventry 2019, DCCEEW 2023b).	Habitat for the Alpine Bog Skink within the FHAC includes open damp heathlands, grasslands and alpine bog systems. It was recorded in Sections 6, 7 and 15, with areas of suitable habitat also identified in Sections 1a, 9, 10a, 11, 16, 17 (Abzeco 2025); Sections 9, 10a and 17 have been removed from the FHAC alignment.
<i>Pseudemoia pagenstecheri</i>	Tussock Skink (High country)		en		The Tussock Skink occurs across south-east mainland Australia from New South Wales to south-west South Australia, and Tasmania. It occurs in two disjunct populations in Victoria – the warm temperate zone of the western volcanic plains and the cold temperate zone in high country. The high-country form of the Tussock Skink occurs from near Mount Wellington in the south to Mount Coberras in north-eastern Victoria.	The Tussock Skink inhabits grassy, treeless habitats, including alpine and sub-alpine grasslands, heathlands and Snow Gum Woodlands (Hutchinson and Donnellan 1992). The Tussock Skink occurs sympatrically with the closely related Alpine Bog Skink and Southern Grass Skink in alpine areas, but occupies more open and drier grassy or heathy microhabitats. It usually basks on fallen timber, surface rocks or within grass tussocks (Robertson and Coventry 2019).	The Tussock Skink is likely to be the most widespread and common reptile species within the FHAC assessment area. Tussock Skinks were recorded along Sections 2, 6 and 7 and at Cope Hut and Westons Hut. Suitable habitat occurs along the majority of the project area wherever there is cover of grass tussocks and low-growing shrubs with little or no tree cover. Suitable habitat occurs in all trail Sections, except 1, 12 and 18, and at all Overnight Nodes (Abzeco 2025).
<i>Pseudomys fumeus</i>	Smoky Mouse	En	en		The Smoky Mouse (or Konoom) occurs within the Greater Grampians and Victorian Alps and Eastern Highlands (Seebeck and Menkhorst 2000, TSSC 2020). It is known to occur within the catchments of the Wonungarra River and Buckland River, 20 km to the west of the FHAC. It has not previously been recorded in the West Kiewa Valley, but this may be due to a lack of survey effort.	Occupies a wide variety of vegetation types, from coastal and subalpine heath to dry sclerophyll forest and subalpine woodland, especially along ridgetops with a heath understorey, and occasionally adjacent wetter habitats, such as gullies. Suitable habitats (except for those in wet gullies) typically support a floristically diverse shrub layer with species of the plant families	Suitable habitat for the Smoky Mouse was identified at around the Red Robin Battery alternative Overnight Node in Section 12. Potential habitat also occurs on the lower slope of Diamantina Spur walking track along Trail Section 18.

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Know distribution	Habitat	Occurrence within the FHAC assessment area
						Epacridaceae (Ericaceae), Fabaceae and Mimosaceae well represented.	
<i>Pycnoptilus floccosus</i>	Pilotbird	Vu	vu		The Pilotbird occurs across south-eastern Australia, with two recognised sub-species – upland and lowland. The upland Pilotbird <i>P. floccosus floccosus</i> occurs above 600 m in north-eastern Victoria, the Brindabella Ranges in the Australian Capital Territory and in the Snowy Mountains, New South Wales (Loyn et al. 2021).	Pilotbirds are sedentary, ground-dwelling birds which occur in wet sclerophyll forests with a dense understorey, including in sub-alpine areas, as well as rainforest and coastal heath. They are strictly terrestrial, foraging on the forest floor on damp ground or amongst leaf litter, and nesting on the ground; they seldom fly and rarely venture far from cover, ascending into shrubs 1 - 2 m above ground, if disturbed (Menkhorst et al. 2017, DAWE 2022c).	Suitable habitat for the Pilotbird occurs in forested, lower-elevation areas of the FHAC in the West Kiewa valley, between the western section of Westons Spur Track and the Razorback track (Sections 12). Habitat was also identified along Bungalow Spur Track (Section 18) and at Blairs Hut.
<i>Riekoperla intermedia</i>	Stonefly		vu	Alpine specialist	The Stonefly <i>Riekoperla intermeida</i> has a highly restricted distribution, known only from small creeks on the summits of Mount McKay, Mount Bogong and Mount Feathertop in Victoria. There is also a record from New South Wales (ALA 2025).	<i>R. intermedia</i> is restricted to first-order alpine streams and trickles, above 760 m ASL (Theischinger 1985). It is likely that water temperature is a key factor limiting the distribution of the species (DELWP 2021)	The Stonefly <i>R. intermedia</i> is known from Mount Feathertop, where it was recorded in 1984. Suitable habitat occurs in small tributaries crossing Sections 4, 6, 7, 9, 12, 17, 18.
<i>Thaumatoperla alpina</i>	Alpine Stonefly	En	en	Endemic, Alpine specialist	The Alpine Stonefly is endemic to the Bogong High Plains, occurring in the major catchments of West Kiewa, East Kiewa and Mitta Mitta Rivers at altitudes above 700 m ASL; most known locations are in the east Kiewa catchments (DELWP 2021). Known locations are separated by natural and anthropogenic barriers and occur within the Alpine National Park, Falls Creek Alpine Resort and State Forest (DSEWPC 2011).	Alpine Stonefly nymphs are typically found in steep, cool and stony streams, often beneath cascading water, cobblestones or detritus (DELWP 2021). Narrow streams, typically 1 m wide and 15 cm deep, are preferred (McKay et al. 2005). The flight capabilities of Alpine Stonefly are highly restricted; adults are therefore generally found on riparian vegetation immediately beside the stream from which they emerged (DELWP 2021).	Suitable habitat for the Alpine Stonefly occurs in small tributaries crossing Sections 4, 6, 7, 9, 12, 17, 18.
<i>Tyto tenebricosa</i>	Sooty Owl		en		Sooty Owls are distributed through coastal central and southern Queensland, New South Wales and Victoria. In eastern Victoria, a sub-population of the Sooty Owl occurs from near Melbourne, east and north-east to the border with New South Wales; within this area, the Sooty Owl is numerically rare (DELWP 2021).	In Victoria, the Sooty Owl occurs in temperate rainforests, and old-growth wet sclerophyll forests supporting dense understorey vegetation; usually where there are large areas of continuous forest. They may also forage in younger forests, though generally in the vicinity of old-growth trees that provide suitable nesting sites (Higgins 1999).	The Sooty Owl was recorded in the vicinity of Blairs Hut in 1996, where forested habitats provide roosting, nesting and foraging habitat. Suitable habitat has also been identified along Section 12, and at the western end of Bungalow Spur Track (Section 18).

4.5 Listed Ecological Communities

4.5.1 EPBC Act-listed communities

Two ecological communities listed under the EPBC Act were identified as potentially occurring within the project area from the Protected Matters Search (see Appendix 2). Only one of these communities — Alpine Sphagnum Bogs and Associated Fens, listed as Endangered, was recorded within the assessment area.

Alpine Sphagnum Bogs and Associated Fens

Alpine Sphagnum Bogs and Associated Fens occur in small pockets of Victoria, Tasmania, New South Wales and the Australian Capital Territory, where they are found in alpine, sub-alpine and montane environments, often (but not always) above the treeline, or in frost hollows. The community has a highly restricted geographic distribution in Victoria, occupying <0.02% of the state (ARI 2019). Although this community can form extensive interconnected networks across large plains, it is naturally discontinuous, occurring mostly as scattered and isolated patches, which have been further depleted and degraded by past disturbances (DoE 2015).

Alpine Sphagnum Bogs and Associated Fens are found in permanently wet sites, forming along streams, valley floors and edges, and waterlogged slopes where a good supply of groundwater and impeded drainage keeps the water table at, or near, the surface. The incomplete decomposition of organic materials in these conditions eventually forms the peat that typically underlies this community.

Sphagnum and the underlying peat organosols have significant water-holding capacity, and are therefore, important in modulating water flow and maintaining the hydrology of surrounding environments. The gradual release of water through the spring and summer snow melt is crucial for the survival of numerous other ecological communities, which often occur as a mosaic with Alpine Sphagnum Bogs and Fens and have close hydrological and ecological connections (DoE 2015). They also play an important role in maintaining water quality throughout catchments, by acting as a natural filter for nutrients, pathogens and sediments.

The community includes two distinct components of high mountain wetlands — Alpine Sphagnum Bogs, and Fens — which often occur together. Each support their own distinctive vegetation, but due to a high degree of interdependence, are listed together as a single community and are considered inseparable in that context (DEWHA 2009). The Alpine Sphagnum Bogs component is characterised by the presence of hummock-forming *Sphagnum*, most commonly Peat Moss *S. cristatum*, in association with other groundwater-dependent species (DEWHA 2009, DoE 2015). A number of variants are recognised along topographical gradients from slopes to valley floors. These include: the 'raised' bogs on wet slopes, where *Sphagnum* spp. together with the growth of *Epacris* spp. shrubs create slightly raised domes; and the flatter, more concave 'valley' bogs where *Carex* sedges may replace some shrubs, at the edges of valleys (DEWHA 2009). Fens are shallow, semi-permanent or permanent open pools with or without emergent aquatic plants that are often found near to, or surrounded by, bogs (DoE 2015). They are typically found in the wettest areas, along water courses or on valley floors, where the growth of sedges is generally favoured over *Sphagnum* (DEWHA 2009). This community is synonymous with areas of Alpine Valley Peatland and Alpine Fen EVCs in the assessment area; there are no condition thresholds associated with this community.

Alpine Sphagnum Bogs and Associated Fens have been recorded in 38 locations (patches) within the assessment area, including at seven locations along or immediately adjoining alternative trail alignments, and at three of the alternative Overnight Nodes, which have been removed from scope (Table 11). Most of these patches fit the Alpine Sphagnum Bog component; the Fen component of this community is represented in only one location (see Section 4.5.2).

Occurrences of this community in the assessment area are located along permanently wet areas including streams, drainage lines or permanent ground water expression points (soaks). All recorded locations are above 1600 m ASL, both above and below the treeline, and most fit the description of 'valley bogs', being dominated by sedges (*Carex* spp.) and occurring in valleys or flatter terrain (Abzeco 2025).

4.5.2 FFG Act-listed communities

Four communities listed as threatened under the FFG Act were identified as potentially occurring within the project area. Three of these communities were identified in the assessment area, but only two occur within the current project area (see Appendix 2, Table 11); the three communities recorded in the assessment area are discussed further below.

Alpine Bog community

The FFG Act-listed Alpine Bog Community is synonymous with the EPBC Act-listed Alpine Bogs and Associated Fens. The community is described as being restricted to permanently wet sites such as ground water expression points and drainage lines with gentle to moderate slopes, in alpine, subalpine and montane areas above the climatic tree line, and frost hollows at lower altitudes where tree growth is limited. The community is characterised by *Sphagnum* species which form peat soils, ranging from one to several meters deep, depending on the substrate. The community was recorded through the Bogong High Plains; areas identified as supporting the EPBC Act-listed community are also identified as supporting the FFG Act-listed Alpine Bog community (Table 11).

Fen (Bog Pool) community

The Fen (Bog Pool) Community is characterised by a suite of species that establish within pools of permanent to semi-permanent standing water within the boggy moss bed of the Alpine Bog Community, with which it is interdependent. Fen (Bog Pool) Communities occur in the wettest areas along watercourses and flat areas on valley floors that are fed by groundwater discharge. This community differs structurally from Alpine Bog Communities, being dominated by sedges and other amphibious plants, due to the presence of standing water. Characteristic species include Fen Sedge or Tufted Sedge *Carex gaudichaudiana*, Mat Water-milfoil *Myriophyllum pedunculatum* subsp. *pedunculatum*, Dwarf Buttercup *Ranunculus millanii* and Mud Pratia *Lobelia surrepens*. The pools usually have permanent water, but free-standing water may disappear at the end of dry summers, while the peaty soils remain damp. All that remains of these rare communities in Victoria are fragmented, isolated occurrences in the alps above the tree line or in frost hollows at lower elevations where trees are limited. Their rarity is likely, in part, a reflection of the scarcity of permanent pools in the alpine region. This community is also a component of the EPBC Act-listed Alpine Sphagnum Bogs and Associated Fens.

The Fen (Bog Pool) Community was recorded at the eastern end of the Fainter Firetrail (Section 17) on the edge of the Pretty Valley Dam (Abzeco 2024a). This area has been removed from the FHAC project (see Section 2.2.2).

Alpine Snowpatch community

The Alpine Snowpatch Community represents a rare vegetation type that is restricted to steep, sheltered southerly and easterly slopes above 1600 m, and where snow cover is persistent into early summer (diuturnal) and the growing season is reduced. The community includes two main vegetation associations — Short-turf Snowpatch, and Diuturnal (long-continuing) Snowpatch (DEECA n.d.).

Short-turf Snowpatch is characterised by a sward structure that is less than 10 cm in height, and dominated by Mountain Sedge *Carex hebes*, Alpine Wallaby-grass *Rytidosperma nudiflorum*, Ledge-grass *Poa hothamensis* var. *hothamensis* and herbs such as Slender Snow-daisy. Diuturnal Snowpatches occur on higher slopes and retain snow for longer periods, with the upper areas of these communities dominated by Silver Snow Daisy *Celmisia asteliifolia*. On the downslope areas where the soil profile can be deeper, Snowgrass *Poa fawcettiae* gradually becomes dominant (DEECA n.d.).

The Alpine Snowpatch Community (Short-turf Snowpatch) was recorded near Mount Feathertop, and is consistent with Snowpatch Grassland EVC, which was recorded along Razorback Track to Mount Feathertop (Track section 14) (Abzeco 2025, Table 11).

Table 11 Listed Ecological Communities recorded within the assessment area

Trail section	Ecological Community	No. patches	Total length (km)	Location
1a	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	1	0.09	Below Rocky Valley Dam wall
2	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	8	0.64	Heathy Spur Track
3	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	2	0.38	Big River Firetrail
4	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	2	0.07	Australian Alps Walking Track
5	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	8	0.69	Langford East & West Aqueduct Road
6	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	2	0.11	Australian Alps Walking Track
7	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	3	0.82	Australian Alps Walking Track
9	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	3	0.30	Fainter Fire Trail and unnamed track to alternative Node 2B
11	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	1	0.32	Westons Spur Track
14	Alpine Snowpatch (FFG)	1	0.54	Razorback North Walking Track
17	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	3	0.10	Pretty Valley Road
17	Fen (Bog Pool) Community (FFG) Alpine Sphagnum Bogs and Associated Fens (EPBC)	1	0.05	Pretty Valley Road
1 Alternate	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	1	0.01 ha	N/A
2 Preferred	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	2	0.05 ha	N/A
2 Alternate	Alpine Sphagnum Bogs and Associated Fens (EPBC) Alpine Bog Community (FFG)	1	0.63 ha	N/A

4.6 Wetlands and waterways

4.6.1 Wetlands

Natural wetlands within the FHAC assessment area comprise the alpine bogs and fens, which have been mapped throughout the Bogong High Plains and are included on the Victorian Wetland Inventory (DEECA 2025b). All wetlands within the assessment area that are included on the Victorian Wetland Inventory are classified as Alpine Bogs. Locations of these wetlands in the assessment area broadly match the on-ground mapping of alpine bogs and fens (as identified by the mapping of listed ecological communities), although the on-ground mapping identified additional areas in the west of the project area (Sections 7 and 11), which are not included on the Victorian Wetland Inventory. Alpine bogs and fens play vital roles in the maintenance of catchment hydrology in the Australian alps, including water retention, modulation of water flows, and maintenance of water quality (see also Section 4.5). They are dependent on groundwater baseflows and discharge, which may vary with the position of the wetland in the landscape, and are sensitive to changes in groundwater flows or discharge (DoE 2015). The absorptive properties of *Sphagnum* spp. and the underlying peat regulate the lateral spread of moisture within the ecological community, which defines its boundaries (DoE 2015). Physical damage to the wetland community can result in its water-hold capacity being reduced, or destroyed as a result of erosion and channelling, and lead to drying of the wetland and surrounding areas.

Artificial wetlands within the FHAC assessment area include the Rocky Valley Dam and Pretty Valley Pondage constructed as part of the Kiewa Hydro-electric Scheme, which also included the construction of aqueducts to collect water from the Bogong High Plains. The Rocky Valley Dam supplies water to the McKay Creek Power Station and is also used for snow-making and water-based recreation. The Pretty Valley Pondage is a water storage for the McKay Creek Power Station.

There are no Wetlands of International Importance (Ramsar sites) or Nationally Important Wetlands within the vicinity of the FHAC.

4.6.2 Waterways

The FHAC trail intersects a number of discrete waterways including:

- Rocky Valley Creek and Rocky Valley Aqueduct (Section 1a)
- Watchbed Creek (Section 3)
- Langford East and West Aqueducts (Section 5)
- Cope Creek and Cope East Aqueduct (Section 6)
- Kiewa River West Branch (Section 12)
- Diamantina River (Section 12) and Diamantina Creek (Section 15)
- Blanket Creek (Section 14)

The trail also intersects multiple minor channels and unchanneled flow lines, as well as minor culverts. None of the Overnight Nodes are located on a waterway, although Westons Hut is located above a tributary of the Kiewa River West Branch.

Four main types of waterway were identified within the assessment area, mainly based on the type and degree of lateral confinement — the confining feature limits the ability of the stream to adjust laterally, which in turn indicates the potential for the waterway to erode and/or degrade in response to track or infrastructure works (Abzeco 2025):

- **Bedrock-controlled:** Waterways with much of the channel boundary on or very close to bedrock, which places strong longitudinal (bed) and horizontal (banks) control on the channel, resulting in limited capacity for lateral or vertical adjustment. High energy flows flush fine sediments through this setting, forming typical features of cascades, waterfalls and plunge pools. Tawonga Hut Creek (near Overnight Node 2 Alternative) is an example of this type of waterway.
- **Confined (with occasional floodplain pockets):** High-energy waterway environments, capable of flushing fine sediments and mobilising coarse bed load material. There is generally only a small potential for lateral or vertical adjustment caused by fluvial processes, except for small discontinuous floodplain pockets that are subject to inundation and erosion. The Diamantina River is an example of this type of waterway.
- **Aqueducts:** Artificial, constructed channels that are positioned outside of the valley floor. Aqueducts within the FHAC assessment area typically follow the contours of the terrain and were designed to convey water to water storages. Management vehicle tracks are typically located on the downhill side of the aqueduct and act as a levee; however formal spillways throughout the network allow excess water to spill from the aqueduct over the levee. Aqueducts have a relatively flat longitudinal gradient and trapezoidal cross-section (although they are piped in parts). These systems are relatively stable, but minor bed and bank erosion has been observed in some sections of aqueduct within the assessment area. The FHAC intersects the Rocky Valley Aqueduct, Langford East and West Aqueduct, which divert water to the Rocky Valley Dam, and the Cope East Aqueduct which supplies the Pretty Valley Pondage. Trail Section 5 follows the Langford West Aqueduct Road, parallel to Langford West Aqueduct.
- **Alpine Bog communities:** Channel arrangements within Alpine Bog systems generally comprise a continuous channel or series of braided channels of varying sinuosity within the wetland, but may also be poorly defined in parts. In some instances, these wetland communities are associated with abandoned channel courses. These systems are highly sensitive and at significantly higher risk of disturbance than any other stream type within the project area. The degradation of these systems, involving lateral or vertical adjustment at individual locations will depend on site-specific features, such as depth to bedrock, relative position of the channel, or floating boulders. Vegetation cover is considered critical to maintaining resilience.

4.7 Geology and geomorphology

The FHAC is located within the Eastern Uplands Geomorphic Division. No single geology coincides with the highest elevations of the Eastern Uplands of Victoria as they are underlain by a variety of Lower Palaeozoic (540 – 360 million years (Ma) age lithologies including multiple granitic intrusions and associated felsic volcanics. An elongate belt of metamorphism — the Omeo Metamorphic Complex — extends north from Ensay to Wagga Wagga in New South Wales. Cenozoic (66 Ma to present) geology is comprised of Eocene-Oligocene (56 – 23 Ma) basaltic lava flows and associated pre-and intra-basaltic sediment and Pleistocene (2.6 Ma) and Holocene (11,700 years) colluvium and alluvium (Rosengren 2023).

The underlying geology varies throughout the FHAC assessment area. The section from Falls Creek to the central Bogong High Plains sits on Lower Silurian migmatite and gneiss, part of the Omeo Metamorphic Complex (Morand et al. 2005). The FHAC then travels over Holocene fluvial deposits and older Eocene to Oligocene volcanics consisting of extrusive basalts (Mount Jim Volcanic Group), then Lower Devonian intrusive granodiorite to Weston Spur Track (Morand et al. 2005). On the western edge of the Bogong High Plains, the high plains gneiss, migmatite and granites are faulted against Lower-Middle Ordovician sediments along the Kiewa Thrust Fault (Morand et al. 2005). The Kiewa River West Branch follows the fault and has cut down along the mylonite zone which is up to 1.5 km wide. The West Kiewa Logging Road and beginning of Diamantina Spur Walking Track are located on the fault zone. The underlying geology of the remainder of the Diamantina Spur track is Lower-Middle Ordovician sandstone and mudstone of the Pinnak Sandstone; this forms part of the Adaminaby Group which consists of marine sandstone, mudstone, siltstone and minor chert (Geoscience 2020).

The elevation and relief of the Eastern Uplands of Victoria is closely related to the evolution of the eastern Australian margin, which was produced by geological and ongoing tectonic processes on a continental scale, including the development of the east coast escarpment, and establishment of the present drainage systems and Great Divide. Landforms reflect a long history of highly varied processes including past and present-day seasonal freezing of soil and surface water. Much of the landscape and soils are relict from Pleistocene colder climates and include areal and linear arrangements of broken rock masses transported by geomorphic processes no longer active (Rosengren 2023).

Landforms—ancient and modern—shaped by cold climates are rare in Australia and evidence of former glaciations occur infrequently in the entire geological record. These landforms are therefore, of at least National significance (Rosengren 2023). Glacial and peri-glacial features are a key value identified in the listing of the Australian Alps National Parks and Reserves National Heritage Place (DCCEE 2023c). Geomorphological values of significance within the assessment area are described in further detail in Sections 4.7.1 – 4.7.3, below.

4.7.1 Sites of Geological and Geomorphological Significance

Sites of Geological and Geomorphological Significance are discrete areas that display one or more geoscience attributes of particular importance for the scientific understanding of Earth's history (see Rosengren 2023). The FHAC passes through one area identified as a Site of Geological and Geomorphological Significance – Bogong High Plains South (see below). It also passes adjacent to the Basalt Hill site, located between the Bogong High Plains Road and Langford West Aqueduct Road.

Bogong High Plains South

The Bogong High Plains South Site of Geological and Geomorphological Significance includes the areas of Mount Cope, Mount Jim, Cobungra Gap and Mount Loch. This area includes the best natural example of the High Plains in Victoria and represents a substantial part of one of the major alpine and sub-alpine environments of continental Australia. Distinctive types of High Plains Gneiss are exposed on Mount Cope, while in the Mount Jim and Mount Loch areas, the Bogong Volcanics, together with the intercalated and pre-volcanic sediments, are exposed. Landforms related to differential erosion along fault lines and consequent stream capture occur at Cobungra Gap, while well-developed stepped topography occurs on Mount Jim and in the head of Middle Creek. The Bogong High Plains South site is of National Significance (VRO 2025, Abzeco 2025). Although not alpine in the global context, the Bogong High Plains comprise one of the major contiguous areas of high-altitude landscape on the Australian continent, and preserve clues to the ancient environments of Australia, especially those resulting from recent colder and drier climates (Rosengren 2023). FHAC Trail Sections 5 – 11 pass through the Bogong High Plains South Site of Geological and Geomorphological Significance, and Westons Hut Overnight Node is also located within this area.

Basalt Hill

Basalt Hill, includes the area surrounding Basalt Hill and Langford Gap. Basalt Hill is a columnar basalt structure that has been formed by at least three volcanic flows that have been shaped by ice. It is surrounded by a boulder field that extends over Langford Gap into the head of Middle Creek and is the most accessible representative example of Bogong Volcanics. Basalt Hill is considered to be of Regional Significance (VRO 2025, Abzeco 2025). Trail Section 5 passes directly to the south of the Basalt Hill Site of Geological and Geomorphological Significance.

4.7.2 Glacial and peri-glacial features

The Eastern Uplands of Victoria are alpine in an ecological rather than geomorphic character. The glacial climates of the Late Cenozoic produced only small valley head glaciers in New South Wales and more extensive ice sheets and valley flow glaciers at lower altitudes in central and western Tasmania. On the mainland, erosional and depositional landforms in the Kosciuszko Main Range and Snowy Mountains represent the only areas of proven Pleistocene glaciation; there is no unequivocal evidence of glacial activity in the Victorian highlands (Rosengren 2023, VRO 2025). Relict peri-glacial landforms are more widespread indicators of past cold climates on upland slopes in Australia.

The nature and origin of peri-glacial materials in the Eastern Uplands is described in Rosengren (2023). In Victoria the record of the Pleistocene cold climates is expressed as solifluction boulder blockstreams of predominantly igneous rocks—basalt, granitic and rhyodacite rocks at elevations above 1600m between Mount Buller, the Bogong High Plains and Mount Cobberas. These landforms are of national geoheritage value (Rosengren 2023).

Within the FHAC assessment area, the most evident extreme cold climate landforms are on the Bogong High Plains; peri-glacial activity is recognised as having been an important geomorphological process in the evolution of the Bogong High Plains landforms (Rosengren 2023, VRO 2025). Peri-glacial landforms and materials include linear and lobate boulder deposits referred to as blockstreams, blockfields, block slopes or rock rivers and shallow terraces with evidence of slow downslope and solifluction movement suggestive of freeze-thaw processes and shallow permafrost. Other evidence at lower elevations includes extensive stable colluvial fans at breaks of slope and intermittently active alluvial fans extending from tributary streams onto floodplains. On the Bogong High Plains these are relict from Pleistocene rather than Holocene or contemporary processes (Rosengren 2023).

The geology, terrain and geomorphological features of the FHAC, including areas of identified peri-glacial deposits, derived from LiDAR and aerial photo interpretation and on-ground inspections, are described in Rosengren and Webb (2024), with additional information provided in Rosengren (2023) and Webb (2023). Section 4.7.3 provides a summary of peri-glacial landforms and deposits identified within the assessment area.

4.7.3 Slope movements

Several locations and types of slope movements were mapped across the assessment area from the LiDAR DEM, which were not otherwise represented on coarse resolution digital and analogue terrain data, and in places, were obscured by dense vegetation that makes field recognition difficult (Rosengren and Webb 2024). These included:

- Scree (talus) slopes
- Landslides (Regolith-soil movement)
- Relict peri-glacial deposits

Scree slopes

Talus and rock slopes of basalt, granodiorite and migmatite gneiss—along with peri-glacial blockstreams of the same materials referred to below—occur along the engineered cut of the Langford Aqueduct and vehicle tracks above Trail Section 5, parts of Westons Spur above Trail Section 11¹, and possibly, parts of the steeper sections of Trail Section 12 below Westons Hut (Rosengren and Webb 2024).

¹ Note that Trail Section numbering used by Rosengren and Webb (2024) differs slightly from that used by Abzeco (2021 and 2025). Trail Section numbers have been amended from Rosengren and Webb (2024) to align with the numbering used by Abzeco (2021 and 2025), and in this report.

Talus slopes in Pinnak Sandstone are common on steep south- and east-facing sections of Diamantina Spur Trail Section 13 and in places around the junction of the Diamantina Spur, High Knob and Razorback Ridge (Trail Section 15), where landform features include active cliffs and talus slopes, possibly caused by geologically recent faulting. Talus slopes are minimal on Track Sections 14 and 15 to Mount Feathertop, and along Bungalow Spur track (Trail Section 18) (Rosengren and Webb 2024).

Landslides

Landslides of varying ages and possible activity are largely confined to the edges and base of basalt at the margins of the Bogong High Plains and in areas above and below parts of Trail Sections 6, 7, 10a and 11 with slopes greater than seven degrees (Rosengren and Webb 2024).

The catchment of Jaithmathang Creek displays a wide range of relict and recent/active slope movements related to a mix of varied geology, steep slopes, rock and groundwater outcrop and relict solifluction materials. This includes a very large, geologically young landslide identified south of Westons Hut and extending 600 m east of Trail Section 11, at around 1700 m elevation. The 30 m high arcuate head scarp faces west-south-west with a broad debris apron spreading 600 m downslope, including a large back-tilted block with a wetland lake. The apron contributes run-off to two tributaries of the West Kiewa River, forming alluvial fans at the confluence, where the alternative Blairs Hut Overnight Node was formerly proposed (Figure 3). This is one of the largest landslides known across the Eastern Uplands (Rosengren and Webb 2024).

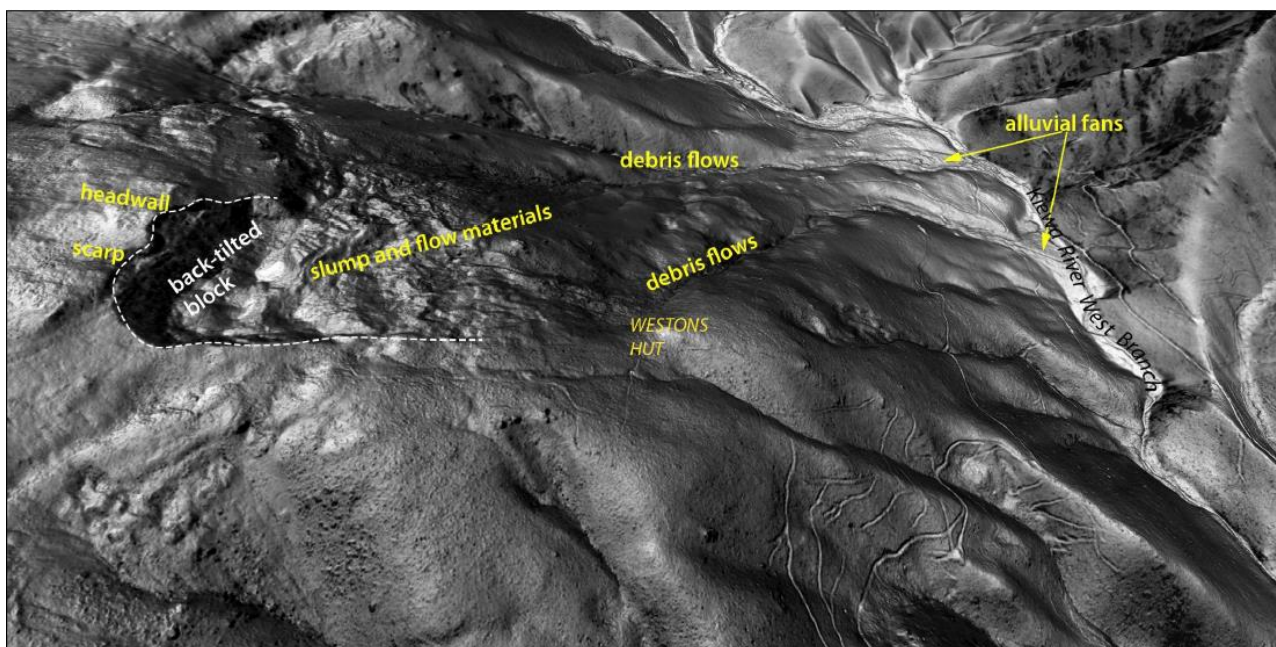


Figure 3 LiDAR 3D oblique image of the large landslide south of Westons Hut, at the head of the drainage line feeding the alluvial fan, looking south. Source: Rosengren and Webb (2024).

At the other end of the landslide scale are micro- to meso-topographic elongate depressions and intervening divides from one to around 10 metres long and with relief less than one metre and often less than 30 centimetres. They occur in groups of five to 30 or more but are of very restricted occurrence and are non-surfaces of gentle slope ± 1 degree. The largest concentration observed in the field and on the aerial photograph were around the junctions of Trail Sections 7, 10a and 11 on basalt geology. A smaller number but individually larger group occurs at the eastern end of Trail Section 6, near Bogong High Plains Road, on weathered migmatite gneiss. The origin and persistence of these features is intriguing as they occur on varied substrate on very gently sloping surfaces. Analysis of possible origins was beyond the scope of assessment by Rosengren and Webb (2024). However, they were flagged as being of high geomorphological significance due to their possible peri-glacial solifluction origin (see below), and are considered to be highly sensitive to physical disturbance (Rosengren and Webb 2024).

As identified above, a section of the Razorback (Trail Section 15), approximately 500 m south of High Knob has cliffs 10 – 20 m high with active talus slopes as part of a larger complex slope failure possibly triggered by faulting (Rosengren and Webb 2024).

Relict peri-glacial deposits

The LiDAR and aerial photography show linear, lobate and areally broad blockstreams are widespread across the Bogong High Plains in varied geology—predominantly basalt but also in granite and metamorphic migmatite.

Outstanding examples of fossil peri-glacial blockstreams developed in Cenozoic volcanics on the Bogong High Plains and Devonian granites of the Jaithmathang Range occur as lobate and linear piles of detritus lying below escarpments and hillcrests and extending along shallow drainage lines. Some of these are modern (active) screes but most are relict materials covered by vegetation on mid-lower slopes producing a distinctive “striped” vegetation pattern not related to modern stream channels (Rosengren and Webb 2024).

The most widespread peri-glacial materials are accumulations of variably-sized, and predominantly angular, blocks distributed across slopes typically much lower than the angle where they have moved solely under the influence of gravity. The size of blocks and distribution of the deposits argues for a peri-glacial origin with the boulders derived by frost action. Although some emplacement occurred through rockfall and talus creep, the bulk of downslope movement has been activated by (peri-glacial) gelifluction, a process which is inactive in modern climates. The question of the more widespread influence of periglacial action in shaping slopes and producing slope mantles in the highlands is complicated by the lack of definitive criteria to distinguish fossil periglacial deposits from similar deposits produced by other slope processes (Rosengren and Webb 2024).

Geomorphological features of likely peri-glacial origin were identified within the assessment area by Rosengren and Webb (2024) in the following areas:

- **Section 2** — Undulating terrain with granite blockstreams and active channels along Heathy Spur Track.
- **Section 4** — Irregular south-facing slope with granite outcrops, granite blockstreams (solifluction debris) and shallow snow-melt and outflow channels between Marum Point and the Langford East Aqueduct.
- **Section 5** — Extensive basalt blockstreams with semi-stabilised surfaces and some granitic blockstreams of larger boulders below the Langford East and West Aqueduct, extending along the Langford East and West Aqueduct Roads to the Bogong High Plains Road (Photo 10).
- **Section 6** — Upland plain with microtopography of relict solifluction depressions (contour trenches) and ridges, wetlands and blockstream veneer between the Bogong High Plains Road and Cope West Aqueduct intake.
- **Section 7 and 10 a** — Upland plain with surfaces of basalt outcrop as benches and scarps with widespread/continuous basalt blockstream veneer, extending from the Cope West Aqueduct intake to the head of Tawonga Huts Creek. The area features a complex microtopography of relict and active solifluction terraces, ridges and shallow elongate contour parallel depressions and wetlands separated by low ridges (see also Appendix 1).
- **Section 8** — Broad, gently sloping valley head of Tawonga Hut Creek; features benched slopes (western valley slope) and widespread veneer of Mount Jim Volcanic Group linear Pleistocene peri-glacial basalt blockstreams (eastern and western slopes) (see also Appendix 1).
- **Section 9 and Overnight Nodes 2 Preferred and Alternate** — Mount Jim Volcanic Group Basalt Pleistocene linear blockstreams and block slopes. Overnight Node 2 Preferred was located on relict peri-glacial debris, with the access track located across a possible debris flow. At Overnight Node 2 Alternate, granite outcrops and boulders were identified across the south-west of the site; at least some of these boulders are likely to be of peri-glacial transport origin (see also Appendix 1).
- **Section 11** — North-facing scarps and solifluction and debris slopes of Mount Jim Volcanic Group basalt overlying granodiorite outcrop and landslide debris (linear and lobate peri-glacial basalt and granodiorite blockstreams) along the western half of Westons Spur Track.
- **Section 17** — Linear blockstreams, steeper block slopes and widely distributed blockfields on fossil soils (see also Appendix 1) along Pretty Valley Track.

The areas of highest geoh heritage significance were identified as the extensive peri-glacial landforms and deposits at the Overnight Node 2 Preferred, and Trail Sections 17 and 10a (Rosengren 2023); these, along with Sections 8 – 10a have been removed from the project area and scope (see Appendix 1 for further detail).



Photo 10 Rock river formed by peri-glacial processes on Langford West Aqueduct Road (Section 5), below Basalt Hill (Source: Golder (2025))

4.8 Aboriginal Cultural Heritage

The Aboriginal Cultural Heritage values of the project are discussed in detail as part of the CHMP (18890), prepared by Extent Heritage. The CHMP notes that the diverse alpine environment across the project area would have supported numerous Aboriginal groups particularly through exploitation of the Bogong moths, which are of particularly importance to Aboriginal people in the region. The area contains a mosaic of landforms that could have provided shelter or access to resources, such as terraces, plateaus, and valleys, as indicated by the VAHR and analysis of Aboriginal Place patterning. These areas were identified as being of higher cultural sensitivity, while steep or exposed slopes were identified as being less archaeologically sensitive.

Aboriginal cultural heritage in the region predominantly comprises stone artefacts (mainly of quartz), and culturally modified trees. The assessment identified that historical use of the activity area as a hiking trail had led to disturbance across the main body of the activity area; but away from the track itself disturbance was likely limited to environmental factors.

Two Aboriginal places that comprised ground surface Aboriginal stone artefacts along the footprint of existing hiking trails, were registered as a result of the standard assessment:

- Bogong High Plains LDAD (VAHR 8324-0217)
- Razorback LDAD (VAHR 8324-0218)

One new Aboriginal place that comprised two quartz artefacts recovered from subsurface contents at Westons Hut was identified through the complex assessment stage: Westons Spur – LDAD (VAHR 8324-0221).

Artefacts rediscovered during the CHMP assessment indicates movement of people across the landscape and also may have been attributed to erosion of the landscape over time with movement of distribution of cultural heritage. However, cultural trees located in the area indicate pathways and purpose of Place.

4.9 High country huts

High Country Huts play an important role in the identity of Victoria's high country, including the Alpine National Park, and are valued as a physical expression of the cultural history of the area. High Country Huts have historical connections with previous grazing and mining areas, public authorities (i.e., State Electricity Commission) and for recreational and refuge purposes. The National Heritage List Summary Statement of Significance for the Australian Alps National Parks and Reserves also includes mountain huts and stockman huts; Wallace and Cope Huts are

specifically referenced. Below is an overview of High Country Huts within the proximity of the FHAC that have been identified for potential conservation and repair.

Wallace Hut

Wallace Hut is located approximately 700 m from the Bogong High Plains Road near Falls Creek. Constructed in 1889 by the Wallace brothers — Arthur, William and Stuart — Wallace Hut is the oldest surviving hut in the Victorian alps. Built from Snow Gum slabs and originally roofed with Woollybutt shingles, the hut initially served as a shelter for cattlemen grazing livestock on the Bogong High Plains. In the 1930s, the State Electricity Commission (SEC) re-purposed the hut for workers involved in the Kiewa Hydro-Electric Scheme. The hut was classified by the National Trust in 1967, recognizing its historical significance. Wallace Hut is recorded on the Victorian Heritage Register (VHR, H1616).

Cope Hut

Cope Hut was constructed in 1929 following a proposal by Robert "Wilkie" Wilkinson for the Ski Club of Victoria. Designed by Evan Smith, Chief Architect of the Victorian Public Works Department, the hut was built under the supervision of Bill Spargo, with builders Bill and Jack Barrington and Martin Lawler. Materials were transported by dray to Dibbins Hut and then by sled to the High Plains. The hut was funded by the State Tourist Committee due to the deterioration of existing ski refuges like Wallace's Hut. Originally, the main entrance led into the ski room, but due to frequent snow blockages, a new entrance was created on the downhill side, which remains in use today. Cope Hut was classified by the National Heritage Trust in 1988, recognising its significance in the early development of ski touring in Victoria. Cope Hut is used as an emergency shelter.

Cope Saddle Hut

Cope Saddle Hut, also known as the Cope Saddle SEC Refuge Hut, was constructed around 1958 by the State Electricity Commission (SEC) of Victoria. It is located on the Cope West Aqueduct on Cope Saddle. It served as a refuge for patrollers overseeing the Cope water races, integral components of the Kiewa Hydro-Electric Scheme. The hut's establishment reflects the mid-20th-century efforts to harness hydroelectric power in Victoria's alpine regions. Cope Saddle Hut was recently rebuilt by the Victorian High Country Huts Association to reflect its original form.

Langford Gap Hut

Langford Gap Hut was constructed in May 1960 by the State Electricity Commission (SEC) of Victoria. It served as a winter refuge for patrollers overseeing the Langford Aqueducts, integral components of the Kiewa Hydro-Electric Scheme. In about 1992, the hut was relocated approximately 200 meters east-southeast to its current position along the Langford East Aqueduct Track.

Westons Hut

Westons Hut was originally constructed in 1932, presumably by Roy "Buffalo Bill" Weston. After being destroyed by fire in 1939, it was rebuilt the same year by Eric Weston and Fred Briggs, with assistance from Eric's son, Tom. The hut was initially built with a shingle roof and featured a verandah, which was uncommon among high country huts. In 1991, the lease was transferred to Eric's daughter, Mary Goldsworthy. The hut underwent restoration in the 1980s, but was destroyed by wildfires in January 2007. Following its destruction, Westons Hut was rebuilt in 2010 by volunteers and Parks Victoria. The reconstructed hut maintains the traditional design, featuring a corrugated iron roof and timber walls.

Blairs Hut

Blairs Hut was originally constructed in 1923–24 by brothers Frank and Tom Blair, sons of Thomas Blair, a miner from Ballarat. The hut served as a base for cattle grazing and early ski touring in the region. It was destroyed by fire in 1931 but was rebuilt by Frank and his son, with completion by Christmas 1932. The hut's design closely resembles that of Dibbins Hut, featuring log construction and a gable roof. It features an unusual internal stone-lined fireplace. Major restoration work was undertaken in 1993, including the replacement of lower logs. The hut is maintained by The Alpine School and the Blair family.

Dibbins Hut

Dibbins Hut is located on the Cobungra River. It has a rich history dating back to the late 19th century. The first hut on this site was constructed in the 1890s but was destroyed by fire in 1920. Over the years, the hut has been re-built several times and underwent various modifications. Today, Dibbins Hut serves as a shelter for hikers. The hut is constructed with log walls and a gabled roof, featuring a unique butt-jointed hardwood floor.

Pretty Valley Hut

Pretty Valley Hut has a rich history dating back to the early 20th century. Originally, a survey hut occupied the site until its demolition in 1928. In the early 1930s, a small timber hut was constructed to replace it. During the late 1960s, the State Electricity Commission (SEC) established additional huts in the area as part of the Kiewa Hydro-Electric Scheme. The existing hut, formerly known as "Pretty Valley Patrol Refuge Hut B," was reconstructed in 1984 and was referred to as "Horseman's Hut" by 1990. Today, Pretty Valley Hut is a timber structure featuring a corrugated iron roof and a veranda. It is situated within the Pretty Valley Horse Yards and Camping Area. The hut itself is primarily used as an emergency shelter and is not intended for regular accommodation.

Tawonga Huts

Tawonga Huts is a group of four historic huts on the Fainter Firetrail on the Bogong High Plains, approximately 4 km from the Pretty Valley Pondage. Originally built by cattlemen in the late 1800s, the current huts date mostly from the 1950s and include structures relocated from nearby areas. The site has long been associated with high country grazing and remains a popular stop for walkers and riders. The Tawonga Huts complex is recognised on the National Heritage Trust.

Ryders Yards

Ryders Yards, also known as Campbells Yards, is located on the Cope West Aqueduct on the Bogong High Plains, approximately 1.5 km from the FHAC from Cope Saddle Hut. The area was originally used for sheep grazing in the late 1800s by the Campbell brothers. There are four huts in total, with varying designs, and they were used for accommodation and storage.

4.10 National Heritage List values

The National Heritage values associated with the Australian Alps National Parks and Reserves are set out in the Commonwealth of Australia Gazette, dated Friday 9th November 2008. The site meets six of the criteria for listing (Table 12).

Table 12 National Heritage List criteria relevant to the Australian Alps National Parks and Reserves

National Heritage List criteria	
a	The place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.
b	The place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.
d	The place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of: (i) a class of Australia's natural or cultural places; or (ii) a class of Australia's natural or cultural environments.
e	The place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.
g	The place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.
h	The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.

The FHAC project area forms a small part of the listed area. The natural heritage values for the National Heritage listed place pertain to the overall Australian Alps National Park area, with some attributes generally applicable to large areas and others in specific locations contributing to the value of the listed place. The presentation of National Heritage attributes within the project area is given in Table 13, adapted from GML (2025). A more detailed analysis of the National Heritage values in the project area is provided in GML (2025).

Table 13 National Heritage values relevant to the FHAC project area (from GML 2025)

Aspect	Details of National Heritage attribute	Presentation in the project area
<i>Criterion a</i>		
Glacial and peri-glacial features	The assemblage of glacial deposits and features are the material expression of the cold-climate, high-altitude history of the Australian Alps National Parks and Reserves, unique in the low-latitude, low-altitude Australian continent. They include five alpine lakes, thirteen cirques and associated moraines, ice-grooved and polished pavements and erratic boulders. Periglacial features, both fossil and modern, include block streams, permafrost and solifluction deposits.	Periglacial features including block streams and solifluction deposits occur in the project area and contribute to this widespread natural heritage attribute.
Fossils	The Mount Howitt fish fossil site demonstrates remarkable fossil species diversity and preserves fish fossils across a wide range of life stages from larvae to mature fish, over tens of millions of years. Fossils revealed at the site have outstanding heritage value to the nation for their place in vertebrate evolution during the so-called 'Age of Fish'.	This attribute references a specific site at Mount Howitt. It is not relevant to the project area, and is not considered further.
Karst	The Yarrangobilly Karst area Contains an outstanding collection of surface karst features including gorges, arches, blind valleys, springs, caves and pinnacle fields. The thick flowstone sequences in Jersey Cave span half a million years and provide the longest continuous fire history record from a single site in Australia.	This attribute references a specific site at Yarrangobilly. It is not relevant to the project area, and is not considered further.
Biological heritage	<p>The site contain most of the contiguous montane to alpine environments in Australia which support a rich and unique assemblage of cold-climate specialist species.</p> <p>Outstandingly rich flora taxa include the daisies (Asteraceae), willow-herbs (Onagraceae), starworts and cushion-plants (Caryophyllaceae), southern heaths (<i>Epacris</i>), bottlebrushes (<i>Callistemon</i>), orchids (<i>Pterostylis</i>, <i>Prasophyllum</i> and <i>Dipodium</i>) and pimeleas (Thymaelaeaceae).</p> <p>Cold climate-adapted and endemic fauna species include the Mountain Pygmy Possum (<i>Burramys parvus</i>), the Alpine She-oak Skink (<i>Cyclodomorphus praealtus</i>), Snowy Mountains Rock Skink (<i>Egernia guthega</i>) (now Guthega Skink <i>Liopholis guthega</i>), Baw Baw Frog (<i>Philoria frosti</i>), Southern Corroboree Frog (<i>Pseudophryne corroboree</i>), and the Northern Corroboree Frog (<i>P. pengilleyi</i>).</p> <p>Species of a great many invertebrate taxa are endemic to the Alps. These include stoneflies, caddisflies, mayflies, grasshoppers, and earthworms. Many display cold-climate adaptations, such as the mountain grasshopper (<i>Acricpeza reticulata</i>), mountain spotted grasshopper (<i>Monistria concinna</i>) and alpine thermocolour grasshopper (<i>Kosciuscola tristis</i>).</p> <p>The Bogong Moth (<i>Agrotis infusa</i>) undertakes regular migration in Australia, and an essential part of its lifecycle occurs within the AANP.</p>	<p>Fifteen EVCs are modelled to occur in the project area and contribute to this widespread National Heritage attribute. Twelve occur in the project area.</p> <p>Flora species richness, especially in daisies, recorded in the project area and contributes to this widespread natural heritage attribute.</p> <p>The Mountain Pygmy Possum has previously been recorded in the vicinity of the project area, and Guthega Skink and Alpine She-oak Skink are known to occur within the project area along the FHAC alignment, and contribute to this widespread natural heritage attribute.</p> <p>Two species of stonefly and the Bogong Moth have previously been recorded in the vicinity of the project area and contribute to this widespread natural heritage attribute.</p>

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Aspect	Details of National Heritage attribute	Presentation in the project area
Moth feasting	<p>The use of an adult insect — the Bogong moth (<i>Agrotis infusa</i>) — as the basis for past large-scale annual gatherings of different Aboriginal groups for ceremonies, sets the gatherings in the Australian Alps National Parks and Reserves apart from other Aboriginal ceremonial gatherings.</p> <p>Rocky crevices and caves which make up the habitat of Bogong Moths during the summer months (December to February). Sites of adult moth massing in early summer are variously reported as "The Tops", Kosciuszko and Mount Bogong in NHL citation references.</p> <p>The Bogong Moth was a critical element in the cultural life of First Nations people in the high country of north-east Victoria. Annual feasts of Bogong Moths were held in summer that were occasions of inter-clan and inter-tribal meetings. In Indigenous culture there are Creation stories that relate to the Bogong Moth, including its migration and habitat, and its importance as a food source.</p>	<p>The Bogong High Plains, is a suitable habitat area for Bogong Moths. Geomorphological features create Bogong Moth habitat across the study area, in particularly rocky outcrops, rock shelters and caves, large boulder outcrops above tree lines.</p> <p>Historic and anecdotal reports of moth feasting include mention of Mount Feathertop, which is on the FHAC route. The lack of caves and crevices at Mount Feathertop are counter-indicative of moth aestivation sites. The SWIFFT/Zoos Victoria Moth Tracker database has no sightings at Mount Feathertop.</p> <p>Artefact scatters in the study area, are likely associated with Indigenous use of the area for Bogong Moth harvesting (refer to FHAC CHMP).</p> <p>Trail routes and alignments where they likely follow Indigenous travel routes around Mount Hotham to Falls Creek.</p>
Basalt Temple	<p>An extensive rock formation composed of weathered hexagonal basalt columns formed by volcanic activity and subsequent erosion. Exhibits unusual magnetic properties</p>	<p>Contributes to geodiversity natural heritage values. This site is 2.5 km south of the FHAC near Blair's Hut, and is therefore, not considered further.</p>
Transhumant grazing	<p>The practice of using alpine high plains to graze stock in the summer months was a pastoral activity of the nineteenth and twentieth centuries that made a considerable contribution to south-east Australia's pastoral industry. Transhumant grazing created a distinctive way of life.</p> <p>Evidence of transhumant grazing includes historic huts used by stockmen, stock yards, former grazing landscapes and stock routes and bridle paths used by grazers. The natural and modified natural landscapes used for grazing, including alpine and subalpine areas with open grasslands, herbfields and woodland.</p>	<p>Wallace Hut, Westons Hut, Blairs Hut, Dibbins Hut, Pretty Valley Hut, Ryders Yards Huts, Tawonga Huts and their settings.</p> <p>Remnants of fenced stockyards near Westons Hut and Tawonga Huts. Post and wire stockyards were identified at Westons Hut in 2005 but are not visible in recent photos and may have been destroyed by the 2007 fires.</p> <p>Evidence of the long history of grazing use of the huts, e.g., apple tree at Westons Hut planted as a cultural planting.</p> <p>The route of trails where they are overlaid on historical stock routes and bridle paths, demonstrating the features of this important historical phase. Exact locations are difficult to define but indicative routes are mapped by Extent Heritage (2023).</p>
Scientific research	<p>The site has outstanding value for the scientific research that taken place since the 1830s, demonstrated by the density and continuity of scientific endeavour. Research sites include those relating to botanical surveys, soil conservation exclosures, karst research, fauna research, meteorology, fire ecology plots, arboreta and glacial research sites. The site also has significance for playing a significant role in the Apollo 11 moon landing mission with Honeysuckle Creek Tracking Station in the Australian Capital Territory.</p>	<p>The botanical survey route associated with Mueller, 1854 (refer Extent Heritage 2023).</p> <p>'Maisie's Plots', the long-term grassland monitoring plots to the north and south of Bogong High Plains road near Pretty Valley.</p>
Water harvesting	<p>The Snowy Mountains and Kiewa Valley hydro-electric schemes have contributed to the social and economic development of Australia, and provide power for south-</p>	<p>The following features are located in the project area:</p> <ul style="list-style-type: none"> ▪ Rocky Valley Storage Dam.

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Aspect	Details of National Heritage attribute	Presentation in the project area
	<p>eastern Australia. Elements associated with the Kiewa Valley Hydro-Electric Scheme, include:</p> <ul style="list-style-type: none"> ▪ Tunnels, roads, former settlements, town and work campsites. ▪ Power stations. ▪ Dams and pondages, aqueducts. ▪ Huts to support the operation of water harvesting infrastructure, and the siting of these huts in close proximity to water-related infrastructure. 	<ul style="list-style-type: none"> ▪ Rocky Valley Aqueduct. ▪ Cope East and West Aqueducts. ▪ Langford East and West Aqueducts. ▪ Huts built and used by the State Electricity Commission: Wallace Hut, Langford Gap Hut, Cope Saddle Hut, Pretty Valley Hut, Tawonga Huts.
Recreation	<p>The site has outstanding heritage value for the longevity and diversity of types of recreational use, including skiing, camping, hiking, horse riding and mountain biking.</p> <p>Features which facilitate the longevity of recreational use include camping locations, skiing infrastructure, horse yards, recreational trails, including hiking trails, fire trails and 4WD tracks.</p> <p>Ski resorts and chalets are associated with the start of snow sports in Australia, and tourism. Huts associated with recreational use, include skiing huts and grazing/infrastructure huts that have been repurposed in association with recreational uses.</p>	<p>Wallace Hut, Cope Hut, Langford Gap Hut, Cope Saddle Hut, Westons Hut, Blairs Hut, Dibbins Hut, Pretty Valley Hut, Ryders Yards Huts, Tawonga Huts and their settings.</p> <p>Cope Hut Camping Area.</p> <p>Diamanta Horse Yards.</p> <p>Tawonga Huts horse camp.</p> <p>Existing Falls to Hotham walking tracks, and other existing tracks which are used by walkers.</p>
<i>Criterion b</i>		
Landscape and topography	<p>The high peaks and plateaus contain the vast majority of alpine and sub-alpine environments in Australia, including most of continental Australia's peaks over 1700 metres and all of those over 1900 m.</p>	<p>The majority of FHAC alignment is above 1,700 metres with high points of Mt Feathertop (1922m), High Knob (1801m) and Mt Jim (1818m) along the route. These contribute to the widespread natural heritage attribute.</p>
Glacial and per-glacial features	<p>The Kosciuszko Plateau exhibits landforms shaped by Late Pleistocene glaciers during a series of glacier advances known as the Late Kosciuszko Glaciation. The active and fossil periglacial landforms include block streams and solifluction features.</p>	<p>Periglacial features including block streams and solifluction deposits occur in the project area and contribute to this widespread natural heritage attribute.</p>
Fossils	<p>Mount Howitt fish fossil site is a globally rare preservation of a diverse array of fossil fish in uncommon detail at all stages of their lives.</p>	<p>This attribute references a specific site at Mount Howitt. It is not relevant to the project area, and is not considered further.</p>
Alpine and sub-alpine ecosystems	<p>Alpine and sub- alpine ecosystems are uncommon in the generally arid and warm climate of Australia. The AANP contains most of the alpine and sub-alpine ecosystems on mainland Australia, supporting flora and fauna species that have evolved to the harsh conditions of the high altitudes.</p>	<p>15 EVCs are modelled to occur in the project area and contribute to this widespread National Heritage attribute.</p>
Eucalypt flora community	<p>The site provides an outstanding example of the adaptability of a plant genus, the genus Eucalyptus, along a steep topographical transect. It demonstrates very large topographical variations, which in turn is reflected in the high diversity of eucalypt species replacing each other along the altitudinal and climatic gradient.</p>	<p>EVC mapping indicates that Snow Gum stands along Langford Aqueduct track and Diamantina and Razorback tracks grade into a range of different eucalypt communities descending the slope. It contributes to this widespread natural heritage attribute.</p>
EPBC Act-listed Community	<p>Alpine Sphagnum Bogs and Associated Fens community is listed as Endangered under the EPBC Act. It is equivalent to two FFG Act listed communities and synonymous with six EVCs that may occur in the assessment area.</p>	<p>One EVC which forms part of the EPBC Act-listed community (Alpine Valley Peatland) is located within the project area.</p>
Rare or threatened	<p>Nine modelled EVCs are listed as rare or threatened in the Victorian Alps Bioregion.</p>	<p>All nine modelled EVCs occur within the project area.</p>

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Aspect	Details of National Heritage attribute	Presentation in the project area
EVCs in the Victorian Alps		
Threatened flora listed under the FFG Act	Numerous flora species listed under the FFG Act have been recorded previously from databases in the vicinity of the project area.	Fifty-nine threatened flora species listed as threatened under the FFG Act have been recorded form within the project area.
<i>Criterion d</i>		
Principal characteristics of a class of place	The north-east Kosciuszko Pastoral Landscape demonstrates the use of mountain resources, as a relict landscape of past grazing leases, transhumance and pastoralism in a remote environment.	The Kosciuszko Pastoral Landscape is not in the project area, and is not considered further.
<i>Criterion e</i>		
Aesthetics	<p>The expansive panoramas and distinctive views and vistas of the area, include long, medium and short-range views of mountain vistas, peaks and valleys, streams, rivers and lakes, snow-clad landscapes, eucalyptus, high plain grasslands, wildflowers and meadows, and forests.</p> <p>The area is highly valued for its remoteness, isolation and for the naturalness of the place, the distinctive sense of place, and feeling of being immersed in nature.</p> <p>The demonstration of these features is in both broad views and more localised settings, with an absence of visual, aural or physical intrusions (e.g., inappropriate development, non-natural sounds, excessive crowds). This includes the views of mountain huts isolated in their natural, remote mountain settings.</p>	<p>Wallace Hut, Cope Hut, Langford Gap Hut, Cope Saddle Hut, Westons Hut, Blairs Hut, Dibbins Hut, Pretty Valley Hut, Ryders Yards Huts, Tawonga Huts and their settings.</p> <p>Views throughout the study area, including but not limited to of Cope Hut and Westons Hut, the Bogong High Plains, Mt Cope, Mt Feathertop, Mt McKay, Mt Jaithmathang, Razorback Trailhead.</p> <p>The trail alignments with limited infrastructure and visual intrusion, e.g., through the use of minimal camping platforms and amenities buildings at Cope Hut campground, the single hut (without additional infrastructure) lack of infrastructure at Westons Hut, and the undeveloped setting at High Knob.</p>
<i>Criterion g</i>		
Social value	<p>The Australian community has a special association with the Australian Alps for the ability to experience remoteness, facilitated by some infrastructure while still maintaining the isolated natural environments, minimal development, and the absence of visual, aural and physical intrusions. This encompasses:</p> <ul style="list-style-type: none"> ▪ The strong associations with the area by the Australian community, mountain cattlemen, skiers, bushwalkers and huts associations. ▪ The ability to have a communal experience while still maintaining the unique wilderness experience (e.g., through dispersed camping). ▪ The activities which express and reinforce the social value of the project area, e.g., bushwalking, collective activities to maintain and repair huts, horse-riding. ▪ The historic huts, and the tradition and practice of vernacular repair and maintenance of the huts. ▪ The myths, legends, literature and media that tell the stories of the high country. 	<p>The natural and cultural environment of the project area which is the basis for the special associations people have with the place, including geomorphology, views, flora and fauna.</p> <p>Wallace Hut, Cope Hut, Langford Gap Hut, Cope Saddle Hut, Westons Hut, Blairs Hut, Dibbins Hut, Pretty Valley Hut, Ryders Yards Huts, Tawonga Huts and their settings.</p> <p>The tradition of vernacular hut repair and the materials and methods used on these huts.</p> <p>The intangible connection between the Victorian High Country Huts association and these huts.</p> <p>Falls Creek and Mount Hotham skiing areas.</p> <p>The isolation and remoteness of the FHAC trail alignment.</p> <p>The use of FHAC trail alignment for recreation including walking, horse riding and camping.</p>

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Aspect	Details of National Heritage attribute	Presentation in the project area
<i>Criterion h</i>		
Baron Ferdinand von Mueller	The place has outstanding heritage value to the nation because of the overall place, landscape and variety of natural and cultural elements which were experienced by the significant people, which inspired their significant works and associations.	The botanical survey route associated with Mueller, 1854.
Eugene von Guerard	The place has connection with individual art pieces — "North-east view from the northern top of Mount Kosciusko" and " <i>The Man from Snowy River</i> ".	The natural and cultural environment of the project area which is the basis for the special associations with the life or works of von Mueller, von Guerard, Patterson, Mitchell and Campbell as it relates to the Australian Alps, including geomorphology, views, flora and fauna.
Banjo Patterson Elyne Mitchell and David Campbell		

5 Project description

The landscape design for the Falls to Hotham Alpine Crossing (FHAC) is grounded in a holistic understanding of both the trail corridor and the three proposed Overnight Nodes distributed along its route. This design philosophy draws from the character of the surrounding environment—an area renowned for its natural beauty and ecological value. To reflect and respect this setting, the design is guided by four core principles:

- Safety in design, ensuring that all elements support secure and accessible use.
- Practicality in construction, allowing for efficient and context-sensitive implementation.
- Simplicity in maintenance, to ensure long-term sustainability with minimal intervention.
- Immersive, sensory engagement, enhancing the visitor’s connection to the landscape.

The FHAC project involves three main components:

- Trail works
- Overnight Nodes
- High Country Huts conservation works

The design elements for the trail works and Overnight Nodes are articulated as a modular “kit of parts,” with each component—whether a toilet, camping platform, or boardwalk — designed to harmonise with the natural surroundings and minimise visual intrusion, through the selection of materials, placement and form.

5.1 Trail works and treatments

The proposed FHAC route has been aligned to maximise use of existing walking tracks and vehicle tracks. The standards to which these tracks are maintained, and their present condition, varies along the FHAC route. In general, vehicle tracks are approximately 3 m wide and maintained for vehicle access. Walking tracks are generally narrow (0.3 – 0.5 m), natural-surface trails. Upgrades to walking tracks are required along some sections of the FHAC, to improve track condition and resilience, ameliorate existing environmental impacts of the trail, and to improve the walking experience. Eight trail treatments are proposed:

- Boardwalks
- Stepping stones
- Steps (stone step, chiselled, benched)
- Stone pitching
- Trail reformation
- Trail resurfacing (gravel, rubber matting)
- Drainage (stone water bars, timber water bars, spoon drains)
- Handrails

5.1.1 Trail sections

Trail works are proposed for 11.77 km, along nine sections of the FHAC — Sections 2, 4, 6, 7, 11, 12, 13, 14 and 15 (Table 14). All works are on existing tracks within the Alpine National Park. The works predominantly comprise drainage treatments, which are required along all nine sections of trail, followed by the installation of elevated boardwalks, and stepping stones, to manage existing impacts and improve track conditions in wetter areas and at crossing of minor drainage flows. Steps are also proposed in steeper sections to limit existing erosion and improve visitor access. The remainder of the treatments are localised to short sections of trail and tailored to local track conditions.

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The approximate locations of treatments have been identified (as per Table 14, Attachment 1e), however, micro-siting will determine their exact placement within these locations (particularly for drainage treatments), to suit track conditions and minimise environmental impacts.

Table 14 Trail treatments proposed along sections of the FHAC

Trail Treatment	Trail Sections	Number of locations	Total distance (km) [^]
Boardwalk	2, 4, 6, 7, 11	27	0.920
Stepping stones	2, 6, 7, 11	24	0.172
Stone Steps	2, 12, 15	10	0.563
Stone steps (benched)	12, 13	3	0.084
Stone steps (chiselled)	12, 13	2	0.131
Stone pitching	14	1	0.594
Track reformation	11	1	0.026
Trail resurfacing (rubber matting)	2, 6	2	0.085
Trail resurfacing (gravel)	11, 15	2	0.531 + (0.026)
Drainage	2, 4, 6, 7, 11, 12, 13, 14, 15	21	8.667 + (1.008)
Handrail	12	1	(0.033)
TOTAL			11.773

[^] Numbers in brackets represent secondary treatments

5.1.2 Trail treatments

Proposed trail treatments are described below, based on the design 'Kit of Parts' (K2LD 2025, L.81.0000).

Boardwalks

Boardwalks are constructed to provide a safe and accessible pathway over sensitive or challenging terrain, such as alpine peatlands, drainage lines or creeks, soaks or areas of groundwater expression. Steel mesh boardwalks offer durability and longevity, being strong enough to take the weight of snow and allowing snow-melt to drain away, and able to withstand fire. Elevated boardwalks help to protect delicate ecosystems by minimising soil compaction and disturbance, allowing natural water flow, light penetration and vegetation growth beneath the structure.

Elevated boardwalks are proposed along five sections of the FHAC, and are the primary trail treatment through the Bogong High Plains. The boardwalks will be 0.6 or 0.9 m wide (depending on site requirements) and elevated 0.35 m above ground, installed in 3 m-long panels (Figure 4). Mesh steps will be installed at the start and end of each boardwalk section. Mesh Steps will be the same width as the boardwalk, with a tread of 0.38 m, installed at 0.15 m above ground. Screw pile footings will be used, providing a stable and secure foundation.

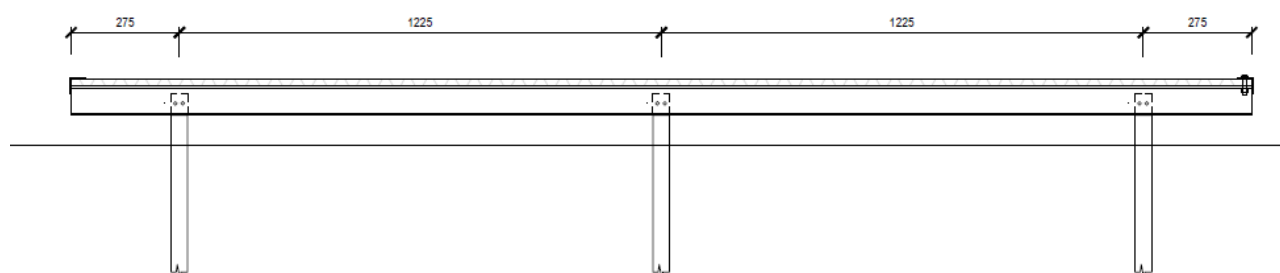


Figure 4 Elevated boardwalk typical elevation (1:10) — Level traverse (Source: K2LD 2025)

Stepping stones

Stepping stones are one of the most permanent, durable and stable substrates for wet areas. They are currently used in many areas across the Alpine National Park, including along the proposed FHAC alignment, where they are used to create a stable and visually appealing pathway across uneven or boggy terrain. Strategically placed, stepping stones provide a natural solution to improving trail accessibility and safety, allowing hikers to navigate challenging sections without damaging the surrounding environment.

Stepping stones are proposed in a total of 24 locations along four sections of trail, and will include installation of additional stones in areas with existing stepping stones and new sections of stepping stones. Stepping stone treatments involve the installation of large (average 0.5 m wide), flat rocks within the existing trail footprint, over a compacted base of fine crushed rock, or a stabilised earth base course (Figure 5). All stones will be imported from a local quarry.

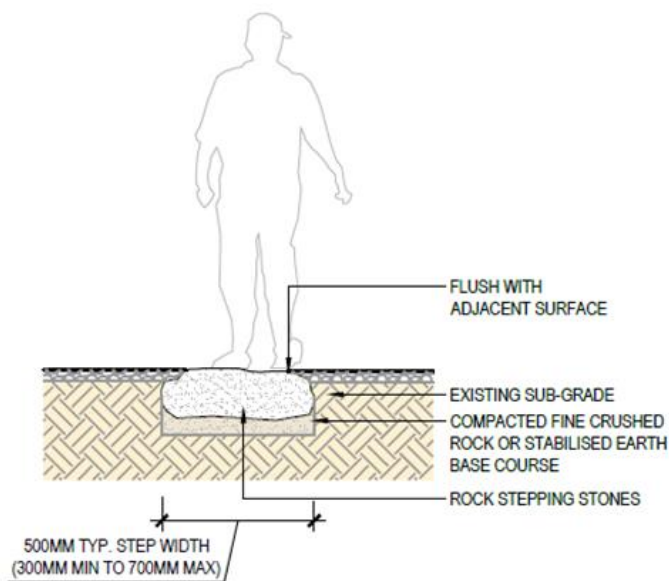


Figure 5 Stepping stones typical front elevation (1:20) (Source: K2LD 2025)

Steps

Three types of steps are proposed along the FHAC, they include: installation of stone steps; chiselling of existing rocky trail surfaces to create steps; and benching of steps into steep sections of track.

Stone steps

Stone steps provide a robust and aesthetically pleasing solution for navigating steep or uneven sections of a trail. They not only facilitate easier movement along the trail but also blend with the natural surroundings. The installation of stone steps involves careful planning and precise placement to ensure each step is level and securely anchored into the ground. Where possible, stone steps will be anchored into existing rocky outcrops, with additional rock anchoring on the outer track edge (Figure 6). Where there are no existing rock outcrops along the track, hand excavation or grading and the use of mortar and other binding agents may be required to maintain stability. The construction of steps involves installation of a base step, buried to ground level, to prevent wear and track deepening, and each subsequent step with a riser of 120 – 150 mm (Figure 7).

Chiselled stone steps

In selected locations (close to the base of the Diamantina Spur) there are three areas in which outcropping rock creates a challenging and hazardous trail for hikers. At these locations stone steps can be carved from the rock surface, thus reducing the need to import stone from outside the National Park. Individual rocks or rocky areas with rounded surface or minimal foothold will be chiselled to create a flat surface (Figure 8).

Benched steps

Benched steps will be construction in three locations along the FHAC (one in Section 12, two in Section 13). Benching of steps involves excavation and grading of the existing surface to create large flat (stepped) sections of trail in the track. Benching treatments are described under trail reformation.

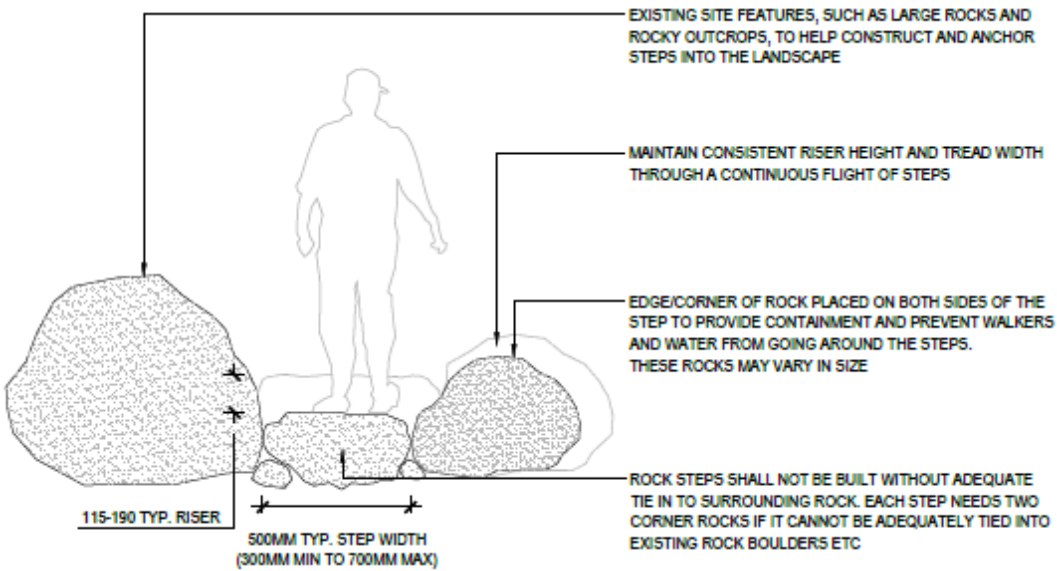


Figure 6 Stone steps typical front elevation (1:20) (Source: K2LD 2025)

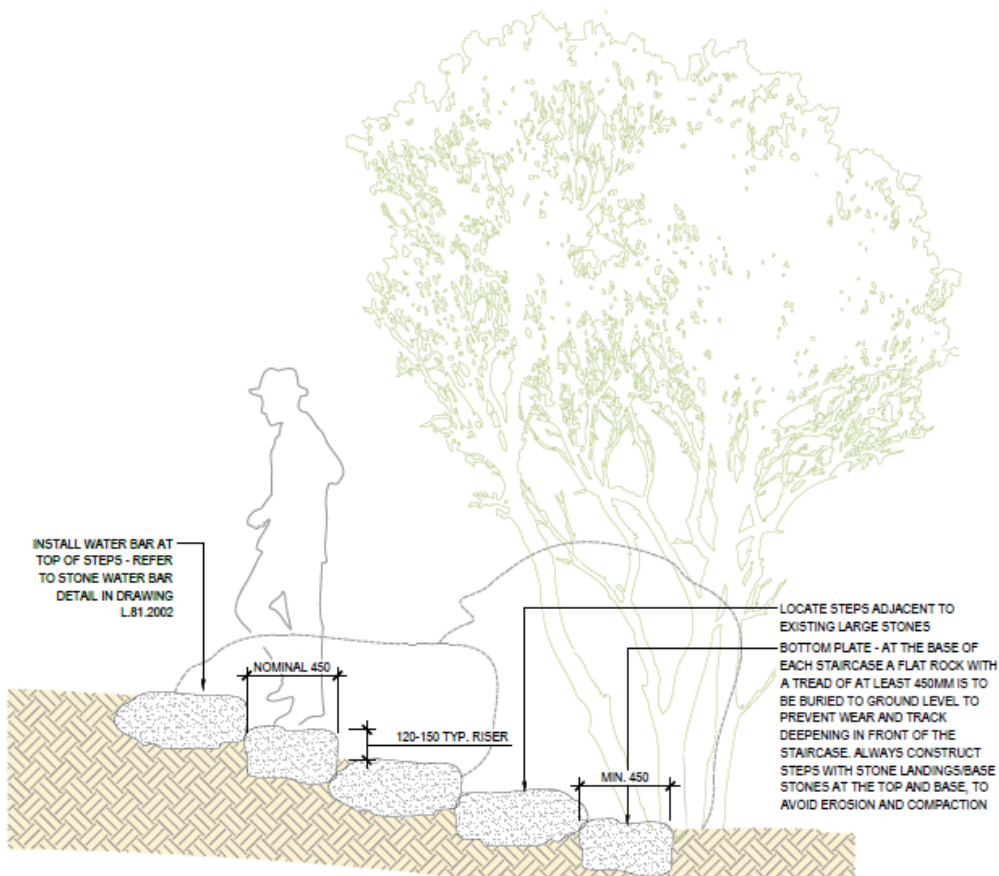


Figure 7 Stone steps typical side elevation (1:20) (Source: K2LD 2025)

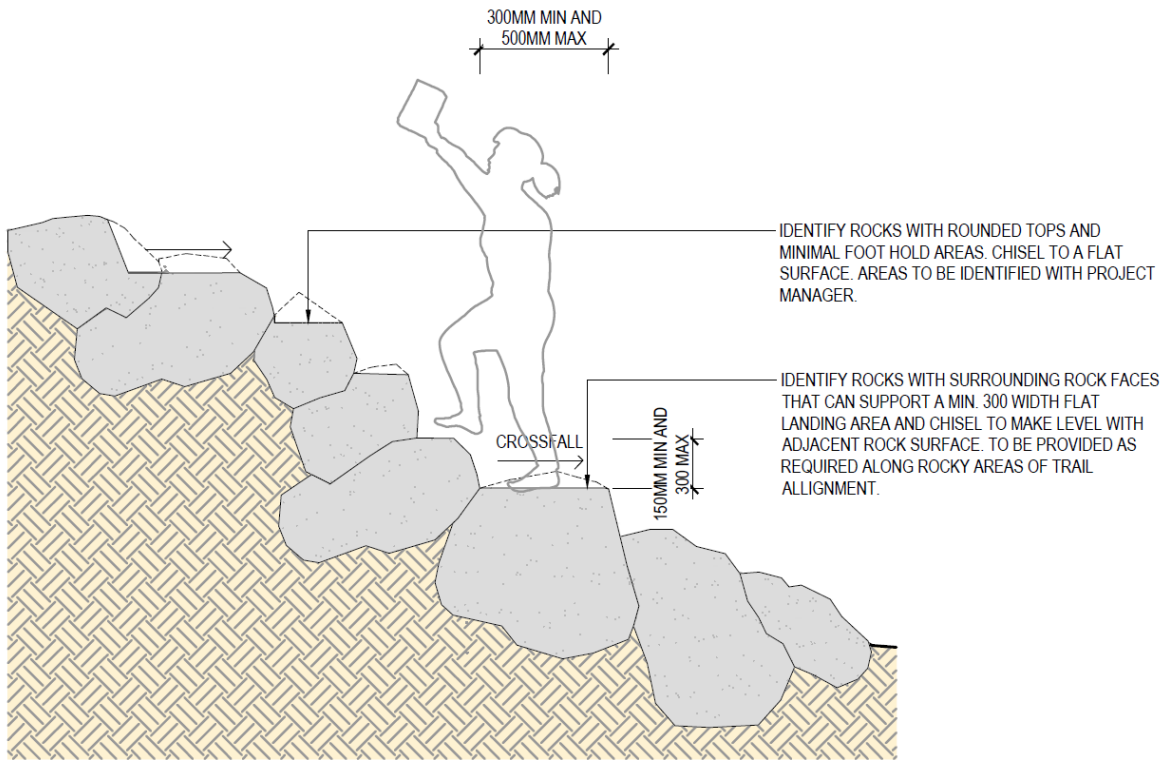


Figure 8 Steps chiselled into rocky surfaces typical section (1:20) (Source: K2LD 2025)

Track reformation

Track reformation is required along a single 26 m length of track along Section 11 near to Westons Hut. Track reformation will involve benching of the trail surface to create a level trail surface on the sloped terrain. This process involves cutting into the hillside to form a flat, bench-like surface that can support the trail. The benching process begins with the removal of vegetation and loose soil, followed by the excavation of a horizontal cut into the slope. The excavated material is often used to build up the outer edge of the trail, creating a balanced and secure pathway. Rock armoured may be used on the upslope or downslope surface (Figure 9). Proper drainage is also incorporated to prevent water accumulation and erosion. The benched trail will then be re-surfaced with gravel.

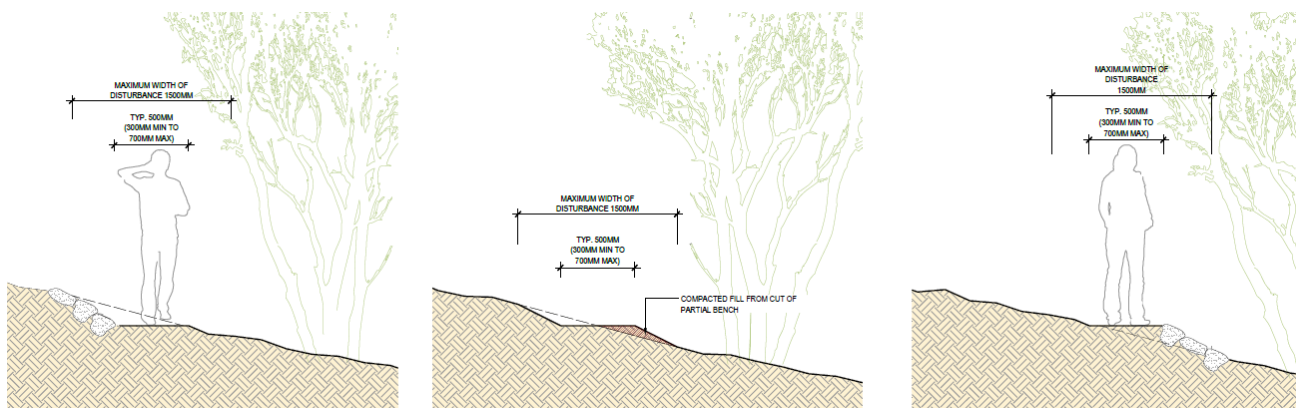


Figure 9 Examples of track benching (typical sections) (Source: K2LD 2025)

Stone pitching

Stone pitching (also known as stone paving) involves the installation of large, flat rocks which are laid directly on the existing track and set into the ground to provide a hardened surface resembling rough cobbles (Figure 10). Stone pitching is required in Section 14 only, on the ascent to Mount Feathertop. Stone pitching involves excavation of the track surface to embed large rocks (typically 150 mm thick, up to 250 mm wide). Rocks are laid close together with minimal gap and are firmly embedded into the ground surface to ensure there is no movement.

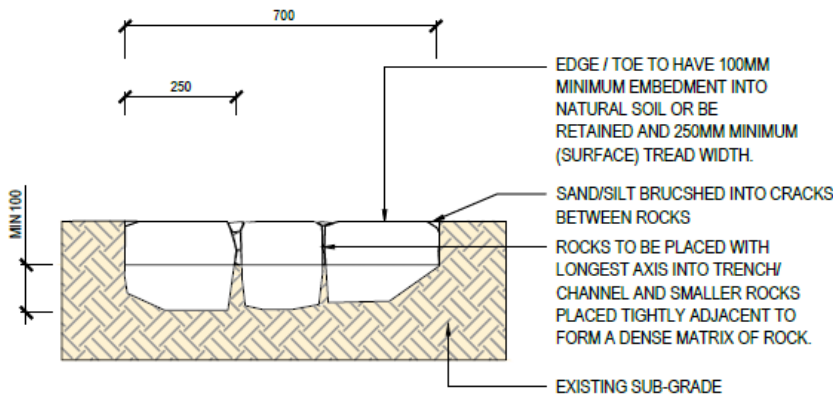


Figure 10 Stone pitching typical section (1:10) (Source: K2LD 2025)

Track re-surfacing

Trail surface treatments are required where the existing trail surface is not suitable or has been degraded by existing uses. Two types of surface treatments are proposed: gravel resurfacing, and installation of rubber matting (Figure 11).

Gravel re-surfacing

Gravel resurfacing is required in two locations, along Section 15, and as a secondary trail treatment along Section 11. This process involves the addition of new gravel to the trail surface, which helps to fill in ruts, smooth out uneven areas, and improve overall drainage. The gravel used is typically a mix of various sizes, providing a stable and compactable surface that can withstand foot traffic and weather conditions. The resurfacing process begins with the removal of any debris or vegetation from the trail, followed by the application of a fresh layer of gravel to create a uniform and durable surface. The gravel will be compacted and crowned to prevent ponding of water.

Rubber matting

Rubber matting consists of 500-mm wide black rubber tiles with a grid-style perforation that is laid over the track surface. Rubber matting is a low-impact surface treatment that allows for water penetration, and for native vegetation to grow to the edges of the rubber mats, and can even allow some vegetation growth through grid openings, increasing soil stability. In areas where rubber matting is currently in use, there is little evidence of erosion and fewer weeds. The rubber mats are generally underlaid with porous gravel which allows for the free drainage of water. They are laid slightly cambered, and held in-place with steel pins, and so will not move with use or wash away with rainfall or snow melt. The installation of rubber matting causes minimal disturbance. Where the existing trail width is narrower than the standard width (500 mm), vegetation along the edge is lifted slightly with a shovel, and placed back over the rubber matting.

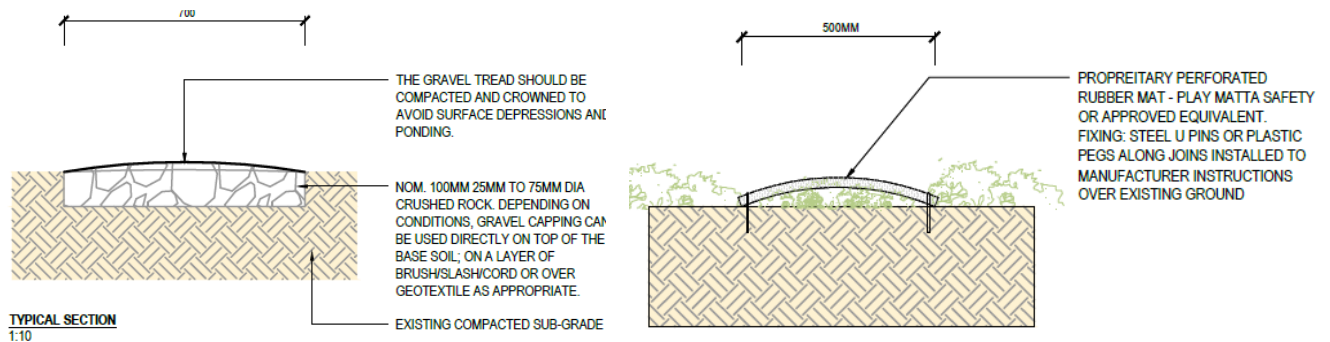


Figure 11 Trail surface treatments. Left: Gravel resurfacing typical section, Right: Rubber matting (Source: K2LD 2025)

Drainage

Drainage works are required along all sections of trail to manage erosion and deterioration of the trail surface and to protect receiving waters from sediment inputs. The concentration of water flows along numerous sections of existing tracks have resulted in erosion and damage to the surrounding environment. To mitigate existing impacts, 21 locations across the entire proposed FHAC alignment have been identified as requiring drainage works.

The appropriate drainage arrangements required for any given section of track will depend upon the track condition, gradient, and terrain. They may include stone or timber water bars, or spoon drains, constructed at intervals of 5 – 50 m along nominated track sections, depending on the specific location requirements. Steeper sections of track will require drains to be constructed at closer intervals.

Water bars

Water bars will be constructed at regular intervals where a sloping track already exists. Properly spaced and maintained water bars effectively reduce the impact of heavy rainfall and runoff, preserving the trail's surface and preventing the formation of ruts and gullies. The construction of water bars involves excavation of the downslope surface of the track to direct water flow into the water bar, with the excavated material used to raise the profile of the track below the water bar. The water bar will consist of trench excavated at a 30 – 40 degrees angle to the track, to intercept and redirect water flow, and will extend a minimum of 0.3 m beyond the track edges.

Stone water bars will be lined with large-diameter rocks as step and channel stones (Figure 12). Timber water bars will use a log or timber board embedded into the ground with either rock-lined splash plate to dissipate run-off at the outflow point or a broad apron of stone or gravel, similar to spoon drains, described below. A rock-lined sediment trap (0.4 x 0.4 m) will be constructed at the end of each drain to collect and dissipate water from the drainage structure.

Spoon drains

Spoon drains will be constructed in a similar way to timber water bars, with the excavation of the downslope track surface to direct water flow, and the excavated material used build-up the track profile below the drain. A timber log will be embedded at a 30 – 40 degrees angle to the track to intercept water flow and broad apron of stone will be installed to create a non-erodible surface immediately above, and a hardened durable ramp below, the drain (Figure 13).

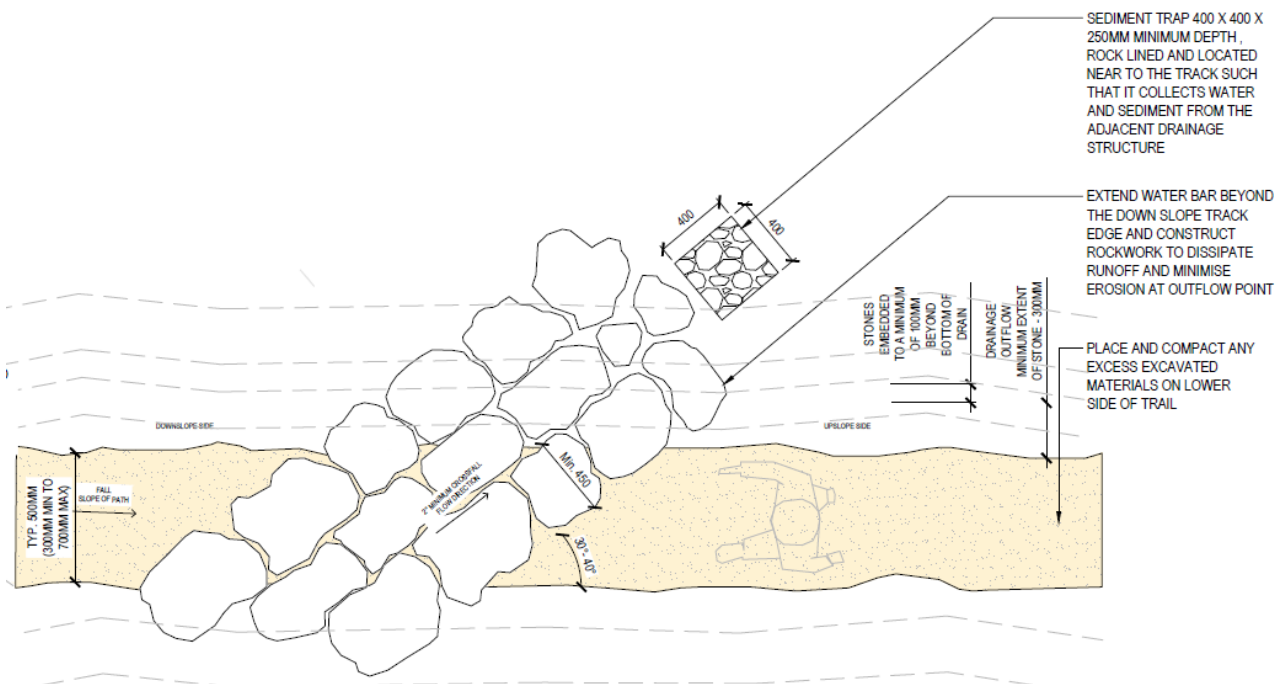


Figure 12 Stone water bar typical plan (1:20) (Source: K2LD 2025)

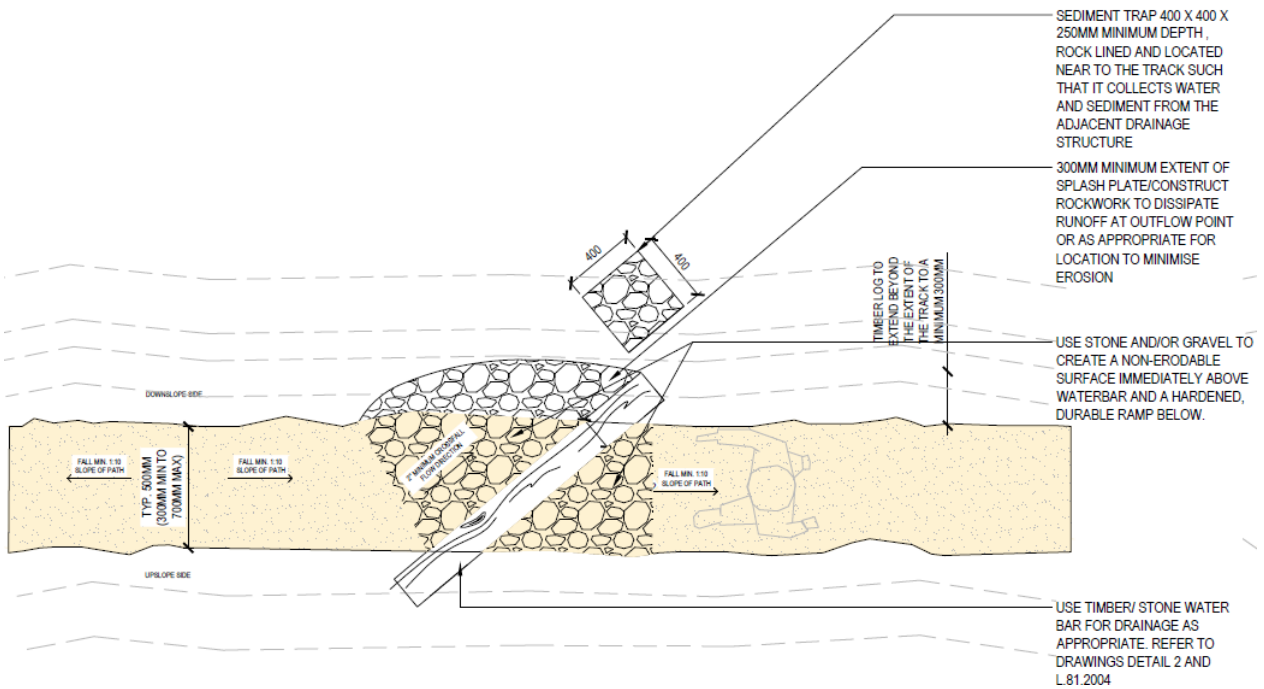


Figure 13 Spoon drain typical plan (1:20) (Source: K2LD 2025)

Handrails

Handrails will be installed in only one location on Section 12, where steps will be constructed in a steep and rocky section — chain hand rails will be installed to provide hikers with additional support. Hand rails will be anchored into an adjoining rocky outcrop, and placement will be determined on-ground.

5.1.3 Trail signage

Wayfinding and interpretive signage will be installed or replaced at 50 locations along the FHAC, comprising a mix of:

- Directional totems
- Straddle signage
- Fingerboards
- Information boards (large and small)

Six of these signs will be new (i.e., in new locations). New and replaced signage will be consistent with Parks Victoria’s signage manual; examples of directional and wayfinding signage, and interpretive signage are provided in Figure 14, below.

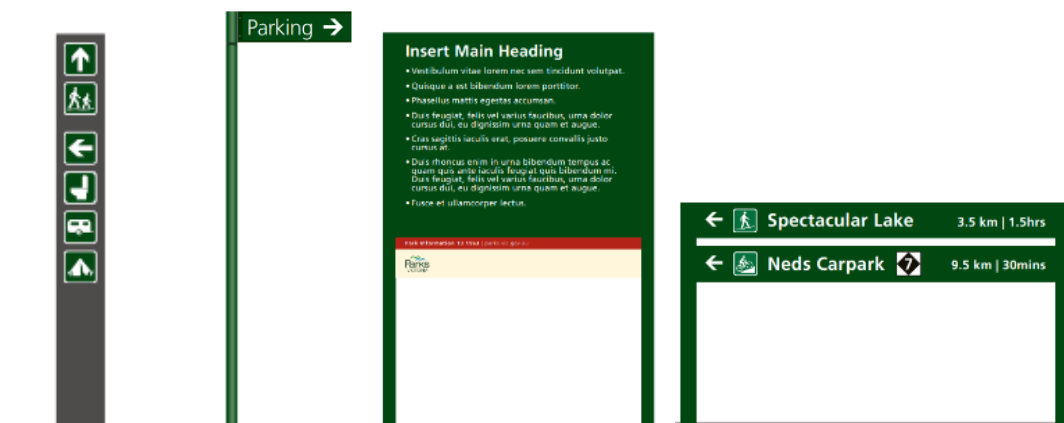


Figure 14 Examples of signage proposed for the FHAC, from left, directional totems, fingerboards, information boards, directional straddle signage.

5.2 Overnight nodes

To enhance the visitor experience along the FHAC, camping areas will be upgraded at Cope Hut, Westons Hut and High Knob, with replacement and installation of new visitor infrastructure. Site layout plans are provided in below (Figures 26 – 28). Table 15 provides a summary of facilities to be upgraded and/or provided at each Node; details are provided in Section 5.2.1.

Table 15 Visitor facilities proposed for upgrade and construction at each Overnight Node as part of the proposed FHAC

Component	Cope Hut	Westons Hut	High Knob
Camping Platforms	<ul style="list-style-type: none"> Replacement of five existing FRP-mesh platforms with timber platforms. Installation of three new timber-deck camping platforms. 	<ul style="list-style-type: none"> Installation of eight new timber-deck camping platforms. 	<ul style="list-style-type: none"> Installation of eight new timber-deck camping platforms.
Communal gathering spaces	<ul style="list-style-type: none"> Construction of a new formal gathering space with two seating platforms. 	<ul style="list-style-type: none"> Construction of a new formal gathering space with two seating platforms. 	<ul style="list-style-type: none"> Construction of a gathering space outside the Shelter, with two seating platforms.
Shelter	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Construction of a new communal shelter Installation of two water tanks
Toilet facilities	<ul style="list-style-type: none"> N/A (Existing toilet) 	<ul style="list-style-type: none"> Construction of new, two-cubicle, six-Pod toilet facility. Installation of one water tank 	<ul style="list-style-type: none"> Construction of new, two-cubicle, 10-Pod toilet facility. Installation of one water tank
Internal paths	<ul style="list-style-type: none"> Construction of internal gravel paths linking Nodes to the FHAC and camping facilities. 	<ul style="list-style-type: none"> Construction of internal gravel paths linking Nodes to the FHAC and camping facilities. 	<ul style="list-style-type: none"> Construction of internal gravel paths linking Nodes to the FHAC and camping facilities.
Stormwater drainage	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Construction of stormwater drainage for buildings and water tanks 	<ul style="list-style-type: none"> Construction of stormwater drainage for buildings and water tanks
Electricity supply	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Solar power provision for the communal shelter Power connection between the shelter and toilet facility.

5.2.1 Visitor facilities

The visitor facilities to be upgraded and constructed at each Overnight Node are described below.

Camping platforms

Eight camping platforms are proposed for each Overnight Node along the FHAC. Eight new platforms will be installed at both Westons Hut and High Knob. At Cope Hut, three new platforms will be installed, and the decking of five existing platforms will be replaced with timber decking using existing footings.

The new camping platforms will measure 3500 x 3800 mm, constructed of 5 x 200 mm hardwood decking on a steel frame, each supported by 10 footings to 500 mm depth. The five camping platforms to be replaced at Cope Hut will measure 3000 x 3000 mm, to be fitted on the existing steel frame. Each of the platforms will feature two, 400 x 400 mm steel cooking plates and a platform identification plate, fixed to the hardwood decking. For camping platforms located on downward slope, steps (1000 mm wide) will be constructed to access the platforms (Figures 15 and 16).

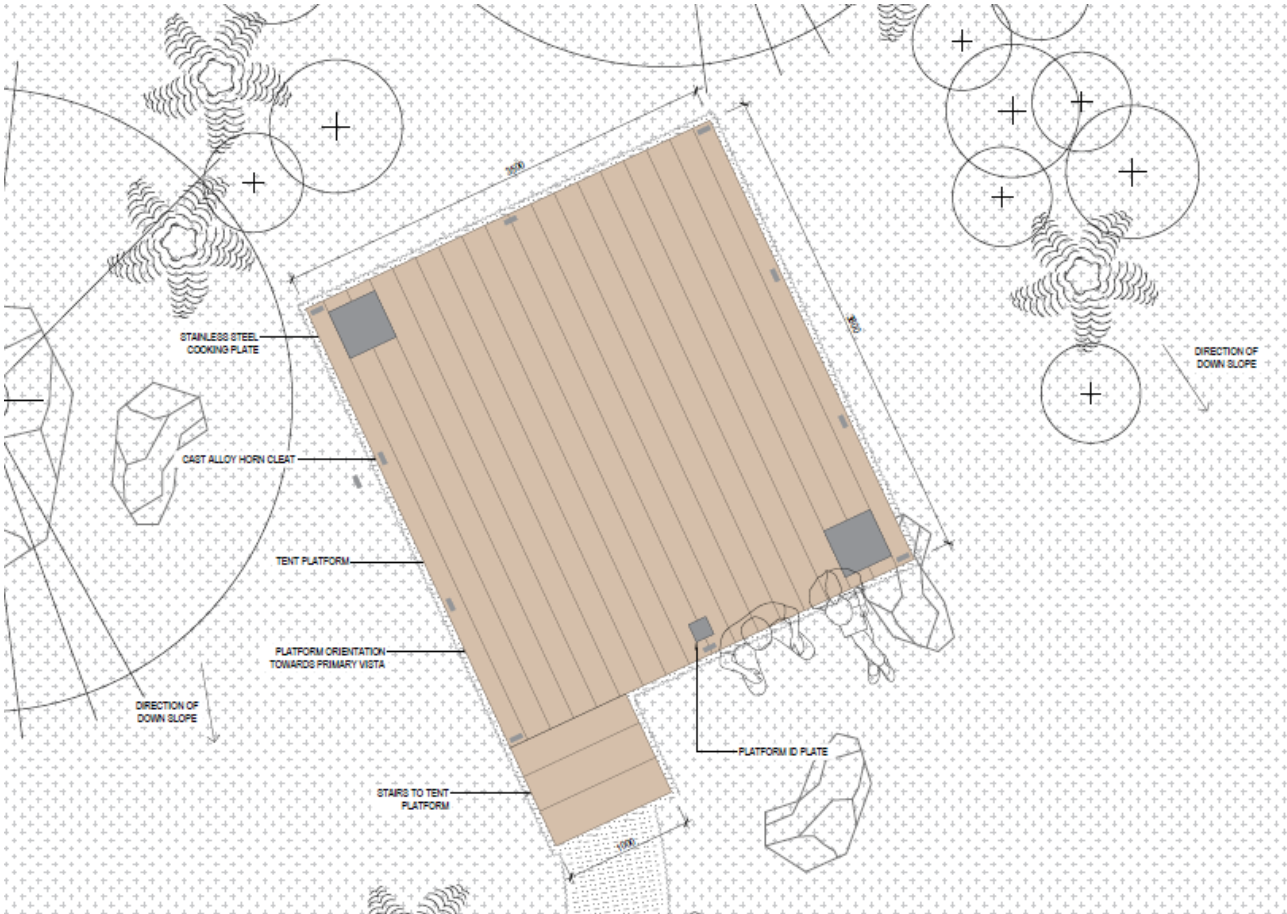


Figure 15 Camping Platform typical plan (1:20) (Source: K2LD 2025, L-81-3001.1-T1)

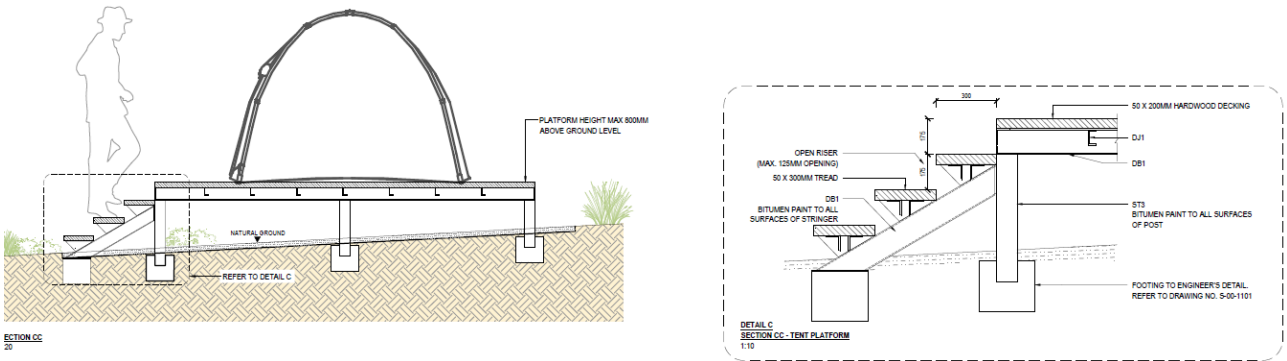


Figure 16 Camping Platform section (1:20) (Source, K2LD 2025, L-81-3000.1-T1)

Communal gathering areas

A formal, communal gathering area will be constructed at each of the Overnight Nodes. The gathering areas at Cope Hut and Westons Hut will comprise of a circular (4000 mm-diameter), lightly compacted gravel area surrounded by imported boulders, to provide area definition and seating (Figures 17 and 18). At High Knob, an area outside of the proposed shelter will be re-surfaced with lightly compacted gravel.

Two circular seating platforms (1500 mm-diameter) will also be provided at each Overnight Node, located adjacent to the new communal gathering spaces at Cope Hut and Westons Hut, and adjacent to the shelter at High Knob (see Figure 19). Seating platforms will be constructed of 5 X 200 mm hardwood decking, fixed to a steel frame and elevated 450 mm above the ground. Each platform will be supported by four footings, 500 mm in depth.

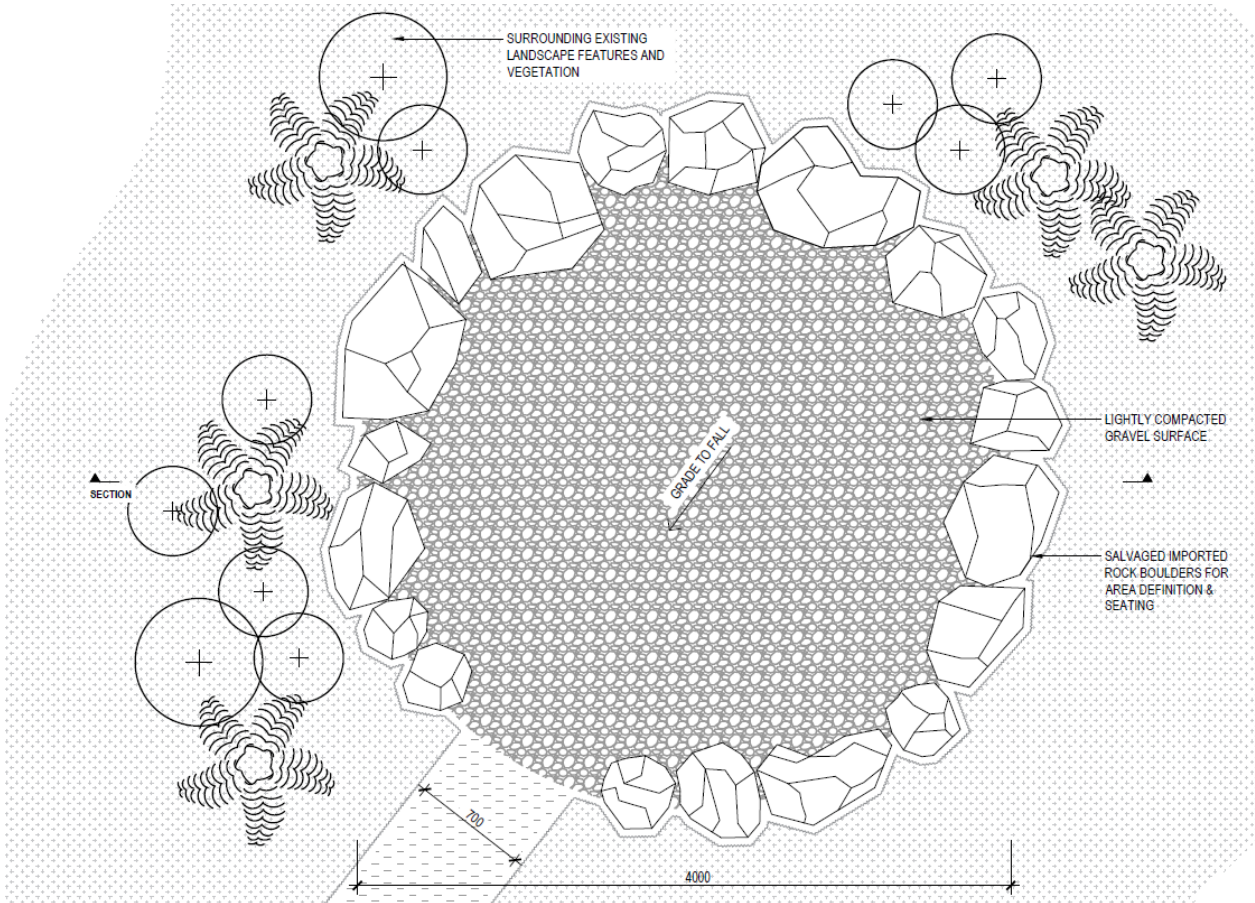


Figure 17 Communal gathering circle typical plan (1:20) (Source K2LD 2025, L-81-5001-T1)

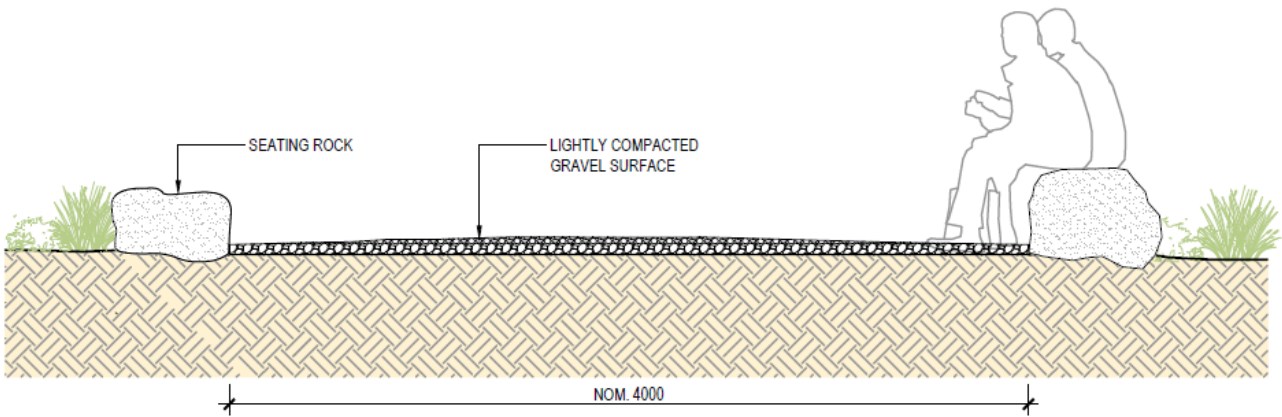


Figure 18 Communal gathering circle typical section (1:20) (Source: K2LD 2025, L-81-5001-T1)

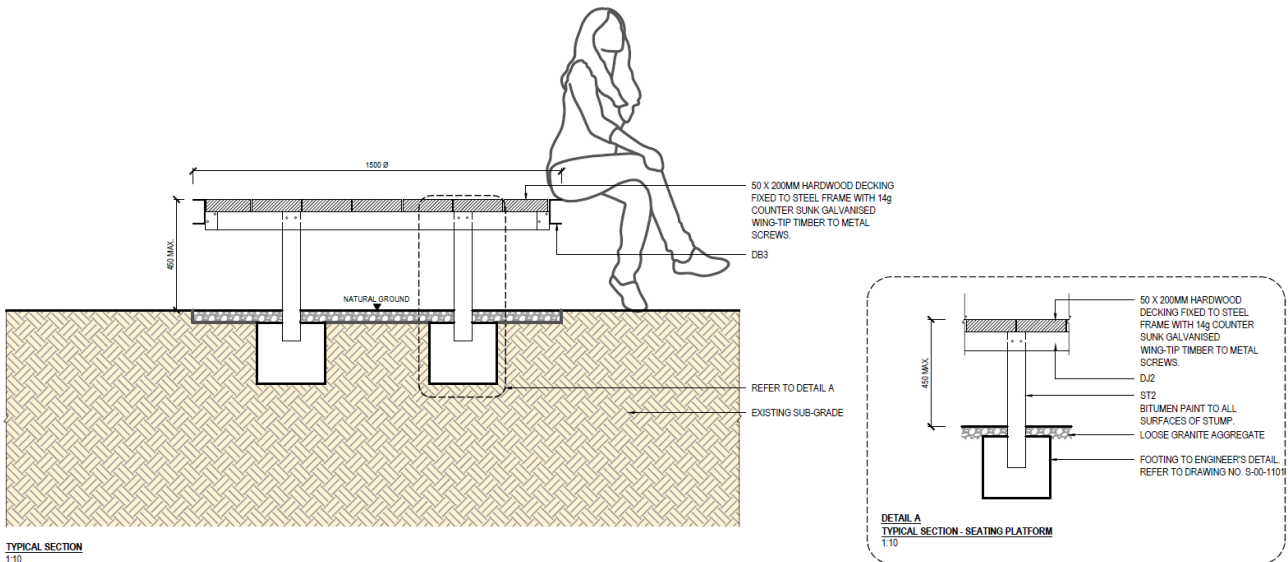


Figure 19 Seating platforms typical section (1:10) (Source: K2LD 2025, L-81-3002-T1)

Shelter

A communal shelter will be constructed at High Knob, and will include an internal airlock, storage room for use by Parks Victoria, and a main room that will include tables and seating. The building will feature a skillion roof, angled at 20 degree, and will include an external decking area and stairs (Figures 20 and 21). The shelter will measure 5272 x 4740 mm and will have a maximum height of 5253 mm above ground.

The shelter has been designed with a focus on energy efficiency, user comfort, and minimal environmental impact. The mechanical and electrical systems reflect these priorities through passive design strategies and low-voltage technologies. The shelter will include the following features:

- Natural Ventilation Compliance — Ventilation for all buildings is achieved through openable doors and windows, ensuring compliance with AS1668.4. These openings provide a minimum of 5% of the floor area for direct ventilation, or 10% via borrowed pathways, promoting airflow and maintaining indoor air quality without the need for mechanical systems.
- Heat Recovery Ventilation (HRV) — A through-wall Heat Recovery Ventilation unit will be installed in the shelter. This system is designed to operate continuously, providing fresh air while recovering heat from outgoing air to improve energy efficiency. The system will include fan speed modulation based on internal temperature and humidity sensors, and ambient temperature sensors. High fan speed will be activated when the indoor dew point exceeds ambient temperature (+ 2°C) or the carbon monoxide alarm is triggered.
- Electricity (solar low-voltage lighting and charging capability) — The shelter building will be equipped with 12V DC LED lighting to provide basic illumination during low-light conditions. Additionally, USB charging ports are available for visitors to recharge small electronic devices such as phones or GPS units.

The shelter is not designed to be used for cooking as no kitchen exhaust or mechanical extraction system is provided. Visitors will, therefore, not be permitted to cook inside the shelter to maintain indoor air quality and reduce fire risk.

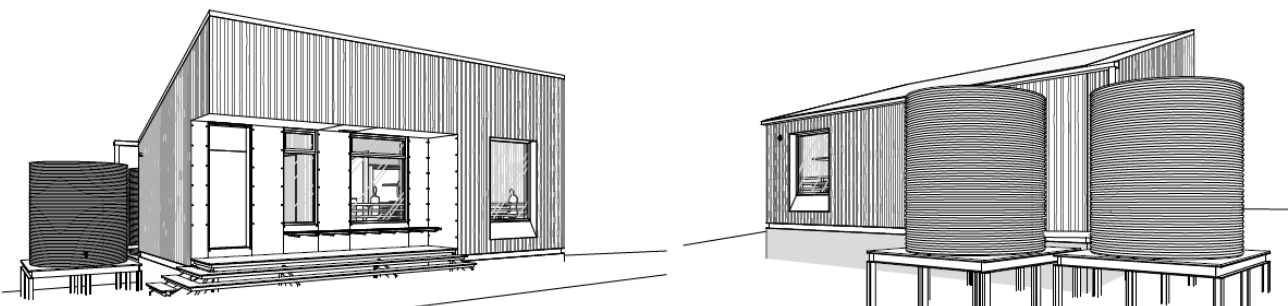


Figure 20 Shelter exterior 3D views (Source: K2LD 2025, A-10-1010-T2)



Figure 21 Shelter interior 3D views (Source: K2LD 2025, A-01-1011-T2)

Toilet facilities

Toilet facilities will be constructed at Westons Hut and High Knob (Figure 22); there is an existing toilet facility near Cope Hut that will remain unchanged. Each facility will include two toilet cubicles and a central storage area.

The toilets will capture waste in a transportable storage pod system, which is designed to hold waste for subsequent transport (fly-out or by road) and for pumping out/waste removal by eductor truck. The pods (600-L capacity) will sit on a platform and will be exchanged when volume reaches 75% capacity. The full pods will be sealed and safely stored before being airlifted out for disposal at a waste treatment facility. The toilet at Westons Hut will include six pods (2700-L at 75% capacity), while the toilets at High Knob will include 10 pods (4500-L at 75% capacity).

Waste removal will occur annually or when pods are at 75% capacity. This will be managed in accordance the *Environmental Protection Action 2017* and *Environmental Protection Regulations 2021*.

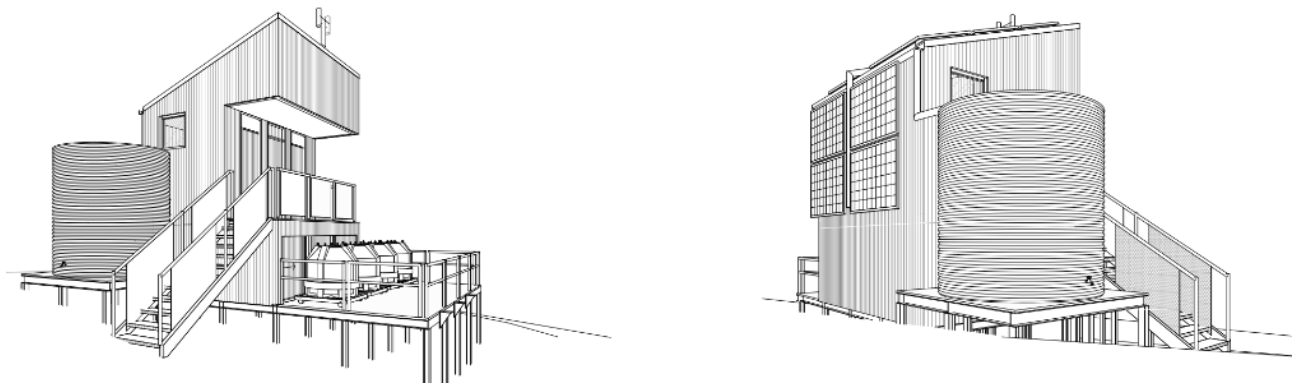


Figure 22 Toilet facilities 3D views (Source: K2LD 2025, A-61-1010-T2)

Internal paths

Internal pathways will be constructed to connect the Nodes to the FHAC and to provide visitors with formal connecting paths between the facilities at each Node. Pathways will be constructed of granitic gravel paving, to a finished width of 700 mm. The existing sub-grade will be proof rolled and any soft or spongy areas to be excavated and replaced with compacted granular fill materials (minimum 95% MMDD subgrade). The sub-base will be 75mm in depth. Two layers each 50mm of granitic sand will then be spread/placed and watered in and compacted progressively with heavy vibrating plate. Toppings will be 100 mm depth of decomposed granite.

5.2.2 Ancillary components

Water supply and stormwater drainage

The High Knob and Westons Hut sites feature integrated rainwater harvesting systems on both the shelter and amenities buildings. Roof runoff will be collected via gutters and downpipes, passed through a first flush diverter and basic mesh filtration, and stored in high-capacity polyethylene water tanks:

- The Shelter buildings at High Knob will be equipped with 2 × 10,000-litre tanks, providing the primary water source for visitors. These tanks will be fitted with push-button taps, fire hose connections, and sludge/cleanout points.
- Amenities buildings at Westons Hut and High Knob will each collect water into a single 10,000-litre tank, with 5,000 litres reserved for fire-fighting purposes and the remaining 5,000 litres available for handwashing and general use.

Although the water will be untreated and non-potable, it is suitable for cleaning and other non-consumptive uses. Visitors are responsible for treating water before drinking or cooking.

To manage overflow from the tanks, a small rubble drain system will be constructed associated to each tank. These drains will incorporate imported rock selected to visually complement the surrounding landscape. The dispersion field is estimated to be 200 x 200 x 50 mm (Figure 23).

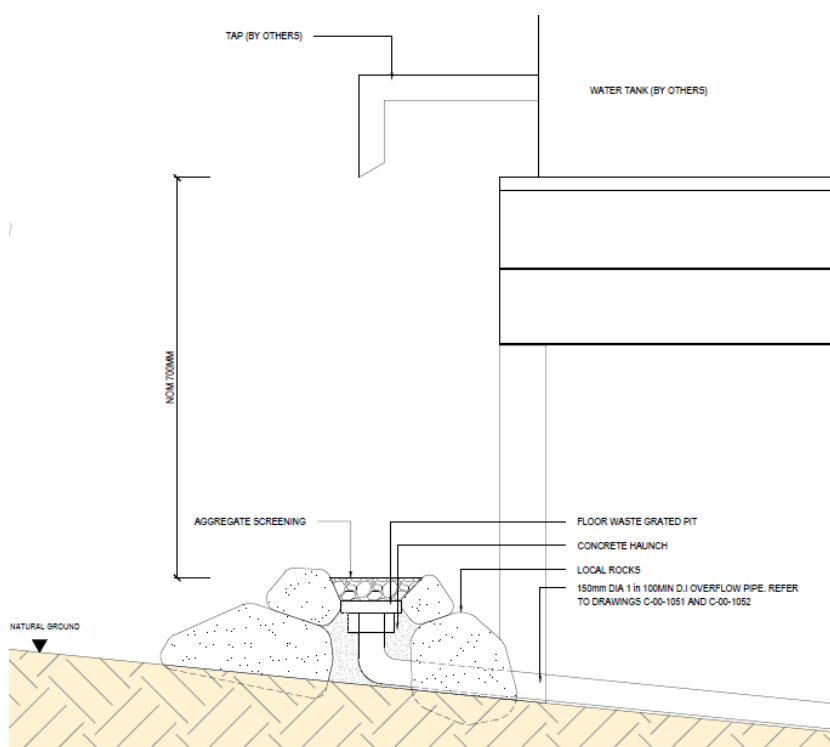


Figure 23 Water tank discharge drainage typical drainage (1:5) (Source: K2LD 2025, L-81-3003-T1)

Electricity supply

The shelter building at High Knob will be equipped with 12V DC LED, internal solar-powered lighting to provide basic illumination during low-light conditions. Solar Panels will be located on the roof and northern-facing façade of the toilet facility. Underground DV Solar PV Cable connection will be provided from the toilet facility to the shelter building (Figure 24). The trench for the DC Solar PV steel-armoured cable is at a nominal depth of 175 mm and will be integrated within the path connecting the toilet facility to the communal shelter (Figure 25). There will be no external lighting as part of the FHAC facilities.

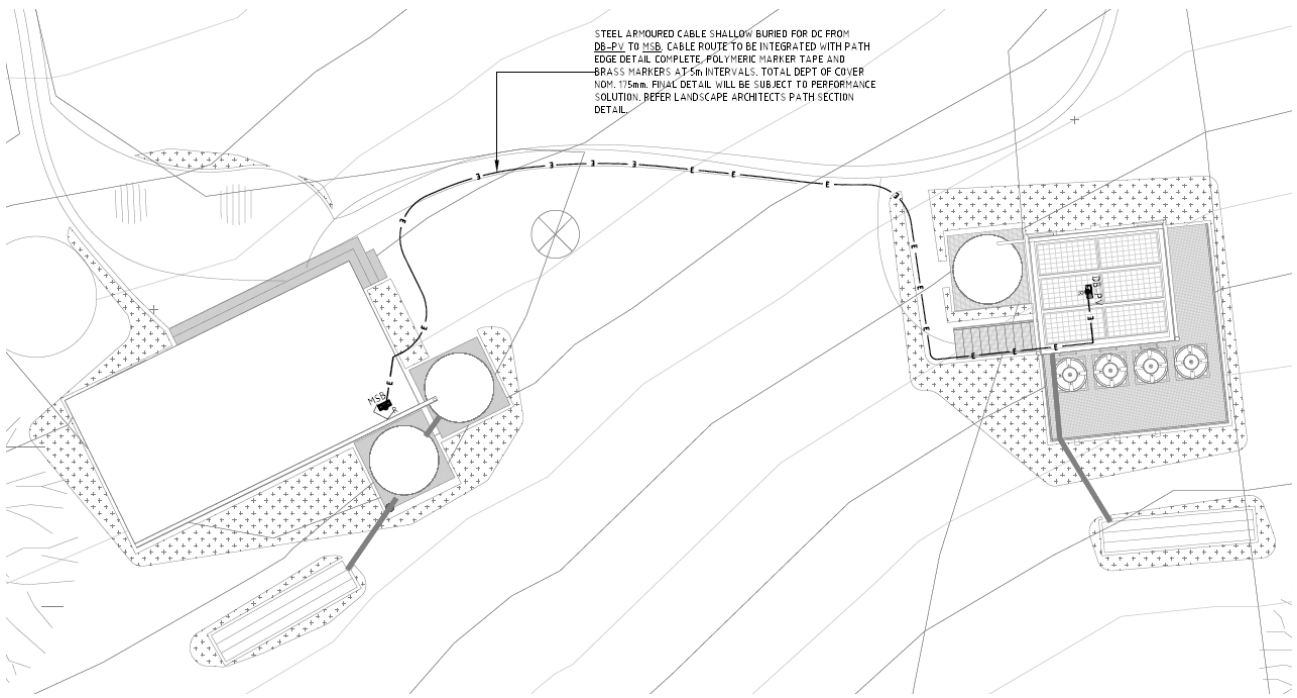


Figure 24 Electrical services layout at High Knob Overnight Node (Source: K2LD 2025, E-00-1052-T1)

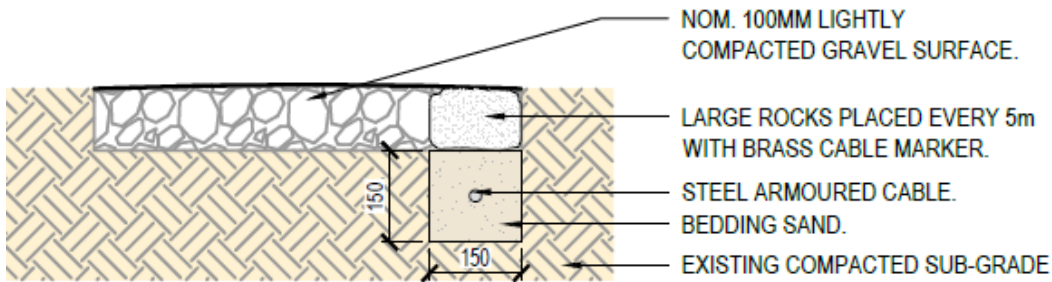


Figure 25 Gravel pathway with electrical cable typical section (1:10) (Source: K2LD 2025, L-81-5000-T4)

5.3 High Country Huts conservation works

Funding has been allocated to support conservation works and repairs for huts along the FHAC and nearby. Maintenance and restoration works are proposed at 14 High Country Huts on the Bogong High Plains. Routine maintenance works are required for two of the huts — Wallace Hut and Cope Hut. These works will involve minor internal repair works, including replacement of internal fixtures (e.g., doors, door handles) and draught-proofing.

More substantial repair works are required on 11 of the huts, as outlined in Table 16. These works are required to preserve the structural integrity of the huts, maintain weather-proofing and to ensure visitor-safety and the long-term conservation of cultural heritage values. They include replacement of floorboards, weatherboards, roofing, and cladding, as well as internal fittings. The removal of hazardous materials (i.e., asbestos) and replacement with non-hazardous materials will be required for some huts. All huts are structurally sound, and no excavation is required for foundational work.

All works will be undertaken in accordance with the Greater Alpine National Park Hut Maintenance Manual (2022), developed by Parks Victoria in collaboration with the Victoria High Country Huts Association (VHCHA). This manual outlines policies, procedures and best practice to guide conservation, maintenance and strategic management of the huts.

The extent of completion of the proposed works is subject to available funds.

Table 16 Conservation works proposed at High Country Huts

High Country Hut	Number of huts	Proposed works
Langford Gap Hut	1	<ul style="list-style-type: none"> ▪ Replacement of weatherboards. ▪ Removal of internal asbestos lining and replacement with non-hazardous materials. ▪ Repair (or replacement) of the corrugated iron roof. ▪ Replacement or restoration of internal framing. ▪ Replacement of floorboards.
Cope Saddle Hut	1	<ul style="list-style-type: none"> ▪ Replacement of the internal fireplace.
Westons Hut	1	<ul style="list-style-type: none"> ▪ Replacement of the cladding on the north side of the hut.
Blairs Hut	1	<ul style="list-style-type: none"> ▪ Replacement of deteriorated structural logs. ▪ Chinking to fill gaps and holes that have developed between structural logs. ▪ Replacement of deteriorating corrugated iron sheets on the roof.
Dibbins Hut	1	<ul style="list-style-type: none"> ▪ Replacement of deteriorating structural logs. ▪ Replacement of roofing sheets and replacement of insulation. ▪ Replacement of the window fixings.
Pretty Valley Hut	1	<ul style="list-style-type: none"> ▪ Replacement of deteriorating weatherboards. ▪ Repair of framing. ▪ Window replacement or restoration ▪ Repair of the roof. ▪ Replacement of the interior lining.
Ryders Yards	2	<ul style="list-style-type: none"> ▪ Replacement of the floorboards at the main hut. ▪ Replacement of the cowl in the fireplace flue at the main hut. ▪ Replacement of floorboards on a second hut.
Tawonga Huts	3	<ul style="list-style-type: none"> ▪ Replacement of floorboards ▪ Removal of the interior asbestos lining and replacement with non-hazardous materials. ▪ Replacement of windows.

5.4 Construction

The re-aligned FHAC has been designed to use the existing trail network and camping areas to provide an improved walking experience between Falls Creek and Mount Hotham, that incorporates iconic landmarks. Trail upgrades are required along some sections of the trail, as described in Section 5.1, which will involve various different standard trail construction techniques. Trail works will necessarily be undertaken by hand and/or using small machinery to limit construction impacts and due to limited vehicle access. Visitor facilities proposed at Overnight Nodes (e.g. camping platforms, framing) will be fabricated off-site whenever possible; construction will be undertaken using small machinery as necessary and/or hand construction. No heavy machinery will be used on-site. Works on High Country Huts will be undertaken using traditional building methods and materials, as far as possible, supplemented by modern tools and equipment to improve safety, precision, and productivity. This includes the use of portable power tools, chainsaws, generators, safety gear, and hand tools tailored to timber and roofing work.

5.4.1 Construction access

Access to the FHAC is via various roads and vehicle management tracks (and walking tracks) that intersect the FHAC alignment. Vehicle access is possible at several points between Falls Creek and Diamantina Spur, including the Bogong High Plains Road (bitumen road), the Langford West Aqueduct Road, the Cope West Aqueduct Road via Cope Saddle Track, Fainter Firetrail and the West Kiewa Logging Road (unsealed management vehicle only tracks). There is no vehicle access to the FHAC between the West Kiewa Logging Road and the Mount Hotham Alpine Resort. Within the Mount Hotham Alpine Resort boundary, the FHAC track alignment crosses the Great Alpine Road (bitumen), providing vehicle access to the southern-most section of the trail.

The Cope Hut Overnight Node can be accessed by management vehicles and hikers via Cope Hut Track, which is a management vehicle only gravel track that connects with the Bogong High Plains Road at the western end and Langford West Aqueduct Road at the eastern end. Westons Hut Overnight Node is located on Westons Spur Track, which is accessible via the West Kiewa Logging Road to the west and the Australian Alps Walking Track to the east; however, there is no direct vehicle access. High Knob Overnight Node on Diamantina Spur Track is accessible on foot via the West Kiewa Logging Road to the east, Bungalow Spur Track to the west and the Razorback Track to the south.

All of the High Country Huts can be accessed directly by vehicle, with the exception of Westons Hut and Dibbins Hut, which must be accessed on-foot.

Where there is vehicle access, construction materials will be brought to site via existing roads and management vehicle-only tracks. Powered barrows may be required to bring materials to some areas. Where there is no vehicle access, it will be necessary to airlift construction materials and equipment onto laydown areas at or near the works sites. As such, the design for buildings and structures, such as the toilets, shelter and camping platforms, support off-site pre-fabrication of structural components, that can be assembled on-site.

5.4.2 Construction activities

Key construction activities for the FHAC project include:

- Site preparation — general site set-out, including (but not limited to) establishment of No-Go-Zones and Tree Protection Zones, establishment of laydown areas, establishment of sediment and erosion controls, and removal of infrastructure to be replaced (e.g., existing camping platforms), weed removal.
- Earthworks — Excavation of existing ground levels to accommodate proposed works, including clearing of vegetation and stripping of topsoil (generally to 75 mm) and stockpiling of topsoil.
- Stonework — Installation of stone water bars, stone steps and stepping stones and boulders around gathering circles, embedded into the natural ground surface. All stone elements will be imported.
- Gravel resurfacing — Addition of new gravel to the existing track soil base, using a mix of various sizes of gravel.
- Construction of new internal paths — Existing sub-grade will be proof-rolled and any soft or spongy areas to be excavated and replaced with compacted granular fill materials (minimum 95% MMDD subgrade). The sub-base will be 75mm in depth. Two layers of granitic sand (each 50mm deep) will be spread and watered in, and compacted progressively with heavy vibrating plate. Toppings will be 100mm depth of decomposed granite.
- Installation of rubber matting.
- Installation of signage.
- Boardwalk construction — Boardwalk frames will be pre-fabricated off-site. Screw pile footings will be driven to refusal with a hydraulic post driver and cut to the specified height. The boardwalk framework will then be welded in-place.
- Maintenance and restoration works on High Country Huts comprising building repairs.
- Restoration of disturbed ground surfaces and re-vegetation in accordance with a site rehabilitation plan.

5.4.3 Construction laydown areas

Trail works will occur on approximately 11.8 km of trail across the 52-km FHAC trail alignment. Due to the dispersed nature of these works, dedicated laydown areas for the proposed trail works have not been identified. It is intended that the existing trail will be used for the laydown of materials and equipment; the existing trail footprint, plus a buffer zone of between 0.75 and 1.5 m either side of the existing track, has been identified as part of the disturbance area for this purpose, along sections where trail works will be undertaken. The width of the buffer depends on the type of works and materials required to undertake the works. This approach is designed to maximise efficiency and minimise environmental impacts by utilising already disturbed areas and avoiding the need to disturb additional areas, separate to the trail works areas. The precise placement of laydown areas will be micro-sited prior to works commencing, to ensure that significant environmental values are not impacted.

Construction laydown area locations have been identified for each of the Overnight Nodes, as shown in site plans (Figures 26 – 28). These locations may be adjusted within the disturbance footprint for each Overnight Node, following micro-siting. Construction laydown areas at Overnight Nodes will be used to accommodate storage of larger structures and to accommodate staging requirements, and contractors will be expected to manage materials and equipment within these constraints, and ensure that all activities remain within the defined footprint. Construction laydown areas will be re-habilitated following construction.

Materials and tools for restoration works on High Country Huts will be stored within or directly beneath the hut structure, making full use of the existing building footprint. This includes storing items on the hut floor, under overhangs, or in sheltered areas beneath the structure where it is safe and practical to do so. If storing materials within or under the hut is not possible, they will be placed on nearby roads or access tracks, ensuring that no equipment is stored on surrounding native vegetation.

5.5 Operation and maintenance

There are no operational requirements for the trail other than regular inspection and maintenance of the trail infrastructure. Vegetation management along the trail will be consistent with other tracks within the Alpine National Park; vegetation will be managed to the width of the track, only to limit encroachment.

The establishment of the three Overnight Nodes and new visitor facilities will necessitate a small increase in operational and maintenance activities at the three sites. The two new toilet facilities at Westons Hut and High Knob are storage pod systems that will require periodic emptying and replacement. Pods will be airlifted from site once they reach 75% capacity and will be taken off-site for emptying. Currently, there are two helicopter flights to the Alpine National Park per year, to service existing toilets. It is anticipated that an additional one to two flights per year may be required to service the toilets at Westons Hut and High Knob, increasing the total number of helicopter flights up to four per year. Operational and maintenance requirements for other visitor facilities will be minimal, and will consist of regular inspection and maintenance to be undertaken as part of existing schedules. Vegetation will be managed to limit encroachment only, in accordance with Parks Victoria's standard maintenance operations. There are no vegetation management and maintenance requirements at the Overnight Nodes for bushfire management purposes (TerraMatrix 2025).

The re-aligned and upgraded FHAC is expected to receive 3,450 visitors per year, along the full trail alignment and using all three Overnight Nodes by 2050. This projection is based a historical Compound Annual Growth Rate (CAGR), for the Falls Creek and Mount Hotham Region of 4.3%, applied to current usage data for walkers on the Razorback Trail at the southern (Mount Hotham) end of the trail, and Heathy Spur Trail towards the start (Falls Creek end) of FHAC. Estimates provided in the Business Case were significantly higher (22,250), based on the original project scope, which include enclosed shelter, accommodation facilities, and roofed accommodation use by licensed tour operators – all of which was expected to attract more users. The Overnight Nodes, under the currently proposed scope, have the capacity to support a maximum of 12 small user groups at a time, based on the number of camping platforms.



Figure 27 Westons Hut Overnight Node site layout plan (Source: K2LD, 2025)



Figure 28 High Knob Overnight Node site layout plan (Source: K2LD, 2025)

6 Consultation and engagement

Extensive stakeholder and community engagement was undertaken between 2016 and 2018 to create a Master Plan for the FHAC. Further community consultation was undertaken from 2022 throughout the draft concept and detailed design phases of the FHAC project. Engagement activities have included:

- Traditional Owner engagement
- Stakeholder Steering Advisory Committee
- On-site visits
- In person drop ins and pop ups in nearby townships
- Online surveys and submissions
- Stakeholder briefings
- Community updates via newsletters

A summary of identified stakeholders and engagement activities is provided below.

6.1 Identified stakeholders

Table 17 lists the stakeholders and community members impacted and/or interested in the project. It describes the nature of their interest; estimates the level of interest in the project and recommends a preferred approach for project engagement and communications.

Table 17 Stakeholder engagement summary

Stakeholder group	Nature of interest	Level of engagement	Main engagement and communications approach
Victorian Minister for Energy, Environment and Climate Action	<ul style="list-style-type: none"> ▪ Major milestones and project modifications ▪ Benefits to the community and regional economies ▪ Ongoing relationships with Traditional Owners 	Empower	<ul style="list-style-type: none"> ▪ Briefings and Ministerial papers
Parks Victoria Board	<ul style="list-style-type: none"> ▪ Major milestones and project modifications ▪ Reputational and operational risks ▪ Marketing and media approach 	Empower	<ul style="list-style-type: none"> ▪ Briefings and Board papers
Traditional Owners	<ul style="list-style-type: none"> ▪ Location and design of accommodation ▪ Operating model and how it can provide economic opportunities for their communities ▪ Interpretation opportunities 	Consult and involve	<ul style="list-style-type: none"> ▪ On Country visits ▪ Meetings ▪ Email/phone call
Department of Energy, the Environment and Climate Action	<ul style="list-style-type: none"> ▪ Planning pathways and regulatory requirements 	Consult and involve	<ul style="list-style-type: none"> ▪ Briefings ▪ Emails ▪ Planning Processes ▪ Steering Advisory Committee meetings
Funding authorities: <ul style="list-style-type: none"> ▪ Department of Jobs, Skills, Industry and Regions [DJSIR (TEVE)]/RDV 	<ul style="list-style-type: none"> ▪ That funds are being appropriately spent to support regional economies 	Consult and Involve	<ul style="list-style-type: none"> ▪ Project Control Board meetings ▪ Briefings ▪ Emails ▪ Planning processes ▪ Steering Advisory Committee meetings
Local Councils: <ul style="list-style-type: none"> ▪ East Gippsland Shire Council ▪ Alpine Shire Council 	<ul style="list-style-type: none"> ▪ Planning requirements ▪ Operating model ▪ Local benefits ▪ Community ideas and feedback 	Involve	<ul style="list-style-type: none"> ▪ One-on-one briefings ▪ Email updates ▪ SPC meetings

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Stakeholder group	Nature of interest	Level of engagement	Main engagement and communications approach
Tourism bodies: <ul style="list-style-type: none"> ▪ Visit Victoria ▪ Licensed Tour Operators ▪ Tourism North East 	<ul style="list-style-type: none"> ▪ Input into product development through market sounding/focus groups ▪ Regular updates on the progress of projects 	Consult/Inform	<ul style="list-style-type: none"> ▪ Steering Advisory Committee meetings ▪ Market sounding research ▪ Email updates ▪ Briefings
Key interest groups: <ul style="list-style-type: none"> ▪ Victorian National Parks Association ▪ Bushwalking Victoria ▪ Outdoors Victoria ▪ Previous campers ▪ Volunteer groups ▪ Birdwatching groups ▪ Environmental groups 	<ul style="list-style-type: none"> ▪ Location and design of the project ▪ Environmental considerations (including fire) ▪ Park and industry benefits ▪ Accessibility 	Consult/Inform	<ul style="list-style-type: none"> ▪ Steering Advisory Committee meetings ▪ Stakeholder briefings ▪ Email updates
Alpine Resorts: <ul style="list-style-type: none"> ▪ Falls Creek Alpine Resort ▪ Mount Hotham Alpine Resort 	<ul style="list-style-type: none"> ▪ Land managers for parts of the FHAC ▪ Interested in product and experience development ▪ Potential commercial partners 	Involve	<ul style="list-style-type: none"> ▪ Steering Advisory Committee meetings ▪ Email updates ▪ Briefings
Victorian High Country Huts Association	<ul style="list-style-type: none"> ▪ High Country Huts 	Consult/Involve	<ul style="list-style-type: none"> ▪ Briefings
Local communities and Park neighbours	<ul style="list-style-type: none"> ▪ Location and design of the project ▪ Environmental considerations (including fire management) 	Consult/Inform	<ul style="list-style-type: none"> ▪ Key messages ▪ Website updates ▪ Community information sessions
Mary Goldsworthy (Westons Hut)	<ul style="list-style-type: none"> ▪ Park and community benefits ▪ Access restrictions ▪ Cost 		<ul style="list-style-type: none"> ▪ Stakeholder and community email bulletin
Media and broader Victorian community	<ul style="list-style-type: none"> ▪ Location and design of the project ▪ Environmental considerations (including fire management) ▪ Economic opportunities ▪ Completion timing ▪ Cost 	Inform	<ul style="list-style-type: none"> ▪ Key messages ▪ Media releases ▪ Website updates ▪ Community information sessions ▪ Stakeholder and community email bulletin ▪ Social media

6.2 Traditional Owner engagement

Parks Victoria's Traditional Owner engagement aligns with the Managing Country Together (MCT) Traditional Owner Engagement Framework and Traditional Owner Engagement Procedure (PRO 658) which supports the implementation of the MCT Framework and honours formal rights and recognition processes. In the case of this project Parks Victoria's engagement is within an area of non-RAP and therefore Traditional Owner engagement in these areas must be underpinned by a commitment to inclusiveness and equity, ensuring opportunity for multiple voices to be heard and involved.

The Traditional Owner groups involved in the CHMP process include:

- Bangerang Aboriginal Corporation (BAC)
- Dalka Warra Mittung Aboriginal Corporation (DWMAC)
- Dhuduroa Waywurru Nations Aboriginal Corporation (DWNAC)
- Duduroa Dhagal Aboriginal Corporation (DDAC)
- Gunaikurnai Land and Waters Aboriginal Corporation (GLAWAC)
- Jaithmathang Traditional Ancestral Bloodline Original Owners First Nation Aboriginal Corporation (JTABOOFNAC)

- Nindi-Ngujarn Ngarigo Monero Aboriginal Corporation (NNNMAC)
- Jaithmathang Traditional Owner Group (JAOG)

6.3 Falls to Hotham Stakeholder Steering Advisory Committee

A Falls to Hotham Stakeholder Steering Advisory Committee (SAC) was created in July 2020 with the purpose of:

- Providing advice into the key directions for the delivery of the project
- Ensuring that a range of specialist, operations and stakeholder views are considered during the project's development and delivery
- Proactively share information with key stakeholders (SAC members) to answer questions, and to provide suitable time for analysis and feedback
- Based on information shared, provide support and advice on communications and community relations functions associated with the project
- Assist PV to ensure risk and opportunities are identified and managed

Members of the committee include:

- Parks Victoria
- Regional Development Victoria - DJSIR
- Tourism, Events and Visitor Economy - DJSIR
- Falls Creek Resort Management
- Tourism North East
- Mount Hotham Resort Management
- Alpine Shire
- Department of Environment, Land, Water and Planning
- Visit Victoria
- Bushwalking Victoria
- Victorian National Parks Association
- Alpine Resort Management Board
- Outdoors Victoria

Since 2020, eleven meetings of the SAC have taken place. The Falls to Hotham SAC will continue to be held at regular intervals and milestones throughout the project.

6.4 Engagement activities

6.4.1 Master Plan

Community consultation for the Falls to Hotham Alpine Crossing began during the development of the Master Plan in 2017. This initial engagement was led by Parks Victoria in partnership with McGregor Coxall and other stakeholders, regional tourism bodies, and local communities. The Master Plan outlined a vision for a five-day/four-night alpine walking experience.

6.4.2 Concept design

In August and September 2022, community consultation was undertaken on the draft concept designs for the FHAC via Engage Victoria. There was a high level of interest in the project:

- The Engage Victoria page for the project was accessed by 6,330 unique visitors.
- Over 700 people took part in the consultation, which included the following engagement activities:

- Engage Victoria survey and submission
- Email feedback
- Online community information sessions
- Pop-up in park and local townships (Bright, Mount Beauty, Falls Creek, Mt Hotham and Harrietville)

Feedback received

Many participants used the opportunity to comment on draft designs to express their opposition to the Falls to Hotham Alpine Crossing project overall. The key concerns raised related to:

- Environmental impacts
- Commercialisation of a National Park
- Project not aligning with primary purpose of National Parks
- Engagement process
- Access to the National Park

Many participants noted the design could be improved by reducing or removing the number of huts in the design.

Some participants liked the simple nature of the design, trail improvements, the addition of elevated tent platforms, provision of water and toilet amenities.

Further details on consultation and engagement activities undertaken by Parks Victoria during the concept design phase, and what was heard, are provided in Parks Victoria's *Consultation Summary Report* (Parks Victoria 2023).

6.4.3 Detailed design

Community and stakeholder feedback from the Concept Design phase was considered and incorporated into the detailed design for the project.

In November 2024, Parks Victoria made available to the public the design changes for the project. This included community and stakeholder updates, consisting of an email sent to over 1700 interested community members, website updates and community information sessions.

Four information sessions were held in the local community and online. They were held in the townships of Bright, Mount Beauty and Harrietville. The purpose of the sessions was to provide information on the planned changes to what is being delivered.

Parks Victoria staff spoke with over 50 local residents. The majority of community members spoken to were happy and appreciative of the changes.

6.4.4 Ongoing engagement

Information on the FHAC project, community updates and a link to previous engagement on the Engage Victoria website is available on the Parks Victoria Falls to Hotham Alpine Crossing web page. Parks Victoria will continue to keep the community informed of project developments and key milestones as the project progresses. This will include:

- On-site events to celebrate the start of works and completion of key infrastructure
- Quarterly email newsletters
- Updates on Parks Victoria's website.

Direct responses to enquiries will continue to be provided via engage@parks.vic.gov.au.

This approach ensures transparency and continued community involvement and acknowledges the core design has been refined through previous consultation phases.

7 Potential impacts

This section identifies and summarises the nature of potential impacts to environmental values resulting from the realignment and upgrade to sections of the FHAC trail and the upgrade and installation of visitor facilities for the establishment of three Overnight Nodes. Potential impacts are identified from the proposed design, construction and operation of the upgraded FHAC on environmental values. Various measures to avoid and minimise potential impacts, have been adopted by Parks Victoria during the planning and design stages of the FHAC project – as outlined in Section 7.9 and Appendix 1. Further impact mitigation measures have been recommended by Abzeco (2025) and are proposed during pre-construction and construction phases, in accordance with best-practice management, to mitigate site-specific risks.

7.1 Native vegetation

Potential impacts to native vegetation as a result of the FHAC were informed by native vegetation mapping undertaken Abzeco (2024, 2025). The calculation of native vegetation losses has been based on the site plans for the proposed Overnight Nodes and locations identified for trail works, the detailed design ‘Kit of Parts’ for trail works and Overnight Node visitor facilities, and construction requirements (see Section 7.1.1 for calculation of losses). No native vegetation will be impacted for conservation works on the High Country Huts.

The revised FHAC route is aligned on existing vehicle and walking tracks. Along the majority of the route (40.2 km), no works are proposed, and no impacts to native vegetation are identified in these areas. Trail upgrades are proposed along 11.8 km of the alignment, where trail infrastructure will be installed over the existing alignment or where trail repair works are proposed. This is anticipated to result in small areas of permanent native vegetation loss or modification at the edges of the existing track footprint. A larger area of temporary vegetation disturbance is anticipated to enable construction works and activity, defined as a buffer of 0.75 – 1.5 m either side of the existing trail and proposed infrastructure. The three Overnight Nodes are proposed in areas that are already used for camping, and already subject to some level of disturbance. Native vegetation in these areas was generally found to be of lower quality than other areas investigated (i.e., alternative Overnight Nodes that are not currently designated visitor areas), with less native species diversity, higher levels of weeds and a modified understorey. New visitor facilities at the three proposed Overnight Nodes have been sited on areas identified by Abzeco (2025) as being most disturbed, where possible. Vegetation losses have been estimated based on the infrastructure footprints, with additional areas of disturbance identified for construction activity and laydowns.

No canopy trees are proposed for removal as part of this project; therefore, it is anticipated that impacts to native vegetation will be limited to understorey vegetation only. Visitor infrastructure within Overnight Nodes has been located so as to avoid the need for tree removal. Some works, within Overnight Nodes and along the trail alignment, may result in encroachment on the Tree Protection Zones (TPZs). Micro-siting will occur prior to construction to minimise encroachment on TPZs as far as possible, and a project arborist will provide advice on tree management requirements where there is potential encroachment, to ensure that trees can be retained.

7.1.1 Native vegetation loss

Native vegetation losses for the proposed FHAC project are estimated as follows:

- A maximum area of up to 3.55 ha of native vegetation will be disturbed that includes the construction footprint plus additional requirements for the displacement of excavated materials (spoil), construction access (the movement of people and machinery) and for the storage of materials and equipment.
- A total of 0.43 ha of native vegetation will be permanently lost or modified (i.e., lost through clearing additional to the existing trail width, or modified by some shading under elevated boardwalks).
- An area of 3.11 ha will be rehabilitated or allowed to regenerate naturally following the completion of works.

Table 18 provides a break-down of estimated vegetation losses for each Overnight Node and each trail treatment type. The area of total disturbance for trail works has been calculated conservatively to account for the maximum areas for construction works, and for the placement of laydown areas along the trail; the actual area of disturbance is likely to be much less than this. Parameters used to calculate these losses are discussed below.

Native vegetation loss calculations

The total disturbance area for proposed works has been calculated based on the infrastructure and/or final track footprint plus a construction buffer of variable width, depending on the type of works. For trail works, the following parameters and total disturbance widths have been used:

- **Boardwalks (2.9 m)** — Elevated boardwalks will be installed over the existing track footprint, and will be constructed from the trail wherever possible, to minimise disturbance. All boardwalks are assumed to be 0.9 m wide. An additional width of up to 1 m either side of the boardwalk will be temporarily disturbed for construction access, foot traffic, laydown of boardwalk panels and frames, and small machinery. This area will be rehabilitated where required.
- **Stepping stones and stone steps (2.5 m)** — Stepping stones and stone steps will generally be installed within the existing footprint of the track. All stepping stones are assumed to have an average width of 0.5 m. An additional disturbance width of 1 m either side will be required for excavation works, foot traffic and storage of materials and equipment.
- **Stone pitching (1.5 m)** — Stone pitching will be installed over the existing track footprint, to a maximum width of 0.7 m. A total width of up to 1.5 m may be temporarily disturbed to enable construction access either side of the track, and for temporary placement of materials and equipment.
- **Track reformation and benched steps (2.5 m)** — Benched tracks have a final disturbance footprint estimated to be 1.5 m, which is variable depending on slope and terrain. An additional distance of 1 m either side of the track may be temporarily disturbed by foot traffic and excavated materials.
- **Gravel resurfacing (2.5 m)** — Resurfacing of tracks will leave a final track width of 0.7 m. A total width of up to 2.5 m may be temporarily disturbed to enable construction access either side of the track, and for temporary placement of materials and equipment.
- **Rubber matting (0.5 m)** — Rubber matting will be installed on the existing track footprint. Rubber matting has a standard width of 0.5 m. No construction or excavation works are required to install rubber matting, little equipment is needed, and materials can be stored on the existing track footprint; No additional areas of disturbance are required.
- **Drainage works (3.0 m)** — Water bars and spoon drains will be constructed across existing tracks at variable intervals, as determined by the slope and track condition. A nominal footprint of 1.5 m has been assumed based on the excavation of trenches/water bars at a minimum of 0.3 m beyond the track edges (at a 30 – 40 degrees angle), plus a sediment dispersion pit of at least 0.4 m. An additional 1.5 m may be disturbed for excavation works, foot traffic, and temporary storage of materials or equipment.

Areas of permanent loss or modification have been calculated based on the existing average width of tracks, which varies along the FHAC from 0.3 – 0.5 m (refer Table 1), and the finished width of the trail or trail infrastructure, as per the design 'kit of parts', to calculate areas of clearing additional to the existing trail.

The impact areas for visitor infrastructure at Overnight Nodes have been calculated based on the proposed designs, which includes the final footprint (structures, pathways, ancillary areas), plus a 2-m construction buffer around the footprint. Areas of permanent loss are calculated from the total final footprint.

Opportunities for reducing the total area of disturbance will be investigated during construction, by limiting the movement of people, equipment and machinery as far as possible, and by strategically locating laydown areas for trail works.

Ecological Vegetation Classes

Fine-scaled mapping of EVCs was not undertaken by Abzeco (2021, 2024, 2025) due to the scale of the assessment area and the fine-scale pattern of variation present on-ground, which make it difficult to define one EVC in a given location. Combinations of EVCs were therefore, mapped along some sections of the trail (refer Section 3.1.2). Along sections of trail where combinations of EVCs were mapped, the total area of disturbance was divided equally between each EVC, to enable the calculation of vegetation losses per EVC. Areas of estimated total loss for each EVC are presented in Table 19, below, for the FHAC project area.

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Table 18 Areas of estimated vegetation loss based on the total disturbance area, permanent impact area and area proposed for rehabilitation for trail works and Overnight Nodes for the proposed FHAC.

Works locations and type	Total disturbance area (ha)	Permanent impact area (ha)	Rehabilitation area (ha)
<i>Overnight Nodes</i>			
Cope Hut	0.140	0.033	0.107
Westons Hut	0.186	0.035	0.151
High Knob	0.252	0.058	0.194
<i>Trail works</i>			
Boardwalks	0.237	0.055	0.182
Stepping stones	0.038	0.005	0.033
Stone steps	0.160	0.062	0.098
Stone pitching	0.149	0.025	0.124
Drainage	2.256	0.136	2.120
Track reformation	0.006	0.003	0.003
Track resurfacing	0.122	0.020	0.102
Handrail	N/A	N/A	N/A
Total	3.546	0.432	3.114

Table 19 Areas of estimated native vegetation loss by Ecological Vegetation Class for all works associated with the proposed FHAC

Ecological Vegetation Class	Bioregional Conservation Status	Total disturbance (ha)		Permanent impact (ha)	
		Trails	Nodes	Trails	Nodes
Alpine Damp Grassland	Rare	0.073	-	0.016	-
Alpine Dwarf Heathland	N/A	0.066	-	0.015	-
Alpine Grassland	Rare	0.614	0.068	0.054	0.014
Alpine Grassy Heathland	Rare	0.494	0.069	0.040	0.019
Alpine Rocky Outcrop Heathland	N/A	0.029	-	0.002	-
Alpine Valley Peatland	Endangered	0.074	-	0.016	-
Montane Damp Forest	Least Concern	0.218	-	0.025	-
Snowpatch Grassland	N/A	0.074	-	0.013	-
Sub-alpine Shrubland	Rare	1.141	-	0.074	-
Sub-alpine Woodland	Least Concern	0.185	0.440	0.051	0.093
TOTAL		2.968	0.577	0.306	0.126

Long-unburnt Snow Gums

Old-growth, long-unburnt Snow Gums are becoming increasingly rare in the Victorian highlands due to effects of increasing fire frequency (RCAAE 2020). The loss of old growth snow gums has multiple implications, including a reduction in the regulation of regular water runoff, decreased soil water retention and decreased snow accumulation (Coates et al. 2012). Trees more than 25 years old have been found to be less flammable than younger trees (Zylstra 2020) so the increased ratio of younger trees may contribute to the flammability of Sub-alpine Woodlands. Long-unburnt Snow Gums also provide habitat for common and threatened understory flora, and foraging, roosting and nesting habitat for common fauna within the study area. Snow Gums are also an important component of the Eucalypt flora community identified as a value of the National Heritage Listing of the Alpine National Park.

Stands of long-unburnt Snow Gums were recorded along FHAC Trail Sections 4, 5 and 18, and at Cope Hut and High Knob Overnight Nodes. Trail Section 18 has been removed from the FHAC trail alignment, and no works will be undertaken along Trail Section 5, with the exception of the replacement of signage. Within the works area, there is potential for works to impact on Snow Gums at Cope Hut, and along the adjoining section of the Cope Hut Track, and at High Knob.

The potential impacts on long-unburnt Snow Gums include:

- Damage to tree canopies from construction works.
- Damage to root zones from excavation works. If construction activities encroach on Tree Protection Zones (TPZs) by more than 10% or Structural Root Zones (SRZs) then trees are considered lost under the Guidelines for the removal, destruction or lopping of native vegetation (DELWP 2017).
- Soil compaction from construction activities and ongoing foot traffic around root zones.

Visitor facilities at Cope Hut and High Knob have been sited to avoid the removal, or encroachment on the SRZs, of long-unburnt Snow Gums. Minor encroachment of TPZ may result from construction of internal gravel paths, or footings for Camping Platforms. A project arborist will advise on micro-siting of these works as well as tree management measures and construction methods for any works within TPZs, if required. With tree protection requirements to be implemented as per the arborist recommendations, it is not anticipated that the works will impact Snow Gums to the extent that they may decline significantly or be considered lost.

7.1.2 Weed invasion

Weed invasion is an existing threat to ecosystems within the Alpine National Park. Weed species have been introduced and spread by past and present land uses and activities, including grazing, construction equipment and materials, vehicles, hikers, and from garden escapes and exotic plantings around alpine resorts. Weed control within the Alpine National Park is complicated by the extensive track network that provides avenues for the spread of weeds by vehicles and hikers, and by other invasive species, such as large, introduced herbivores, which can transport weed seeds. Many highly invasive weeds are also found in, and spread via, rivers and streams (Parks Victoria 2016).

A number of weed species were recorded within the project area during on-ground assessments, including eight species declared as noxious weeds in the North East Catchment Management Area, four of which have also been identified as Weeds of National Significance. A number of other 'High Risk' environmental weeds were also recorded that provide sources of seed and propagules (refer Section 4.3.3). The highest levels of weed invasion, and the most invasive weed species occur in areas where there has been significant disturbance in the past (e.g., Trails Section 1a, below the Rocky Valley dam wall) and where there are higher levels of visitation (e.g., Westons Hut).

The FHAC is likely to encourage more visitors to walk between Falls Creek and Mount Hotham, and there is a risk that an increase in visitation will increase the risk of spreading weeds; however, this is not a new risk. The re-aligned FHAC uses existing vehicle and walking tracks, and therefore, will not introduce new avenues for weed invasion into the Park. No new tracks will be constructed that could lead to the introduction of weeds in formerly undisturbed areas. The use of existing camping areas for the establishment of Overnight Nodes also minimises the risk of visitor-induced weed spread by focussing facilities at key visitor locations, consistent with the Park Management Plan. Weed management programs are already in-place to control the spread of weeds in priority locations and priority species throughout the Alpine National Park (Parks Victoria 2016).

There is some potential for construction activities associated with the FHAC project to introduce new weeds, or to further spread weeds through the project area, via the movement of equipment and machinery, footwear or construction and landscaping materials (e.g., imported rock and gravel). Native vegetation removal and exposed soils resulting from some works provide opportunities for weed invasion; transport of weed seeds and propagules into these newly disturbed areas during construction works may lead to new weed infestations (Abzeco 2025). To manage this risk, strict hygiene controls will be implemented from pre- to post-construction, which will be included in a Construction Environment Management Plan. In addition to these measures, weed control will be undertaken within the works areas, focusing on noxious weeds, WoNS, and high-risk environmental weeds, prior to commencing works. Post-construction monitoring will also be undertaken as part of regular monitoring and maintenance along the FHAC (See Section 7.9).

7.1.3 Pathogens

Construction activities associated with the FHAC and ongoing use and operation of the FHAC has the potential to result in the introduction and spread of soil-borne pathogens, including *Phytophthora* spp., of which *Phytophthora cinnamomi* (also known as cinnamon fungus), is considered the most significant plant pathogen in Victoria.

Phytophthora spp. are soil-borne pathogenic water moulds that attack the roots and basal stem tissue of susceptible plants, limiting their ability to absorb water and nutrients, causing dieback. In Australia, 99 *Phytophthora* species have been reported, with Cinnamon fungus being the most frequently identified (Burgess et al. 2021), although, several other species are known to be pathogenic. Cinnamon fungus is not currently known to be impacting the project area. In Victoria, much of the current disease expression is confined to lowland sclerophyll forests and heathland vegetation communities. However, *Phytophthora* species have been found to occur at higher elevations than previously thought, and Cinnamon fungus has been detected at high altitude in Kosciuszko National Park (Burgess et al. 2017). A number of other species have also been isolated from sub-alpine and alpine areas of Australia, at least some of which have the potential to cause disease (Khaliq et al. 2019).

Phytophthora species may be introduced or spread through the movement of infested soil, water or plant material via microscopic zoospores. This includes through water or soil transported on vehicles and equipment, footwear, and imported construction and landscaping materials (e.g., gravel used in track construction), or from the use of infected nursery stock. Strict hygiene controls, as outlined in Section 7.9 will be implemented to manage the risk of introducing and/or spreading soil-borne pathogens through construction or infected landscaping materials. The Alpine National Park has an extensive track network, and hikers also present a potential exposure pathway. However, the FHAC utilises existing vehicle and walking tracks, and existing camping areas, so the FHAC project will not increase this risk or introduce new risks into previously undisturbed areas.

7.2 Listed Ecological Communities

Three threatened ecological communities will be impacted by trail upgrade works:

- Alpine Sphagnum Bogs and Associated Fens — listed as endangered under the EPBC Act.
- Alpine Bog community — listed as threatened under the FFG Act.
- Alpine Snowpatch community— listed as threatened under the FFG Act.

Two of these communities, the EPBC Act-listed Alpine Sphagnum Bogs and Associated Fens community and the FFG Act-listed Alpine Bog Community, are interdependent and considered synonymous.

The Alpine Sphagnum Bogs and Associated Fens/Alpine Bog Community directly intersects, or occurs adjacent to, the FHAC trail alignment in 27 locations (refer to Section 4.5). The trail alignment uses existing tracks but works will be undertaken at 21 locations, solely for the long-term protection of the community and to mitigate existing usage impacts, which include track braiding and vegetation trampling, resulting from off-track walking, erosion and channelisation. Alternative sections of trail alignment (Sections 9 and 17) and alternative Overnight Nodes (Nodes 1 Alternate, 2 Preferred and 2 Alternate) have been removed from the FHAC project that would have resulted in the loss of relatively large areas, or significant soil disturbance in previously undisturbed areas, for this community.

The works proposed for the FHAC will result in the temporary disturbance of up to 0.074 ha of this community for the installation of elevated boardwalks and stepping stones over the existing trail. This area accounts for the installation of infrastructure and potential disturbance resulting from foot traffic and the laydown of materials during

construction; although the boardwalks and stepping stones will be 'built from the track' as far as possible. The area of permanent loss or modification is much smaller (0.016 ha), which includes minor permanent losses for boardwalk footings and placement of stepping stones, and the potential effects of shading from the boardwalk panels. The boardwalks will allow light, water and snow melt to penetrate through to ground and are elevated to enable vegetation to grow beneath the boardwalk; however, it is reasonable to expect that there may be some ongoing influence of shading that may alter vegetation structure or composition beneath the boardwalk.

The areas of loss have been determined from EVC mapping. Within the project area, this community often occurs in a fine-scale mosaic with other communities. For the purposes of this assessment, all trail sections containing patches of Alpine Valley Peatland EVC are taken to represent the extent of this community. An assessment of potential impacts to the EPBC Act-listed Alpine Sphagnum Bogs and Associated Fens has been undertaken against EPBC Act Significant Impact Criteria, provided in Appendix 3.

The FFG Act-listed Alpine Snowpatch community was recorded on the Razorback North Track to the summit of Mount Feathertop. The extent of this community is synonymous with areas mapped as Snowpatch Grassland EVC (Abzeco 2025); all patches containing this EVC were taken to represent the FFG Act-listed community. Proposed works through this community include stone pitching along the existing trail, some of which already includes stone pitching that requires repair. Stone pitching will be undertaken to the width of the existing trail and will be confined to the existing footprint as far as possible. Some drainage works will also be undertaken to reduce erosion of the trail surface; drainage works will be kept to the minimum extent necessary, based on site conditions (i.e., every 20 m). These works are estimated to result in the temporary disturbance of up to 0.074 ha to allow for the laydown of stone, materials and foot traffic, although, laydowns will be located on the trail as far as practical, and works will be 'built from the trail' where possible. The area of permanent loss is estimated at 0.013 ha for this community.

7.3 Wetlands and waterways

The proposed FHAC trail alignment utilises existing vehicle and walking tracks that are aligned parallel to, and/or intersect, a number of natural waterways, constructed channels (aqueducts), as well as minor, unnamed drainage lines (refer to Section 4.6). With the exception of elevated boardwalks over channels within alpine peatlands, there are no new or upgraded waterway crossings proposed as part of the FHAC. Existing waterway crossings, which include culverts and steel bridges will remain in place. Therefore, there will be no works directly on waterways that may impact their physical form, flows or riparian and instream vegetation and habitats.

Works proposed in the vicinity of waterways are limited. Drainage works are proposed along Section 14, where Blanket Creek intersects the trail, and along Section 15 where the tributaries of Diamantina Creek intersect the trail in five locations. Drainage works along the FHAC trail alignment are designed to address existing impacts of surface water accumulation on the trail, erosion and concentrated run-off. Drains will be constructed at intervals and are designed to control and direct run-off, and prevent erosion of the trail. Drainage works in these areas will be micro-sited to ensure that they do not directly impact the waterways; no drains will be installed within 30 m of these waterway crossings. The trail also intersects a number of small drainage lines or flow paths on the Bogong High Plains, including two areas where elevated boardwalks and stepping stones are proposed on Sections 6 and 7. These works are also intended to reduce erosion and damage in these areas and will also be micro-sited. Works in close proximity to other waterways are limited to the installation or replacement of signage, which will cause minor soil disturbance and are unlikely to impact the waterways.

The FHAC also intersects multiple areas of alpine peatlands. Alpine peatlands are highly sensitive to the impacts of construction activities and other disturbances, such as trampling, vegetation removal, compaction of soil or *Sphagnum* moss, as well as hydrological changes (e.g., increased run-off and sediment input). Physical damage to the wetland community can result in its water-hold capacity being reduced, or destroyed as a result of erosion and channelling, and lead to drying of the wetland and surrounding areas. Vegetation cover is considered critical to maintaining the resilience of these systems. Works in these areas include the installation of boardwalks and stepping stones to reduce existing impacts of the trail from off-track walking, track braiding and vegetation damage. The boardwalk will use low-impact screw-pile footings and will enable light, water flow, and vegetation growth beneath the structure. Stepping stones will be installed within the existing track footprint and will provide a resilient walking surface.

There is a small risk of indirect impacts on waterways and wetlands from these works, if they are not undertaken sensitively. These works have the potential to impact water quality through:

- Sediment disturbance and mobilisation, or sediment-laden run-off entering nearby waterways and wetlands.

- Waste, hazardous materials or contaminants entering the waterways from spillage or seepage of fuels, oils or other chemicals from construction equipment.

A site-specific CEMP will be developed, as outlined in Section 7.9, to address these risks, which will include erosion and sediment controls, hazardous materials management and environmental incident protocols.

7.4 Flora species

Threatened flora species have been recorded across the project area in all Sections of the FHAC trail alignment and at all three Overnight Nodes. Targeted surveys have only been undertaken at the Overnight Nodes, to-date. No targeted flora surveys have yet been undertaken along the FHAC trail alignment, although a number of species were recorded incidentally, and it is noted that some threatened species are relatively conspicuous and would have been detected during vegetation assessments, if present.

Potential impacts to flora species include:

- Direct loss of individuals through removal.
- Habitat loss and fragmentation.
- Indirect impacts from trampling or habitat degradation.

Potential impacts to flora species have been minimised as far as possible through the planning phase of the project, through design and placement of infrastructure, including the use of the existing trail network and areas already used for camping. Trail works are proposed only in areas where they are considered necessary for ameliorating existing impacts of the trail (e.g., from trampling and erosion) and for trail repair, with low impact infrastructure, i.e., elevated boardwalks, to be used in sensitive areas.

Direct losses of threatened flora species have been assessed and calculated within Overnight Nodes based on targeted surveys. To reduce the risk of directly impacting threatened flora species along the trail, targeted surveys will be undertaken along sections of trail where works are required, prior to works commencing. If threatened species are recorded, opportunities for micro-siting the trail works or infrastructure (e.g., water bar placement, boardwalk footings), will be investigated, in order to avoid impacting the plants. These surveys will also be required to inform the FFG Act Protected Flora permit. This permit will need to identify each species, location and number of plants for each species impacted by the project (if they can't be avoided through micro-siting).

The assessment of potential impacts to threatened flora as a result of the project works is based on loss of habitat (Table 19). For the purposes of this assessment, habitat is defined by the EVCs within the project area that would provide suitable habitat for each species, and the area of habitat loss is based on the area of each EVC that will be impacted by the project (refer Section 7.1 for determination of native vegetation removal). For many of these species, Habitat Models (i.e., Habitat Distribution Models or Habitat Importance Models typically used to assess impacts) do not provide a useful representation of the area occupied by the species or the area of potential habitat, most likely due to a lack of contemporary records. A number of species predicted to occur within the project area either do not have habitat models, or habitat models are represented by individual 75-m grids. Some species are also known to occur outside of their modelled areas of habitat. Assessments for the FHAC project recorded a number of threatened flora species outside of their Habitat Distribution or Habitat Importance Models. To assess the impact of the project, losses have been assessed against the Area of Occupancy used in formal conservation status assessments. The Area of Occupancy, based on 2 x 2 km grid from accepted records, is likely to under-estimate the area the species occupies but has been used as a conservative estimate.

7.4.1 EPBC Act-listed flora

Four flora species listed as threatened (Vulnerable) under the EPBC Act are considered likely to occur within the project area (Abzeco 2025):

- Shining Cudweed *Argyrotegium nitidulum*
- Thick Eyebright *Euphrasia crassiuscula* subsp. *glandulifera*
- Bogong Eyebright *Euphrasia eichleri*
- Snow Daphne *Kelleria bogongensis*

One of these species, Shining Cudweed, was recorded incidentally during vegetation surveys along Trail Sections 1a, 2, 3, 6, and 7. The Shining Cudweed was found to be relatively common in localised areas where it was recorded (Abzeco 2025). Individuals were recorded growing immediately adjacent to the track along Sections 2, 3, 6, and 7; individuals recorded along Section 1a were located within the survey area, but not near the track. This species was recorded near to where trail works (stepping stones) are proposed in only one location, along Trail Section 7. However, as no targeted surveys have been undertaken in areas of proposed trail works, it is possible that additional individuals of this species may be recorded along additional sections of trail works. Given the relatively small areas of disturbance that will occur along existing tracks, it is anticipated that impacts to this species can be avoided by micro-siting the placement of trail structures, such as stepping stones, and laydown areas. It is also possible that the remaining three EPBC Act species may occur along the trail, despite not being recorded during the vegetation surveys.

Possible disturbance of potential habitat for the four EPBC Act-listed species will occur along seven sections of trail:

- Shining Cudweed – Sections 2, 4, 6, 11, 14 and 15
- Thick Eyebright – Sections 2, 4, 6, 11, 13, 14 and 15
- Bogong Eyebright – Sections 2, 4, 6, 7, 11, 14 and 15
- Snow Daphne – Sections 2, 4, 6, 7, 11, 14 and 15

Areas of potential habitat disturbance for these species are relatively small (1.17 – 1.27 ha) in the context of their broader distribution and areas of occupancy. In addition, not all of these areas will support populations of these species, and not all of the area will be lost; areas of permanent loss are likely to be much smaller. Given that the works proposed in areas where these species may occur will be limited to the edges of the existing tracks, the likelihood that trail works will impact high-quality habitat, large numbers of individuals, or lead to habitat degradation is low. Wherever possible, trail works and structures, as well as laydown areas will be micro-sited to avoid impacting populations of these species. No EPBC Act-listed flora species were recorded within Overnight Nodes during initial field surveys or targeted surveys (Abzeco 2025, TEO 2025).

Significant impacts to these species are considered unlikely, based on habitats, proposed works and known distribution of these species. Potential impacts to EPBC Act-listed flora species are discussed further and assessed against significant impact criteria in Appendix 3.

7.4.2 FFG Act-listed flora

A total of 59 FFG Act-listed flora species has been recorded within the project area, and a further 88 species have been identified as potentially occurring within the project area (Abzeco 2025), specifically, along the proposed trail alignment, which has not been surveyed in detail.

Targeted surveys at the three Overnight Nodes recorded 13 FFG Act-listed threatened species within the survey areas (Abzeco 2025, TEO 2025; refer Table 20). Twelve of these species are likely to be impacted by the proposed construction works at the Overnight Nodes, with a total of up to 1546 individuals (of all species) estimated to be directly removed or indirectly impacted (i.e., individuals located within the infrastructure footprint or construction buffer). The highest numbers of individuals impacted are of Silver Snow-daisy (489) and Alpine Phebalium (380), followed by three species of Daisy-bush — Bogong Daisy-bush (203), Dusty Daisy-bush (170) and Rusty Daisy-bush (105). Smaller numbers of individuals (2 – 85) of the remaining seven species are expected to be impacted (see Table 20). Many of these species, despite being threatened and restricted in distribution to sub-alpine and alpine areas, are locally common in areas of suitable habitat. This includes the Alpine Phebalium and Daisy-bushes, which are common on the Bogong High Plains and/or more broadly through alpine and sub-alpine areas.

The number of individuals of each species estimated to be impacted at Overnight Nodes, exceeds 1% of the lower population estimate in Victoria for four species: Rusty Daisy-bush, Bogong Daisy-bush, Dusty Daisy-bush and Alpine Phebalium; however, none exceed 1% of the upper population estimate. Given that these species were recorded in high numbers within relatively small areas of habitat, and within areas already disturbed, it is unlikely that these losses actually represent 1% of the populations; population sizes of these species are probably larger than estimated. In addition, opportunities for reducing the total area of disturbance will be investigated during construction, by limiting the movement of people, machinery and equipment as far as possible.

All 59 FFG Act-listed species recorded within the project area were recorded incidentally along the proposed trail alignment. Targeted surveys will be undertaken within works areas along the tracks prior to works commencing. It is

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anticipated that due to the linear nature of potential impacts, which will be largely limited to the edges of existing tracks, in combination with micro-siting, will largely avoid impacts to threatened species along the trail.

Species that may occur along the proposed alignment are given in Table 21. Assessment of habitat losses uses Area of Occupancy, a standardised spatial measure of the risk of extinction that represents the area of suitable habitat known, inferred or projected to be currently occupied by the species. Losses of habitat for any of these species does not exceed 1% of the estimated area of habitat available.

Table 20 FFG Act-listed species recorded at Overnight Nodes and numbers of individuals impacted by the total disturbance area

Scientific Name	Common Name	FFG Act Status	Numbers of individuals			
			Cope Hut	Westons Hut	High Knob	Total
<i>Acrothamnus montanus</i>	Snow Beard-heath	En	2	-	16	18
<i>Austrostipa nivicola</i>	Alpine Spear-grass	En	-	-	-	-
<i>Celmisia costiniana</i>	Carpet Snow-daisy	En	-	-	13	13
<i>Celmisia tomentella</i>	Silver Snow-daisy	Vu	396	3	90	489
<i>Craspedia aurantia</i> [^]	Orange/Green Billy-buttons	En	77	8	-	85
<i>Grevillea victoriae</i> subsp. <i>victoriae</i>	Royal Grevillea	En	-	7	-	7
<i>Olearia brevipedunculata</i>	Rusty Daisy-bush	En	-	-	105	105
<i>Olearia frostii</i>	Bogong Daisy-bush	Vu	131	-	72	203
<i>Olearia phlogopappa</i> subsp. <i>flavescens</i>	Dusty Daisy-bush	En	96	72	2	170
<i>Ozothamnus alpinus</i>	Alpine Everlasting	En	-	-	4	4
<i>Phebalium squamulosum</i> subsp. <i>alpinum</i>	Alpine Phebalium	En	380	-	-	380
<i>Ranunculus victoriensis</i>	Victorian Buttercup	En	70	-	-	70
<i>Scleranthus singuliflorus</i>	Mossy Knawel	En			2	2
Total			1152	90	304	1546

[^] Individuals of *Craspedia aurantia* may be Orange Billy-buttons *Craspedia aurantia* var. *aurantia* or Green Billy-buttons *Craspedia aurantia* var. *jamesii*.



Photo 11 Silky Snow-daisy (left) and Shining Cudweed (right) (Source: Abzeco 2025)

Table 21 Potential areas of habitat loss for threatened species considered likely to occur within the project area.

Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Habitat	Associated EVCs within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Acacia alpina</i>	Alpine Wattle		En		Exposed sites on shallow rocky soils at 1300 m to 1800 m ASL; often associated with granite and sometimes thrives in windswept areas. Can be locally common and occasionally forms thickets.	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland 	148	6000 – 8000	0.0178
<i>Acacia dallachiana</i>	Catkin Wattle		Vu		Restricted to sub-alpine and montane forests.	<ul style="list-style-type: none"> ▪ Montane Damp Forest ▪ Sub-alpine Woodland 	140	Unknown	0.0040
<i>Aciphylla glacialis</i>	Snow Aciphyll		En		Tussock grassland and tall herbfields in alpine and higher subalpine areas; rarely recorded in Snow-gum woodland. Can be locally common (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Woodland ▪ Snowpatch Grassland 	308	10000 – 20000	0.0144
<i>Aciphylla simplicifolia</i>	Mountain Aciphyll		En		Sub-alpine and alpine grasslands, tall herbfield, Sphagnum bog edges and eucalypt woodlands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Alpine Grassy Heathland ▪ Sub-alpine Woodland ▪ Alpine Grassland 	234	30000 – 50000	0.0144
<i>Acrothamnus montanus</i>	Snow Beard-heath		En	Restricted	Grows in high-alpine areas, specifically, heath, grassland and on rocky slopes above 1800 m where it is often locally common, forming near-pure stands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Dwarf Heathland ▪ Sub-alpine Woodland 	104	50000 – 150000	0.0139
<i>Agrostis australiensis</i>	Tiny Bent		En		Locally common in moist alpine grasslands (VicFlora 2025) and alpine bogs and wetlands that are often strongly dominated by Sphagnum. Sometimes associated with damp herbfields or wet heathlands and rarely extends to Sub-alpine Woodland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Woodland ▪ Snowpatch Grassland ▪ Alpine Valley Peatland 	88	Unknown	0.0151
<i>Agrostis muelleriana</i>	Mueller's Bent		En		Occupies a large habitat range from Sphagnum bogs and heathy wetlands through to dense grasslands, including Snowpatch vegetation, to elevated rocky dryland habitats. Sometimes occurring in Sub-alpine Woodlands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Dwarf Heathland ▪ Alpine Rocky Outcrop Heathland ▪ Sub-alpine Woodland ▪ Snowpatch Grassland ▪ Alpine Valley Peatland 	205	Unknown	0.0151
<i>Alchemilla xanthochlora</i>	Lady's Mantle		En		Alpine and subalpine regions mainly along watercourses or seepage lines.	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	44	135 – 180	0.0015
<i>Argyrotegium mackayi</i>	Silver Cudweed		En	Restricted	Mainly known from Mount Hotham and Bogong High Plains. This species colonises bare ground in grassland communities (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Damp Grassland 	40	800 – 1200	0.0069
<i>Argyrotegium nitidulum</i>	Shining Cudweed		Vu	Restricted	Occurs on open wet ground, near streams and bogs or in damp open grasslands and heathland on the Bogong High Plains (VicFlora 2025). Can be found in disturbed areas such as along roadsides suggesting that it is a good coloniser of bare patches, potentially even needing some disturbance to promote germination.	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Dwarf Heathland ▪ Alpine Damp Grassland ▪ Alpine Rocky Outcrop Heathland 	112	20,000 – 40,000	0.0128
<i>Argyrotegium poliochlorum</i>	Grey-green Cudweed		En		Known from the Bogong High Plains where it occurs in Sphagnum moss beds, wet heathland or wettish grassland communities (typically between 1400 and 1850 m ASL) (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	56	Unknown	0.0015
<i>Australopyrum velutinum</i>	Mountain Wheat-grass		Vu		Damp alpine and subalpine grasslands. Can be locally common (VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	208	Unknown	0.0126

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Habitat	Associated EVCs within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Austrostipa nivicola</i>	Alpine Spear-grass		En		Grassland, heathland, Sow Gum (<i>Eucalyptus pauciflora</i>) woodland at altitudes above 1500 m. Shows a strong post-fire flowering response (flowering is otherwise irregular) (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	264	Unknown	0.0243
<i>Barbarea grayi</i>	Native Wintercress		Vu		Typically grows in damp areas near high-altitude streams, but it is rather rare. Quadrat and monitoring data indicate that the taxon is consistently associated with taxa which characterise a range of moist to wet forest and woodland communities, high elevation riparian thickets and wetland habitats. Can be locally common after fire (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Sub-alpine Woodland (near waterways) Sub-alpine Shrubland (near waterways) Montane Damp Forest 	80	Unknown	0.0162
<i>Bartramia subsymmetrica</i>	Bogong Apple-moss		Cr	Restricted	Occurs in pools and boggy sites in treeless zones. Co-occurs with other moss species <i>Blinda robusta</i> . Habitat has been significantly impacted by fires, feral animals, wet invasion and changed hydrology (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland 	8	3000 – 8000	0.00075
<i>Boronia algida</i>	Alpine Boronia		Vu		Occurs on shallow soils derived from igneous rock in heath or open eucalypt woodland communities (Vicflora 2019).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland Alpine Grassy Heathland Alpine Rocky Outcrop Heathland 	156	2500 – 5000	0.0185
<i>Bossiaea bracteosa</i>	Mountain Leafless Bossiaea		En	Endemic	Found in drier upper montane to subalpine forest or subalpine woodland, where it is almost entirely recorded in Snow Gum (<i>Eucalyptus pauciflora</i>) woodland (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland (where in a mosaic with woodland) 	96	2000 – 20000	0.0133
<i>Brachydontium intermedium</i>	Bogong Bristle-leaf Moss		Cr	Endemic, Restricted	Occurs in sheltered rocky areas of the Bogong High Plains. The taxon is lithophytic on schist and basalt, always in dry situations such as the upper surfaces of rock overhangs. Main known location is around Falls Creek - Mt McKay (DELWP 2021).	No specific EVC	24	400 – 1000	-
<i>Brachyscome foliosa</i>	Mountain Daisy		En		Typically occurs in tussock grassland and alpine herbfields, often on basaltic soils, above 1200 metres altitude (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland 	56	240 – 320	0.0111
<i>Brachyscome tadgellii</i>	Tadgell's Daisy		En	Endemic	Commonly grows in open grasslands and herblands with poor drainage (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Grassy Heathland Alpine Dwarf Heathland 	28	1000 – 3000	0.0125
<i>Cardamine astoniae</i>	Spreading Bitter-cress		Cr		Forms small to large colonies and grows amongst <i>Poa</i> or <i>Empodisma</i> tussocks, or Sphagnum moss in open, moist to boggy alpine and subalpine environment in Victorian Alps (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland 	44	Unknown	0.0015
<i>Cardamine franklinensis</i>	Franklin Bitter-cress		Cr		Occurs in Sub-alpine Woodland on rocky scree slopes or amongst <i>Poa</i> (Snow Grass) tussocks where it forms small colonies (DELWP 2021).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland 	32	30	0.0133
<i>Cardamine lilacina</i> s.s.	Lilac Bitter-cress		En		Lower altitude forests, Sub-alpine woodland and various alpine habitats. This species is taxonomically unclear and comprises a complex of species, making habitat attributes difficult to describe. Responds well to disturbance (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Valley Peatland Sub-alpine Shrubland Sub-alpine Woodland 	40	10000 – 40000	0.0251
<i>Carex archeri</i>	Archer's Sedge		En		A habitat specialist restricted to wet, sheltered and typically rocky sites including amongst wet rocks along creeks and cliff faces near waterfalls (DELWP 2021).	<ul style="list-style-type: none"> Alpine Rocky Outcrop Heathland 	28	Unknown	0.0003
<i>Carex austrocompacta</i>	Compact Hook-sedge		En		Grows in sub-alpine and alpine herbfields (including heath and damp herbfields) and Snow Gum woodlands. Often associated with basalt soils. Around the Cope West Aqueduct, it has been recorded in grassy Snow Gum woodland and Snow Gum dominated woodland with a closed heath understorey on basalt soils. (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Alpine Damp Grassland Sub-alpine Shrubland Sub-alpine Woodland 	32	Unknown	0.0251
<i>Carex blakei</i>	Alpine Sedge		En		Locally common in the alps and sub-alps, particularly in sodden grassland and at the margins of Sphagnum bog communities (DELWP 2021).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland 	256	Unknown	0.0015
<i>Carex canescens</i>	Short Sedge		En		Locally common near pools and streams on the Bogong High Plains e.g. near Mt Cope and Baw Baw Plateau.	<ul style="list-style-type: none"> Alpine Valley Peatland 	108	Unknown	0.00075

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Habitat	Associated EVCs within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Carex capillacea</i>	Hair Sedge		En		Scattered occurrences in alpine areas bordering high-altitude swamps and wet alpine heathlands, usually associated with Sphagnum moss (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Valley Peatland 	176	Unknown	0.00075
<i>Carex cephalotes</i>	Wire-head Sedge		Cr	Restricted	A habitat specialist, apparently confined to sheltered, rocky areas on the summits of the highest mountains, near late-lying Snowpatch areas (DELWP 2021).	<ul style="list-style-type: none"> Snowpatch Grassland 	12	1000 – 5000	0.00075
<i>Carex echinata</i>	Star Sedge		En		Occurs in higher alpine areas on wet valley-floor bogs and heaths (VicFlora 2025). Site and specimen data indicate the taxon is consistently associated with Fen Sedge <i>Carex gaudichaudiana</i> and frequently also with Peat Moss <i>Sphagnum cristatum</i> . Spreading Rope-rush <i>Empodisma minus</i> is often dominant (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland 	80	10000 – 100000	0.00075
<i>Carex hypandra</i>	Alpine Fen-sedge		Cr		Restricted to soaks in alpine wetlands, including alpine swamps, fens and slow flowing streams (DELWP 2021).	<ul style="list-style-type: none"> Alpine Valley Peatland 	16	1200 – 10000	0.00075
<i>Carex jackiana</i>	Carpet Sedge		En		Locally common in alpine areas usually bordering bogs and/or within damp grassland communities (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Valley Peatland Alpine Damp Grassland Alpine Grassland Alpine Grassy Heathland 	216	Unknown	0.0126
<i>Carex paupera</i>	Dwarf Sedge		En	Endemic	A habitat specialist strictly confined to shallow depressions ('snow-pools') in alpine and sub-alpine grassland over an altitudinal range of between 1200 metres and 1760 m ASL. All known records are located on Tertiary basalt. Often recorded on track margins and other areas prone to disturbance (on basaltic soils) and devoid of dense tussock grasses (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland 	32	100 – 250	0.0069
<i>Carpha alpina</i>	Small Flower-rush		En		Often dominant (with <i>Poa</i> spp.) in tall alpine herbfield and forms extensive carpets. It is also found in open heaths, herbfields, grasslands, in cold-air drainage valleys and along gravelly stream banks.	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Grassy Heathland 	80	10000 – 20000	0.0118
<i>Carpha nivicola</i>	Broad-leaf Flower-rush		En		Alpine – sub-alpine species occurring in and on the margins of Sphagnum Bogs and wet heaths above 1400m (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Valley Peatland Alpine Grassy Heathland 	252	40000 – 80000	0.0126
<i>Celmisia costiniana</i>	Carpet Snow-daisy		En		Locally common in alpine and higher sub-alpine areas, often dominant (with <i>Poa</i> spp.) in tall alpine herbfields, and can form extensive carpets, often in association with <i>C. pugioniformis</i> . It is also found in open heaths, Grasslands, and along stream banks (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> Sub-alpine Woodland Sub-alpine Shrubland Alpine Grassland Alpine Damp Grassland Alpine Grassy Heathland Snowpatch Grassland 	152	20000 – 40000	0.0260
<i>Celmisia latifolia</i>	Victorian Snow-daisy		En	Endemic	Confined to higher sub-alpine meadows, margins of wet heaths and bogs, and Snow Gum woodlands. It sometimes forms pure stands up to c. 10 m diameter (VicFlora 2019).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	76	6000 – 10000	0.0251
<i>Celmisia sericophylla</i>	Silky Snow-daisy		En	Endemic, Restricted	Typically forming extensive carpets along rocky stream banks or tufted among boulders and on rocks overhanging water, occasionally in Sphagnum bogs and wet areas below snow patches (VicFlora 2025).	<ul style="list-style-type: none"> Alpine Damp Grassland Alpine Valley Peatland Sub-alpine Woodland Sub-alpine Shrubland 	116	5000 – 15000	0.0147
<i>Celmisia tomentella</i>	Silver Snow-daisy		Vu		Most common in sub-alpine areas. It forms more or less open patches or scattered colonies in Snow Gum woodland, heaths, herbfields and Sphagnum bogs. It also occurs in lower alpine and higher-altitude montane bogs (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Damp Grassland Alpine Valley Peatland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	188	50000 – 100000	0.0258
<i>Chenopodium erosum</i>	Papery Goosefoot		En		Grassland, heathland and Snow Gum woodland where it can be locally common, particularly following fire (DELWP 2021).	<ul style="list-style-type: none"> Alpine Grassland Alpine Grassy Heathland Sub-alpine Woodland Sub-alpine Shrubland 	60	Unknown	0.0243

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Habitat	Associated EVCs within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Colobanthus affinis</i>	Alpine Colobanth		En		Alpine plant occurring in alpine grassland and open heathland above 1600 m, in peaty soils. Readily colonises track and road verges (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	204	50000 – 150000	0.0118
<i>Coprosma moorei</i>	Turquoise Coprosma		en		Confined to high altitude, moist peaty heaths and Sphagnum bogs (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	80	10000 – 20000	0.000747
<i>Coprosma nivalis</i>	Snow Coprosma		En		In Victoria, occasionally recorded in rocky places in dry shallow soils, including on the Bogong High Plains, Dargo High Plains and Mount Hotham (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Dwarf Heathland 	144	10000 – 20000	0.0010
<i>Coronidium waddelliae</i>	Snowy Everlasting		Vu		Locally common in Snow Gum woodland and treeless communities, often in dry, rocky sites (DELWP 2021).	<ul style="list-style-type: none"> ▪ Montane Damp Forest ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	104	2600 – 20800	0.0265
<i>Craspedia adenophora</i>	Sticky Billy-buttons		En		Alpine plant (typically above 1500 m) which is locally common in dry to damp grassland and open heaths, often around exposed rock (VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Damp Grassland ▪ Sub-alpine Woodland 	52	8000 – 18000	0.0137
<i>Craspedia alba</i>	White Billy-buttons		Cr	Restricted	Occurs in seasonally inundated pools and gravely pavements of short alpine herbfield near Mt Cope/Pretty Valley.	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	5	4000 – 8000	0.0015
<i>Craspedia aurantia sl</i>	Orange/Green Billy-buttons		En		Refer varieties below.	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland 	N/A	N/A	0.0243
<i>Craspedia aurantia var. aurantia</i>	Orange Billy-buttons		En	Restricted	Can be locally common in higher subalpine grassland, and occasionally extends above the treeline in sheltered places. It tends to occur in native vegetation but not on road verges (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland 	84	25000 – 75000	0.0194
<i>Craspedia aurantia var. jamesii</i>	Green Billy-buttons		En		Found in grassland and low open heathland in alpine and higher subalpine areas. It tends to occur in native vegetation but not on road verges (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Shrubland 	185	50000 – 150000	0.0225
<i>Craspedia crocata</i>	Crimson Billy-buttons		En		Usually occurs in alpine grassland (often moist grasslands), herbfields, Snow Gum Woodland near or below the (inverted) treeline in frost hollows (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Damp Grassland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland 	100	Unknown	0.0251
<i>Craspedia lamicola</i>	Bog Billy-buttons		En		Associated with alpine bogs and wet heathlands on the Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	60	Unknown	0.00075
<i>Craspedia maxgrayi s.s.</i>	Woolly Billy-buttons		Cr	Restricted	Apparently restricted in Victoria to alpine grassland, herbfield, and open heath and shrubland, usually in drier sites (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Damp Grassland ▪ Sub-alpine Woodland 	16	Unknown	0.0137
<i>Deschampsia cespitosa</i>	Tufted Hair-grass		En		Uncommon grass largely confined to damp to wet, peaty sites at both low and high elevations. Can tolerate inundation by shallow water (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	88	Unknown	0.0015
<i>Deyeuxia affinis</i>	Allied Bent-grass		Cr	Restricted	Grows in nearly permanently wet silty, peaty or pebbly sites, mostly between open shallow pools and fringing heath at high altitudes (above 1600 m). Sometimes recorded amongst wet alpine herbfield or mossbeds (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	8	100 – 500	0.0015
<i>Deyeuxia carinata</i>	Keeled Bent-grass		En		Occurs in moist, higher subalpine grasslands, heathlands or rocky drainage areas predominately above 1500 m. Most commonly associated with Sphagnum bogs, often at their periphery, or in an ecotone between bogs and Poa-dominated grassland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Valley Peatland 	200	5000 – 30000	0.0126

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<i>Deyeuxia crassiuscula</i>	Thick Bent-grass		En		Occurs in rocky summit areas and grassy plains above ca 1600 m mostly in drier sites rather than those associated with wet heath/bog associations (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Dwarf Heathland 	176	120 – 2400	0.0120
<i>Diplaspis nivis</i>	Snow Pennywort		En		Confined to Sphagnum bogs, relic bogs, gravel pavements, and wet heaths and herbfields in the alps. Can be locally common and often forming small colonies (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	192	5000 – 15000	0.0015
<i>Drepanocladus polygamus</i>	Shore Feather-moss		Vu		Occurs in and around shallow freshwater ponds and streams in a variety of vegetation types, from sea level to the treeless alpine zone.	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	28	Unknown	0.0008
<i>Drosera arcturi</i>	Alpine Sundew		En		Usually occurs in or adjoining moist shallow depressions of wet heaths and herbfields, late lying snow patches and bogs often association with Sphagnum (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland ▪ Snowpatch Grassland 	116	10000 – 20000	0.0015
<i>Epacris celata</i>	Cryptic Heath		En		Locally common on higher mountains of the alps, occurring in damp to wet heathlands and bogs, often co-occurs with <i>Epacris breviflora</i> and/or <i>E. glacialis</i> (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	176	30000 – 50000	0.0008
<i>Epacris glacialis</i>	Reddish Bog-heath		En	Restricted	Occurs in Wet Heath, and in and around the margins of subalpine-alpine bogs, along creeks, through moss beds, and in gravelly soaks, where it can be locally common (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	112	20000 – 40000	0.0008
<i>Epacris petrophila</i>	Snow Heath		En		In alpine areas and often locally common in subalpine heathland on the margins of pools, in bogs and in frost hollows (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	228	20000 – 40000	0.0008
<i>Epilobium curtisiae</i>	Bald-seeded Willow-herb		En		Typically confined to alpine and subalpine areas in moist peaty depressions in grassland or in ephemeral shallow pools.	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	104 – 192	Unknown	0.0015
<i>Epilobium sarmentaceum</i>	Mountain Willow-herb		Vu		Confined to alpine and sub-alpine areas where it grows on dry slopes amongst rocks (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	140	Unknown	0.0114
<i>Epilobium tasmanicum</i>	Snow Willow-herb		Cr	Restricted	Grows in moist gravelly places, often in out-wash areas below areas of late lying snow (DELWP 2021).	<ul style="list-style-type: none"> ▪ Snowpatch Grassland ▪ Alpine Dwarf Heathland 	24	Unknown	0.0014
<i>Eucalyptus pauciflora</i> subsp. <i>hedraia</i>	Bogong Sally		Cr	Endemic, Restricted	Sub-alpine Woodland areas. It is known to grow in pure stands except along its boundaries where it mixes with <i>E. pauciflora</i> ssp. <i>niphophila</i> .	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland 	36	200 – 2000	0.0019
<i>Eucalyptus perriniana</i>	Spinning Gum		En		Occurs in high altitude sub-alpine localities on the sheltered sides of ridges, or adjoining swamps and bogs. It typically grows in deep soils, with good moisture availability throughout summers (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Montane Damp Forest 	156	5000 – 45000	0.0154
<i>Euchiton traversii</i>	Mat Cudweed		Vu		Dry and damp grassland communities of the eastern alps, and occasional occurrences in (wet and dry) heathland, sometimes in wet peaty sites. Has also been recorded in disturbed areas (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	204	Unknown	0.0118
<i>Euchiton umbricola</i>	Cliff Cudweed		En		Confined exclusively to shaded cliff faces (often near waterfalls) and boulders above 1000 m (DELWP 2021).	Habitat very specialised - no specific EVC. Recorded during site assessments	296	12000 – 20000	-
<i>Euphrasia crassiuscula</i> subsp. <i>crassiuscula</i>	Thick Eyebright		Vu	Endemic	Occurs in high-subalpine to alpine locations, especially grassy areas, in or near Snow gum woodland, also in low alpine heath (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Alpine Grassy Heathland ▪ Alpine Grassland 	56	Unknown	0.0243
<i>Euphrasia crassiuscula</i> subsp. <i>eglandulosa</i>	Thick Eyebright		Vu	Endemic, Restricted	Occurs in low alpine heath and alpine herbfields usually in grassy areas, but occasionally in stony tracts. It has also been collected within areas of shrubs in sparse Snow Gum woodland or in wide areas of heathland between Snow Gums (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland ▪ Alpine Grassland ▪ Sub-alpine Shrubland 	48	Unknown	0.0225
<i>Euphrasia crassiuscula</i> subsp. <i>glandulifera</i>	Thick Eyebright	VU	Cr	Endemic, Restricted	Confined to higher mountain treeless areas at an altitude above 1650 metres. It has been recorded in tall alpine herbfield (alpine meadow), margins of low alpine heath and open grassy sites, sometimes on stony terrain (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Dwarf Heathland 	12	500 – 2000	0.0117

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<i>Euphrasia eichleri</i>	Bogong Eyebright	VU	En	Endemic	Confined to alpine and subalpine areas. Occurs in low open grassland, heath and Sphagnum bogs. On the Bogong High Plains this includes low open damp sites typically associated with <i>Poa costiniana</i> and <i>Empodisma minus</i> (D. Frood pers. comm.)	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Alpine Grassy Heathland ▪ Alpine Grassland 	56	< 2000 (1130 – 15000)	0.0126
<i>Ewartia nubigena</i>	Silver Ewartia		En		Found in low herbfields, often amongst rocks (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland ▪ Alpine Grassland ▪ Alpine Dwarf Heathland 	92	30000 – 50000	0.0117
<i>Geranium brevicaule</i>	Alpine Crane's-bill		En		Typically occurs in grasslands and herbfields of treeless sub-alpine and alpine areas. Database records also indicate it has been found in Sub-alpine Woodland and Damp Grassland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Damp Grassland ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland 	90	Unknown	0.0251
<i>Geranium potentilloides</i> var. <i>abditum</i>	Soft Crane's-bill		En		Typically grows in or adjoining subalpine woodlands, often in areas with exposed rock. Records indicate it also extends to both drier and wetter forests at lower elevations including Wet Forest (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Montane Damp Forest 	114	Unknown	0.0154
<i>Grevillea victoriae</i> subsp. <i>victoriae</i>	Royal Grevillea		En	Endemic	Grows at altitudes between 1400 – 1900 m. Typically recorded in Sub-alpine Woodland, but can extend into montane forests. Often recorded on boulder strewn sites.	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Montane Damp Forest 	328	20000 – 40000	0.0154
<i>Hakea lissosperma</i>	Mountain Needlewood		Vu		Scattered in rocky, high sub-alpine to alpine areas. Can be locally common (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Alpine Grassy Heathland 	154	Unknown	0.0182
<i>Herpolirion novae-zelandiae</i>	Sky Lily		En		Moist peaty herbfields and grasslands above 1200 m throughout the alps. Difficult to detect unless in flower (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	168	20000 – 40000	0.0015
<i>Hierochloa submutica</i>	Alpine Holy-grass		En		Occurs on boggy sites at high altitudes (e.g., soaks at gully heads) (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	40	Unknown	0.0015
<i>Hookerchloa eriopoda</i>	Snow Fescue		Vu		Occurs in montane to subalpine woodlands and forests (including damp forests) with grassy understories on a variety of geological substrates (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Montane Damp Forest 	96	Unknown	0.0154
<i>Huperzia australiana</i>	Fir Clubmoss		En		Restricted alpine or subalpine areas to 2000 m in scrubs or wet heathlands e.g. the Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	147	90 – 350	0.00075
<i>Isolepis gaudichaudiana</i>	Benambra Club-sedge		Vu		Occurs in moist open situations at alpine and subalpine elevations, and sometimes at lowland elevations. Most records are from wet depressions in subalpine to alpine herbfields and heathy wetlands, typically on black peaty loam (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	52	Unknown	0.0015
<i>Isolepis montivaga</i>	Fog Club-sedge		En		Occasional in alpine and subalpine areas, usually colonising bare earth e.g. track margins and drying pools. It is typically associated with wet depressions in herbfields or wet grasslands, including on the margins of fens dominated by <i>Carex gaudichaudiana</i> (Fen Sedge) or bogs dominated by Sphagnum.	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	216	> 1000	0.0015
<i>Juncus antarcticus</i>	Cushion Rush		En	Restricted	Occurs on late-lying snowpatches and the margins of bogs and creeks in alpine short herbfields (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Snowpatch Grassland ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	60	Unknown	0.0022
<i>Juncus falcatus</i> subsp. <i>falcatus</i>	Sickle-leaf Rush		En		Margins of Sphagnum bogs, streams and other swampy places in the alps and sub-alps (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland ▪ Alpine Damp Grassland 	408	Unknown	0.0015
<i>Kelleria bogongensis</i>	Snow Daphne	VU	Cr	Endemic, Restricted	Found on basalt-derived soil, growing between snow-grass tussocks in slight depressions within alpine grassland on shallow organic loams overlaying basalt. The sites are typically dominated by <i>Poa costiniana</i> . (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Damp Grassland ▪ Alpine Grassy Heathland 	12	18 – 2000	0.0181

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<i>Lachnagrostis meionectes</i>	Alpine Blown-grass		En		Occurs in alpine and subalpine grasslands and heaths. It commonly colonises damp ground of shallow depressions and drying, ephemeral pools (VicFlora 2025). It occasionally occurs in mossy areas on sloping rock faces and in, or adjoining, densely vegetated soaks or bogs (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Dwarf Heathland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	68	Unknown	0.0135
<i>Leptorhynchos squamatus</i> subsp. <i>alpinus</i>	Alpine Buttons		En		Found in grassland, herbfields and open heath communities in alpine and subalpine regions. Can be locally common.	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Damp Grassland ▪ Alpine Grassy Heathland 	132	100000 – 200000	0.0118
<i>Leucochrysum alpinum</i>	Alpine Sunray		En		Restricted to higher peaks of the Victorian Alps, usually in feldmark and low heathland on shallow rocky soils (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Dwarf Heathland ▪ Alpine Grassy Heathland ▪ Alpine Rocky Outcrop Heathland 	40	Unknown	0.0120
<i>Luzula acutifolia</i> subsp. <i>acutifolia</i>	Sharp-leaf Woodrush		En	Restricted	Occurs on shallow soils in areas where patches of late-lying snow regularly occur (DELWP 2021).	<ul style="list-style-type: none"> ▪ Snowpatch Grassland ▪ Alpine Grassland ▪ Alpine Damp Grassland 	124	8000 – 15000	0.0076
<i>Luzula alpestris</i>	Tussock Woodrush		Vu		A coloniser of bare soil, particularly the margins of bogs and soaks and in shallow depressions. Also, an occasional component of grassland and heath communities (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Valley Peatland 	705	Unknown	0.0126
<i>Luzula atrata</i>	Slender Woodrush		Cr	Restricted	Bogong High Plains on gravelly peat seepages and damp grassland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	16	500 – 1000	0.0015
<i>Lycopodium scariosum</i>	Spreading Clubmoss		Cr		Occurs in alpine and subalpine areas in Sphagnum bogs, wet heathland and edges of gravelly creeks (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	80	70 – 500	0.0015
<i>Notogrammitis crassior</i>	Alpine Finger-fern		En		Forms mats on rocks and in rock crevices, often near water in alpine and subalpine areas	(not associated with a particular EVC; most records are from subalpine areas near waterways)	48	270 – 550	-
<i>Olearia brevipedunculata</i>	Rusty Daisy-bush		En		Occurs in shrubland and heathland, as well as in alpine areas in open heath and on the margins of grassland, often near rocky sites or the edges of treelines. It is generally associated with reasonably damp areas.	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland 	104	1000 – 40000	0.0182
<i>Olearia frostii</i>	Bogong Daisy-bush		Vu	Endemic, Restricted	Typically occurs alpine heathland, and grassland, but can extend into Snow Gum Woodland.	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland ▪ Alpine Grassland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland 	276	20000 – 40000	0.0243
<i>Olearia phlogopappa</i> subsp. <i>flavescens</i>	Dusty Daisy-bush		En		Common throughout alpine and sub-alpine areas above 1300 m, often in rocky areas and usually growing in heath, shrubland and Snow Gum Woodland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassland 	204	15000 – 30000	0.0243
<i>Oreobolus pumilio</i> subsp. <i>pumilio</i>	Alpine Tuft-rush		En		Broad cold-air drainage areas and seepage zones above the treeline of the Bogong High Plains, i.e., wet heath, on peaty substrates, usually with Sphagnum present. Often the habitat is seasonally snow-covered for several months.	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	80 – 84	Unknown	0.0015
<i>Oreomyrrhis argentea</i>	Silver Caraway		En		Locally common in grassland and herbfield, often on dark, basalt-derived soils (VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	56	15000 – 40000	0.0069
<i>Oreomyrrhis brevipes</i>	Branched Caraway		En		Occurs on the Bogong High Plains on basalt outcrops in open wet heath or herbfields.	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland ▪ Alpine Grassland ▪ Alpine Damp Grassland 	12	200 – 300	0.0118
<i>Oreomyrrhis pulvinifca</i>	Cushion Caraway		En	Restricted	Known from low herbfield communities in drainage or seepage areas typically below late-lying snowpatches (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	24	Unknown	0.0015

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<i>Orthotrichum rupestre</i>	Granite Bristle-moss		En		Grows on granite and other non-calcareous rock, and less commonly on trees and shrubs (DELWP 2021).	(no specific EVC - may occur on basalt and granite rocks in alpine and subalpine areas)	108	Unknown	-
<i>Ozothamnus alpinus</i>	Alpine Everlasting		En	Restricted	Confined to the margins of wet alpine heathland and shrubland, and can be an important component of wet heathland (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Subalpine Shrubland ▪ Sub-alpine Woodland 	192	6000 – 20000	0.0147
<i>Ozothamnus stirlingii</i>	Ovens Everlasting		En		Grows in montane forest above 1000 m, usually with Mountain Ash <i>Eucalyptus regnans</i> , Mountain Gum <i>E. dalrympleana</i> , Candlebark <i>E. rubia</i> , Peppermint Gums <i>E. radiata</i> , and Snow Gum (DELWP 2021).	<ul style="list-style-type: none"> ▪ Montane Damp Forest ▪ Sub-alpine Woodland 	220	11000 – 22000	0.0040
<i>Pappochroma nitidum</i>	Sticky Fleabane		Vu		Occurs in grassland and open heathland communities.	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	216	4000 – 6000	0.0111
<i>Parantennaria uniceps</i>	Parantennaria		Cr	Restricted	Low, moist alpine herbfields on the Bogong High Plains. Often associated with the EVC 905 – Alpine Short Herbland (this EVC was not recorded in the project area).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland 	8	Unknown	0.0007
<i>Pentachondra pumila</i>	Carpet Heath		En		Occurs in higher alps, predominantly in moist open grassland or heathland communities (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland 	124	20000 – 40000	0.0007
<i>Persoonia subvelutina</i>	Velvety Geebung		En		Typically confined to shaded slopes in montane and subalpine forests. It is frequently associated with tall open-forests dominated by Alpine Ash, less frequently with Mountain Gum, and sometimes extending into stands of Mountain Tea-tree <i>Leptospermum grandifolium</i> (DEECA 2021).	<ul style="list-style-type: none"> ▪ Montane Damp Forest 	36	Unknown	0.0022
<i>Phebalium squamulosum</i> subsp. <i>alpinum</i>	Alpine Phebalium		En		Typically occurs rock areas in subalpine and alpine woodlands and shrublands below the treeline. Extends into treeless areas on the Bogong High Plains.	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassy Heathland ▪ Alpine Grassland ▪ Alpine Rocky Outcrop Heathland 	308	30000 – 50000	0.0246
<i>Pimelea axiflora</i> subsp. <i>alpina</i>	Alpine Bootlace Bush		Vu		Grows in alpine to subalpine habitats above 1500 m, predominately in in rocky areas (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassland 	172	Unknown	0.0194
<i>Pimelea biflora</i>	Matted Rice-flower		En		In dry alpine and sub-alpine <i>Poa</i> tussock dominated grassland and open herbfields, heathland or woodland at altitudes of c. 1500 m (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	148	Unknown	0.0243
<i>Pimelea ligustrina</i> subsp. <i>ciliata</i>	Fringed Rice-flower		En		In alpine or subalpine areas at altitudes over 1400 m, often in Snow-gum woodland (VicFlora 2025, DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassy Heathland 	108	Unknown	0.0182
<i>Plantago alpestris</i>	Veined Plantain		Vu		Confined to higher altitude regions, where it grows in grassland or herbfield, often beside streams or around bogs (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	156	30000 – 50000	0.0076
<i>Plantago glacialis</i>	Small Star-plantain		En	Restricted	Occurs in short alpine herbfield in seepage areas below snow patches (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland 	40	5000 – 10000	0.0007
<i>Podolepis laciniata</i>	High-plain Podolepis		En		Mostly occurs in grassy habitats near the treeline (Snow Gum Woodland) or below (1200 – 1700m ASL). It occasionally occurs with <i>P. robusta</i> , but is usually at lower altitudes (VicFlora 2025).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	96	Unknown	0.0243
<i>Poranthera oreophila</i>	Mountain Poranthera		En		Occurs in grassland and Snow Gum woodland, at over 1400 m ASL (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassland 	24	1500 – 3000	0.0194
<i>Prasophyllum sphacelatum</i>	Large Alpine Leek-orchid		En		Confined to alpine plains and sub-alpine meadows, herbfields and Snow Gum woodlands, often in moist to wet areas among tussock grasses e.g. around sphagnum bog margins and along creek lines (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	62	3200 – 7200	0.0033

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Habitat	Associated EVCs within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Psychrophila introloba</i>	Alpine Marsh-marigold		En		Locally common in areas of late-lying snow, wet grasslands and in alpine bogs on the higher ranges. Can also form a herbfield community on stony pavements, including steep slopes at the head of wetlands or on flat ground (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Snowpatch Grassland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Grassland ▪ Alpine Grassy Heathland 	224	150000 – 250000	0.0128
<i>Pterostylis crassicaulis</i>	Alpine Swan Greenhood		En		Alpine and subalpine grasslands and herbfields on well-drained to seasonally moist loam or peaty soils (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Damp Grassland ▪ Alpine Grassy Heathland 	56	3000 – 6000	0.0118
<i>Pultenaea capitellata</i>	Hard-head Bush-pea		En		Confined to wet areas adjacent to sub-alpine woodland and in alpine heath on the Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassy Heathland 	48	Unknown	0.0049
<i>Pultenaea fasciculata</i>	Alpine Bush-pea		En		Alpine herbfields, margins of bogs and subalpine woodlands (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Valley Peatland ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland 	141	Unknown	0.0201
<i>Ranunculus eichlerianus</i>	Eichler's Buttercup		En	Endemic	Occurs in alpine grassland and herbfields, open heaths, alpine marsh communities (in running water) and hillside soaks, as well as Snow Gum Woodland; sites may be rocky or without surface soaks (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland 	256	Unknown	0.0243
<i>Ranunculus gunnianus</i>	Gunn's Alpine Buttercup		En		Is locally common in damp grassland, herbfields and bogs throughout the higher alps (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	284	50000 – 100000	0.0015
<i>Ranunculus millanii</i>	Dwarf Buttercup		En		Restricted to shallow (often ephemeral) pools and depressions prone to inundation (VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Valley Peatland 	252	20000 – 40000	0.0008
<i>Ranunculus muelleri</i>	Felted Buttercup		En	Restricted	Favours exposed sites usually with shallow soils overlying basalt. Herbarium notes indicate that this species occurs in wetter sites, such as damp herbfield and swampy grasslands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland 	104	1000 – 2000	0.0007
<i>Ranunculus victoriensis</i>	Victorian Buttercup		En	Endemic	Largely confined to damp grassland and open heathlands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Sub-alpine Woodland 	220	10000 – 40000	0.0144
<i>Rytidosperma alpicola</i>	Crag Wallaby-grass		Vu		A characteristic species of exposed rock crags and ledges of the higher alps. Although considered a habitat specialist, the habitat can be quite extensive, locally. These areas are often inaccessible on very steep slopes (DELWP 2021).	<ul style="list-style-type: none"> ▪ Snowpatch Grassland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Dwarf Heathland 	250	Unknown	0.0017
<i>Rytidosperma australe</i>	Southern Sheep-grass		Cr	Restricted	Occurs in broad, wet, gravelly creek beds and margins on the Bogong High Plains near Mt Cope. Associated species can include <i>Oreobolus pumilo</i> , <i>Deschampsia caespitosa</i> , <i>Sphagnum</i> and <i>Carex gaudichaudiana</i> (DEECA 2021)	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	4	Unknown	0.0015
<i>Rytidosperma nivicola</i>	Snow Wallaby-grass		En		Occurs in wet alpine heathland and sphagnum and other alpine bog communities (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	160	Unknown	0.0015
<i>Rytidosperma oreophilum</i>	Mountain Wallaby-grass		En		Typically grows in rocky areas above 1300 m in the eastern ranges (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Rocky Outcrop Heathland ▪ Sub-alpine Woodland ▪ Sub-alpine Grassland ▪ Alpine Grassland 	92	Unknown	0.0197
<i>Saxipoa saxicola</i>	Rock Poa		En		Inhabits heathland/grassland communities, mostly above c. 1500 m and is usually associated with rocks. Sites tend to be more damp than dry, and occasionally support closed heaths that include <i>Richea continentis</i> (but not sphagnum-dominated). It has been collected from the margin of a large snowpatch community at Mt Hotham (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Rocky Outcrop Heathland ▪ Snowpatch Grassland 	72	650 – 2000	0.0018
<i>Schizeilema fragoseum</i>	Alpine Pennywort		En		Moist alpine herbfields, rock crevices and near streams (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland 	76	Unknown	0.0007
<i>Scleranthus brockiei</i>	Brock Knawel		En		Typically found in sub-alpine to alpine grasslands (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Sub-alpine Shrubland 	52 – 250	Unknown	0.0176

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Scientific name	Common name	EPBC Status	FFG Status	Occurrence in Victoria	Habitat	Associated EVCs within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Scleranthus diander</i>	Tufted Knawel		En		Extends from montane areas to the highest alpine areas. Occurs in montane grasslands and open woodlands (above 500 m) often in stony soils. Is typically associated with skeletal soils on dry rocky slopes, ridgelines, cliffs, summits, or flat basalt pavements (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Snowpatch Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Dwarf Heathland 	226 – 234	Unknown	0.0260
<i>Scleranthus singuliflorus</i>	Mossy Knawel		En		Grows in alpine and subalpine herbfields and tussock grasslands, usually above 1600 m (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland 	216	30000 – 50000	0.0243
<i>Senecio extensus</i>	Alpine Fireweed		En		Confined to alpine grasslands, usually <i>Poa</i> dominated, above 1,500 m, as well as open grassy cold air drainage lines at around 800 m ASL (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Alpine Damp Grassland 	84	Unknown	0.0118
<i>Senecio pectinatus</i> var. <i>major</i> (now <i>Scapisenecio pectinatus</i>)	Alpine Groundsel		En		Restricted to the higher ranges, occurring on damp ground in herbfields open heath communities and fringing Sphagnum dominated communities (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	140	Unknown	0.0015
<i>Senecio pinnatifolius</i> var. <i>alpinus</i>	Snowfield Groundsel		En		Occurs in sub-alpine forest and woodland, as well as above the treeline in damp herbfields and grasslands (DELWP 2021)	<ul style="list-style-type: none"> ▪ Sub-alpine Woodland ▪ Sub-alpine Shrubland ▪ Alpine Damp Grassland 	140	Unknown	0.0140
<i>Stackhousia pulvinaris</i>	Alpine Stackhousia		En		Occurs in alpine herbfields and alpine-sub alpine grasslands, often in small depressions that are inundated following snow melt (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Alpine Damp Grassland ▪ Alpine Grassland 	176	2500 – 5000	0.0183
<i>Stylidium montanum</i>	Alpine Triggerplant		En		Occurs in montane, sub-alpine and alpine herbfields in at least seasonally wet habitats, including cold-air drainage lines, spring soaks, and swamp margins. The substrate is often peaty or organic-rich (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Subalpine Shrubland ▪ Subalpine Woodland 	96	Unknown	0.0147
<i>Taraxacum aristum</i>	Mountain Dandelion		En		Grasslands and Grassy Woodlands in alpine and sub-alpine areas (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Grassland ▪ Alpine Shrubland 	100	Unknown	0.0176
<i>Trachymene humilis</i> subsp. <i>breviscapa</i>	Alpine Trachymene		En		Locally common in moist alpine and higher sub-alpine grasslands and herbfields, often bordering streams and seepage zones between the Baw Baw Plateau and Bogong High Plains (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Alpine Damp Grassland ▪ Alpine Grassland ▪ Alpine Valley Peatland 	72	10000 – 20000	0.0190
<i>Usnea acromelana</i>	Black-beard Lichen		Cr	Restricted	On the mainland, it is likely a habitat specialist, restricted to basalt outcrops (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Rocky Outcrop Heathland ▪ Alpine Dwarf Heathland 	4	Unknown	0.0010
<i>Utricularia monanthos</i>	Tasmanian Bladderwort		En		Found in very wet soil by streams and pools (DELWP 2021, VicFlora 2025).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland 	40	20000 – 40000	0.0015
<i>Veronica nivea</i>	Milfoil Speedwell		En		Scattered in alpine and subalpine grassland, heath, bogs and woodlands often in disturbed habitats (e.g. track margins). Large post-fire recruitment was recorded after the 2009 fires around the edges of wet heathland/bog. It is considered to be rare in older vegetation but appears to regenerate profusely after fire (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Alpine Grassland ▪ Alpine Grassy Heathland ▪ Sub-alpine Woodland 	92	20000 – 40000	0.0144
<i>Viola fuscoviolacea</i>	Dusky Violet		En		Occurs on permanently moist peaty substrates around montane swamps and cold air drainage lines to treeless alpine herbfields and peatlands. Also recorded in high-rainfall subalpine Snow Gum Woodlands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Alpine Damp Grassland ▪ Alpine Valley Peatland ▪ Sub-alpine Woodland 	128	Unknown	0.0033
<i>Westringia senifolia</i>	Alpine Westringia		En	Endemic	Usually occurs on shallow soils amongst rock in exposed shrubland communities, or in Snow Gum woodlands (DELWP 2021).	<ul style="list-style-type: none"> ▪ Sub-alpine Shrubland ▪ Sub-alpine Woodland ▪ Alpine Grassy Heathland ▪ Alpine Rocky Outcrop Heathland 	134	10000 – 20000	0.0185

7.5 Fauna species

Threatened fauna species have been recorded and/or are predicted to occur across the FHAC, in all sections of the trail alignment and at all three Overnight Nodes. Eleven threatened fauna species were recorded in the project area during site assessments and limited targeted surveys, and a further 21 species are considered likely to occur. The assessment of potential impacts to fauna species is based on the currently known distribution and habitat requirements of the species, where species identified by Abzeco (2025) as potentially occurring within the project area, are assumed to be present within areas of suitable habitat. Potential impacts have been identified for 28 of the thirty threatened species that are considered likely to occur within the FHAC project area.

The potential impacts to fauna species for this project are primarily related to habitat loss and disturbance, including the potential loss of sheltering or basking habitat, overwintering habitat, and food resources. The areas of habitat loss and/or modification are relatively small, and will occur along a narrow, linear corridor, predominantly along existing tracks, and at Overnight Nodes within areas currently used for camping; habitat losses are therefore not expected to cause further habitat fragmentation or significantly impact the overall availability and use habitats by threatened species. Estimated areas of habitat loss and disturbance for threatened fauna are based on conservative estimates of total native vegetation losses in all areas where a species has been identified as likely to be present (refer to Section 7.1 for calculation of native vegetation losses). However, not all of the area estimated to be impacted will be lost, and not all areas of suitable habitat is likely to be occupied by the species. Areas of Occupancy have been used to assess the scale of potential habitat losses for threatened fauna species.

For some species, particularly ground-dwelling species that use rocks, logs, burrows or runways in dense vegetation close to tracks (e.g., alpine skinks, Broad-toothed Rat), or within Overnight Nodes, there is a risk of direct injury or mortality during construction works caused by soil excavation, crushing by machinery or laydown of materials and foot traffic. These risks will be managed through pre-construction surveys, micro-siting of works and laydown areas, habitat protection measures and salvage protocols, to be implemented as part of a Fauna Management Plan (see Section 7.9).

Potential indirect and/or facilitated impacts on fauna species include:

- The introduction of spread of pathogens (particularly amphibian chytrid fungus).
- Anthropogenic disturbance, from noise or light pollution.
- Increased predation.
- Habitat modification or degradation.

The potential impacts for threatened species and groups of threatened species are discussed below and in Sections 7.5.3 and 7.5.4.

7.5.1 Pathogens

Amphibian Chytrid Fungus infection (Chytridiomycosis) is the most severe disease of wild amphibians. The disease has been implicated in the rapid decline or extinction of up to 200 amphibian species worldwide, including for declines in the Spotted Tree Frog *Litoria spenceri* and Alpine Tree Frog *Litoria vereauxii alpina* (Skerratt et al. 2007, DoE 2016, DELWP 2021).

Chytridiomycosis is a virulent, water-dispersed disease, caused by the fungus *Batrachochytrium dendrobatidis*, which infects the keratinised epidermal cells of amphibians, inhibiting the water regulating function of the skin (Carver et al. 2010, Piotrowski et al. 2014). Free-living saprophytic forms of the fungus may be found in water and soil, and are capable of remaining viable in moist substrates for up to three months (Johnson and Speare 2005). Wild amphibians are therefore, naturally at risk of exposure to infectious disease via contact with the environment, such as water, moist substrates and other amphibians. Human-mediated contamination is also a risk factor in its spread.

Chytrid fungus is considered to be widely distributed in Australia, including alpine and sub-alpine areas. However, even in infected areas, control measures are important to prevent the introduction and spread of new, and potentially

more virulent, strains (Heard et al. 2012). Hygiene controls, as outlined in Section 7.9 will be implemented to manage the risk of introducing and/or spreading the disease.

7.5.2 Disturbance

Disturbance to fauna species from the FHAC project may include:

- Noise disturbance during construction activities from helicopters (for airlifting of materials), small machinery and tools.
- Noise disturbance from helicopters to service toilets at Westons Hut and High Knob.
- Human disturbances from visitor facilities and increased visitation (noise and light pollution).

Noise disturbance

Anthropogenic noise pollution is known to impact wildlife with some animals reported to temporarily or permanently avoid areas affected by noise. Noise cannot only alter habitat use and disrupt foraging or resting activities, but also interfere with communication between individuals, including the ability to find mates, detect predators or prey (Newport et al. 2014). Studies have also shown higher levels of stress hormones in animals exposed to anthropogenic noise, which can weaken their immune system and reduce reproductive success. Different species exhibit differing levels of sensitivity to noise.

Many groups of species have been found to be affected by noise, including birds, mammals, amphibians, reptiles, fish and invertebrates (Sordello et al. 2020). Noise generated by the FHAC has the greatest potential to impact on mammals and reptiles (Abzeco 2025).

The sources of noise pollution from the FHAC will primarily be from helicopters that are required to airlift materials during the construction of the Overnight Node facilities and for trail works. Only small machinery will be used for most of the construction works, and much of the work will involve hand construction and hand-held machinery or tools. The potential impacts of disturbance during construction are likely to be temporary and of short duration within any given area of works.

The ongoing effects of disturbance associated with recreational use of the FHAC are likely to be minimal. While the upgraded FHAC is intended to drive increased visitation to the region, the alignment is located on the existing trail network, which already experiences disturbance from visitation. Usage has been projected to increase by approximately 4% by 2050 (see Section 5.5). However, the capacity of Overnight Nodes is limited by the number of Camping Platforms (12 at each node), and the use of the Overnight Nodes as camping areas will not change. There is little information about the noise impacts of outdoor recreation on species that are likely to occur within the project area, but hiking and camping are considered to be relatively low-intensity land uses (Pickering et al. 2003).

Light pollution

Artificial light pollution is a major concern for biodiversity conservation, known to negatively impact many species and ecological communities (DoEE 2020). Light pollution can alter the natural rhythms of day and night, disrupting circadian rhythms, and causing physiological and behavioural changes. For many species, the impacts can be serious, disorienting species that use moonlight to navigate (Longcore and Rich 2004, Hölker et al. 2010). It can also indirectly change the availability of habitat or food resources, and can attract predators and invasive pests; in particular, many insects have a strong attraction to artificial light sources (Longcore and Rich 2004). Artificial light pollution can therefore impact individual animals' health and fitness, as well as alter the food sources, community structure and ecosystems (DoEE 2010).

Lighting for visitor facilities at Overnight Nodes will only be provided at the communal shelter at High Knob. All lighting will be internal only; no external lighting will be provided on the shelter building. The artificial light glow from this building is expected to be minimal, and no more than the torch lights of campers. Artificial light sources for the FHAC project are therefore, not expected to significantly impact fauna species.

7.5.3 Increased predation

The impacts of predation by the European Red Fox *Vulpes vulpes*, and feral Cats *Felis catus* on native wildlife are well established, and have been implicated in the decline of numerous native mammals, birds, and reptiles (Saunders et al.

2010, Doherty et al. 2017). Species most vulnerable to the impacts of predation are small to medium-sized, ground-dwelling species, which includes many of the threatened fauna species likely to occur in the project area.

There is evidence to suggest that many predators, including European Red foxes and Cats, preferentially move along roads and walking tracks (Newsome et al. 1983, Claridge 1998), particularly through intact landscapes, which make these areas easier to traverse, provide opportunities for scent-marking, and may increase hunting efficiency (May and Norton 1996, Meek and Saunders 2000). The construction of access tracks can, therefore, facilitate the movement of predators and increase their ingress into natural landscapes, thereby increasing the effects of predation on native fauna. The Alpine National Park has a relatively extensive and well-established track network. The re-aligned and upgraded FHAC project uses the existing track network, and will not involve the construction or widening of tracks. New tracks proposed in the Master Plan have been removed from the project. The project will, therefore, not increase or alter the movement patterns of introduced predators through the landscape. In addition, some trail structures to be installed, such as elevated boardwalks, are likely to make the trails more difficult for predators to traverse.

There is a small risk that installing elevated structures within treeless alpine vegetation can provide perches that predatory birds can exploit to increase predation on terrestrial fauna, such as reptiles (Abzeco 2025). The elevated boardwalks to be installed along the track will be constructed to 0.35 m above ground to allow vegetation growth beneath the structure. However, no hand rails will be installed on boardwalks that may have provided perching sites for birds of prey.

7.5.4 Habitat modification and degradation

Habitat modification and degradation along the proposed trail alignment and at Overnight Nodes can occur during construction works through damage or trampling of vegetation, disturbance to fauna burrows, tunnels or nests, removal of important habitat features such as rock and logs, and soil erosion. As the FHAC trail is aligned on existing trails, the potential for these impacts is relatively low, and limited in extent to the edges of existing tracks. Overnight Nodes are also located in areas that are already used for camping and are already subject to a level of disturbance. A number of measures will be put in-place to limit disturbance during construction to the minimum extent necessary for construction. This includes measures to contain works to existing tracks and designated laydown areas, pre-construction surveys and micro-siting of structures to avoid destruction and disturbance to fauna and critical habitat features. Best-practice sediment and erosion controls will be implemented to prevent erosion and sediment-laden run-off from entering nearby aquatic habitats (see Section 7.9).

The potential ongoing effects of the operation and use of the trail and Overnight Nodes, which are typically associated with hiking and camping, include trampling of native vegetation, the collection of wood for campfires, collection of rocks for rock stacking and creating borders on campfires, littering and human waste (Pickering et al. 2003, Abzeco 2025). These effects are likely to be most concentrated at Overnight Nodes. The selection of Overnight Node locations that are already used for camping is the primary means of limiting these potential effects. The design of the Overnight Nodes also considers these impacts and incorporates internal gravel paths between facilities, such as camping platforms and gathering areas. The tracks are intended to limit trampling of vegetation across the entire area. In addition, toilet facilities will be provided at each of the Overnight Nodes to contain human wastes. Campfires will not be permitted at any of the Overnight Nodes.

7.5.5 EPBC Act-listed fauna species

Twenty fauna species listed under the EPBC Act were identified as potentially occurring within the FHAC project area (Abzeco 2025, see Table 22). Potential impacts have been identified for 18 of these species. They include 14 species impacted by the direct loss or disturbance to known or potential habitats as a result of the proposed trail upgrades and construction of the Overnight Nodes. They are the:

- **Gang-gang Cockatoo** *Callocephalon fimbriatum*, which is most likely to occur in the montane environments of the West Kiew Valley, but may also utilise Sub-alpine Woodlands.
- **Alpine She-oak Skink** *Cyclodomorphys praealtus*, **Guthega Skink** *Liopholis guthega* and **Mountain Skink** *Liopholis montana*, which occur in the low open alpine heathlands and grasslands that are widespread in the project area.
- **Alpine Water Skink** *Eulamprus kosciuskoi* and **Alpine Bog Skink** *Pseudemoia cryodroma*, which occur near wet or damp alpine and sub-alpine habitats, such as damp grasslands and alpine peatlands.

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- **Broad-toothed Rat** *Mastacomys fuscus*, which is most likely to occur along waterways and damp habitats, including the tributaries and bog systems on the Bogong High Plains.
- **Latham's Snipe** *Gallinago hardwickii*, **Alpine Tree Frog** *Litoria verreauxii alpina* and **Alpine Stonefly** *Thaumatoperla alpina*, which may occur in wetland environments such as alpine bog and small tributaries.
- **Spot-tailed Quoll** *Dasyurus maculatus maculatus*, **Long-nosed Potoroo** *Potorous longipes*, **Smoky Mouse** *Pseudomys fumeus* and **Pilotbird** *Pycnoptilus floccosus* — ground dwelling forest-dependent species that potentially occur in Montane Damp Forest in the West Kiewa valley.
- **Greater Glider** *Petauroides volans* and **Yellow-bellied Glider** *Petaurus australis australis* — arboreal mammals that were recorded in Montane Damp Forest in the West Kiewa valley.

Most of these species are expected to occur along the trail alignment rather than at Overnight Nodes, and a number of these species were recorded within the project area during site assessments, including some in close proximity to the existing track. Pre-construction surveys will be undertaken to ensure that these species are not injured or disturbed during works. It is expected that impacts to most of these species can be avoided by micro-siting the placement of trail structures (e.g., the placement of stepping stones, water bars, laydown areas) and visitor facilities (e.g., camping platforms). The total areas of habitat disturbance for these species are relatively small (0.03 – 2.75 ha) and are less than 1% on the known Area of Occupancy for all species (see Table 22). Given the relatively small areas of disturbance, most of which will occur along existing tracks, it is not expected that the project would have a significant impact on these species (see Appendix 3).

Habitat for two species will not be directly affected by the proposed works but may be impacted by downstream impacts if works are not managed appropriately:

- **Murray Spiny Crayfish** *Euastacus armatus*
- **Spotted Tree Frog** *Litoria spenceri*

Potential impacts to the habitat of species will be managed by best-practice construction management techniques; this includes hygiene controls for Chytrid fungus, sediment and erosion controls, and chemical contamination controls, which will be outlined in a CEMP. With these measures in-place, impacts to these species are considered unlikely.

Two species will not be impacted by the proposed works:

- The **Mountain Pygmy Possum** *Burramys parvus* was identified as potentially occurring in boulder fields and basalt blockstreams on parts of the Fainter Fire Trail (Section 17), and at an alternative Overnight Node (1G). These areas have been removed from the project. Suitable habitat within the FHAC project area was identified in a small area of boulder field along Section 5, near Wallace Hut (Abzeco 2025). No works are proposed along Section 5 of the FHAC. Therefore, habitat for the Mountain Pygmy Possum will not be affected by the project.
- The **White-throated Needle-tail** *Hirundapus caudacutus* was identified as potentially occurring across the entire project area. The White-throated Needle-tail is almost exclusively an aerial species in Australia, flying at between 1 and 1000 m, and sometimes more than 1800 m above ground. The proposed FHAC is not expected to impact the White-throated Needle-tail, or its habitat, given the almost exclusively aerial habitat of this species in Australia. White-throated Needle-tails are most likely to be impacted by large structures which cause a collision risk (e.g., wind turbines, tall buildings) or by substantial loss or modification of important habitat (DoE 2015). There are no components of the FHAC that encroach significantly on the aerial environment, and the project area is not known to support important habitat for the species.

Two species listed under the Migratory Schedule of the EPBC Act are considered likely to occur within the project area — Latham's Snipe and the White-throated Needle-tail. Both species are also listed as threatened under the EPBC Act. The project area is not known to support important habitat for either of these species.

Potential impacts to EPBC Act-listed fauna species are discussed in more detail in Appendix 3, which includes an assessment of impacts against each of the Significant Impact Criteria, with justification, for each of the species potentially impacted by the project.

7.5.6 FFG Act-listed fauna species

Eighteen fauna species listed under the FFG Act were identified as potentially occurring within the project area, which includes eight species also listed as threatened under the EPBC Act. Two of these species were recorded in the project area:

- The **Platypus** *Ornithorhynchus anatinus* was recorded near the Diamantina Horse Yards and is considered likely to occur in the waterways of the west Kiewa Valley, in the Kiewa River West Branch and Diamantina River. The FHAC intersects these waterways at Section 12. No works are proposed at these waterway crossings and existing crossings will be left in-place. With the implementation of best-practice construction techniques for any nearby works, the Platypus is unlikely to be impacted by the project.
- The **Tussock Skink** *Pseudemoia pagenstecheri* is locally common on the Bogong High Plains and is likely to be the most common and widespread reptile species within the project area. Suitable habitat occurs along the majority of the project area, wherever there is cover of grass tussocks and low-growing shrubs with little or no tree cover. Habitat disturbance for this species will occur along the trail alignment and at proposed Overnight Nodes, but predominantly along the trail, totalling to 2.72 ha. These losses will occur over multiple small areas and mostly at the edges of existing tracks. These areas are relatively minor in the context of habitat available in the broader landscape, which is extensive.

The remaining species were not recorded within the project area but are assumed to occur within areas of suitable habitat. They include:

- Five species of aquatic fauna — **Alpine Darner** *Austroaeschna flavomaculata*, **Freshwater Isopod** *Colubotelson joyneri*, **Stonefly** *Riekoperla intermedia*, **Alpine Spiny Crayfish** *Euastacus crassus*, and **Mountain Galaxias complex** *Galaxias olidus* (cf). Areas of potential habitat disturbance for these species is minor (0.08 ha) and is restricted to a few locations where elevated boardwalks and stepping stones are proposed on the existing trail. These works involve no to minimal excavation and sensitive construction techniques will be implemented that will include — building from the trail, utilising the existing tracks for temporary laydown of materials and equipment, minimising foot traffic either side of the track, and avoiding disturbance of habitat features such as rock. With these measures in-place, impacts to aquatic fauna from the project are expected to be minimal.
- Two owl species were identified as potentially occurring within and around the FHAC project area — **Powerful Owl** *Ninox strenua* and **Sooty Owl** *Tyto tenebricosa*. These species are forest-dependent species that have the potential to occur at lower-elevations in the West Kiewa valley. Potential impacts are expected to be minimal for both species. Estimated habitat losses represent less than 1% of their Area of Occupancy, and canopy trees within the project area will largely be retained through micro-siting of the trail works. Works identified as potentially impacting Large Trees will be re-positioned to avoid Large Tree losses. In addition, no works will be undertaken at night to avoid disturbance to owls and other nocturnal fauna, and high-impact activities (e.g., groundworks, machinery causing noise and vibrations, and lighting, will not be used around dawn or dusk).
- The **Dingo** *Canis lupus dingo* is expected to potentially occur throughout the project area. Dingoes range widely and individuals are expected to at least pass through most of the area; some parts of the FHAC may fall within the core range of some individuals. However, not all areas will be occupied or visited consistently throughout the year (Abzeco 2025). Given the large areas across which this species ranges and the small scale of the proposed works and habitat losses, the project is considered to have a negligible impact on the Dingo.

The project will not lead to the total loss or disturbance of more than 1% of known remaining habitat for any of the above species (see Table 22).

Table 22 Potential impacts to fauna species considered likely to occur within the project area

Scientific name	Common name	EPBC Status	FFG Status	Habitat within the project area	Potential locations within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Austroaeschna flavomaculata</i>	Alpine Darner Dragonfly		vu	Suitable habitat for the Alpine Darner was identified in drainage lines and Alpine Bog communities along Trail Sections 6 and 7 (Abzeco 2025).	Sections 6 and 7	44	Unknown	0.0008
<i>Burrhamys parvus</i>	Mountain Pygmy Possum	En	en	Suitable habitat for the Mountain Pygmy Possum within the FHAC project area was identified in a small area of boulder field along Section 5, near Wallace Hut (Abzeco 2025).	Section 5	148	< 1500 (Mount Bogong – Mount Higginbotham)	0.0000
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	En	en	Suitable habitat in the project area occurs in Montane Damp Forest in Section 12 and areas of Sub-alpine Woodland throughout the project area, for foraging.	Section 4, 11, 12, 13, 15, and Cope Hut, Westons Hut, and High Knob	30,000 (Australian population)	25,300 (Australian population)	0.0084
<i>Canis lupus dingo</i>	Dingo		vu	The Dingo is expected to potentially occur throughout the FHAC assessment area but not consistently through all areas or throughout the year. Dingoes range widely and individuals are expected to at least pass through most of the area.	All areas	1990	300 – 800	0.0355
<i>Colubotelson joyneri</i>	Freshwater Isopod		cr	Suitable habitat for <i>C. joyneri</i> occurs in Alpine Bog communities and small pools/drainage lines along Trail Sections 4, 6 and 7 (Abzeco 2025).	Sections 4, 6 and 7	8	Unknown	0.0008
<i>Cyclodomorphys praealtus</i>	Alpine She-oak Skink	En	cr	Suitable for the Alpine She-oak Skink occurs broadly across the high plains within the FHAC project area, although not uniformly within Sections 1a, 2 – 11, 13, 14, 15, and at all three proposed Overnight Nodes.	Section 2, 3, 4, 5, 6, 7, 11, 13, 14, 15, Cope Hut, Westons Hut and High Knob	104	250 – 3500	0.0166
<i>Dasyurus maculatus maculatus</i>	Spot-tailed Quoll (south-eastern mainland)	En	en	Suitable habitat for the Spot-tailed Quoll occurs in lower-elevation Montane Damp Forest in the West Kiewa valley.	Section 12	419	100 – 500	0.0022
<i>Euastacus armatus</i>	Murray Spiny Crayfish	Vu	Th	Suitable habitat within the FHAC assessment area was identified where waterways cross lower-elevation sections of the FHAC trail alignment, including Diamantina River and Kiew River West Branch.	Section 12	1280 – 2012 (Australian population)	> 10,000 (Australian population)	0.0000
<i>Euastacus crassus</i>	Alpine Spiny Crayfish		en	Suitable habitat for the Alpine Spiny Crayfish was identified in small waterways crossings that intersect the FHAC in Sections 4, 6, 7 and 12.	Sections 4, 6, 7 and 12	102	Unknown	0.0008
<i>Eulamprus kosciuskoi</i>	Alpine Water Skink	VU	en	Suitable for the Alpine Water Skink in the project area occurs in alpine bogs and small waterways/drainage lines which were identified in Sections 1a, 6, 7, 11.	Sections 6, 7 and 11	192	500 – 5,000	0.0013
<i>Galaxias olidus</i> (complex)	Mountain Galaxias		n/a	Headwater streams to the main reaches of rivers and creeks, including on forested slopes and in bog systems on the highland plains (Kuitert 2016).	Section 6	-	-	0.0008
<i>Gallinago hardwickii</i>	Latham's Snipe	VU, Mi		Suitable habitat for Latham's Snipe, in the project area includes areas of grasses, sedges and rushes adjacent to alpine bogs and riparian areas along trail Sections 1a, 6, 7 and 9.	Sections, 6, 7	13, 000 (Australian population, DCCEEW 2024)	19,000 (Australian population, DCCEEW 2024) 30,000 (Weller et al. 2020)	0.0009
<i>Hirundapus caudacutus</i>	White-throated Needletail	Vu, Mi	vu	The White-throated Needletail has the potential to occur throughout the FHAC area. It is almost exclusively aerial in Australia, flying at between 1 and 1000 m, and sometimes > 1800 m above ground. The White-throated Needletail is transitory at most sites in Australia and is only expected to occasionally fly over the FHAC assessment area (Abzeco 2025).	All areas	> 18,000 (Australia)	Unknown	0.000
<i>Liopholis guthega</i>	Guthega Skink	En	cr	The Guthega Skink is known to occur on Heathy Spur, and colonies were recorded along Section 2 of the FHAC trail. Additional potential colonies, indicated by the presence of burrows, were recorded along Trail Section 7 (Abzeco 2025).	Section 2, 7	36	360	0.0021

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Scientific name	Common name	EPBC Status	FFG Status	Habitat within the project area	Potential locations within the project area	Area of Occupancy (km ²)	Population size	Area of habitat loss (km ²)
<i>Liopholis montana</i>	Mountain Skink	En	en	Suitable habitat for the Mountain Skink was identified along the Razorback and Diamantina Spur, along FHAC Sections 12, 13 and 15, and 16 with possible burrows located towards the eastern end of Section 13.	Section 12, 13, 15 and High Knob	196	Unknown	0.0275
<i>Litoria spenceri</i>	Spotted Tree Frog	Cr	cr	Suitable habitat for the Spotted Tree Frog occurs where the Kiewa River West Branch crosses the FHAC.	Section 12	132	1100 – 1800	0.000
<i>Litoria verreauxii alpina</i>	Alpine Tree Frog	Vu	cr	A known population of the Alpine Tree Frog persists around Mount Hotham, and there are historic records of this species on the Bogong High Plains (Abzeco 2025). Suitable habitat occurs in alpine ponds, pools and creeks in Sections 4, 6, 7 and 11.	Section 4, 6, 7, 11	612	100 – 7500	0.0013
<i>Mastacomys fuscus mordicus</i>	Broad-toothed Rat	En	vu	Suitable habitat occurs in damp or wet areas with a dense cover of sedges and grasses along Trail Sections 1a and 6.	Section 6	912 (Australian population)	Unknown	0.0003
<i>Ninox strenua</i>	Powerful Owl		vu	The Powerful Owl is generally absent from alpine areas (Green and Osborne 2012), but may occur in the lower-altitude montane forests in the West Kiewa valley.	Section 12	6,261	3,000 – 6,000	0.0022
<i>Ornithorhynchus anatinus</i>	Platypus		vu	Suitable habitat was identified in the Diamantina River in the West Kiewa valley.	Section 12	n/a	n/a	0.000
<i>Petauroides volans</i>	Greater Glider (Southern and Central)	En	en	Suitable habitat occurs the lower-elevation forests of the West Kiewa valley, including Montane Damp Forest adjoining Section 12.	Section 12	15,316 (Australian population)	> 100,000 (Australian population)	0.0022
<i>Petaurus australis australis</i>	Yellow-bellied Glider (South-eastern)	Vu	vu	Suitable habitat occurs the lower-elevation forests of the West Kiewa valley, including Montane Damp Forest adjoining Section 12.	Section 12	12,724 (Australian population)	< 100,000 (Australian population)	0.0022
<i>Potorous longipes</i>	Long-footed Potoroo	En	en	Suitable habitat occurs the lower-elevation forests of the West Kiewa valley, including Montane Damp Forest adjoining Section 12.	Section 12	1,792 (Australian population)	10,000 – 50,000 (Australian population)	0.0022
<i>Pseudemoia cryodroma</i>	Alpine Bog Skink	En	en	Habitat for the Alpine Bog Skink within the FHAC includes open damp heathlands, grasslands and alpine bog systems in Sections 1a, 6, 7, 11, 15 and 16 (Abzeco 2025).	Sections 6, 7, 11, 15	192	Unknown	0.0228
<i>Pseudemoia pagenstecheri</i>	Tussock Skink (High country)		en	Suitable habitat occurs along the majority of the project area wherever there is cover of grass tussocks and low-growing shrubs with little or no tree cover. Suitable habitat occurs in all trail Sections, except 1a and 12 and at all Overnight Nodes (Abzeco 2025).	Section 2, 4, 6, 7, 11, 13, 14, 15, Cope Hut, Westons Hut, High Knob	314	Unknown	0.0272
<i>Pseudomys fumeus</i>	Smoky Mouse	En	en	Suitable habitat occurs the lower-elevation forests of the West Kiewa valley, including Montane Damp Forest adjoining Section 12.	Section 12	480	3,000 – 10,000	0.0022
<i>Pycnoptilus floccosus</i>	Pilotbird (Upland)	Vu	vu	Suitable habitat occurs the lower-elevation forests of the West Kiewa valley, including Montane Damp Forest adjoining Section 12.	Section 12	2,800 (Australian population)	11,000 (Australian population)	0.0022
<i>Riekoperla intermedia</i>	Stonefly		vu	Suitable habitat occurs in small tributaries crossing Sections 4, 6, 7, and 12.	Section 4, 6, 7, 12	16	Unknown	0.0008
<i>Thaumatoperla alpina</i>	Alpine Stonefly	En	en	Suitable habitat for the Alpine Stonefly occurs in small tributaries crossing Sections 4, 6, 7 and 12.	Section 4, 6, 7, 12	36	Unknown	0.0008
<i>Tyto tenebricosa</i>	Sooty Owl		en	Suitable habitat occurs the lower-elevation forests of the West Kiewa valley, including Montane Damp Forest adjoining Section 12.	Section 12	2,850	1,000 – 3,000	0.0022

7.6 Landforms

Natural qualities for which the High Plains are significant include their varied and dramatic topography, some features of which reflect Pleistocene periglacial activity, that is found in few places in mainland Australia. Apart from the distinctive broken rock materials and landforms of past glacial and periglacial processes, seasonal low temperature as a landscaping factor is expressed in thin, stony soil material and vegetation species and communities adapted to frost, seasonally frozen soil and several months snow cover (Rosengren 2023). Many land surfaces are highly sensitive to physical and ecological disturbance due to the slow rate of soil formation and slow recovery of some vegetation communities damaged by trampling or other impact (Rosengren 2023). The scientific significance of this area, particularly peri-glacial feature, is therefore maintained by minimising disturbances, particularly within the alpine treeless zone (VRO 2025).

7.6.1 Geomorphological features

Evidence of Pleistocene climates, in the form of peri-glacial solifluction deposits, are most prevalent through the Bogong High Plains, and were found to be more widespread than is immediately obvious, often being mantled by vegetation cover. Peri-glacial deposits were identified in Sections 2, 4, 5, 6, 7, 8, 9, 10a and 17 and alternate Overnight Nodes 2 Preferred and Alternate. Extensive deposits were recorded along Trail Sections 10a, 17, as well as at Overnight Node 2 Preferred, where they are multi-layered and likely to play a critical role in determining surface and sub-surface hydrology (Rosengren 2023, Rosengren and Webb 2024). FHAC alternative Trail Sections 8, 9, 10a, and 17 are no longer part of the project area, and Overnight Node 2 Preferred was removed from scope to avoid impacts to significant geomorphological values.

Within the proposed works area, peri-glacial features have been identified in Sections 2, 4, 6, 7 and 11 by Rosengren and Webb (2024), although the exact location and extent of these features cannot be precisely determined without ground-truthing. In particular, blockstreams along Sections 2 were tentatively determined but could not comprehensively be defined due to some anomalies in the DEM compared with the DSM (see Rosengren and Webb 2024). Proposed works in areas where per-glacial features have been recorded, include:

- **Section 2** — Proposed works in Section 2 include the installation of stone steps at start of Heathy Spur Track, boardwalks across alpine peatland and the installation of stepping stones. Three short sections of stepping stone located in an area where blockstreams were recorded.
- **Section 4** — Elevated boardwalks and water bars are proposed along this section. One section of elevated boardwalks is proposed in an area where small clast blockstreams and channels were recorded and one in an area where a blockstream and channel was recorded.
- **Section 6** — Three small sections of stepping stones are proposed for installation in Section 6 around low ridges and depressions.
- **Section 7** — Elevated boardwalks and stepping stones are proposed through an area with basalt benches and scarps into solifluction terraces and lobes, and shallow ponds and trenches.
- **Section 11** — Boardwalks and stepping stone are proposed at the eastern end of this section through Basalt Blockstreams and lobes. Complex microtopography of relict and active solifluction terraces, ridges and shallow, elongate contour parallel depressions and wetlands separated by low ridges. Active land surface.

Peri-glacial landforms and deposits are extremely sensitive to physical impact from vegetation removal, soil compaction and the deliberate and accidental movement of surface materials. Construction and ongoing use that involves removal, covering, slope alteration and other physical disturbance can also compromise much larger areas and have off-site impacts (Rosengren and Webb 2024). The potential impacts of the FHAC on geomorphological values include potential changes in land surface stability from vegetation removal or physical disturbance of surface materials and soil structure due to excavation works, as well as concentration foot traffic and trampling. These changes impact land surface stability and have likely ongoing implications for plant growth and establishment. Compacted soil affects future vegetation growth thus triggering a feedback loop (Martin and Butler 2017).

The works proposed within areas of peri-glacial features are relatively low-impact and involve minimal vegetation removal and excavation. The works will be limited to the installation of elevated boardwalks, and installation of stepping stones on the existing track footprint, and the construction of water bars in two locations to minimise track erosion. Vegetation losses and disturbance for these works will be limited to the edges of the existing tracks. Minimal excavation will be required for the installation of stepping stones and water bars. Boardwalks will be installed with screw-pile footings, thereby avoiding the need for excavation.

The most concentrated human activity and movements will occur at the Cope Hut, Westons Hut and High Knob Overnight Nodes, where visitor facilities such as camping platforms, gathering areas, and toilet facilities are provided. These areas are already used for camping and were not found to support relict peri-glacial features. At High Knob, geomorphological interpretation indicated that it demonstrates the western extent of the erosion surface beneath the basalt. However, this does not impact its suitability for use as a camping area, and construction of huts, camping platforms etc at this site will not impact its geomorphological significance. Any excavation that occurs over the area postulated to be covered by basalt offers the opportunity to confirm the existence of basalt here (Rosengren and Webb 2024).

It is reasonable to expect that the installation of structures at Overnight Nodes may result in localised impacts/changes to the soil-atmosphere-biosphere interface with some changes to infiltration, soil moisture and runoff. These impacts may be more widespread due to movement of people around the nodes and walking off-track throughout the area (Rosengren 2023). Constructed formal pathways between visitor facilities within and between nodes and the FHAC are intended to limit these impacts.

7.6.2 Land stability

The FHAC traverses complex geological terrain. The eastern approximately two-thirds of the proposed FHAC crosses the Bogong High Plains in the catchment of the Kiewa River, dominated by the Omeo Metamorphic Complex. Large extents of Cenozoic basalt flows cover the southwestern part of this area. The western third of the project area, west of the Kiewa River West Branch, is through an area known as the dissected uplands, which consists of broad south to south-east trending ridges of Ordovician metasedimentary rocks; these ridges have many hundreds of metres of relief, with steep V-shaped valley profiles. The two different sections of terrain are separated by the Kiewa Shear Zone, which forms a deep linear valley occupied by the Kiewa River West Branch and the upper part of the Cobungra River (Golder 2025).

Across much of the eastern two-thirds of FHAC project area, low angle and locally moderate slopes have evidence of blockstreams and blockfields (see Section 4.7.2). These linear, lobate and broad field accumulations of unconsolidated clasts of gravel to boulder-sized deposits are explained by Rosengren and Webb (2024) as peri-glacial solifluction deposits. Apart from instability of some individual blocks, these are considered to be stable in the present environment, and have been stable across the Holocene, at least (Rosengren and Webb 2024). Areas of dynamic landscape are indicated by abrupt slope changes, arcuate morphology and displaced rock and earth. These are of varying types and ages (apparently post-Last Glacial Maximum), ranging from creep to rapid rock fall and landslides involving a complex of regolith and bedrock materials (Section 4.7; Rosengren and Webb 2024).

The large landslide south of Westons Hut was regarded as a potentially (re)active landform with varied degrees and styles of ongoing slow or future rapid displacement. The slopes at the margin of Mount Jim Basalt Group including outliers of this material were identified as key areas where there is potential ongoing slope instability (Rosengren and Webb 2024). A geotechnical/landslide risk assessment, focusing on Sections 11 and 12 and Westons Hut Overnight Node was therefore undertaken based on the recommendations of Rosengren and Webb (2024), to increase understanding of the present landscape dynamics and possible implications for any engineering works associated with the FHAC.

The hazards identified from the geotechnical risk assessment (Golder 2025) are generally similar to those identified by Rosengren and Webb (2024). Field observations confirmed the transition from flat-lying basalt plains at the top of the plateau east of Westons Hut to the underlying granodiorite in a gully formed from landslip material. The gully was observed to slope down at an angle of approximately 25 – 30° to the south-west (Figure 4; Golder 2025). In addition to the major landslide south of Westons Hut, several smaller landslide hazards were identified on the north and western sides of the spur on which Westons Hut is located, with downslope run-out directions away from the Westons Hut area (Figure 4; Golder 2025).

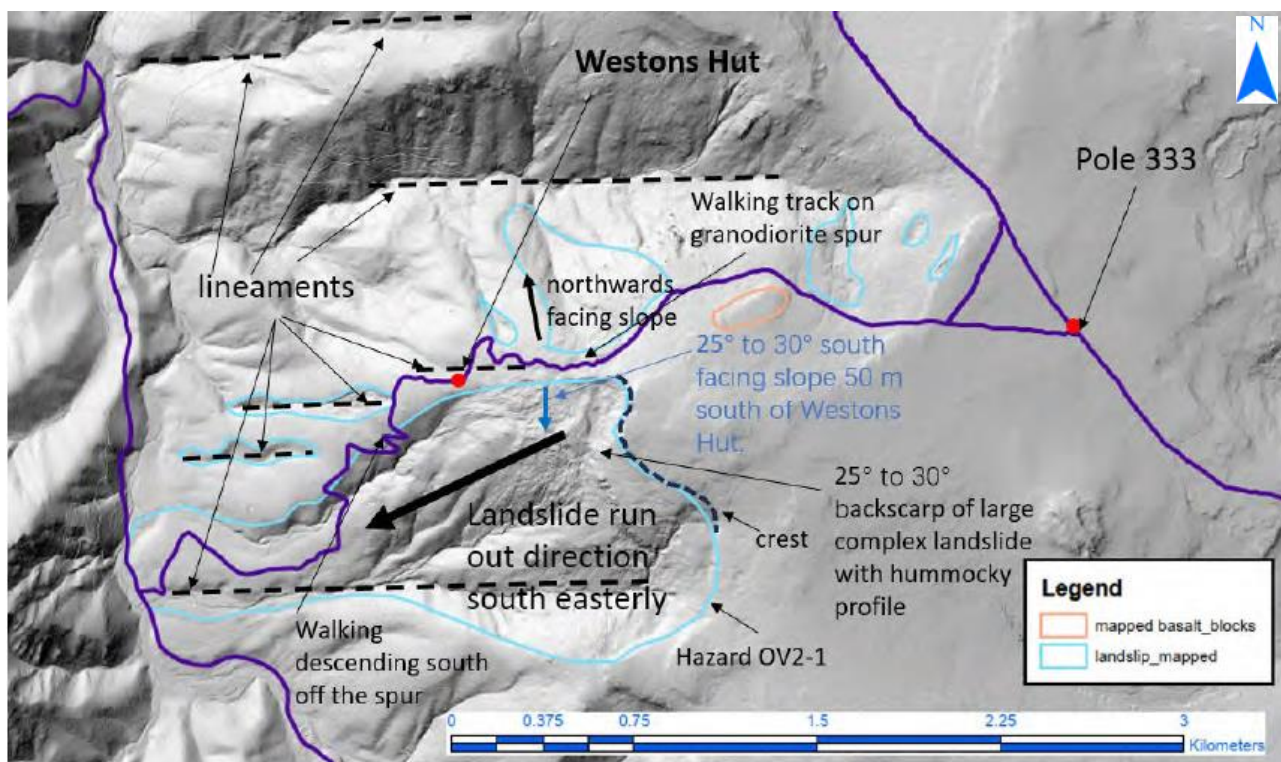


Figure 29 Features of the large complex landslide to the south-east of Westons Hut (Source: Golder (2025))

There were no observations of recent ground movement or instability, and Golder (2025) concluded that whilst the hummock profile suggests ongoing creep, the landslide complex, if still active, is likely to be relatively slow. The east-west trending lineament immediately north of Westons Hut, observed from the high-resolution LiDAR data and shown in Figure 4, was also investigated in the field. It has been assessed that this lineament does not represent a potential large scale tension crack related to the landslide complex of the gully to the south of Westons Hut, with the geomorphology at this location representing the crest of a slope facing to the north and similar linear features observed in the area, suggesting it is a feature formed from the influence of underlying structural geology (Golder 2025).

Assessment of the trail sections east of Westons Hut, as recommended by Rosengren and Webb (2024) identified an area of potential basalt rock fall intersecting the trail, where loose angular surface basalt cobbles and boulder outcrops were observed upslope from the trail. Golder (2025) determined that outcrops appear to have formed in-situ from weathering and erosion of the basalt escarpment overlying the granodiorite. A risk-assessment of this hazard was undertaken (see Section 7.6.3).

Golder (2025) noted that some of the terrain features in the higher elevations of the Victorian Alps that appear to have a landslide morphology (e.g., arcuate 'bowl' shaped features) are inferred to be features formed through cold-climate peri-glacial processes, such as gelifluction. As south-eastern Australia was last subject to these conditions during the Pleistocene, the climate under which these processes were triggered, are no longer prevalent. Therefore, the likelihood of these feature reactivating under current climatic conditions is low. However, slope failures in the region due to earthquakes remain possible (Golder 2025).

The Victorian Alps, although not as tectonically active as in the past, are strongly faulted and subject to occasional intraplate earthquakes. Golder (2025) reported that a magnitude of M4.0 earthquake has been determined by Keefer (1984) as the threshold for triggering landslides —three such earthquakes have been recorded in the vicinity of the FHAC in the past three years, and a M5.9 earthquake in 2021, with an epicentre around Woods Point, triggered cut and fill earthworks failures at the Mount Buller Resort. Golder (2025) calculated the Hazard Factor (Z), according to the geographic location of the area, and determined that the Hazard Factor is relatively low (0.10) across the FHAC area (Golder 2025).

7.6.3 Geotechnical hazards

All geohazards identified as potentially impacting the FHAC were subject to a landslide risk assessment (see Golder (2025) for further detail), which assessed risks to life and/or property. Several different types of geohazards were identified by Golder (2025), including rockfalls, natural shallow landslides, fill and cut batter failures, and debris flow. A total of 25 hazards were identified within the FHAC project area. They included:

- **Falls Creek to Cope Hut Overnight Node** — nine hazards along Trail Sections 2 and 5, predominantly related to failure of the fill batter at the edge of the trail along the Langford Aqueduct in Section 5.
- **Cope Hut to Westons Hut Overnight Nodes** — three hazards along Trail Sections 6 and 11, comprising a combination of rockfall, natural shallow landslide and cut failure.
- **Westons Hut to High Knob Overnight Nodes** — eight hazards along Trail Section 12, where the trail descends into the West Kiewa Valley. They include natural shallow landslides, debris flow and rockfall, also identified by Rosengren and Webb (2024), and are predominantly associated with gullies on steeper slopes where surface flow is concentrated, leading to the potential for increased erosion.
- **High Knob Overnight Node to Mount Hotham** — five hazards along Trail Section 15, comprising a combination of natural shallow landslides and rockfall. Although the trail traverses steep slopes, the trail is generally close to the top of the ridgeline. Identified hazards are where the track diverts around the eastern slopes of the ridge, near the intersection with Bon Accord walking track.

Two hazards were assessed as ‘tolerable’ for risk to life, while the remaining 16 credible hazards were assessed as ‘acceptable’, based on AGS (2007) and NSW NPWS (2002); no hazards were assessed as ‘not acceptable’. All hazards assessed for risk to property were found to be either low or very low risk. No hazards were assessed as medium or higher risk. As hikers would be passing multiple hazards, the cumulative risk to hikers was assessed for the entire proposed FHAC trail, including the overnight nodes, as well as for day hikers from Mount Hotham and from Falls Creek using the end sections of the proposed FHAC route. The day hike from Mount Hotham scenario was assessed as having a ‘tolerable’ risk to life using AGS (2007b) guidelines. The cumulative risk to hikers for the other scenarios has been assessed as having an ‘acceptable’ risk. Golder (2025) concluded that due to the remote nature of the hazards and the relatively small reduction in risk required to achieve an acceptable risk level for individual hazards, it may be impractical to implement engineering measures to reduce the risks posed by the hazards.

7.7 Aboriginal Cultural Heritage

A Cultural Heritage Management Plan (CHMP) is required for this project under Part 4 of the *Aboriginal Heritage Act 2006* which includes archaeological assessments to determine the tangible and intangible cultural values and to identify potential impacts to cultural values associated with the proposed works.

Impacts to Aboriginal cultural heritage by the project will be managed through the provision of management conditions outlined in the CHMP. Once a CHMP is approved, the management conditions become compliance requirements that must be adhered to under the Aboriginal Heritage Act 2006. Management conditions set out the actions that Parks Victoria needs to meet before, during and after the activity to avoid, minimize or mitigate harm to cultural heritage. The CHMP will also include a series of contingency plans for managing unexpected finds during construction should the activity unearth previously unrecorded Aboriginal heritage.

7.8 National Heritage Values

The Significant Impact Guidelines 1.1 – Matters of National Environmental Significance (DoE 2013) provide guidance on matters which are likely to have a significant impact on National Heritage values. These include whether there is a real chance or possibility the action will cause one or more heritage values to be lost, degraded or damaged, or notably altered, modified, obscured or diminished.

Following assessment of the proposed action with reference to the National Heritage values, the context and intensity of the proposed works, the proposed action has been assessed as having an overall moderate impact on the National Heritage values.

More specifically, the following heritage impacts have been identified:

- **Criterion a – Events and processes**
 - Minor impacts to the natural heritage values, including peri-glacial features, biological heritage and alpine ecosystems. These impacts are localised, with mitigation measures in place to avoid or minimise disturbance.
 - Minor impacts to indigenous heritage values, particularly those associated with moth feasting and traditional travel routes. Artefact scatters identified along the Razorback Track will be temporarily relocated and repatriated after works are complete, in accordance with the CHMP.
 - Minor to moderate impacts to the historic heritage values associated with transhumant grazing, especially at Westons Hut, where new infrastructure may visually and physically alter the historic alpine grazing landscape. Conservation work to high country huts are designed to be sympathetic and consistent with the Burra Charter.
 - Negligible impacts to the historic heritage values associated with scientific research, water harvesting and recreation, as key research sites and infrastructure are not affected and recreational use is supported, rather than diminished.
- **Criterion b – Rarity**
 - Minor impacts on the natural heritage values, including rare alpine and sub-alpine ecosystems and EPBC-listed ecological communities such as Alpine Sphagnum Bogs and Associated Fens. These communities are present in mosaic form along the trail and at overnight nodes, but impacts are minimised through micro-siting and construction methods.
- **Criterion d – Representativeness**
 - No impacts have been identified. The representative pastoral landscapes cited in the National Heritage listing are primarily located in Kosciuszko National Park (NSW), and not within the FHAC project area.
- **Criterion e – Aesthetic values**
 - Minor to moderate impacts have been identified. The construction of new infrastructure at overnight nodes (especially Westons Hut and High Knob) will alter the visual character of the landscape in those areas. While long-range vistas remain largely unaffected, medium and short-range views will be changed by the presence of camping platforms, amenities buildings, and gravel paths. These changes may diminish the sense of remoteness and naturalness valued by visitors.
- **Criterion g – Social values**
 - Moderate impacts have been identified. The project area is highly valued by bushwalkers, mountain cattlemen, and huts associations. The introduction of new infrastructure may reduce the perceived remoteness and simplicity of the experience, which are key aspects of its social value. However, the project also supports ongoing recreational use and community engagement with the landscape.
- **Criterion h – Associations with significant people**
 - Negligible impacts have been identified. The natural and cultural landscape that inspired figures such as Baron von Mueller, Banjo Paterson, and Elyne Mitchell will remain largely intact. The proposed action does not affect specific sites directly associated with these individuals.

Based on this assessment, the project will not have a significant impact on National Heritage Values.

7.9 Avoidance and minimisation strategies

Avoidance and minimisation strategies have been considered throughout the planning and assessment phases for the upgraded FHAC, as outlined in the following sections.

7.9.1 Design phase

The FHAC Master Plan proposed a 57-km five day/four-night experience with four Overnight Nodes, each with roofed accommodation (hut numbers unspecified) and hiker camps with up to 12 camping platforms per hiker camp. This was supported by the Business Case, which indicated that this option presented the best value for achieving objectives.

Detailed project planning and assessments have since been undertaken to investigate the values and constraints of the project, including, feasibility of construction and operation, desktop and field investigations of ecological and cultural heritage values, geomorphology and geotechnical conditions. As part of this, a number of alternative trail alignments and alternative Overnight Node locations were investigated, iteratively, along with opportunities to avoid and minimise impacts. The current proposed alignment, Overnight Nodes and project scope are the result of a multi-criteria analysis that evaluated impacts to biodiversity, cultural heritage, stakeholder and community feedback, and operational and maintenance requirements (refer Section 3.10). This analysis resulted in a change of scope to:

- Remove roofed accommodation.
- Remove proposed new trails.
- Reduce the number of Overnight Nodes to three, and the FHAC experience to a four day/three-night hike.

The following avoidance and minimisation strategies were implemented during the design phase:

- Alignment of the FHAC route on existing walking and vehicle tracks, without widening, to reduce vegetation clearing and avoid impacts of trail construction and visitation in new, undisturbed areas.
- Limiting the trail works to priority areas where trail works will improve environmental outcomes and the long-term sustainability of the trail, or where trail repairs or safety improvements are required.
- Locating Overnight Nodes in areas already used for camping, to avoid areas of high ecological and cultural heritage sensitivity, and to avoid impacts of construction and visitation in previously undisturbed locations.
- Siting of infrastructure within Overnight Nodes to ensure the retention of canopy trees and to minimise clearing.

The following measures were taken to avoid impacts to specific values:

- Removal of Overnight Nodes 1 Alternative, 2 Preferred and 2 Alternative to avoid loss or significant disturbances to areas of alpine peatland (i.e., Alpine Sphagnum Bogs and Associated Fens community).
- Removal of alternative Trail Sections 10a, 17 and Overnight Nodes 2 Preferred, 2 Alternative to avoid significant disturbance to areas of high geomorphologic significance, supporting per-glacial features.
- Removal of Tawonga Huts Overnight Nodes to reduce the potential for significant harm to Aboriginal Cultural Heritage Values.
- Removal of Blairs Hut Overnight Node to avoid potential long-term disturbance impacts to breeding habitat for Gang-gang Cockatoo and the potential for significant harm to Aboriginal Cultural Heritage values.
- Ensuring that the design of trail infrastructure is suited to the alpine environment and minimises the need for vegetation removal and soil disturbance, including the use of elevated boardwalks.

7.9.2 Pre-construction

Mitigation measures to be implemented before and during construction are outlined below. This includes pre-construction surveys that will provide further opportunity to avoid and minimise impacts to biodiversity values.

Pre-construction surveys

Pre-construction flora and fauna surveys will be undertaken prior to works commencing, with a commitment to micro-siting of infrastructure and works, to minimise impacts to threatened flora species, impacts to canopy trees and key habitats for threatened fauna species.

Specifically, trail works will be micro-sited to avoid and minimise:

- Losses and indirect impacts to threatened flora species as far as practical.
- Injury or mortality of fauna species.
- Destruction or disturbance of critical habitat features for threatened fauna species (e.g., burrows, nests).
- Disturbance of listed Ecological Communities.
- Losses of canopy trees and long-unburnt Snow Gums.

Pre-construction surveys and proposed outcomes will include:

- **Threatened flora** – Threatened flora surveys will be undertaken within and adjoining proposed trail works areas by qualified botanists with the expertise to identify the threatened species likely to occur within the area. Micro-siting of proposed works and laydown areas will be undertaken to avoid threatened flora species if they are recorded in the works area. If after all opportunities to avoid the plants have been explored and the plants cannot be avoided, a Protected Flora permit will be obtained under the FFG Act.
- **Threatened fauna** – Pre-clearance fauna surveys will be undertaken by qualified zoologists to:
 - Identify potential burrows, tunnels or nesting sites for ground-dwelling species, such as Guthega Skink, Mountain Sink and Broad-toothed Rat. If these are located within the works area, impacts will be avoided through micro-siting of structures and best-practice controls during construction.
 - Supervise excavation and construction works in high-sensitivity areas, and any disturbances to rocky habitats that may be necessary for construction works.
 - Search for threatened fauna species within and directly adjoining vegetation proposed for removal.
 - Inspect trees requiring pruning or removal prior to the works commencing. If the tree is found to support fauna and its removal cannot be avoided, the fauna species will need to be salvaged and relocated to suitable habitat in the adjoining area as per a Fauna Management Plan (more detailed below).
- **Trees** – A project arborist will be engaged to provide advice on avoiding impacts to canopy trees, and managing construction works within TPZs, if required. Specific avoidance measures to be employed before works commence include:
 - Induction of contractors on tree functions and potential impacts from proposed works, requirements for tree protection and guidelines for working around trees.
 - Micro-siting of camping platforms to avoid impacting long-unburnt Snow Gums (through encroachment into TPZs) and to avoid or minimise the need tree pruning/lopping.
 - Determining site specific mitigation measures for canopy trees adjoining works in areas where deeper excavation will be occurring to avoid long-term impacts to the trees. Tree Protection Zones (TPZs) in these areas will be delineated on the ground prior to construction activities occurring.
 - Provide procedures for working around trees and contingency measures if roots are damaged.

Construction Environmental Management Plan

A site-specific Construction Environment Management Plan (CEMP) will be developed prior to works commencing. The CEMP will be developed in accordance with Parks Victoria's Health Safety and Environment & Heritage Minimum Contractor Requirements Guideline (GUI-615B), and requirements under the *Environment Protection Act 2017*.

CEMP documentation will set out a framework for environmental planning on projects consistent with Parks Victoria's and contractor policies and procedures. This plan will then apply to all activities undertaken as part of the awarded works. This includes all activities for subcontractors, suppliers and consultants. The site management team will be inducted into established plans, and all workers and people inducted on to site will be made aware of its location and details. The CEMP will have clear statements of auditable actions, environmental performance indicators and management systems consistent with achieving objectives of policy documents.

The CEMP will address and include, but will not necessarily be limited to, the following:

- Site induction protocols — all construction workers must be inducted on the environmental procedures in the CEMP.
- Pre-construction surveys (see Section 7.9.2)
- Timing of construction works:
 - Avoiding construction during and immediately after rain.
 - Timing and staging of vegetation removal and construction to avoid long periods of exposed soil.
 - Avoiding night works and no high disturbance/impact works at dawn or dusk to avoid impacts to fauna.

- Monitoring of weather conditions and inclement weather protocols.
- Site supervision either by Parks Victoria or a project ecologist, as necessary.
- Vehicle and machinery hygiene protocols — strict hygiene protocols will be implemented during site works to reduce the risks of introducing and/or spread of invasive species and pathogens. This will include wash-down and cleaning for all plant and equipment prior to, and following, use on-site. This will include:
 - Hygiene controls for *Phytophthora* and weed species, in accordance with 'Arrive Clean, Leave Clean' guidelines (DoE 2015b).
 - Hygiene controls for amphibian chytrid fungus, in accordance 'Hygiene protocols for the control of diseases in Australian frogs' (Murray et al. 2011).
- Delineation of works areas — clear delineation of work areas during construction, including for vehicle access points and temporary materials storage.
- Vegetation removal prescriptions and controls.
- 'No-Go-Zone' requirements — 'No-Go-Zones' will be employed to protect sensitive areas, i.e., adjoining waterways, wetlands, heritage sites, threatened species, canopy trees and vegetation to be retained.
- Sediment and erosion control measures — best practice construction and sediment management measures are to be employed to ensure run-off during construction does not impact surrounding waterways and wetland environments.
- Requirements for stockpiling materials and equipment — No spoil or equipment are to be placed in areas supporting native vegetation that is to be retained, outside of designated areas, or within Tree Protection Zones. No storage of materials or spoil will be allowed in wetland habitats.
- Hazardous chemicals protocols — Management of potential pollution sources that could be spilled during construction (e.g. fuels and chemicals).
- Tree management protocols.
- Aboriginal Cultural Heritage — Construction mitigation measures outlined in the CHMPs.
- Non-Aboriginal Cultural Heritage — Unexpected finds protocols as contingencies for unexpected finds.
- Fauna Management Plan, to include:
 - Pre-construction surveys requirement.
 - Construction mitigation measures, including site induction requirements specific to fauna, timing of works, hours of operation, noise management, temporary fencing and habitat management.
 - Habitat management protocols (e.g., for rocks, logs and coarse woody-debris).
 - Unexpected finds protocols and salvage protocols.
- Rehabilitation Plan, to include:
 - Soil stabilisation and site rehabilitation of disturbed areas after construction.
 - Site preparation requirements.
 - Re-vegetation requirements (species, densities, methods).
 - Weed monitoring during and post-construction. This must address measures to include the management of new high threat weed species into the weed management plan if they are identified during monitoring.

7.9.3 Construction

Mitigation measures to be employed during construction are outlined below, which will involve on-ground implementation of measures and protocols outlined in the CEMP.

Materials

Material selection for the FHAC is guided by environmental sustainability, long-term durability and structural requirements. The following material specifications are made for the project.

Steel

The FHAC incorporates both galvanised steel and mild steel, with their use governed by structural and engineering requirements and environmental protection requirements.

Galvanised steel will be used only where structurally necessary, such as in load-bearing components and exposed infrastructure elements requiring enhanced corrosion resistance. However, its use will be minimised where possible to limit the potential for heavy metal leaching, particularly zinc, into surrounding soils and waterways.

The use of galvanised steel in Australian alpine environments has been shown to lead to localised zinc toxicity and plant deaths, and the effects of this can be evident decades later (Good 2006). Alpine humus soils are base-unsaturated and strongly acidic, and levels of exchangeable zinc are very low compared with soil at lower elevations (Johnson and Good 1996). Zinc released from galvanised structures has been found to disrupt the mycorrhizal fungal associations that assist with nutrient uptake in many alpine herbaceous plants (Ryan 2000).

To mitigate the risks posed by galvanised steel, biochar will be incorporated into the footing surrounds of galvanised steel structures. Biochar is a carbon-rich, porous material that effectively adsorbs and immobilises heavy metals, reducing their mobility and preventing contamination of nearby soils and aquatic systems. While biochar will be applied primarily at shallow depths, a minimal amount (less than 2 cm) may also be considered at greater depths, subject to engineering feasibility. In addition, all galvanised steel components that are in direct contact with the ground will be painted up to 200 mm above ground or snow level, using VOC-free bitumen paint where possible. This coating acts as a barrier to reduce direct environmental exposure and further limit the potential for leaching. Regular inspection and maintenance of painted surfaces will be undertaken to prevent flaking and ensure long-term effectiveness without significantly impacting the visual landscape.

Mild steel will be used wherever possible, including in structures such as elevated boardwalks, mesh steps, and other components that have lower structural bearing requirements, not directly exposed to harsh environmental conditions. In these applications, the steel gauge will be selected to ensure durability and longevity, even in alpine conditions.

Stone

All stone materials required for the FHAC Project will be sourced from local suppliers outside the National Park. The harvesting of local rock within the park is explicitly prohibited to ensure there is no impact on native fauna habitats or disturbance to the natural landscape. By sourcing stone externally, the project avoids disruption to sensitive ground layers and microhabitats that support a range of alpine species, ensuring that infrastructure development proceeds in a manner that is both environmentally responsible and culturally respectful.

All gravel will be sourced from local suppliers and certified free of weed species and pathogens.

Plant Stock

Plant stock to be used in revegetation will consist of species of local provenance, appropriate for the location and the relevant Ecological Vegetation Class. Plant stock will be sourced from suppliers accredited under the Nursery Industry Accreditation Scheme (NIASA), which requires the implementation of procedures and practices to ensure the supply of clean material, or otherwise, certified free of *Phytophthora*.

Native vegetation

The following measures will be implemented during construction to minimise the impacts to native vegetation and fauna habitats, and to reduce the risks of accidental or unauthorised impacts:

- Trails will be constructed by 'building from the trail' and works on existing trails will be contained to the existing footprint as far as possible and the minimum extent required beyond the trail footprint.
- Laydowns for materials will be on the existing track, and will be limited to the disturbance footprint (i.e., not more than 0.75 – 1.5 m beyond the existing track footprint, depending on the type of works).

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- Movements, including foot traffic, on either side of the existing track will be limited to the minimum extent necessary to limit trampling.

To the fullest extent practicable, disturbance to any native vegetation must be minimised. This will include clear demarcation of areas of native vegetation to be retained during works. In addition, the following mitigation measures will be employed:

- The direct removal of canopy trees along the trail alignment, particularly large and hollow-bearing trees, will be avoided through micro-siting of the trail and Overnight Node infrastructure to avoid tree SRZs and to limit encroachment into TPZs.
- A suitably qualified arborist will be engaged to advise on the management of trees during the construction phase of the project. This will include:
 - Inducting workers prior to commencing trail construction works on basic tree functions, potential impacts of the works, construction guidelines for working close to trees; and procedure when roots are damaged.
 - Inspect work sites to ensure site specific tree mitigation measures are being implemented. This includes supervising (permitted) works within TPZs.
 - Any tree pruning works will be undertaken by a minimum certificate III qualified arborist and in accordance with natural target pruning as outlined in 'Australian Standard 4373 Pruning of amenity trees'.
- Stockpiling of materials and spoil and equipment laydown areas will be contained within designated areas.

Threatened fauna

The site-specific Fauna Management Plan will be implemented during construction to ensure that the risks to threatened fauna species from death and/or injury resulting from works. The following is to be included in the Fauna Management Plan:

- Impacts to Large Trees and hollow-bearing trees will be avoided through micro-siting of trail works.
- Rocks and large fallen logs will not be removed from site and disturbance of these habitat features will be avoided as far as possible, through-micro-siting. If total avoidance is not possible, rocks and logs shall only be moved carefully, to the extent necessary for construction works, and not more than 20 m from the original position.
- No night works will be allowed to reduce impacts on nocturnal species including owls, gliders and invertebrates.
- High impact and disturbance activities (e.g. groundworks, operating machinery, vibration, and lighting) will not be undertaken around dawn and dusk to minimise potential disturbance to the behaviour of nocturnal and crepuscular species.
- Suitable salvage techniques and mitigation measures to reduce the risk of the injury or death of fauna will be implemented, as outlined in a Fauna Management Plan.

Waterways and wetlands

Sensitive construction techniques will be used for works on and around waterways and wetlands, particularly Alpine Bog systems. These will be detailed in the site-specific CEMP. At a minimum, the following will be implemented:

- No works will be undertaken within 30 m of discrete waterway crossings, including the Diamantina River, Diamantina Creek and Kiewa River West Branch.
- Works through alpine peatland systems or minor drainage lines will be undertaken using best-practice construction techniques. All works will be 'built from the trail' as far as possible, and laydown of equipment, tools and foot traffic will be limited to the existing track footprint as far as possible.
- Construction works will not be undertaken during and immediately after rain.
- Sediment fencing and erosion control measures will be established on-site prior to commencing construction and will be maintained throughout the construction period. The most sensitive short-term (i.e. during

construction) and long-term sediment control methods available will be utilised for all works located within, and in the vicinity of, all flowing and mapped waterways.

- Potential sources of pollution or contamination during construction (e.g., fuels, chemicals) will be eliminated.

7.9.4 Post-construction

Post-construction mitigation measures will include:

- Rehabilitation of areas disturbed during works, in accordance with the Rehabilitation Plan. This should occur as soon as possible following the works to stabilise soils and reduce run-off and erosion.
- Implementation of a weed management strategy aimed at managing existing weed populations and preventing establishment of new weeds during construction and operation.
- Implementing arborist recommendations.

8 Legislation and policy

8.1 *Environment Protection and Biodiversity Conservation Act 1999*

The Commonwealth *Environment Protection and Biodiversity Conservation (EPBC) Act 1999* is Australia's primary legislation for environment and heritage. The Act pertains to Matters of National Environmental Significance (MNES). Under the provisions of the Act, any action which will have or is likely to have a significant impact on MNES, as defined under the Act, must be referred to the Australian Government for a decision on whether formal assessment and approval is required.

Four Matters of National Environmental Significance (MNES) were modelled to occur or potentially occur within 10 km of the FHAC from the Protected Matters Search Tool. Their relevance to the project is given in Table 23. The proposed re-aligned and upgraded FHAC is not likely to have a significant impact on any of the MNES relevant to the project area. An assessment of the significance of potential effects against each significant impact criterion (as defined in relevant EPBC Act policy statements), and justification, for each of the relevant matters, is provided in Appendix 3.

Table 23 Matters of National Environmental Significance (MNES) identified as potentially occurring within the project area by the Protected Matters Search Tool

Matters of National Environmental Significance	Potential to Occur	Relevance to the project area
World Heritage Properties	No	The project area is not located within or near to any World Heritage Properties.
National Heritage Places	Yes	The project area is located within the Australian Alps National Parks and Reserves National Heritage Place. Potential impacts to the National Heritage Place have been assessed against the relevant Significant Impact Criteria under the EPBC Act (Appendix 3).
Wetlands of International Importance	No	There are no Wetlands of International Importance located within or near the project area.
Listed threatened ecological communities	Yes	One EPBC Act-listed threatened ecological community occurs within the project area. The FHAC trail alignment intersects the Alpine Sphagnum Bogs and Associated Fens Community in multiple locations. Potential impacts of this project have been assessed against Significant Impact Criteria (Appendix 3).
Listed threatened species	Yes	Twenty-four threatened species have been recorded, or are considered likely to occur within the project area, including four flora species (Section 7.4.1) and 20 fauna species (Section 7.5.5). The project has been assessed as having the potential to impact on 15 of these species, either directly or indirectly. Assessments against the Significant Impact Criteria have been undertaken for the species potentially impacted (see Appendix 3). With proposed avoidance and mitigation measures, outlined in Section 7.9, it is considered that there is a low likelihood the project will result in significant impacts to these species, based on the significant impact criteria.
Migratory species	Yes	Two species listed as Migratory under the EPBC Act were identified as potentially occurring within the project area. Potential impacts were identified to one of these species – Latham's Snipe (refer Section 7.5.5).

Matters of National Environmental Significance	Potential to Occur	Relevance to the project area
		Potential impacts to this species have been assessed against Significant Impact Criteria (Appendix 3).
Commonwealth Marine areas	No	The project area is not located within or near to a Commonwealth Marine Area.
Great Barrier Reef Marine Park	No	The project area is not located near the Great Barrier Reef Marine Park.
Nuclear actions	No	No nuclear actions are proposed.
Water resource in relation to coal seam gas or large coal mine development	No	No coal seam gas or large coal mine developments are proposed.

8.2 Environmental Effects Act 1978

The *Environmental Effects Act 1978* (EE Act) provides the primary legislative framework for assessing projects with the potential to cause adverse environmental effects at a regional or State context in Victoria. Projects which are likely to meet the criteria for potentially significant effects must be referred to the Minister for Planning for a decision on whether an EES is required. An EES is used as a decision-making tool to understand the environmental, economic and social impacts of a project and to decide whether a project provides an acceptable outcome.

The ‘Ministerial guidelines for assessment of environmental effects under the Environmental Effects Act 1978’ (DTP, 2023) outlines the criteria that individually, or in combination, may trigger the need for a referral under the Act. The referral criteria cover potential physical, ecological, cultural heritage, social, health and safety, and economic effects of a project. The FHAC meets one of the individual criteria for referral:

- “potential for loss of a significant proportion (e.g., 1% or greater) of known remaining habitat or population of a threatened species in Victoria”.

Construction of the visitor facilities within the Overnight Nodes will impact more than 1% of the lower estimate of the Victorian population for four species listed under the FFG Act. Although, it is likely that populations of these species are larger than estimated, given the local abundance of these species in areas where they were recorded.

See Appendix 4 for a full assessment against each of the referral criteria.

8.3 Flora and Fauna Guarantee Act 1988

The *Flora and Fauna Guarantee (FFG) Act 1988* is the primary legislation in Victoria for the conservation of threatened flora, fauna and ecological communities, and for the management of potentially threatening processes. The Act provides for the determination and listing of:

- Threatened species and ecological communities
- Potentially Threatening Processes
- Critical Habitat and Habitat Conservation Orders
- Protected Flora

The objectives of the FFG Act aim to conserve all of Victoria’s native flora and fauna by identifying species and communities that require protection and processes that require management to minimise threats to biodiversity, with the focus on preventing further species and communities from becoming threatened. A permit is required to take (i.e., remove, disturb) Protected Flora and Listed fish species. The Public Authority Duty under the Act also requires Victorian Ministers and public authorities to consider the objectives of the FFG Act when performing any functions that may impact on biodiversity, including FFG Act-listed fauna species.

A total of 59 FFG Act-listed flora species have been recorded within project area, and a further 88 species have the potential to occur. Twelve Protected Flora species will be impacted for the construction of the visitor facilities at the three Overnight Nodes (see Section 7.4.2), for which a Protected Flora permit is required. All of these species are declared to be Generally Protected in accordance with the Declared Protected Flora Guidelines (DEECA 2024). A permit is required for the whole or part removal of species which are declared to be Generally Protected for any reason, including as part of clearing for infrastructure construction or maintenance works, otherwise known as 'incidental take' (DEECA 2024). A number of other Protected Flora taxa have been recorded within the assessment area that are declared as Restricted Use Protected Flora (e.g., *Acacia* spp.), in accordance with the Declared Protected Flora Guidelines; a permit to remove these species is not required, for the purposes of 'incidental take'.

The trail alignment has not yet been surveyed in detail. Pre-construction surveys will be undertaken within works areas along the trail, and works will be micro-sited to avoid and minimise impacts to threatened flora species as far as possible. If impacts cannot be completely avoided, the surveys will record the species and number of individuals impacted, and a Protected Flora permit will be obtained under the FFG Act. Potential impacts to FFG Act-listed flora species are detailed in Section 7.4.2.

Two communities listed under the FFG Act will be impacted by the proposed works — Alpine Bog Community and Alpine Snowpatch Community. All flora species within these communities are considered Protected Flora. The proposed FHAC will disturb a total of 0.074 ha of each of these communities. However, the areas of permanent loss for both of these communities will be less than this — 0.016 ha of Alpine Bog Community, and 0.013 ha for Snowpatch Grassland Community (see Section 7.2). A Protected Flora Permit will be required for impacts to these communities.

Potential impacts to FFG Act-listed fauna species are detailed in Section 7.5.6. Areas of potential habitat loss for these species are relatively small, and avoidance and mitigation measure will be put in place to avoid and/or minimise impacts to these species as far as possible.

8.4 National Parks Act 1975

The *National Parks Act 1975* provides for the protection, use and management of National, State, Wilderness, National Heritage and Other Parks, Marine National Parks and Marine Sanctuaries. The Act also establishes Wilderness Zone and Remote and Natural Area Overlays in National Parks that apply strict development and land use controls.

The Greater Alpine National Parks Management Plan (Parks Victoria 2016), which includes the Alpine National Park, provides the strategic guidance for active management of the Alpine National Park, in accordance with the *National Parks Act 1975*. Under the Management Plan, the FHAC falls within two park management zones — Conservation and Conservation and Recreation. Various park management overlays also apply to the FHAC project area. The overlays provide additional direction for areas where specified activities or values require special management. The applicable overlays are the:

- Bundara-Cobungra RNA, designated under Schedule 6 of the *National Parks Act 1975*.
- Mount Feathertop VEA, Red Robin VEA, Bogong High Plains VEA, and the VEA – Journey.

The Protection of Remote and Natural Areas must be in accordance with Section 21 of the *National Parks Act 1975*:

- **21C (1)** Parks Victoria must ensure that each RNA is controlled and managed in accordance with the objects of the *National Parks Act 1975* in a manner that will protect and preserve the natural environment of the area, including indigenous flora and fauna and features of ecological, geological, scenic, archaeological, historic or scientific significance.
- **21C (2)** Parks Victoria must ensure that in a RNA, no new roads, tracks, structures or facilities are installed, and no new works are carried out that will adversely affect the natural condition or appearance of the area unless it meets requirements under 21D.

The FHAC will involve the installation of boardwalks and stepping stones along existing tracks within the RNA, to ameliorate existing impacts of the trail, such as track braiding and erosion. These works meet the following requirements under Section 21D:

- The works are necessary for the maintenance or repair of existing roads, tracks, structures or facilities.
- The works are considered necessary for the protection of the natural environment.

The FHAC is consistent with the National Park Management Plan VEA – Journey (see Section 2.3).

8.5 Planning and Environment Act 1987

The *Planning and Environment Act 1987* establishes a framework for planning the use, development and protection of land in Victoria. It sets out procedures for preparing and amending the Victoria Planning Provisions and planning schemes. The Act also sets out the process for obtaining permits under schemes, settling disputes, enforcing compliance with planning schemes and permits, and other administrative procedures.

8.5.1 Planning Schemes

The applicable Planning Schemes for the FHAC are:

- East Gippsland Planning Scheme covering the East Gippsland Local Government Area.
- Alpine Planning Scheme covering the Alpine Local Government Area.
- Alpine Resorts Planning Scheme covering the Mount Hotham Resort Area.

As the FHAC does not propose any change to use or the undertaking of building or works within the Mount Hotham Alpine Resorts Area, the following section focuses only on the East Gippsland and Alpine Planning Scheme requirements.

8.5.2 Planning Policy Framework

The applicable State and local planning policy for the development that triggers a planning permit is detailed in the relevant Planning Schemes — Alpine and East Gippsland. It includes:

- Sustainable development in alpine areas
- Bushfire planning

The objective of both the Statewide and Alpine ‘*Sustainable development in alpine areas*’ clauses is to facilitate sustainable development and protect the values of the alpine area.

The Statewide Bushfire Planning Clause aims to ensure risk-based planning that prioritises the protection of human life, settlements and communities. Relevant strategies include the protection of human life and bushfire hazard identification and assessment.

Zoning and Overlays and Planning Permit triggers

Planning permit triggers and requirements under zoning and overlays relevant to the FHAC project are detailed in Table 24.

Table 24 Planning permit requirements under Planning Scheme Overlays relevant to the FHAC project

Local Government Area	Zone/Overlay	Permit requirements	Implications for the FHAC
<i>Zoning</i>			
Alpine Shire	Public Conservation and Resource Zone	No permit is required for the use and buildings and works where the use and building and works are conducted by and on behalf of Parks Victoria (Clause 36.03-1 and Clause 36.03-2) consistent with the <i>National Parks Act 1975</i> .	No Planning Permit required
East Gippsland Shire	Public Conservation and Resource Zone	No permit is required for use or buildings and works where the use and building and works are conducted by and on behalf of Parks Victoria (Clause 36.03-1 and Clause 36.03-2) consistent with the <i>National Parks Act 1975</i> .	No Planning Permit required

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Local Government Area	Zone/Overlay	Permit requirements	Implications for the FHAC
<i>Overlays</i>			
Alpine Shire	Bushfire Management Overlay	A permit is required for buildings and works associated with accommodation and leisure and recreation (Clause 44.06-2).	A Planning Permit is required for buildings and works associated with accommodation (new camping platforms and internal connecting paths).
East Gippsland Shire	Bushfire Management Overlay	A permit is required for buildings and works associated with accommodation and leisure and recreation (Clause 44.06-2).	A Planning Permit is required for buildings and works associated with accommodation (new camping platforms and internal connecting paths).
Alpine Shire	Heritage Overlay	A permit is required for buildings and works at Blairs Hut and Tawonga Huts (HO2), except where consistent with the Overlay permit exemptions. While Cope Hut is also referenced under HO2, it is not located within the Alpine Planning Scheme area and so is not covered by the Heritage Overlay.	No Planning Permit is required
East Gippsland Shire	Heritage Overlay	No Permit is required for Wallace Hut which is covered by HO226 pursuant to Clause 43.01-3 as the place is included in the Heritage Register — H1616.	No Planning Permit is required

8.5.3 Native vegetation controls (Clause 52.17)

All Victorian planning schemes contain state standard Particular Provisions that require a planning permit to remove, destroy or lop native vegetation, under Clause 52.17 of the Planning Scheme. Permit applications for the removal of native vegetation follow Victoria's procedures for the removal, destruction and lopping of native vegetation (DELWP 2017) and includes the requirement to offset the loss of native vegetation through securing or purchasing offsets.

Clause 52.17 also includes exemptions from requiring a planning permit to remove native vegetation for certain uses, activities or development. The *Crown land exemption* exempts Parks Victoria from the requirement to obtain a planning permit and secure offsets under Clause 52.17, for native vegetation removal undertaken by Parks Victoria on Crown land, in accordance with the 'Procedure for the removal, destruction or lopping of native vegetation on Crown land' (Crown Land Procedure, DELWP 2018).

To rely on the Crown land exemption, Parks Victoria must ensure that biodiversity values have been considered, and that native vegetation is removed to the minimum extent necessary.

Native vegetation removal for the project, and potential impacts to biodiversity values, has been assessed in accordance with the Crown Land Procedure, for areas where works will be undertaken on Crown land managed by Parks Victoria. Section 7.9 sets out the avoidance and mitigations measures to protect biodiversity and minimise native vegetation losses as part of this project. Native vegetation losses have been minimised by utilising existing disturbed areas and micro-siting. Native vegetation losses have been conservatively estimated at 3.55 ha (total disturbance area) and must be reported to DEECA, in accordance with the Crown land Procedure.

8.5.4 Sign controls (Clause 52.05)

The Planning Permit requirement for signs is detailed in Clause 52.05 of the relevant Planning Schemes. No Planning Permit is required for signage to be installed as part of the FHAC as the proposed signs benefit from the following exemption at Clause 52.05-10:

“A sign identifying the functions or property of a government department, public authority or municipal council, but not a promotion sign displayed at the direction of any of these bodies”.

8.5.5 Planning Permit General Exemptions (Clause 62.02-2)

Clause 62.02-2 provides permit exemptions for buildings and works requiring a permit unless specifically required by the Planning Scheme. This provides exemptions for most elements of the FHAC and includes park furniture such as public toilets, seating, shelter, and buildings and works for priority sections of trail.

8.6 Water Act 1989

The *Water Act 1989* establishes rights and obligations in relation to water resources, provides for the management and allocation of Victorian surface water and groundwater, and the maintenance of aquatic ecosystem functions. It authorises the functions and management powers of nine CMAs and Melbourne Water (in the Port Phillip and Westernport Region) over waterways, floodplains, drainage and environmental water, as designated waterway management authorities.

The *Water Act 1989* provides for the control, management and authorisation of works and activities around designated waterways, for designated land and works and for the protection of flora, fauna and habitat. By-laws for waterway protection have been enacted under the Act for most Catchment and Land Protection Regions, that regulate works in the vicinity of waterways which may affect water quality or quantity, riparian vegetation, waterway streambeds or banks.

Works on Waterways

Designated Waterways are declared under the *Water Act 1989* by CMAs, and may include named or unnamed, permanent or seasonal rivers, creeks, streams, watercourses, gullies, drains, lakes, lagoons, swamps, marshes, natural depressions and estuaries. Works that may interfere with water flow, cause erosion or pollution, soil disturbance or damage to vegetation require written authorisation from the designated water authority. This includes waterway crossings, boardwalks and jetties, excavation and river mouth openings, bank stabilisation works, vegetation or timber removal, planting and stormwater work. The permitting process is designed to provide best-practice guidance to ensure potential impacts on waterway health are addressed. A Works on Waterways permit will be required for trail construction works in the vicinity of waterway crossings, including Diamantina River and Blanket Creek.

8.7 Wildlife Act 1975

The Victorian *Wildlife Act 1975* provides for the protection and management of all Victorian wildlife (as declared under the Act) and regulates the conduct of any persons engaged in activities concerning or relating to wildlife. The Act seeks to achieve the protection of wildlife and wildlife habitats through the establishment of reserves, including State Game Reserves, State Wildlife Reserves and Nature Reserves, and with a system of licenses, permits and authorisations, outlined in the Wildlife Regulations 2013.

The *Wildlife Act 1975* regulates, among other activities, field investigations for the purpose of conserving, monitoring, improving or maintaining wildlife habitat, as well as the removal, handling and relocation of wildlife. Any persons involved in the capture and release of fauna, including the salvage and relocation of fauna prior to vegetation clearing or tree felling, must hold a valid Management Authorisation under the Act, issued by DEECA.

8.8 Catchment and Land Protection Act 1994

The *Catchment and Land Protection (CaLP) Act 1994* provides the framework for the protection of catchment and integrated management of land and resources in Victoria. It places obligations on land managers to:

- Conserve soil
- Protect water resources
- Eradicate Regionally Prohibited Weeds
- Control Regionally Controlled Weeds
- Prevent the spread and control Established Pest Animals

The FHAC project area is located within the North East Catchment Management Authority area. Eight species of Noxious Weeds listed under the CaLP Act were recorded within the project area. These may be disturbed during construction activities. In areas where noxious weed species occur within works areas, weed removal or control will be undertaken prior to works commencing. A Construction Environment Management Plan will also be developed and implemented that will include, but not be limited to the following measures (see Section 7.9.2):

- Hygiene controls for vehicles, machinery, equipment, tools and boots to prevent the introduction or spread of weeds and pathogens during construction. Post-construction monitoring of works sites will also be undertaken to detect and control any new weed incursions.
- Sensitive construction techniques for works on and around waterways and wetlands, particularly Alpine Bog systems.
- Soil stabilisation and site rehabilitation of disturbed areas after construction.
- Sediment and erosion control measures — best practice construction and sediment management measures are to be employed to ensure run-off during construction does not impact surrounding waterways and wetland environments.

8.9 *Aboriginal Heritage Act 2006*

Victoria's Aboriginal heritage legislation outlines the responsibilities that all people have to protect Victoria's unique Aboriginal heritage values.

The *Aboriginal Heritage Act 2006* has four key objectives:

- To provide for the protection of Aboriginal cultural heritage and Aboriginal intangible heritage in Victoria.
- To empower Traditional Owners as protectors of their cultural heritage on behalf of Aboriginal people and all other peoples.
- To strengthen the ongoing right to maintain the distinctive spiritual, cultural, material and economic relationship of Traditional Owners with the land and waters and other resources with which they have a connection under traditional laws and customs.
- To promote respect for Aboriginal cultural heritage, contributing to its protection as part of the common heritage of all peoples and to the sustainable development and management of land and of the environment.

Under the Act, it is an offence to harm Aboriginal cultural heritage, even unknowingly. Parks Victoria has processes in place to make sure we identify and protect cultural heritage as we go about the business of park management. The Aboriginal Heritage Regulations 2018 ensure the *Aboriginal Heritage Act 2006* is regulated.

As there is no Registered Aboriginal Party (RAP) for this area, the CHMP is approved by First Peoples — State Relations.

8.10 *Heritage Act 2017*

The Victorian *Heritage Act 2017* provides for the protection and conservation of the (non-Aboriginal) cultural heritage of Victoria. The Act established the Victorian Heritage Register (VHR — Register of places and objects assessed to be of state level significance) and Victorian Heritage Inventory (VHI — List of all known archaeological places and objects in Victoria). Works and activities to places and objects on the VHR and VHI require statutory approvals. The Act also establishes the process for obtaining statutory approvals, enforcing compliance, and other administrative procedures. The *Heritage Act 2017* is supported by the Heritage Regulations 2017.

One site within the project area is listed under the VHR — Wallace Hut (H1616). Archaeological surveys did not record any new archaeological sites within the project area. Wallace Hut has a Heritage Action Plan (2002) and a Conservation Plan (McDougal and Vines, Heritage Architects 2011). Being on the Victorian Heritage Register the Heritage Act General Exemptions (2022) allow repairs and maintenance including refixing, patching and/or the replacement of missing, damaged or deteriorated fabric that is beyond further maintenance.

The investigations undertaken by Extent Heritage determined that the FHAC project, by virtue of its alignment and works, does not propose any impact to known historical archaeological sites thus will not necessitate a Consent or Consent Exemption under the *Heritage Act 2017*. To manage any unexpected archaeological finds, such as ephemeral

hut footprints remains and isolated artefacts, it was recommended that all contractors attend a historical archaeological induction and adhere to an Unexpected Finds Protocol for the duration of the project.

8.11 *Environment Protection Act 2017*

The *Environment Protection Act 2017* provides for the protection of the environment and human health from pollution and waste through a prevention-based approach, which includes a General Environmental Duty (GED) that requires all Victorians to take reasonably practicable steps to eliminate or reduce risks of harm to the environment. The Act enables the Environment Protection Authority (EPA) to investigate businesses and hold environmental polluters accountable, with increased penalties for non-compliance and contamination.

A site-specific Construction Environment Management Plan (CEMP) will be developed prior to works commencing. The CEMP will be developed in accordance with Parks Victoria's Health Safety and Environment & Heritage Minimum Contractor Requirements Guideline (GUI-615B), and requirements under the *Environment Protection Act 2017*.

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Appendices

Appendix 1 Summary of project alternatives

Bogong High Plains area

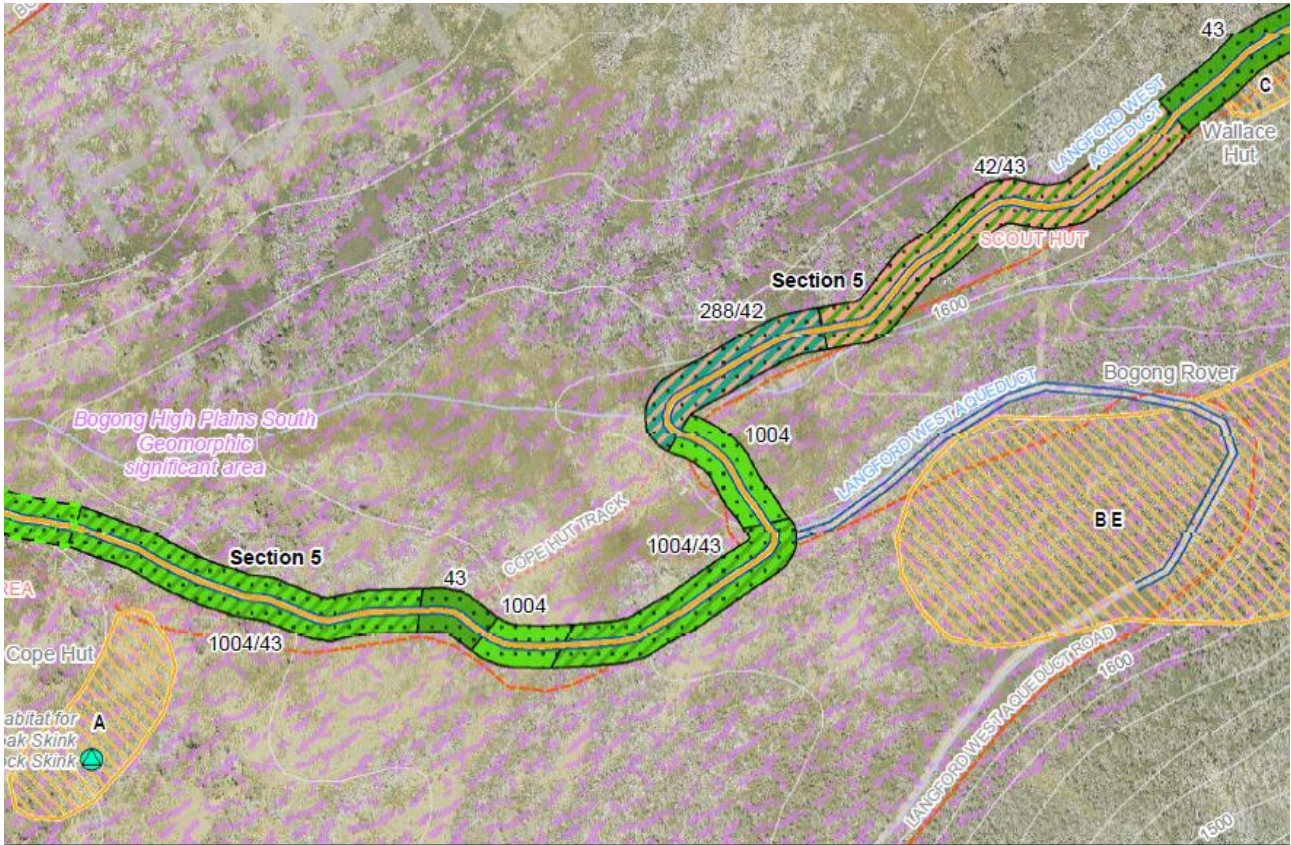


Figure 30 FHAC Alternative Overnight Nodes 1A, and 1B/E along Trail Section 5 (source: Abzeco 2021)

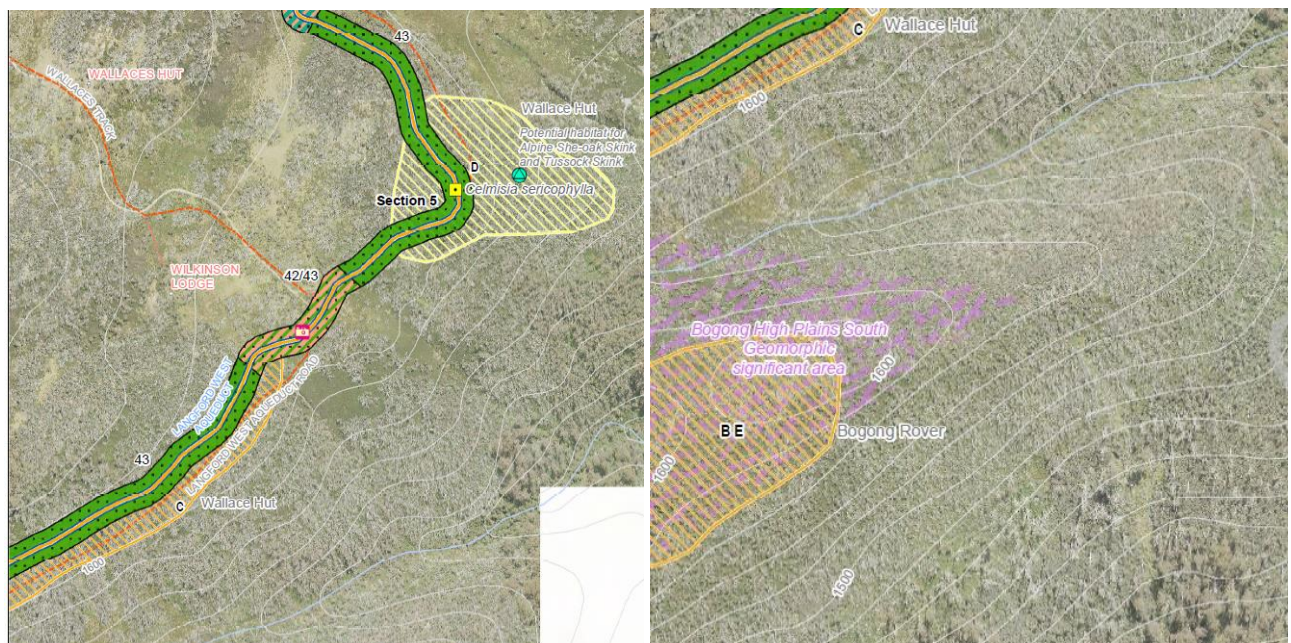


Figure 31 FHAC Alternative Overnight Nodes 1C and 1D (Left) and 1B/E and 1C (right) along Trail Section 5 (Source: Abzeco 2021)

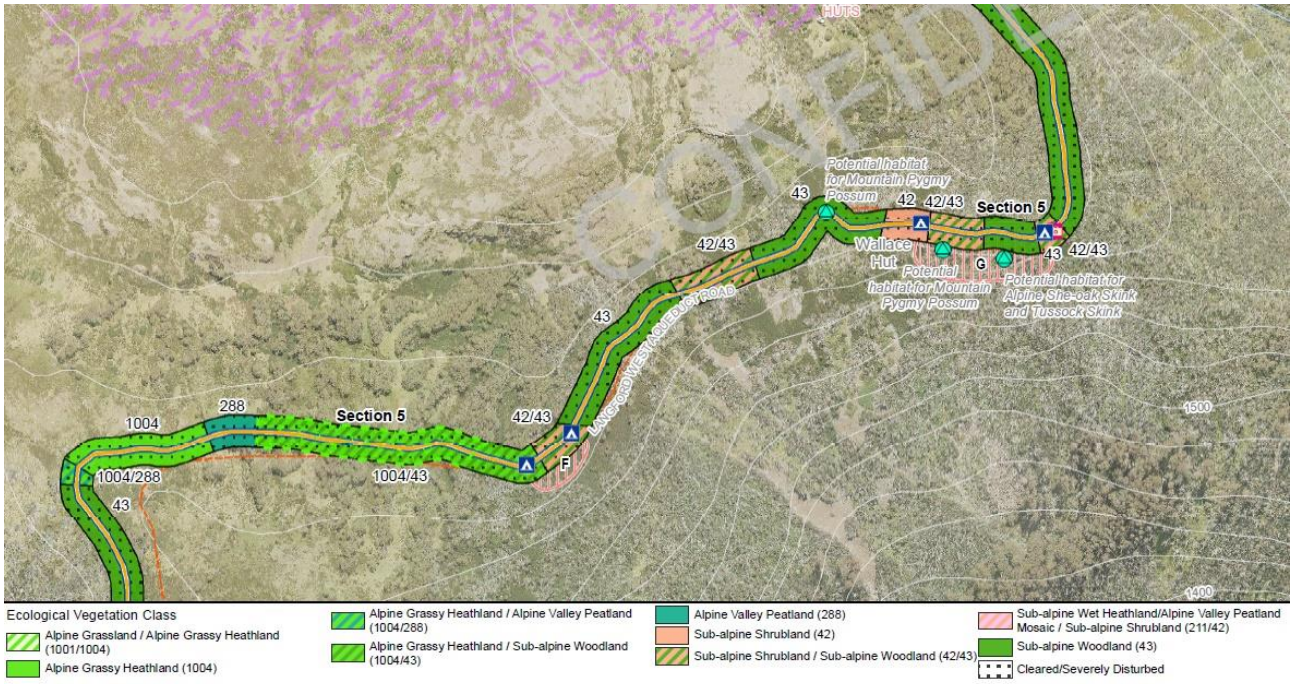


Figure 32 FHAC Alternative Overnight Nodes 1F and 1G along Trail Section 5 (Source: Abzeco 2021)

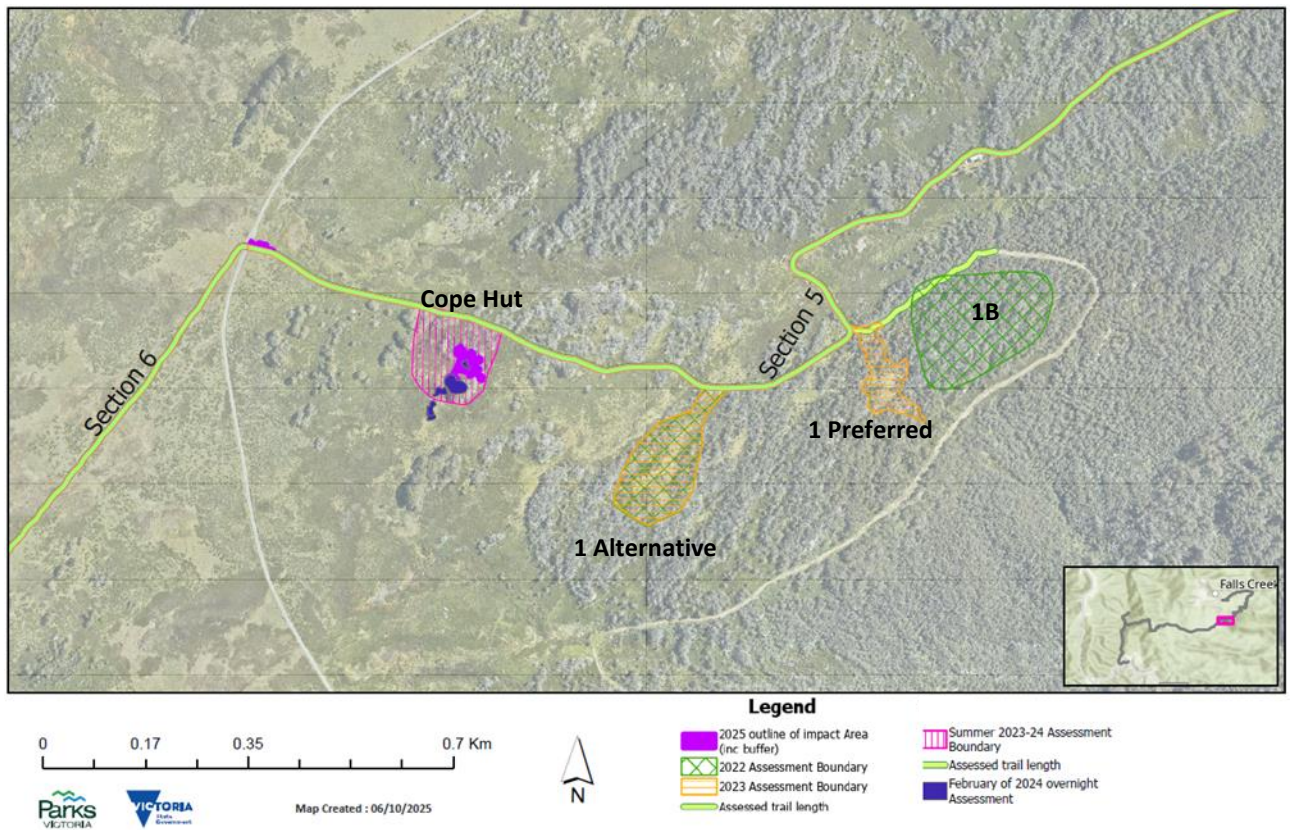


Figure 33 FHAC Alternative Overnight Nodes 1 Alternative and 1 Preferred along Trail Section 5 and Cope Hut Overnight Node showing refinement of the Overnight Node extent

Tawonga Huts area

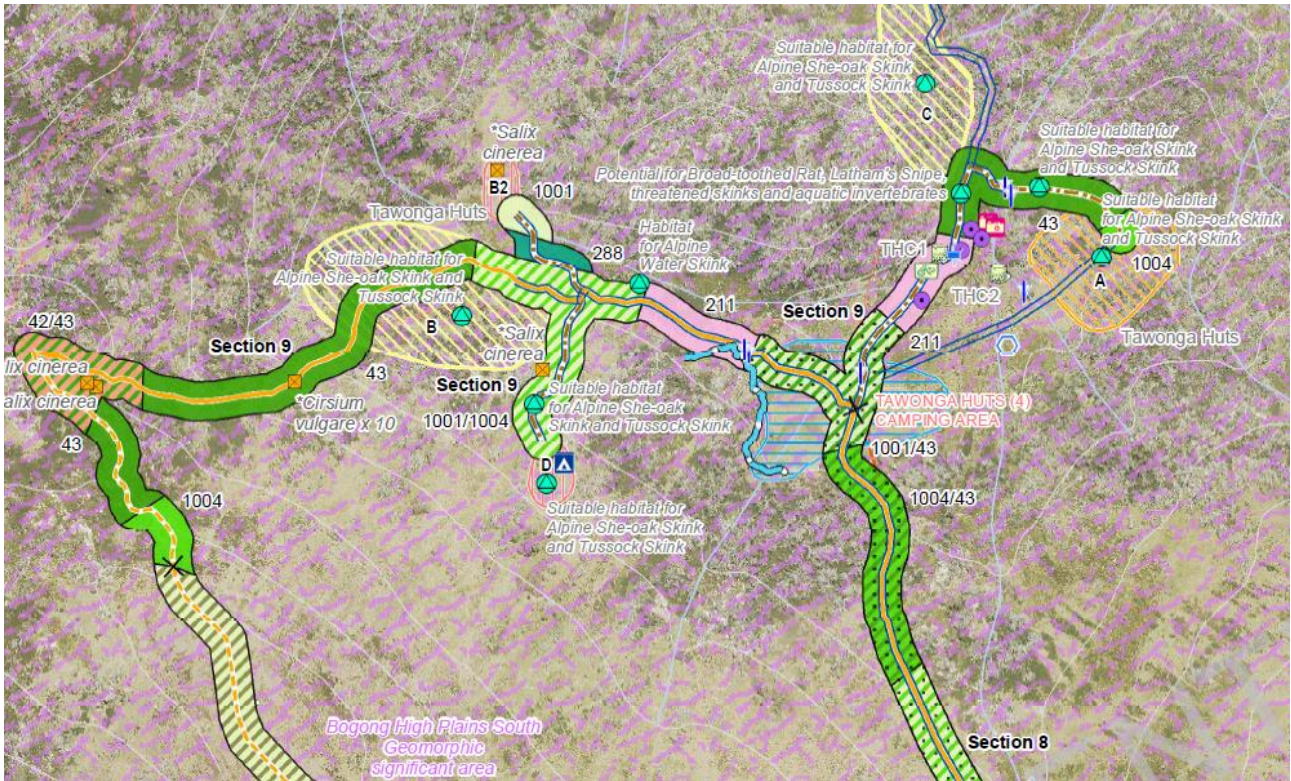


Figure 34 FHAC Alternative Overnight Nodes 2A, 2B, 2B(2), 2C and 2D (Source: Abzeco 2021)

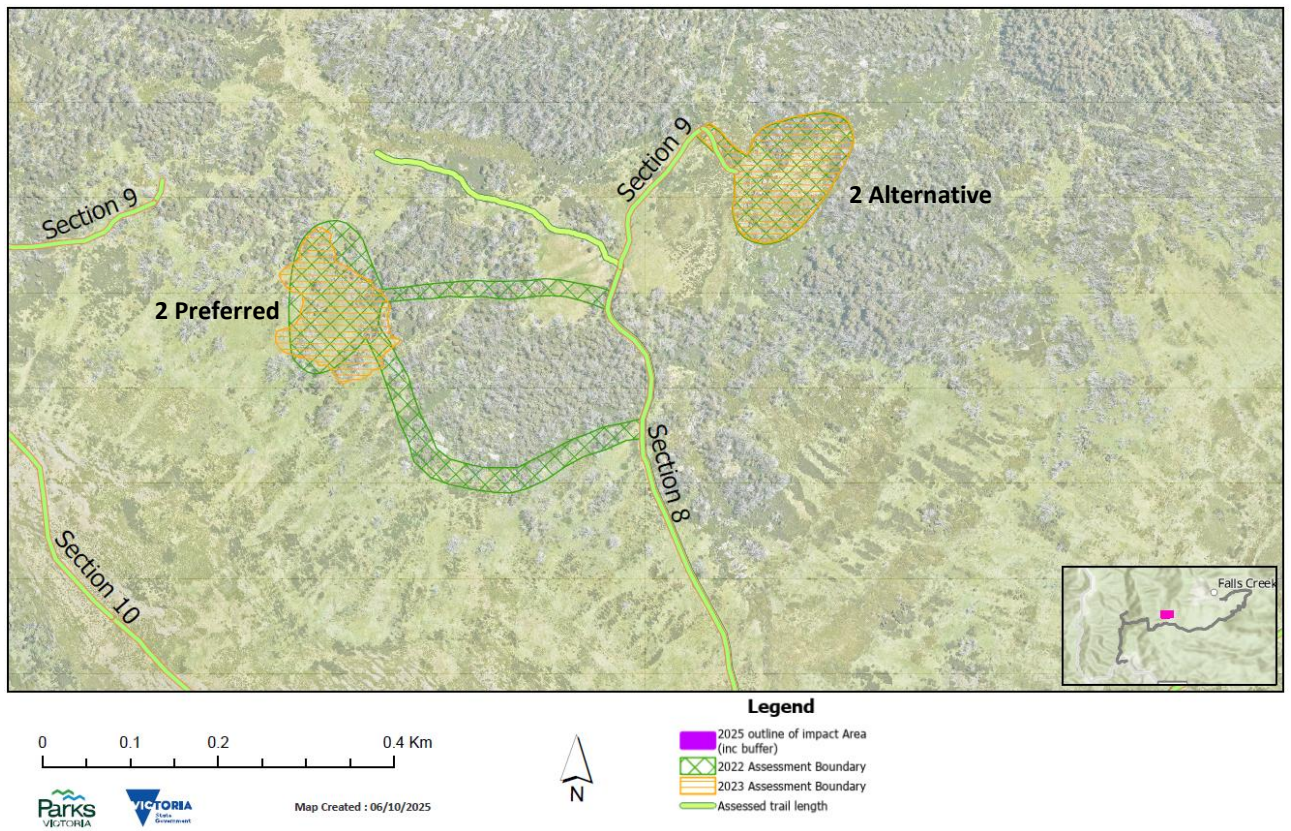


Figure 35 FHAC Alternative Overnight Nodes 2 Preferred (including updated boundaries) and 2 Alternative.

West Kiewa Valley area and High Knob

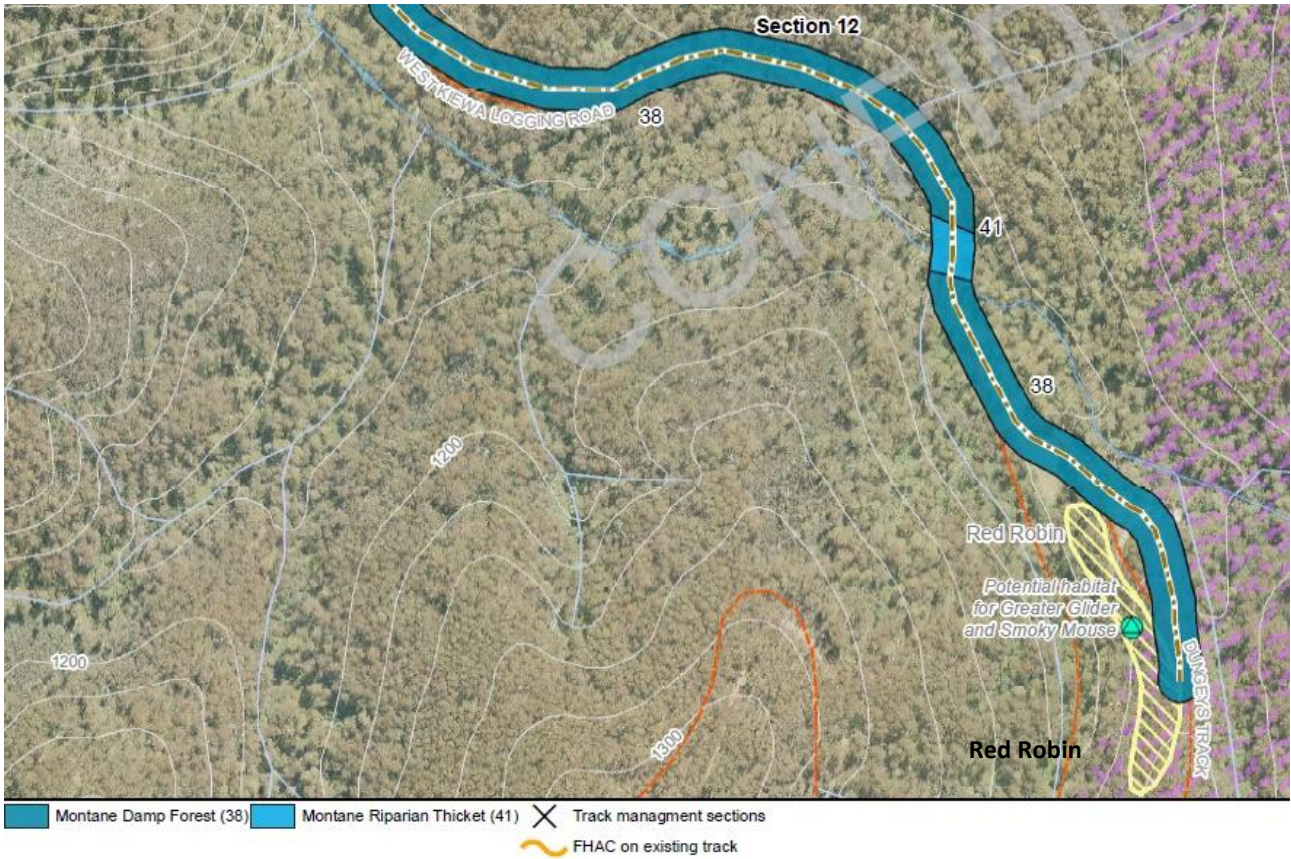


Figure 36 FHAC Alternative Overnight Node Red Robin along the (now removed) southern half of Trail Section 12 (Source: Abzecco 2021)

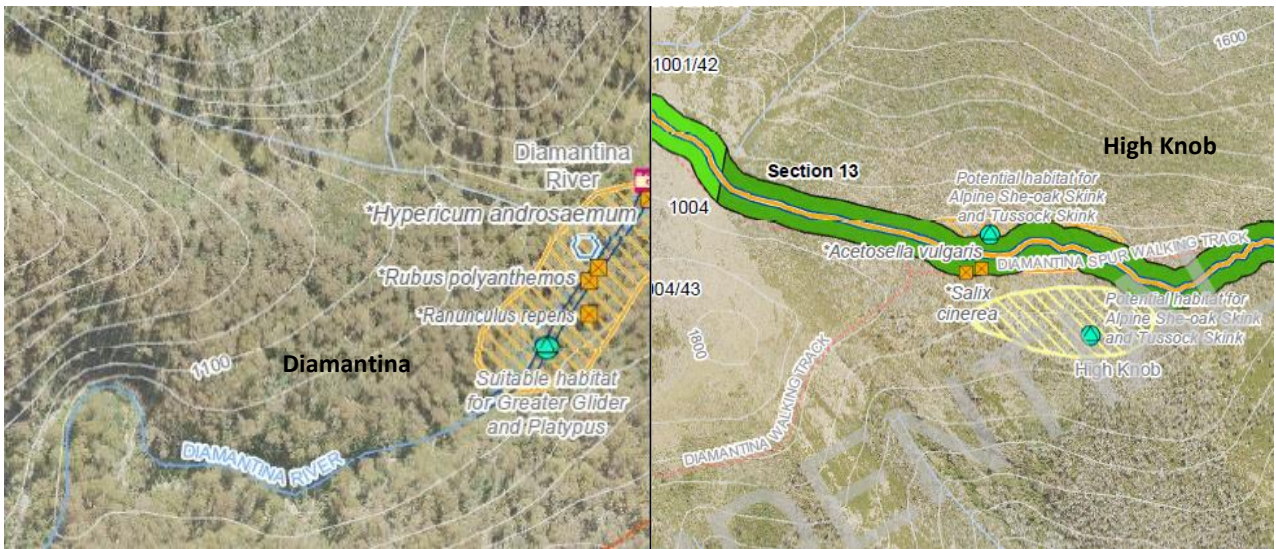


Figure 37 FHAC Alternative Overnight Node Diamantina (Left) and High Knob Hiker Camp and Operated Huts (right) (Source: Abzecco 2021)

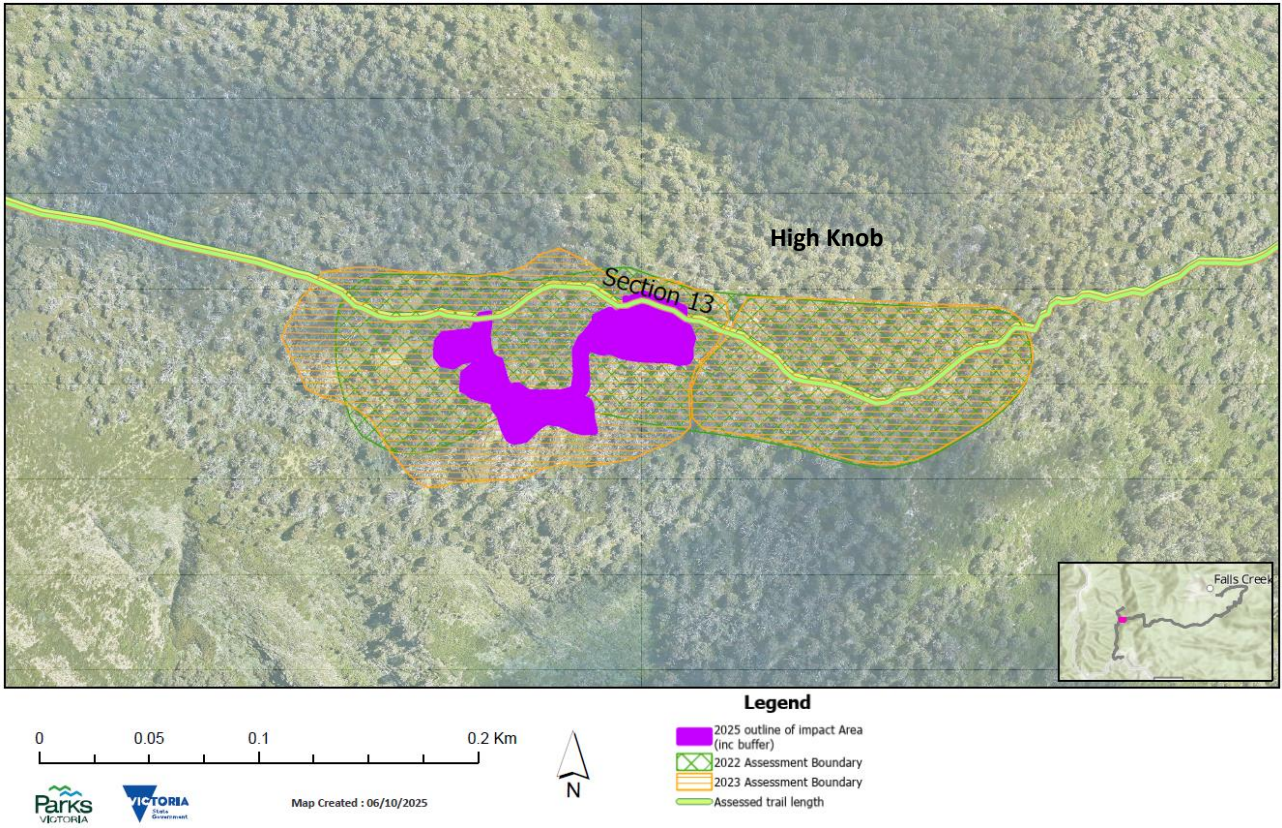


Figure 38 FHAC Overnight Node Alternative High Knob showing alternative iterations and refinement of the Overnight Node extent

Table 25 Summary of alternative Overnight Node and Trail options assessed, significant values identified within or adjoining each location, site constraints and final outcome

Alternative option	Description	Length (km)	Area (ha)	Significant values	Site constraints	Outcome
<i>Overnight Nodes</i>						
1A	Relatively flat location off Langford West Aqueduct Road, supporting closed Alpine Grassland and Alpine Grassy Heathland fringed by burnt Sub-alpine woodland (Abzeco 2021).	n/a	1.5	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site. ▪ Threatened species: Habitat for the Alpine She-oak Skink and Tussock Skink 	<ul style="list-style-type: none"> ▪ Potential for localised erosion around proposed accommodation and other infrastructure. 	Removed from project scope
1B/E	Located on the bend of Langford West Aqueduct and Langford West Aqueduct Road (straddling both sides) on a spur with relatively steep slopes, supporting Sub-alpine Woodland interspersed with Sub-alpine Shrubland (Abzeco 2021).	n/a	10.6	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site. ▪ Waterways: Located on the Langford West Aqueduct. 	<ul style="list-style-type: none"> ▪ High risk of surface run-off and erosion of the hillslope from the construction of campground infrastructure on steep slopes. ▪ Potential for impacts to the waterway, likely requiring a 30-m buffer from Langford Aqueduct. 	Removed from project scope
1C	A long, linear Overnight Node location positioned along the eastern side the Langford West Aqueduct (off Langford West Aqueduct Road) on a gentle slope, supporting Sub-alpine Woodland (Abzeco 2021).	n/a	2.4	<ul style="list-style-type: none"> ▪ Waterways: Located on the Langford West Aqueduct. 	<ul style="list-style-type: none"> ▪ Potential for localised erosion around proposed accommodation and other infrastructure. ▪ Potential impacts to the waterways, likely requiring a 30-m buffer from the Lanford Aqueduct and potential safety issues. 	Removed from project scope
1D	Situated on the Langford West Aqueduct Road and Langford West Aqueduct (straddling both sides), on a moderately-steep, eastern-facing slope, supporting Sub-alpine Woodland (Abzeco 2021).	n/a	4.9	<ul style="list-style-type: none"> ▪ Waterways: Located on the Langford West Aqueduct ▪ Threatened species: Habitat for Alpine She-oak Skink, Tussock Skink 	<ul style="list-style-type: none"> ▪ High risk of surface run-off and erosion of the hillslope from the construction of campground infrastructure on steep slopes. ▪ Potential for impacts to the waterway, likely requiring a 30-m buffer from Langford Aqueduct. 	Removed from project scope
1F	Located on the southern side of the Langford West Aqueduct (off Langford West Aqueduct Road) on a moderately-steep slope with an easterly aspect. This location supports Alpine Grassy Woodland, Sub-alpine Shrubland and Sub-alpine Woodland on shallow soils with large boulders and rock scattered throughout (Abzeco 2021).	n/a	3.6	<ul style="list-style-type: none"> ▪ Long-unburnt Snow Gums: Long-unburnt Snow Gums at proposed Node location ▪ Geology: Large boulders and scattered rock 	<ul style="list-style-type: none"> ▪ High risk of surface run-off and erosion of the hillslope from the construction of campground infrastructure on steep slopes. ▪ Site supports shallow soils and large boulders and scattered rock throughout. 	Removed from project scope
1G	Situated on the southern side of the Langford West Aqueduct (off Langford West Aqueduct Road) on a steep, south-facing slope, supporting Sub-alpine Shrubland and Sub-alpine Woodland (Abzeco 2021).	n/a	2.1	<ul style="list-style-type: none"> ▪ Threatened species: Habitat for Mountain Pygmy Possum habitat on embankment above track as well as Alpine She-oak Skink, Tussock Skink 	<ul style="list-style-type: none"> ▪ High risk of surface run-off and erosion of the hillslope from the construction of campground infrastructure on steep slopes. 	Removed from project scope
1 Preferred	Located on the south-eastern side of Langford West Aqueduct Road, extending from the road to the south-east, on a moderate slope. This Node comprises a central area of Alpine Grassland, fringed by Sub-alpine Woodland, with a small area of Alpine Grassy Heathland near the Road (Abzeco 2025).	n/a	0.8	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Geology: Gneiss outcrop located centrally within the Node. ▪ Threatened species: Habitat for Broad-toothed Rat, Alpine She-oak Skink, Alpine Bog skink, Tussock Skink 	<ul style="list-style-type: none"> ▪ Potential for damage to significant geological features. ▪ Habitat for multiple threatened fauna species restricted to high alpine environments. 	Removed from project scope
1 Alternate	Located on the southern side of Langford West Aqueduct Road on a moderate slope which levels out towards the south-east of the site. This area supports a central area of Alpine Grassland fringed by Sub-alpine Woodland, interspersed with Sub-alpine Shrubland and Alpine Grassy heathland, and includes a patch of Alpine Valley Peatland near the road (Abzeco 2025).	n/a	2.1	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community. ▪ Geology: Unusually large Gneiss boulders (3+ m) occur on the south-eastern edge of the Overnight Node 	<ul style="list-style-type: none"> ▪ Alpine Sphagnum Bogs extend over part of the sites, that would be at risk of significant direct or indirect impacts. ▪ Potential for damage to significant geological features. 	Removed from project scope
2A + access track	Situated on relatively flat terrain, east of Tawonga Hut Creek, supporting Alpine Grassy Heathland, fringed by Sub-alpine Shrubland, with a new access track proposed extending east from the Fainter Firetrail at Overnight Node 2C to 2A, through Sub-alpine Woodland (Abzeco 2021).	n/a	1.5	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Waterways: Access Track crosses Tawonga Hut Creek ▪ Aboriginal Cultural Heritage: Scar trees and artefacts ▪ Threatened species: Habitat for Alpine She-oak Skink, Tussock Skink 	<ul style="list-style-type: none"> ▪ Construction/extension of track would require removal of Snow Gums and associated understorey. ▪ Access is over Tawonga Hut Creek which is on stable bedrock, but may be subject to indirect impacts. 	Removed from project scope
2B	Located on a gentle, north-facing slope supporting Alpine Grassland, Sub-alpine Woodland, and Sub-alpine Shrubland.	n/a	2.9	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site 	<ul style="list-style-type: none"> ▪ Node adjoins, Alpine bog communities and areas of associated areas of groundwater seepage. Potential for concentration of flows and degradation of community and physical degradation. 	Removed from project scope

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Alternative option	Description	Length (km)	Area (ha)	Significant values	Site constraints	Outcome
	Abuts Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic (Abzeco 2021).			<ul style="list-style-type: none"> ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community. ▪ Aboriginal Cultural Heritage: Scar trees and artefacts 	<ul style="list-style-type: none"> ▪ Potential for harm to significant Aboriginal cultural heritage 	
2B ext. (B2)	Optional extension of proposed Overnight Node 2B, within Alpine Grassland, fringed by Sub-alpine Woodland and adjoining areas of Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic. Access to this area was proposed via a new track through Alpine Grassland and Alpine Valley Peatland (Abzeco 2021).	n/a	2.9	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community 	<ul style="list-style-type: none"> ▪ Access to the Overnight Node and part of the Overnight Node is covered by Alpine bog communities, at risk of significant direct impact. 	Removed from project scope
2C + access track	Located on the eastern side of the Fainter Fire Trail on a steep, rocky, east-facing slope supporting Sub-alpine Woodland. Access is via the Fainter Firetrail, commencing at Tawonga Huts, through Alpine Grassland, Sub-alpine Woodland and Sub-alpine Wet Heathland/Alpine Valley Peatland Mosaic (Abzeco 2021).	n/a	1.4	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community is located along the access track. ▪ Waterways: Track crosses Tawonga Hut Creek ▪ Aboriginal Cultural Heritage: Scar trees and artefacts 	<ul style="list-style-type: none"> ▪ High risk of surface run-off and erosion of the hillslope from the construction of campground infrastructure on steep slopes. ▪ Access is across Tawonga Hut Creek which is on stable bedrock, but would require bridging to avoid impacts from trampling and damage to the adjacent Alpine Bog system. ▪ Existing track intercepts groundwater expression points and localised surface water forming concentrated flow path along track. ▪ Potential for harm to significant Aboriginal cultural heritage. 	Removed from project scope
2D + access track	Located to the west of the existing Tawonga Huts Camping Area within Alpine Grassland and Sub-alpine Woodland, with a proposed access track extending south from the FHAC (Trail Section 9) through Alpine Grassland and Alpine Grassy Heathland (Abzeco 2021).	n/a	1.5	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Threatened species: Habitat for Alpine She-oak, Tussock Skink ▪ Aboriginal Cultural Heritage: Scar trees and artefacts. 	<ul style="list-style-type: none"> ▪ Potential for harm to significant Aboriginal cultural heritage. ▪ Habitat for threatened fauna species 	Removed from project scope
2 Preferred + access tracks	<p>Located on the western valley of Tawonga Creek (southeast of Mount Jaithmathang) on gentle to moderate slopes, west of Tawonga Hut. The Overnight Node location comprises primarily Alpine Grassy Heathland interspersed with patches of Sub-alpine Woodland, and includes one small patch of Sub-alpine Shrubland and one patch of Alpine Valley Peatland (Abzeco 2025).</p> <p>Two access tracks were investigated, including a northern access track supporting Sub-alpine Woodland, Alpine Grassy Heathland and Sub-alpine Shrubland. The southern access track supported Alpine Grassland, Sub-alpine Woodland, Alpine Grassy Heathland, Sub-alpine Shrubland and a patch of Alpine Valley Peatland (Abzeco 2025).</p>	n/a	2.8	<ul style="list-style-type: none"> ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community occurs within and adjacent to the Overnight Node location. ▪ Peri-glacial features: The Overnight Node and surrounds are located on relict peri-glacial debris, including block slope of basalt and granodiorite rubble from the late Pleistocene. Access tracks cross a possible debris flow that travelled down the tributary of Tawonga Hut Creek. This location is geologically significant as it is located on a particularly large basalt block stream. ▪ Aboriginal Cultural Heritage: Scar trees and artefacts. 	<ul style="list-style-type: none"> ▪ Contains extensive and highly significant peri-glacial landforms. The location and immediate surrounds are comprised of linear block streams derived from basalt upslope. The deposits across much of the site are relict (fossil) landforms from the late Pleistocene cold phase, and as such, are of high geoscience significance. ▪ High risk of erosion, altered hydrology, compromised slope stability and downslope movement from vegetation removal and construction of infrastructure. While the larger rock debris is inactive under present conditions, local slumping and surface instability occurs where lateral and vertical drainage is impeded by accumulation of organic and fine sediment resulting in high water tables with wetlands, ponds and shallow streams (Rosengren 2023). ▪ Potential for harm to significant Aboriginal cultural heritage. 	Removed from project scope
2 Alternate + access track	Located at the base of the ridge on the eastern side of Tawonga Hut Creek, including the lower hillslope and alluvial flat along the creek; the channel of Tawonga Hut Creek flows around outcrop and boulders across the lower western part of the site. The area supports Alpine Grassy Heathland, Sub-alpine Woodland and Sub-alpine Shrubland in the northern half and Alpine Valley Peatland across the southern half. Access to this node is through Alpine Valley Peatland and Sub-alpine Shrubland (Abzeco 2025).	n/a	2.0	<ul style="list-style-type: none"> ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community occurs within and adjoining the Overnight Node location. ▪ Peri-glacial features: Boulders occur across the lower western portion of the site, some of which are of periglacial transport origin. Cryogenic-transported basalt materials are likely within the alluvium and lower slopes. ▪ Aboriginal Cultural Heritage: Scar trees and artefacts 	<ul style="list-style-type: none"> ▪ Alpine Sphagnum Bog systems cover a large portion of the site, and extends beyond the Overnight Node location, which are subject to degradation and unsuitable for visitor activity. ▪ Peri-glacial features of high geomorphic significance occur across the lower western portion of the site which are subject to disturbance. ▪ Potential for harm to significant Aboriginal cultural heritage. 	Removed from project scope
Diamantina Horse Yards	Overnight Node split into two areas, either side of the Diamantina River, located within dense Montane Damp Forest (Abzeco 2021).	n/a	1.7	<ul style="list-style-type: none"> ▪ Waterways: Located on the floodplain terrace of the Diamantina River – a high-energy and flashy river. ▪ Threatened species: Greater Glider and Platypus 	<ul style="list-style-type: none"> ▪ Potential for the Overnight Node (located on the floodplain terrace) to become rapidly inundated by floodwaters, making it a hazardous area to camp. ▪ Potential for rapidly rising waters to damage accommodation and other infrastructure and create public safety issues. ▪ Large amount of vegetation clearing and high level of maintenance required, including the removal of mature/hazardous trees for public safety, potentially beyond immediate footprint. 	Removed from project scope

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Alternative option	Description	Length (km)	Area (ha)	Significant values	Site constraints	Outcome
Red Robin Battery	Located on a westerly slope within a fork between the West Kiewa Logging Road and Dungeys Track, densely vegetated with Montane Damp Forest (Abzeco 2021).	n/a	0.9	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Threatened species: Habitat for Greater Glider, Smoky Mouse ▪ Non-Aboriginal Heritage: Included on the Victorian Heritage Register 	<ul style="list-style-type: none"> ▪ Potential soil contamination associated with the former Red Robin Battery mining activities. ▪ Large amount of vegetation removal and high level of maintenance required, including removal of mature/hazardous trees for public safety, potentially beyond the immediate footprint, and potential impacts to threatened fauna. ▪ May be subject to inundation during flood events. ▪ Potential impacts to registered site on the Victorian Heritage Register 	Removed from project scope
Blairs Hut	Located on the eastern side of the Kiewa River, off the West Kiewa Logging Road, this Overnight Node area is covered entirely by Montane Damp Forest (Abzeco 2021).	n/a	2.2	<ul style="list-style-type: none"> ▪ Aboriginal Cultural Heritage: Culturally-modified trees identified in the West Kiewa Valley. ▪ Threatened species: Breeding location for Gang-gang Cockatoo ▪ Geomorphology: Located on an alluvial fan formed by an unusual slump/debris flow (c. 20,000 years ago) consisting of poorly sorted sediment and mud and basalt pebbles around an old stream course. 	<ul style="list-style-type: none"> ▪ Small possibility of uphill slump in the future, which would likely flow across the Overnight Node site, if it were to occur. ▪ Possibility of flooding, given proximity to the river. An exceptional flood event could realign the existing stream in line with one of several historical courses which intersect the Overnight Node location. ▪ High potential for disturbance of breeding of the Gang-gang Cockatoo. 	Removed from project scope
High Knob Hiker Camp	Located on the north side of Diamantina Spur Walking Track in Sub-alpine Woodland and Alpine Grassland (Abzeco 2021).	n/a	0.97	<ul style="list-style-type: none"> ▪ Slope: Moderate slope 	<ul style="list-style-type: none"> ▪ High risk of erosion and surface run-off. 	Area refined
High Knob Operated Huts	Located on the south side of the Diamantina Spur Walking Track on a steep (>20°) southerly slope, supporting dense Sub-alpine Woodland (Abzeco 2021).	n/a	1.1	<ul style="list-style-type: none"> ▪ Long-unburnt Snow Gums: Unburnt Snow Gums fringe the proposed Overnight Node ▪ Slope: Steep southern slope 	<ul style="list-style-type: none"> ▪ Large amount of vegetation removal and high level of maintenance required, including removal of long-unburnt Snow Gums. ▪ High risk of erosion and surface run-off 	Area refined
<i>Trail sections</i>						
8	Fainter Firetrail 4WD track extending north from Section 7 to Tawonga Hut.	0.81	n/a	<ul style="list-style-type: none"> ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Peri-glacial features: Pleistocene periglacial basalt blockstreams ▪ Threatened species: Alpine She-oak Skink, Tussock Skink 	<ul style="list-style-type: none"> ▪ Waterways have the potential to be negatively impacted through the concentration of flows, track runoff and construction activities that lead to physical damage/erosion. ▪ Potential for physical damage to peri-glacial features 	Removed from project scope
9		1.46	n/a	<ul style="list-style-type: none"> ▪ Peri-glacial features: Pleistocene periglacial basalt blockstreams ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community occurs along track. ▪ Slope: Steep track profile ▪ Threatened species: Habitat for Alpine Darner Dragonfly, Alpine She-oak Skink, Alpine Water Skink, Latham's Snipe, Broad-toothed Rat, Alpine Bog Skink, Tussock Skink, Alpine Stonefly. 	<ul style="list-style-type: none"> ▪ Steepness of the track creates potential for erosion within/adjacent to the upgraded track ▪ Potential for significant direct impact on threatened alpine bog communities ▪ Potential for damage to significant geomorphological features ▪ Potential for impacts to habitat for multiple threatened species. 	Removed from project scope
10	Proposed new track between 40 and 120 m east of the break of slope above Jaithmathang Creek.	2.55	n/a	<ul style="list-style-type: none"> ▪ Not Assessed (Inaccessible) 	<ul style="list-style-type: none"> ▪ New track that would require extensive vegetation clearance 	Removed from project scope
10a	Previously constructed track between the Fainter Firetrail and Westons Track, to provide a shorter route link or turnback, bypassing Tawonga Huts.	0.5	n/a	<ul style="list-style-type: none"> ▪ Peri-glacial features: The track crosses an almost flat surface of outcropping Mt Jim Volcanic Group basalt with periglacial basalt blocks from higher exposed slopes of the same geology. Although of low overall relief this apparently flat surface has substantial microtopography defined as discrete landforms or surface shapes with relief ranging from decimetres to around one metre vertically and ±10 metres laterally (Rosengren 2023). 	<ul style="list-style-type: none"> ▪ Potential damage to geomorphological features of high geoscience significant and sensitivity, including shallow elongate to sub-circular depressions occurring singly or in close-spaced groups. 	Removed from scope.
12a	Proposed new loop track between the West Kiewa Logging Road, east of the Diamantina Horse Yards, and the start of the Diamantina Spur Walking Track, located on the western side of the Diamantina River.	n/a	n/a	<ul style="list-style-type: none"> ▪ Not Assessed (Inaccessible) 	<ul style="list-style-type: none"> ▪ Inaccessible due to steep and rocky terrain and obscured by dense vegetation which present safety risks. ▪ Crosses the Diamantina River, a high-energy and flashy river, requiring a potentially substantial crossing structure. 	Removed from scope.
12b	Proposed new track extending west from the start of the Diamantina Spur Walking Track at the junction of West Kiewa Logging Road, looping north to re-join the Diamantina Spur Walking Track c. 1 km west of the West Kiewa Logging Road.	n/a	n/a	<ul style="list-style-type: none"> ▪ Not Assessed (Inaccessible) 	<ul style="list-style-type: none"> ▪ Inaccessible due to steep and rocky terrain and obscured by dense vegetation which present safety risks. 	Removed from scope.

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Alternative option	Description	Length (km)	Area (ha)	Significant values	Site constraints	Outcome
17 (Pretty Valley Track)	Existing vehicle track between Pretty Valley Pondage, west to the head of Tawonga Huts Creek, supporting Alpine Valley Peatland, Alpine Fen, Sub-alpine Shrubland, Alpine Grassland, Sub-alpine Woodland and Alpine Conifer Shrubland.	3.3	n/a	<ul style="list-style-type: none"> ▪ Listed Ecological Communities: Alpine Sphagnum Bogs and Associated Fens (EPBC) / Alpine Bog (FFG) Community, and Alpine Fen (Bog Pool) Community (FFG) ▪ Sites of Geological and Geomorphological Significance: Located within the Bogong High Plains South Site ▪ Peri-glacial features: The surface along most of this section is covered by a veneer of basalt blocks emplaced by Pleistocene cryogenic processes as linear blockstreams, steeper block slopes and widely distributed blockfields (Rosengren 2023). ▪ Threatened species: Basalt blockstreams in Alpine Conifer Shrubland provide habitat for the Mountain Pygmy Possum 	<ul style="list-style-type: none"> ▪ Vegetation loss and disturbance exposing the soil surface soil can lead to loss of the fine material by water and wind action. ▪ Potential for significant direct and indirect damage to listed alpine bog communities. ▪ Potential for significant disturbance and damage to features of high geomorphological significance ▪ Potential for significant disturbance and habitat loss for threatened species 	Existing track. No longer required as part of the FHAC.
Bungalow Spur (18)	From the Razorback to Harrietville. Alpine Grassland, Alpine Grassy Heathland, Sub-alpine Shrubland	9	n/a	<ul style="list-style-type: none"> ▪ Geomorphology: Exposure of Pinnak Sandstone at Picture Point, which shows the typical lithologies of this formation and allows interpretation of the depositional environment, and a thin bed of Pinnak Sandstone that displays well-developed cylindrical folds, located between Federation Hut and the intersection of Bungalow Spur Track and the Razorback (Webb 2023). ▪ Threatened species: Gang-gang Cockatoo 	<ul style="list-style-type: none"> ▪ Two Pinnak Sandstone outcrop features of geomorphological significant, would need to be preserved if the track were to be widened. ▪ Two springs were identified along the track, most likely due to an impermeable geological unit forcing shallow groundwater to the surface. Track works to avoid disturbing the springs (Webb 2023). ▪ Potential impacts to breeding habitat for threatened species. 	Existing track. No longer required as part of the FHAC.

Appendix 2 Listed Ecological Communities

Six listed ecological communities were identified as potentially occurring within the assessment area. Four of these were recorded from on-ground surveys; the remaining two communities were not recorded, refer Table 26, below.

Table 26 Listed Ecological Communities modelled within the assessment area, and their occurrence in the assessment area.

Ecological Community	Status	Description
<i>EPBC Act-listed communities</i>		
White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	<p>Not present</p> <p>This community is characterised by a species-rich understorey of native tussock grasses, herbs and scattered shrubs, and the dominance, or prior dominance, of White Box <i>Eucalyptus albens</i>, Yellow Box <i>E. melliodora</i> or Blakely’s Red Gum <i>E. blakelyi</i>. It occurs on the western slopes and tablelands of the Great Dividing Range from southern Queensland to central Victoria, typically between 170 and 1200 m ASL (TSSC 2006).</p> <p>The dominant species and structural characteristics which define the White Box – Yellow Box – Blakely’s Red Gum Grassy Woodland and Derived Native Grassland community were not recorded within the assessment area. This community is also typically found at lower altitudes (Abzeco 2025).</p>
Alpine Sphagnum Bogs and Associated Fens	Endangered	<p>Present</p> <p>See Section 4.5</p>
<i>FFG Act-listed communities</i>		
Alpine Bog Community	Listed	<p>Present</p> <p>See Section 4.5</p>
Fen (Bog Pool) Community	Listed	<p>Present</p> <p>See Section 4.5</p>
Alpine Snowpatch Community	Listed	<p>Present</p> <p>See Section 4.5</p>
<i>Caltha introloba</i> Herbland Community	Listed	<p>Not present</p> <p>This herbland is characterised by a very low cover of vegetation (< 30%), which occurs in small patches (250 – 1000 m²), dominated by either Alpine Marsh Marigold <i>Caltha introloba</i> or Dwarf Cushion Sedge <i>Oreobolus pumilio</i> subsp. <i>pumilio</i>. It occurs primarily within Snowpatch communities of the sub-alpine and alpine zones; the openness of the vegetation is maintained by the continuous and abundant flow of water from the Snowpatch during the spring/summer thaw. In Victoria, it is known only from the Bogong High Plains (DEECA n.d.).</p> <p>Open herbland, dominated by <i>Caltha introloba</i> was not recorded within the assessment area (Abzeco 2025).</p>

Appendix 3 EPBC Act 1999 Significant Impact Assessments

This section provides an assessment of the potential impacts on the Matters of National Environmental Significance (MNES) under the EPBC Act which occur within the project area. The assessments have been undertaken in accordance with 'EPBC Policy Statement 1.1 — Significant Impact Guidelines Matters of National Environmental Significance' (DoE 2013), and any additional relevant policy statements, Conservation Advice or other guidelines.

The EPBC Act defines a 'significant impact' as an impact that is important, notable or of consequence, having regard to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value, and quality of the environment that is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. To be considered 'likely', it is not necessary for a significant impact to have a greater than 50% chance of happening; it is sufficient if a significant impact on the environment is a real or not remote chance or possibility (DoE 2013).

National Heritage Places

An action is likely to have a significant impact on the National Heritage values of a National Heritage Place if there is a real change or possibility it will cause:

- One or more of the National Heritage values to be lost
- One or more of the National Heritage values to be degraded or damaged
- One or more of the National Heritage values to be notably altered, modified, obscured or diminished.

An assessment of impacts on National Heritage Values for the FHAC project has been undertaken by GML (2025). The assessment found that the FHAC will have a moderate impact, at most, on the National Heritage values of the Australian Alps National Parks and Reserves National Heritage place.

An assessment of the potential impacts of the FHAC against the significant impact criteria is given in Table 27.

Table 27 Assessment of potential impacts to the National Heritage Place against EPBC Act significant impact criteria

Significant Impact Criteria	Assessment outcome
<i>Values associated with geology or landscapes</i>	
Damage, modify, alter, or obscure important geological formations in a National Heritage Place	The important geological formations within the project area will remain intact.
Damage, modify, alter or obscure landform features, for example by clearing, excavating or infilling the land surface in a National Heritage Place	The FHAC project will not alter the landforms or landscape features of the area. Small areas of vegetation clearance will be required for trail upgrades and establishment of the Nodes. This level of clearing will not significantly alter the land surface.
Modify, alter or inhibit landscape processes, for example, by accelerating or increasing susceptibility to erosion, or stabilising mobile landforms, such as sand dunes in a National Heritage Place	The FHAC project will not alter, nor inhibit landscape processes. Small areas of vegetation clearing will occur and then be remediated, and are not expected to affect erosion or other processes.
Divert, impound, or channelise a river, wetland or other water body in a National Heritage Place	The FHAC will not involve any works on waterways. Works through wetland areas (e.g., alpine bogs) will not divert, impound, nor change drainage or hydrological patterns.
Substantially increase concentrations of suspended sediment, nutrients, heavy metals, hydrocarbons, or other pollutants or substances in a river, wetland or water body in a National	The FHAC project will not increase pollutants in water bodies, or damage or obscure rock art or cultural or ceremonial features. The project will not involve substantial alteration of surface water drainage patterns, nor will it result in changes in ground water. Soil disturbance will be kept to the minimum required for infrastructure

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Significant Impact Criteria	Assessment outcome
Heritage Place; permanently damage or obscure rock art or other cultural or ceremonial features with World Heritage values.	installation. Sediment and erosion controls will be in-place during all works within or near wetlands.
<i>Biological and ecological values</i>	
Modify or inhibit ecological processes in a National Heritage Place	The proposed FHAC will not modify or inhibit processes in the project area or National Heritage place. There will be some minor alterations to the natural environment, but these will not affect ecological processes.
Reduce the diversity or modify the composition of plant and animal species in a National Heritage Place	The proposed FHAC will not reduce the diversity or modify the composition of plant and animal species. There will be some minor impacts and vegetation clearing as part of the proposed action, but the proposed design and mitigation measures have minimised impacts to avoid impacts to biodiversity.
Fragment or damage habitat important for the conservation of biological diversity in a National Heritage Place	The FHAC will not fragment or damage habitat important for conserving biological diversity. Habitat impacts will be minimal and not have larger effects on the habitat integrity.
Cause a long-term reduction in rare, endemic or unique plant or animal populations or species in a National Heritage Place	The FHAC will not cause a long-term reduction in rare, endemic or unique plant or animal populations. Design and construction mitigation measures have been put in place to ensure that potential impacts to biodiversity are minimised as far as possible. The scale and intensity of residual impacts means that there will be minimal effects on plant or animal populations.
Fragment, isolate or substantially damage habitat for rare, endemic or unique animal populations or species in a National Heritage Place	The FHAC will not fragment or damage habitat for rare, endemic or unique animal populations or species. Habitat impacts will be minimal and not have larger effects on the habitat integrity.
<i>Wilderness, aesthetic or other rare or unique environmental values</i>	
Involve the construction of buildings, roads, or other structures, vegetation clearance, or other actions with substantial and/or long-term impacts on relevant values	The FHAC will involve the construction of structures and vegetation clearance, however the impacts of this will be minimal, not substantial and long-term. The proposed vegetation clearance will be to small, localised areas. The new structures constructed have been designed and sited to minimise visual impacts, and the construction methodology involves minimal physical intrusions and is reversible. Trail works will be constrained to existing trail alignments, and so this aspect of the works will not notably have substantial or long-term impacts on heritage values.
Introduce noise, odours, pollutants or other intrusive elements with substantial long-term impacts on relevant values	The proposed action will facilitate some increase in intangible intrusive elements such as noise from more visitors along the walk; however, these are not expected to have substantial or long-term impacts on the relevant values. The increase in noise will be transient and variable, from more visitors and from helicopters removing waste pods. Helicopters will only fly in to remove waste three-four times a year, and the increase in noise from visitors will be limited by the camping capacity of each site and be at a human scale. Interpretive materials and guidance will encourage users to minimise intrusive noise and behaviours. Noises and other intrusive elements associated with the construction phase will be temporary.
<i>Historic heritage values</i>	
Permanently remove, destroy, damage or substantially alter the fabric of a National Heritage place in a manner which is inconsistent with relevant values	The proposed action does involve alteration to the fabric of high country huts, part of the National Heritage place. However, the works are consistent with the National Heritage values, as their purpose is conserving the huts. The practice of vernacular building repair is an expression of the National Heritage values.
Extend, renovate, refurbish or substantially alter a National Heritage place in a manner which is inconsistent with relevant values	The proposed action does involve altering historic parts of the National Heritage place (the high country huts), but the works are consistent with the National Heritage values because they are for conservation.

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Significant Impact Criteria	Assessment outcome
Permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a National Heritage place	The proposed action is not expected to impact archaeological deposits or artefacts. The potential for historical archaeology is low and no historical artefacts impacted have been identified. Some Aboriginal archaeological artefacts have been identified, see further discussion below.
Involve activities in a National Heritage place with substantial and/or long-term impacts on its values	The FHAC will not have substantial or long-term impacts on the National Heritage values. The impacts that have been identified are of a minor to moderate severity, and while they will be longer-term, they would generally be reversible.
Involve the construction of buildings or other structures within, adjacent to, or within important sight lines of, a National Heritage place which are inconsistent with relevant values, and	The proposed action involves the construction of structures within view lines which express the National Heritage values. These are partially inconsistent with the National Heritage values, because they will result in noticeable visual changes, more so at Westons Hut Overnight Node. However, the proposed action will support continued use of the Australian Alps for recreation (consistent with criteria A and G) and transmission and appreciation of the aesthetic values of the National Heritage place (criterion E) The visual impacts are not substantial in the context of the whole place.
Make notable changes to the layout, spaces, form or species composition of a garden, landscape or setting of a National Heritage place in a manner which is inconsistent with relevant values.	The proposed action makes some changes to the landscape of the National Heritage place but they are minor to moderate.
<i>Other cultural heritage values</i>	
Restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time	The proposed action will not inhibit use of the site for cultural reasons. Access will be maintained, and important social uses such as recreation will be facilitated.
Permanently diminish the cultural value of a National Heritage place for a community or group to which its National Heritage values relate	The proposed action is not likely to permanently diminish the cultural value of the place to a community or group. There are likely to be some impacts on social heritage values, but these will be moderate.
Destroy or damage cultural or ceremonial, artefacts, features, or objects in a National Heritage place, and	The proposed action will not destroy or damage artefacts, features or objects in the National Heritage place. Several Aboriginal cultural heritage artefacts along the Razorback Track are within the works area. However, impacts to these will be avoided because they will be salvaged and then repatriated after the works are complete.
Notably diminish the value of a National Heritage place in demonstrating creative or technical achievement.	The Australian Alps National Parks and Reserves National Heritage place does not have National Heritage values for demonstrating creative or technical achievement.
<i>Indigenous heritage values</i>	
Restrict or inhibit the continuing use of a National Heritage place as a cultural or ceremonial site causing its values to notably diminish over time	The proposed action would not inhibit the continuing use of the place as a cultural site, for example inhibiting the historical practice of moth feasting.
Permanently diminish the cultural value of a National Heritage place for an Indigenous group to which its National Heritage values relate	Based on consultation with Traditional Owners undertaken as part of the Cultural Heritage Management Plan (Latitude Heritage 2025) the proposed action would not diminish the cultural value of the place for Indigenous groups.
Alter the setting of a National Heritage place in a manner which is inconsistent with relevant values	The proposed action would not alter the setting of the National Heritage place in a manner inconsistent with Indigenous National Heritage values.

Significant Impact Criteria	Assessment outcome
Remove, destroy, damage or substantially disturb archaeological deposits or cultural artefacts in a National Heritage place	The proposed action will only temporarily disturb cultural artefacts in the place. Aboriginal cultural heritage artefacts on the Razorback Trail will be temporarily relocated and stored, then repatriated after the works are complete.
Destroy, damage or permanently obscure rock art or other cultural or ceremonial, artefacts, features, or objects in a National Heritage place	The proposed action would not destroy, damage or obscure rock art or other significant artefacts, features or objects.
Notably diminish the value of a National Heritage place in demonstrating creative or technical achievement	The Australian Alps National Parks and Reserves National Heritage place is not significant for demonstrating creative or technical achievement.
Permanently remove, destroy, damage or substantially alter Indigenous built structures in a National Heritage place, and	The proposed action will not damage any Indigenous built structures in the Australian Alps National Parks and Reserves National Heritage place.
Involve activities in a National Heritage place with substantial and/or long-term impacts on the values of the place.	The proposed action would not involve activities with long term impacts on the National Heritage values. The proposed action will facilitate activities such as hiking, camping and vernacular repair of historic buildings which are consistent with the National Heritage values.

Listed Ecological Communities

One EPBC Act-listed ecological community occurs within the FHAC project area – Alpine Sphagnum Bogs and Associated Fens. Potential impacts to this community are discussed below and in Table 28.

Alpine Sphagnum Bogs and Associated Fens

Alpine Sphagnum Bogs and Associated Fens occur in alpine, subalpine and montane areas of Tasmania, Victoria, New South Wales and the Australian Capital Territory in permanently wet areas, such as along streams, drainage lines, valley edges and valley floors. They are naturally restricted in extent and distribution and have been further depleted and degraded by past and ongoing disturbances. Alpine Sphagnum Bogs and Associated Fens occur across 10,000 km² and have been comprehensively mapped within Victoria over the past 10 years. They are currently estimated to occupy a total of 4372 ha in Victoria, mostly in National Parks and reserves, but with some areas in State Forests and on private land (ARI 2025). The Bogong High Plains supports the largest areas of alpine peatlands in Victoria.

Alpine Sphagnum Bogs and Associated Fens are reliant on groundwater flows and discharge and are sensitive to changes in groundwater and surface drainage patterns. They are also sensitive to physical damage from vegetation and soil disturbance. Alterations of their naturally diffuse drainage system to a channelled drainage pattern either through trampling or erosion by gully formation rapidly degrades these communities (see Section 7.2).

The main identified threats to the Alpine Sphagnum Bogs and Associated Fens ecological community include climate change, fire, exotic weed invasions, grazing and trampling by non-native herbivores, tourism and increased human infrastructure. Trampling of vegetation by walkers not keeping to pathways is a recognised issue, while the expansion of trail networks, particularly for mountain bikes and horse riding, is a potential threat if created near the ecological community. These activities have the potential to impact the ecological community indirectly where damage such as erosion, increased sediments and runoff diversions alter hydrology (DoE 2015).

The FHAC utilises existing walking and vehicle tracks and existing camping areas, and does not involve the expansion of infrastructure or new developments in areas supporting this community, or adjacent to this community. The FHAC trail intersects Alpine Sphagnum Bogs and Associated Fens in 27 locations in the project area, and trail works will be undertaken at 21 of these locations. Works will mostly comprise of the installation of elevated boardwalks and stepping stones, for the long-term protection of the community from continuing use.

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Table 28 Assessment of potential impacts to Alpine Sphagnum Bogs and Associated Fens ecological community against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Reduce the extent of an ecological community	The current area occupied by this community in Victoria is estimated to be 4372 ha, across a range of 10,000 km ² (ARI 2025). The proposed FHAC has the potential to result in the temporary disturbance of up to 0.074 ha of the community during construction, and permanent loss of up to 0.016 ha. The estimated losses account for the installation of infrastructure (e.g., boardwalk footings), potential effects of shading, and foot traffic during construction; however, actual losses are likely to be less than this and will be limited to the edges of existing tracks. The works will, therefore, not reduce the overall extent of the ecological community.
Fragment or increase fragmentation of an ecological community	The proposed FHAC utilises existing tracks, which intersect the Alpine Sphagnum Bogs and Associated Fens community in 27 locations. Trail works for the re-aligned FHAC will be undertaken at 21 of these locations, primarily involving the installation of boardwalks or stepping stones over the existing trail footprint, where usage of the trail and off-track walking has caused track braiding or erosion. All potential losses will occur at the edges of existing tracks and will therefore, not lead to further fragmentation of the community. The proposed works are intended to limit vegetation damage, and in the long-term will contribute to remediation.
Adversely affect habitat critical to the survival of an ecological community	Habitats critical to the survival of this community cannot be easily identified. All occurrences are considered of high conservation value due to the limited and scattered distribution of the community, and the importance of each occurrence to the catchment in which they occur (DoE 2015). The proposed works that will occur within or near this community as part of the FHAC are not expected to adversely affect the survival of the community. Works along sections of trail that intersect the community are primarily for the long-term protection of the community and to facilitate rehabilitation where off-track walking has caused track-braiding, erosion and degradation. There are no new or expanded developments (including for Overnight Nodes) near the ecological community that may result in indirect impacts such as altered hydrology, erosion or sediment run-off.
Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns	Works proposed within areas of Alpine Sphagnum Bogs and Associated Fens will include the installation of elevated boardwalks and stepping stones over existing tracks, to mitigate the existing impacts of walking trails. The proposed trail infrastructure is limited to localised areas where existing impacts are evident, and will not involve substantial alteration of surface water drainage patterns, nor will it result in changes in ground water. Soil disturbance will be kept to the minimum required for infrastructure installation; screw pile footings, driven to refusal, will be used for elevated boardwalks and placement of stepping stones will require only minor excavation works to embed the rock in the trail surface. Sediment and erosion controls will be in-place during all works within or near the community.
Cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species	All works within or near Alpine Sphagnum Bogs and Associated Fens are on existing tracks. Areas of this community along the trail have already been subject to disturbance and alteration from trail construction and use, and from other infrastructure, such as culverts. Disturbance in these areas includes the natural surface trail, braiding, erosion and trampled vegetation. The elevated boardwalks and stepping stones proposed along sections of trail intersecting the ecological community are intended to mitigate these impacts. In the long-term, elevated boardwalks and stepping stones are intended to reduce the impacts of walkers by reducing the amount of bare ground, increasing vegetation cover and increasing shelter for fauna species. The elevated boardwalks may have some shading effect; however, the steel mesh will allow light, water and snowmelt to penetrate and flow beneath, and will ultimately allow vegetation growth beneath the structure. The effects of shading, if any, are likely to be minimal and localised. Overall, the works are unlikely to result in a substantial negative change to the species composition or structure of the ecological community, or the loss of functionally important species.
Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: assisting invasive species, that	Alpine Sphagnum Bogs and Associated Fens are sensitive to the impacts of introduced herbivores, including horses, deer, rabbits, and pigs. Feral cats, foxes and trout are also considered to impact fauna species within the community (DoE 2015). Many of these pest species are already established within the Alpine

Significant Impact Criteria	Assessment of impacts
are harmful to the listed ecological community, to become established; and causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community that kill or inhibit the growth of species in the ecological community	<p>National Park. The FHAC will utilise the existing trail network within the National Park, and therefore, will not facilitate the movement or spread of any of these species. There is a small risk that construction activity may facilitate the introduction or spread of weeds or pathogens via machinery, footwear or construction materials. Strict hygiene controls will be implemented as part of a Construction Environment Management Plan to reduce this risk.</p> <p>The boardwalks will be constructed of mild steel, to avoid potential impacts of heavy metal soil contamination from galvanised steel.</p>
Interfere with the recovery of an ecological community	<p>Strategies for the recovery of Alpine Sphagnum Bogs and Associated Fens are outlined in the National Recovery Plan (DoE 2015). They include actions to: improve or maintain the condition of the community through restoration and research; improve knowledge of the community, its status and the use of adaptive management; and address the threats most influencing the ongoing survival of the community, which includes invasive species, livestock, and fire, and avoiding and minimising impacts from infrastructure development. The works proposed as part of the FHAC are not contrary to any of these strategies. The FHAC has been designed to avoid impacts to this ecological community, except where minor works are required to mitigate existing impacts, which is consistent with the National Recovery Plan (Action 4).</p>

Listed Threatened Species

Tables 29 to 50 provide assessments of the project against the significant impact criteria for listed critically endangered, endangered, and vulnerable species that have the potential to be impacted by the proposed FHAC works. The criteria refer to a 'population of a species', defined under the EPBC Act as an occurrence of the species in a particular area. In relation to an endangered species, occurrences include:

- A geographically distinct regional population, or collection of local populations.
- A population, or collection of local populations, that occurs within a particular bioregion.

The criteria specific to vulnerable species refer to 'important population of a species', defined under the EPBC Act as a population that is necessary for a species' long-term survival and recovery. This may include populations identified as such in recovery plans, and/or that are:

- A key source population either for breeding or dispersal
- Populations that are necessary for maintaining genetic diversity, and/or
- Populations that are near the limit of the species range

The following assessments have been made against populations as defined in conservation status assessments, EPBC Conservation Advice or Recovery Plans, which may include the Australian population, Victorian population or bioregional populations. The assessments have also been made with reference to the species occurrence, known threats, potential direct and indirect impacts, and formal Conservation Advice and/or Recovery Plans under the EPBC Act.

Flora species

Four EPBC Act-listed flora species were identified as potentially occurring within the project area:

- Shining Cudweed *Argyrotegium nitidulum*
- Thick Eyebright *Euphrasia crassiuscula* subsp. *glandulifera*
- Bogong Eyebright *Euphrasia eichleri*
- Snow Daphne *Kelleria bogongensis*

All four species are listed as Vulnerable under the EPBC Act 1999. Potential impacts to these species and their habitat are described below.

Shining Cudweed

Shining Cudweed *Argyrotegium nitidulum* is listed as Vulnerable under the EPBC Act 1999, but it is not currently listed under the FFG Act. This species is a low (1 – 3 cm tall), mat-forming perennial daisy with creeping rhizomes that occurs in alpine and sub-alpine environments of Victoria (one population), New South Wales (four populations), Tasmania (two populations) and New Zealand. In Victoria, it is extremely localised, where it is known primarily from damp, open grasslands on the Bogong High Plains (TSSC 2016, VicFlora 2025). There are 75 records of Shining Cudweed within the Victorian Biodiversity Atlas (VBA), this includes 72 from Bogong High Plains, one from Dargo High Plains and two from Mt Bogong. The population on Bogong High Plains is estimated to comprise 20,000 to 40,000 plants, although population size can be hard to determine due to the rhizomatous nature of the species (DELWP 2021). In Victoria the Extent of Occupancy for this species is estimated to be 276 km² and Area of Occupancy is 112 km². No important populations for this species are formally recognised in EPBC Act listing advice or recovery plan, however it is likely that the population on Bogong High Plains is an important population.

The Shining Cudweed occurs on open wet ground, near streams and bogs or in damp open grasslands and heathland. In grasslands where this species occurs, most plants have been found growing in gaps between large tussocks of Snow Bog Grass *Poa costiniana*. It can also be found in disturbed areas such as along tracks and roadsides (DELWP 2021), indicating that the species may be disturbance-dependent, requiring bare, damp ground for recruitment and persistence (TSSC 2016). Habitat critical to the survival of Shining Cudweed has not been formally recognised in the species recovery plan. This habitat is likely to constitute intact open grassland and heathland vegetation communities in widespread or localised damp areas above the treeline. For habitat to provide ‘long-term maintenance’ of the species, these areas are unlikely to be subject to regular anthropogenic disturbances.

Shining Cudweed was recorded along five sections of track within the FHAC assessment area:

- Section 1a – recorded within the survey area but not directly adjacent to, or near the track.
- Sections 2, 3, 6 and 7 – recorded growing immediately adjacent to and near existing tracks.

The highest number of records were from Section 6 (15 records). It was not recorded within any of the Overnight Nodes. Shining Cudweed has been recorded, or has the potential to occur, within the following EVCs: Alpine Grassland, Alpine Grassy Heathland, Alpine Dwarf Heathland, Alpine Damp Grassland and Alpine Rocky Outcrop Heathland.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Shining Cudweed is given in Table 29.

Table 29 Assessment of potential impacts to Shining Cudweed against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	No important populations of the Shining Cudweed have been identified but it is likely that the Bogong High Plains population would represent an important population. The FHAC project is not likely to lead to a long-term decrease in this population. Shining Cudweed was recorded growing adjacent to the FHAC trail in four Sections, with the most individuals recorded in Section 6. The species was recorded near to where works are proposed in only one location along Trail Section 7. In this location, stepping stones are proposed for installation within the existing track footprint, and it is expected that these works can be micro-sited to avoid impacting individuals of this species. As no targeted surveys have been undertaken along the trail alignment, it is possible that this species may occur along sections of track where it has not yet been detected. To mitigate this risk, pre-construction surveys will be undertaken to ensure that additional individuals can be identified, and works can be micro-sited to avoid impacting the species. This species has not been recorded in Overnight Nodes.
Reduce the area of occupancy of an important population	The Area of Occupancy of the Shining Cudweed is estimated at 112 km ² . Based on EVCs in which the species may occur, the FHAC is estimated to disturb up to 0.0128 km ² of habitat. Most of this will occur in small sections along the edges of existing tracks. Targeted surveys did not record Shining Cudweed in Overnight Nodes. Given the small area of habitat that may be impacted, along existing tracks, it is unlikely that the works will reduce the area of occupancy of the population.

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Significant Impact Criteria	Assessment of impacts
Fragment an existing important population into two or more populations	The FHAC trail upgrade works will occur on existing tracks and will not involve significant track widening; only minor losses or disturbances of habitat are expected to occur along the edges of existing track for trail works. It is unlikely that this would cause further fragmentation of the population.
Adversely affect habitat critical to the survival of species	Habitat critical to the survival of Shining Cudweed has not been formally recognised in the species recovery plan, but may include intact open grassland and heathland vegetation communities in widespread or localised damp areas above the treeline. For habitat to provide 'long-term maintenance' of the species, these areas are unlikely to be subject to regular anthropogenic disturbances. Given that the proposed works are restricted to existing tracks, it is therefore unlikely that the project will impact habitat critical for the survival of the species.
Disrupt the breeding cycle of an important population.	Direct impacts to the Shining Cudweed can feasibly be avoided by micro-siting of trail works, and given the small area of potential habitat impacted, it is considered unlikely that the works would impact pollination, seed set or seed dispersal of Shining Cudweed.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Disturbance of habitat for Shining Cudweed will occur along the edges of existing tracks that are already subject to past and ongoing disturbance. It is not expected that the proposed track works would result in the degradation or modification of habitat beyond this area, to the extent that the species would decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	There is a small risk that invasive plant species may be introduced or spread into adjoining vegetation as a result the proposed works. To manage the risk, hygiene controls to prevent the introduction or spread of weed species will be implemented pre- to post- construction. These protocols will be included in the Construction Environmental Management Plan (CEMP).
Introduce disease that may cause the species to decline.	Plant diseases can be introduced through transport of soil, water and plant material on vehicles, machinery, equipment and boots. With the implementation of hygiene measures as part of a CEMP, it is unlikely that the project would introduce or spread disease that would cause the species to decline.
Interfere substantially with the recovery of the species	Conservation and management priorities in the EPBC Conservation Advice include actions to respond to the impacts of climate change, mitigations against inadvertent local extinctions from land management activities, reducing the impacts of weeds or pathogens and seed collation and propagation. The FHAC is not inconsistent with any of these priorities.

Thick Eyebright

Thick Eyebright *Euphrasia crassiuscula* subsp. *glandulifera* is listed as vulnerable under the EPBC Act 1999 and critically endangered under the FFG Act 1988. It is a perennial semi-parasitic herb that grows to c. 20 cm high with large lilac to purple flowers. Thick Eyebright is a Victorian Alpine endemic. There are three known populations; two located at Mount Bogong and one at Mount Nelse (Carter et al. 2006). These populations would constitute important populations. Prior to the 2003 bushfires, there were around 1300 plants recorded from the three populations; however, two populations at Mount Bogong were significantly impacted by the bushfires. It is now estimated there are between 500 and 2,000 individual plants, with an extent and area occupancy around 12 km² (DELWP 2021). There are additional records at Rocky Knobs (two records from 1987), however the status of the plants at this location is unknown.

Thick Eyebright is confined to higher altitudes above the treeline. It occurs in open and closed low heath, alpine grasslands and tall alpine herbfields (DELWP 2021). It is often associated with shallow alpine loams on gentle to steep slopes on eastern aspects (Carter et al. 2006, DELWP 2021). Habitat critical to the survival of the species has not been identified in the recovery plan. Three EVCs recorded within the project area could support potential habitat for Thick Eyebright, they include: Alpine Grassy Heathland, Alpine Grassland and Alpine Dwarf Heathland. Intact patches of these EVCs are likely to provide critical habitat for this species.

Thick Eyebright was not recorded during field surveys, including targeted surveys within the Overnight Nodes. Along the trail alignment, this species has the highest potential to occur around Mount Nelse and Mount Cope in areas

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supporting the associated EVCs listed above. All documented records (Mt Nelse and Rocky Knobs) are however located further north of the trail alignment (i.e. 1 – 2 km north).

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Thick Eyebright is given in Table 30.

Table 30 Assessment of potential impacts to Thick Eyebright against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	Important populations of the Thick Eyebright have not been formally identified but it is expected that the three known populations would be considered important. The FHAC project is not likely to lead to a long-term decrease in a population of the species. Thick Eyebright has not been recorded within the project area during site assessments, although no targeted surveys have yet been undertaken along the trail alignment. Pre-construction surveys will be undertaken to mitigate the risk that this species has been overlooked in areas of proposed trail works. Due to the discrete and low-impact nature of the trail works, it is expected that works can be micro-sited to avoid impacting individuals of this species, should it occur.
Reduce the area of occupancy of an important population	The Area of Occupancy of Thick Eyebright is estimated at 12 km ² . It has not been recorded from the project area. It is known from three populations (Carter et al. 2006): Mount Nelse (3 ha); Hooker Plateau, Mount Bogong (9 ha); and Quartz Ridge, Bogong Creek Saddle to Mount Bogong (0.5 ha). Based on EVCs in which the species may occur, the FHAC is estimated to disturb up to 0.0117 km ² of habitat, however, the project area is outside of the above known areas of occupancy. Therefore, the works are not considered to reduce the area of occupancy of an important population.
Fragment an existing important population into two or more populations	The FHAC trail upgrade works will occur on existing tracks and will not involve significant track widening; only minor losses or disturbances of habitat are expected to occur along the edges of existing track for trail works. It is unlikely that this would cause further fragmentation of the population.
Adversely affect habitat critical to the survival of species	Habitat critical to the survival of Thick Eyebright has not been formally recognised in the species recovery plan. However, the species may occur within Alpine Grassy Heathland, Alpine Grassland and Alpine Dwarf Heathland, and intact patches of these EVCs are likely to provide critical habitat for this species. Given that the proposed works are restricted to existing tracks, and are outside of the area of known populations, it is unlikely that the project will impact habitat critical for the survival of the species.
Disrupt the breeding cycle of an important population.	Direct impacts to the Thick Eyebright can feasibly be avoided by micro-siting of trail works, and given the small area of potential habitat impacted, it is considered unlikely that the works would impact pollination, seed set or seed dispersal.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Thick Eyebright has not been recorded from the project area, and disturbance of potential habitat for Thick Eyebright will occur along the edges of existing tracks that are already subject to past and ongoing disturbance. It is not expected that the proposed track works would result in the degradation or modification of habitat that would cause the species to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	There is a small risk that invasive plant species may be introduced or spread into adjoining vegetation as a result the proposed works. To manage the risk, hygiene controls to prevent the introduction or spread of weed species will be implemented pre- to post- construction. These protocols will be included in the Construction Environmental Management Plan (CEMP).
Introduce disease that may cause the species to decline.	Plant diseases can be introduced through transport of soil, water and plant material on vehicles, machinery, equipment and boots. With the implementation of hygiene measures as part of a CEMP, it is unlikely that the project would introduce or spread disease that would cause the species to decline.
Interfere substantially with the recovery of the species	The Recovery Plan for Thick Eyebright (Carter et al. 2006) includes actions to meet the objectives of: acquiring information for conservation status assessments,

Significant Impact Criteria	Assessment of impacts
	identifying critical habitats, managing threats (e.g. weeds) and establishing populations in cultivation. The FHAC is not contrary to any of these objectives.

Bogong Eyebright

Bogong Eyebright *Euphrasia eichleri* is listed as vulnerable under the EPBC Act 1999 and Endangered under the FFG Act 1988. It is a small semi-parasitic herb, growing to c. 15 cm high. There is uncertainty as to whether the species is annual or perennial, as plants are not evident at recorded sites every year (DELWP 2021). Bogong Eyebright is a Victorian Alpine endemic. It is estimated there is around 1130 – 15000 plants across 14 populations located between Bogong High Plains, Mt Bogong and Dargo High Plains (Carter and Walsh 2006a, DELWP 2021). The area of occupancy is estimated to be 56 km² and extent of occupancy between 60 and 109 km² (DEECA 2021). Important populations necessary for the long-term survival and recovery of the species include: Cope Creek; Cope Saddle Road; Mt Nesle north – Nelse Saddle; Mt Nelse South; Upper Watchbed Creek; Watchbed Creek; Whiterock Creek; and Quart Ridge, Mt Bogong (DSE 2008, Carter and Walsh 2006a).

Bogong Eyebright occurs in alpine to sub-alpine low open heath, grasslands and Sphagnum bogs. Based on associated species it has the potential to occur within the following EVCs within the project area: Alpine Damp Grassland, Alpine Grassy Heathland, Alpine Grassland, Alpine Valley Heathland, and Sub-alpine Wet Heathland.

Thick Eyebright was not recorded during field surveys, including targeted surveys within the overnight nodes. Along the trail alignment it is most likely to occur around Mount Cope and Mount Nelse within the EVCs listed above. In these areas, it has been previously recorded along Watched Creek near Big River Fire Track (Section 3) and Cope Creek near the Australian Alpine Walking Track (Section 6); no works are proposed in these areas.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Bogong Eyebright is given in Table 31.

Table 31 Assessment of potential impacts to Bogong Eyebright against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	An important population of the Bogong Eyebright has been identified in close proximity to the project area at Cope Creek (Section 6). There are no works proposed on the FHAC where it crosses Cope Creek, thus it is unlikely to lead to a decrease in population size. Thick Eyebright has been previously recorded from only one other location within the project area (Big River Track, Section 3) and was not recorded during site assessments. No works are planned for Section 3. Pre-construction surveys will be undertaken to mitigate the risk that this species has been overlooked in other areas of proposed trail works, where the species could occur. Due to the discrete and low-impact nature of the trail works, it is expected that works can be micro-sited to avoid impacting individuals of this species, should it occur.
Reduce the area of occupancy of an important population	The Area of Occupancy of the Bogong Eyebright is estimated to be 56 km ² . The species was not recorded within the project area during assessments but has previously been recorded near parts of the project area, and is located within its Area of Occupancy. Based on EVCs in which the species may occur, the FHAC is estimated to disturb up to 0.0126 km ² of habitat. Given the relatively small area of habitat that may be impacted, along existing tracks, it is unlikely that the works will reduce the area of occupancy of an important population.
Fragment an existing important population into two or more populations	The FHAC trail upgrade works will occur on existing tracks and will not involve significant track widening; only minor losses or disturbances of habitat are expected to occur along the edges of existing track for trail works. It is unlikely that this would cause further fragmentation of the population.
Adversely affect habitat critical to the survival of species	Habitat critical to the survival of Bogong Eyebright has not been formally identified but may include intact sub-alpine and alpine low open heathland, grassland and <i>Sphagnum</i> bogs. For habitat to provide 'long-term maintenance' of the species, these areas are unlikely to be subject to regular anthropogenic disturbances. Given

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Significant Impact Criteria	Assessment of impacts
	that the proposed works are restricted to existing tracks, it is therefore unlikely that the project will impact habitat critical for the survival of the species.
Disrupt the breeding cycle of an important population.	Direct impacts to the Thick Eyebright can feasibly be avoided by micro-siting of trail works, and given the small area of potential habitat impacted, it is considered unlikely that the works would impact pollination, seed set or seed dispersal.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Bogong Eyebright has not been recorded from the project area, and disturbance of potential habitat for Bogong Eyebright will occur along the edges of existing tracks that are already subject to past and ongoing disturbance. It is not expected that the proposed track works would result in the degradation or modification of habitat that would cause the species to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	There is a small risk that invasive plant species may be introduced or spread into adjoining vegetation as a result the proposed works. To manage the risk, hygiene controls to prevent the introduction or spread of weed species will be implemented pre- to post- construction. These protocols will be included in the Construction Environmental Management Plan (CEMP).
Introduce disease that may cause the species to decline.	Plant diseases can be introduced through transport of soil, water and plant material on vehicles, machinery, equipment and boots. With the implementation of hygiene measures as part of a CEMP, it is unlikely that the project would introduce or spread disease that would cause the species to decline.
Interfere substantially with the recovery of the species	The Recovery Plan for Bogong Eyebright (Carter and Walsh 2006a) includes actions to meet the objectives of: acquiring information for conservation status assessments, identifying critical habitats, determining germination requirements, growth rates and viability of populations, and managing threats to populations. Threat management actions include controlling threats from high visitation by re-routing tracks, fencing sites, caging plants or installing signage. However, it is noted that the Bogong Eyebright may be naturally rare, and this may not necessarily result in increased population size (Carter and Walsh 2006a). The FHAC is not contrary to any of these objectives. The FHAC will not introduce or significantly increase visitation to known populations.

Snow Daphne

Snow Daphne *Kelleria bogongensis* is listed as vulnerable under the EPBC Act and critically endangered under the FFG Act. It is a small prostrate shrub, growing up to 3 cm high and 40 cm diameter. It is a Victorian alpine endemic, only known from one population on the Bogong High Plains. The population comprises 19 patches (sub-populations) around Mount Jim. Population size is difficult to determine due to the spreading growth habitat but is estimated to be between 400 and 2000 plants (Carter and Walsh 2006b). Both the Area and Extent of Occupancy is estimated to be 12 km².

Snow Daphne is associated with basalt-derived soils that support alpine grassland, particularly patches dominated by *Poa costiniana*. Plants tend to occur in depressions or on the edges of pools, and it is considered likely that damp-moist sites are important to its survival (Carter and Walsh 2006b). Snow Daphne is often recorded growing with Shining Cudweed. Associated EVCs in the project area include Alpine Damp Grassland, Alpine Grassy Heathland and Alpine Grassland.

A cluster of Snow Daphne has been previously recorded in close proximity to the track along the Australian Alpine Walking Trail (Section 7) near the western end (Mount Jim area). Shining Cudweed was also recorded during the site assessments in this area. Another cluster has been recorded just south of Western Spur Track (Section 11). The most recent record is located close to the Australian Alps Walking Track on Section 7 north of Pole 333 (DEECA 2025), which has been removed from the FHAC alignment.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Snow Daphne is given in Table 32.

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Table 32 Assessment of potential impacts to Snow Daphne against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	The single population of Snow Daphne should be considered an important population. Individuals have previously been recorded close to the alignment along Section 7 (below Pole 333) and Westons Spur Track along Section 11. Although none were recorded within the assessment area during site assessments, it is possible that they were overlooked, in the absence of targeted surveys. Pre-construction surveys will therefore be undertaken to mitigate this risk. Due to the discrete and low-impact nature of the trail works in this location, it is expected that works can be micro-sited to avoid impacting individuals of this species, should it occur within or close to the disturbance area.
Reduce the area of occupancy of an important population	The Area of Occupancy of Snow Daphne is estimated to be 12 km ² . The species was not recorded within the project area during assessments but has previously been recorded near parts of the project area, and is located within its Area of Occupancy. Based on EVCs in which the species may occur, the FHAC is estimated to disturb up to 0.0181 km ² of habitat. Works proposed within this area are low-impact trail treatments, including elevated boardwalks and stepping stones. Given the relatively small area of habitat that may be impacted, along existing tracks, and the type of works proposed, it is unlikely that the area of occupancy would be reduced.
Fragment an existing important population into two or more populations	The FHAC trail upgrade works will occur on existing tracks and will not involve significant track widening; only minor losses or disturbances of habitat are expected to occur along the edges of existing track for trail works. It is unlikely that this would cause further fragmentation of the population.
Adversely affect habitat critical to the survival of species	Habitat critical to the survival of Snow Daphne has not been formally identified but may include high quality areas of alpine grasslands dominated by <i>Poa costiniana</i> ; damp-moist sites are also likely to be important to its survival (Carter and Walsh 2006b). Habitats that meet this description are likely to occur along Section 7 and 11, although not uniformly. Works proposed along these sections include elevated boardwalks and stepping stones, and are intended to ameliorate existing impacts of the tracks, and encourage on-track walking. Given that the proposed works are restricted to existing tracks, it is unlikely that the project will impact habitat critical for the survival of the species.
Disrupt the breeding cycle of an important population.	Direct impacts to the Snow Daphne can feasibly be avoided by micro-siting of trail works, and given the small area of potential habitat impacted, it is considered unlikely that the works would impact pollination, seed set or seed dispersal.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Disturbance of potential habitat for Snow Daphne will be limited to discrete, narrow sections along the edges of existing tracks that are already subject to past and ongoing disturbance. It is not expected that the proposed track works would result in the degradation or modification of habitat that would cause the species to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	There is a small risk that invasive plant species may be introduced or spread into adjoining vegetation as a result the proposed works. To manage the risk, hygiene controls to prevent the introduction or spread of weed species will be implemented pre- to post- construction. These protocols will be included in the Construction Environmental Management Plan (CEMP).
Introduce disease that may cause the species to decline.	Plant diseases can be introduced through transport of soil, water and plant material on vehicles, machinery, equipment and boots. With the implementation of hygiene measures as part of a CEMP, it is unlikely that the project would introduce or spread disease that would cause the species to decline.
Interfere substantially with the recovery of the species	The Recovery Plan for the Snow Daphne (Carter and Walsh 2006b) includes actions to meet the objectives of: acquiring information for conservation status assessments, identifying critical habitats, determining growth rates and population viability, establishing populations in cultivate and managing threats to populations, including that from recreational damage and grazing by pest animals. Threat management actions includes fencing sites, caging plants or installing signage (Carter and Walsh 2006b). The FHAC is not contrary to any of these objectives. The FHAC will not introduce or significantly increase visitation to known locations, and

Significant Impact Criteria	Assessment of impacts
	trail works are intended to encourage hikers to stay on-track. Sections of trail that are closest to the most recent records of this species are not part of the FHAC alignment.

Fauna Species

Twenty EPBC Act-listed fauna species were identified as potentially occurring in the project area. Potential impacts were identified for 18 species, including:

- One species listed as Critically Endangered – Spotted Tree Frog *Litoria spenceri*.
- Eleven species listed as Endangered – Gang-gang Cockatoo *Callocephalon fimbriatum*, Alpine She-oak Skink *Cyclodomorphys praealtus*, Spot-tailed Quoll *Dasyurus maculatus maculatus*, Guthega Skink *Liopholis guthega*, Mountain Skink *Liopholis montana*, Broad-toothed Rat *Mastacomys fuscus mordicus*, Greater Glider *Petauroides volans*, Long-footed Potoroo *Potorous longipes*, Alpine Bog Skink *Pseudemoia cryodroma*, Smoky Mouse *Pseudomys fumeus*, and Alpine Stonefly *Thaumatoperla alpina*.
- Six species listed as Vulnerable – Murray Spiny Crayfish *Euastacus armatus*, Alpine Water Skink *Eulamprus kosciuskoi*, Latham’s Snipe *Gallinago hardwickii*, Alpine Tree Frog *Litoria verreauxii alpina*, Yellow-bellied Glider *Petaurus australis australis* and Pilotbird *Pycnoptilus floccosus*.

Potential impacts to these species and their habitat are described below.

Gang-gang Cockatoo

The Gang-gang Cockatoo *Callocephalon fimbriatum* occurs primarily in the temperate forests and woodlands of mainland south-eastern Australia (Menkhorst et al. 2019) and is widespread across north-eastern and southern regions of Victoria. However, the species is adapted to cooler conditions, and is always more common at higher elevations and more southern latitudes (DAWE 2022a).

In summer, Gang-gang Cockatoos primarily occupy mature, wet sclerophyll forests. Eucalypt-dominated vegetation types with a dense and shrubby understorey of *Acacia* and *Banksia* support the highest densities of birds, although they have also been reported in more open eucalypt communities, including sub-alpine Snow Gum woodland. In winter, at least part of the population tends to disperse into lower altitude, drier woodlands and open forest. However, seasonal movements are not fully understood and overlapping of winter and summer ranges is common (DAWE 2022a). Gang-gang Cockatoos primarily forage in the canopy (particularly amongst eucalypts), and less often within the understorey (except during *Acacia* seeding) (Cameron et al. 2021, DAWE 2022a), feeding on seeds and insect larvae. Stands of mature, hollow-bearing trees are required for breeding (typically between October and January) and breeding sites are often located near water. Individuals may use the same nesting sites for multiple years but only half of nest trees are utilised each year (DAWE 2022a).

The Conservation Advice for the species defines habitat critical to the survival of Gang-gang Cockatoos as:

- All foraging habitat during both the breeding and non-breeding season.
- Hollow-bearing trees with known or potential Gang-gang Cockatoo hollow chambers (approximately 20 cm in floor diameter, 50 cm deep and 7 m above ground). Breeding habitat includes stands of trees within or adjacent to known breeding areas that may develop hollows in future years (DAWE 2022a).

Suitable habitat for the Gang-gang Cockatoo within the FHAC project area was identified by Abzeco (2025), primarily within Montane Damp Forest, adjoining FHAC trail Section 12. Within the broader assessment, area, forest assemblages, including Wet Forest, Damp Forest, Grassy Dry Forest, Shrubby Dry Forest and Herb-rich Foothill Forest along Section 18 were also identified as providing suitable habitat, and evidence of breeding was recorded in Montane Damp Forest near the Kiewa River at Blairs Hut (Abzeco 2025). Sub-alpine Woodland may also provide some foraging habitat for this species. All of this habitat could be considered habitat critical for the survival of the species.

Most of the potential impacts to this species have been avoided through the removal of Blairs Hut as an Overnight Node, and the removal of Section 18 from the proposed FHAC trail alignment. Potential impacts to remaining areas of Montane Damp Forest along Section 12 are minimal (0.218 ha), resulting from trail drainage works and the

construction of steps, over c. 1 km of trail. These works will primarily impact ground-layer species. No trees are proposed for removal, and it is unlikely that the shrub layer will be impacted, with the exception of small numbers of individual plants. Similarly, up to 0.625 ha of Sub-alpine Woodland will be impacted, involving removal or disturbance of small areas of understorey along sections of trail and at Overnight Nodes. All works will be micro-sited to ensure that trail works do not significantly encroach on the TPZs of trees and the project arborist will advise on tree management measures for works around trees to ensure that trees are not significantly impacted.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Gang-gang Cockatoo is given in Table 33.

Table 33 Assessment of potential impacts to Gang-gang Cockatoo against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	Gang-gang Cockatoos are considered to form a single population, estimated to be 25,300 (17,600 – 35,200), with a declining trend (DAWE 2022a). Gang-gang Cockatoos are mainly threatened by habitat loss and clearing that removes trees and shrubs required for foraging and nesting, wildfire, climate change and competition for nesting hollows (DAWE 2022a). The FHAC will result in the modification of up to 0.843 ha of potential habitat, although the actual area of impact will most likely be less than this. The proposed works will primarily impact understorey species along the edges of existing tracks and at established camping areas. Therefore, foraging and nesting habitat is not likely to be impacted to the extent that the population would be impacted nor result in a long-term decrease.
Reduce the Area of Occupancy of the species	The Area of Occupancy (AOO) is estimated at 30,000 km ² , although the real AOO is assumed to be twice that represented by records of presence and probably substantially greater (DAWE 2022a). Up to 0.0084 km ² of habitat may be impacted, resulting in removal or disturbance to understorey species along the edges of existing tracks and at existing camping areas. No trees are proposed for removal as part of this project and the shrub layer will remain largely intact, with the exception of individual plants that may be impacted. Given the small and largely linear nature of potential impacts, and the large areas over which the species ranges, the project is not considered to reduce the area of occupancy for the species.
Fragment an existing population into two or more populations	As an altitudinal migrant, the Gang-gang Cockatoo is highly mobile, and the total population is not severely fragmented (DAWE 2022a). The works proposed as part of the FHAC, involving upgrades to existing tracks and construction of visitor facilities at existing campgrounds, will not lead to fragmentation of habitat and is not of a scale that would fragment an existing population.
Adversely affect habitat critical to the survival of the species	Habitat critical to the survival of Gang-gang Cockatoos has been identified as including all foraging habitat during the breeding and non-breeding season and breeding habitat (i.e., hollow-bearing trees with known or suitable breeding hollows). The Montane Damp Forest adjoining Section 12 of the FHAC was identified by Abzeco (2025) as supporting suitable foraging and breeding habitat. Areas of sub-alpine Woodland may also provide foraging habitat. The works proposed in these areas will not result in the loss or removal of trees or shrub habitats that provide critical breeding and foraging resources. Most works will occur along the edges of existing tracks, resulting in the removal of small areas of understorey vegetation. Therefore, the FHAC is not expected to adversely affect habitat critical to the survival of the species.
Disrupt the breeding cycle of the population	Breeding habitat for the Gang-gang Cockatoo was identified within Montane Damp Forest adjoining Section 12 of the FHAC. A nesting site was also identified in Montane Damp Forest near Blairs Hut. Blairs Hut was removed from the FHAC as an Overnight Node to avoid long-term impacts of human disturbance on a known breeding site. Conservation works are proposed on Blairs Hut as part of this project, including replacement of roofing and structural logs. This work is likely to result in some noise disturbance from construction tools, but this is likely to be temporary. Works proposed along the trail alignment may also result in some, temporary noise disturbance. To minimise potential disturbance of breeding Gang-gang Cockatoos, work in these areas can be undertaken in February and March, at the end of the breeding season.

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Significant Impact Criteria	Assessment of impacts
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline	Works proposed as part of the FHAC will result in the modification of small areas (up to 0.843 ha) of potential habitat. This work will not result in the loss or removal of trees or shrub habitats that provide critical breeding and foraging resources. Most works will occur along the edges of existing tracks, resulting in the removal of small areas of understorey vegetation. Therefore, the FHAC is not expected to adversely affect habitat to the extent that the species is likely to decline.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	Invasive species that are known to impact Gang-gang Cockatoos include species that compete for nest hollows (e.g., feral honeybees, Noisy Miners, Common Mynas, brushtail possums). The project will not result in an increase in any of these species, or alter their use of habitat that may be used by Gang-gang Cockatoos.
Introduce disease that may cause the species to decline	Gang-gang Cockatoos are susceptible to Psittacine beak and feather disease; however, the prevalence in most populations is unknown (DAWE 2022a). The disease is transmitted through feather, dander, faeces and saliva. Hence, there is no pathway through which the proposed FHAC project would introduce or cause of the spread of this disease.
Interfere with the recovery of the species	Conservation and management priorities for the Gang-gang Cockatoo are listed in the EPBC Act Conservation Advice for the species. They include strategies to manage inappropriate fire regimes, the retention of hollow-bearing trees and ceasing the clearing of habitat critical to the survival of the species, improving forestry practices, protecting and enhancing the quality of habitat, strategies to mitigate hollow-competition, stakeholder engagement, and survey and research. Habitat clearing that removes trees and shrub species that the Gang-gang Cockatoo requires for foraging, roosting and nesting, is considered to interfere with the recovery of the species (DAWE 2022a). The FHAC will result in the disturbance of up to 0.843 ha of potential habitat for this species. However, the canopy and shrub layer will remain largely intact. Only relatively small areas of understorey vegetation will be impacted adjoining existing tracks and within existing camping areas.

Alpine She-oak Skink

The Alpine She-oak Skink is endemic to New South Wales and Victoria where it occurs in areas of the Australian Alps above 1400 m, from the Wellington Plains (Victoria) in the south, to Kiandra (New South Wales) in the north (DELWP 2021). It has a highly restricted and fragmented geographic distribution and is known from only four sub-populations in Victoria, all of which occur on 'sky islands' (sensu Koumoundouros et al. 2009) separated by valleys of unsuitable habitat and conditions (DELWP 2021, DCCEEW 2024d), between which there is no gene flow (DCCEEW 2024d). Genetic studies and long-term monitoring programs have shown that the Alpine She-oak Skink has a limited capacity for dispersal (Koumoundouros et al. 2009) and is likely to have small home ranges (DCCEEW 2024d). Therefore, at least some of these populations are likely to be further fragmented by infrastructure such as roads, carparks, ski runs and resort infrastructure, or areas of degraded habitat (DELWP 2021).

In Victoria, the Alpine She-oak Skink has primarily been recorded from alpine tussock grasslands, alpine heathlands and alpine grassy heathlands, usually above the tree line, although it does occur in grassy areas of very sparse Snow Gums and around the margins of alpine bog communities (DCCEEW 2024d). Within these habitats, the Alpine She-oak Skink shelters in ground-layer vegetation, beneath litter and rocks. Due to the cold climate, the Alpine She-oak Skink usually selects sunny aspects. Individuals have been observed basking on grass tussocks and may also thermoregulate by contact with warm surfaces within low vegetation (Robertson and Coventry 2019).

Habitat critical to the survival of the alpine she-oak skink is considered to comprise all tussock grassland, alpine grassland and grassy heathland, low heath communities, bog and riparian habitats, and snow gum woodland in the 'sky island' plains of south-east Australia, which are, or have previously been occupied by the species. Due to the limited dispersal capabilities of the species, all populations of the species are considered important (DCCEEW 2024d).

The main current threats to the Alpine She-oak Skink include habitat loss and fragmentation, frequent fires, climate change and degradation by hard-hooved animals, while predation and degradation from weeds are probable additional threats (DCCEEW 2024d). Habitat loss and fragmentation resulting from infrastructure development,

maintenance and recreational activities, particularly those associated with ski resort development around Mount Hotham and Falls Creek, have been identified as having had a major historical impact on the species as well as representing an on-going threat. Summer recreational activities may also impact habitat where the Alpine She-oak Skink is known to occur; potential recreational impacts include trampling or damage to vegetation by walkers and vehicles, which typically takes a long time to recover due to the climate and short growing period for alpine vegetation. The EPBC Act Conservation Advice for the Alpine She-oak Skink identifies the proposed ‘icon walk’ between Mt Hotham and Falls Creek (i.e. the FHAC) as a potential threat, due to the likely removal and degradation of areas of high-quality habitat (DCCEEW 2024d).

Habitat for the Alpine She-oak Skink within the FHAC project area was identified by Abzeco (2025) as occurring broadly, but not uniformly, in areas of Alpine Grassland, Alpine Damp Grassland, Alpine Dwarf Heathland, and Alpine Grassy Heathland across the Bogong High Plains (Sections 2, 4, 6, 7, and 11). Potential habitat was also identified in Sections 13 – 15 on the Razorback to Mount Feathertop and High Knob to Diamantina Track; there has been a lack of survey effort in these areas, but it is less likely to occur here than on the Bogong High Plains (N. Clemann pers. comm, cited in Abzeco 2025). Suitable habitat for the species also occurs in habitat surrounding the Cope Hut and Westons Hut Overnight Nodes, and possibly at High Knob Overnight Node; however, areas within the Overnight Nodes are already used for camping, and are likely to be less suitable due to existing impacts of disturbance and vegetation trampling (Abzeco 2025).

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Alpine She-oak Skink is given in Table 34.

Table 34 Assessment of potential impacts to Alpine She-oak Skink against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The Alpine She-oak Skink population is estimated at 250 – 3500 individuals. Threats such as habitat loss and fragmentation, frequent fires, and predation and habitat degradation by invasive species, have contributed to the decline of the species. Habitat for the Alpine She-oak Skink occurs extensively throughout the project area. The FHAC project is estimated to result in the disturbance of up to 0.912 ha of high-quality habitat adjoining trails on the Bogong High Plains (along Sections 2, 4, 6, 7, and 11), and a maximum of 0.751 ha of lower-quality habitat along Sections 13, 14 and 15 and at the three Overnight Nodes. Most of this will occur at the edges of the existing tracks, and not all of this area is likely to be disturbed. Works in areas of high-quality habitat predominantly comprise elevated boardwalks and stepping stones constructed over the existing footprint, to mitigate existing impacts of the trail and facilitate vegetation rehabilitation. Visitor facilities for Overnight Nodes will also be constructed in areas already disturbed, where Alpine She-oak Skinks are considered less likely to occur. In the broader context of available habitat, and considering the scale and location of habitat disturbance, it is unlikely that the FHAC project would cause a long-term decrease in the population of the species.
Reduce the Area of Occupancy of the species	The estimated Area of Occupancy for the Alpine She-oak Skink is 104 km ² . Potential habitat for the species occurs broadly, but not uniformly throughout the FHAC project area (Abzeco 2025). It is estimated that a maximum of up to 0.0166 km ² of habitat will be disturbed along approximately 10.8 km of the FHAC and at the three Overnight Nodes. Not all of this area will be lost, and not all of this area is likely to support habitat occupied by Alpine She-oak Skinks. In addition, most of the disturbance will occur at the edges of existing tracks and in areas already subject to disturbance, and disturbed areas will be rehabilitated as necessary. Given the availability of habitat for Alpine She-oak Skinks within the broader area, and the use of existing tracks and camping areas, the works are unlikely to alter the use of the habitat by the species or reduce their overall area of occupancy on the Bogong High Plains and surround.
Fragment an existing population into two or more populations	The Alpine She-oak Skink is thought to have limited capacity for dispersal, with individuals often re-captured within 5 – 10 m of their original capture point over multiple years. The species is therefore highly susceptible to the effects of habitat fragmentation. The FHAC is aligned on existing tracks; trail works will predominantly result in small areas of habitat loss or modification at the edges of the tracks and therefore will not increase habitat fragmentation. In addition, elevated boardwalks will be installed along approximately 1 km of track, which will enable increased

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Significant Impact Criteria	Assessment of impacts
Adversely affect habitat critical to the survival of the species	<p>movement of individuals in these areas. The Overnight Nodes have been sited in areas already modified and used for camping. This will include the construction of discrete structures such as toilets and camping platforms. Internal gravel paths will also be constructed between visitor facilities to reduce the impacts of trampling by visitors. These tracks will be 0.7 m wide, and although they may break the continuity of vegetation, they are unlikely to present a barrier to the movement of Alpine She-oak Skinks.</p>
Disrupt the breeding cycle of the population	<p>Habitat critical to the survival of the Alpine She-oak Skink is considered to include all alpine treeless vegetation and Sub-alpine Woodland within the 'sky islands'. In particular, tussock-forming grasses and low shrubs are important for providing shelter and protection from predators. Small areas of this habitat will be lost at the edges of existing tracks and at Overnight Nodes. Given that these areas are already modified and disturbed, and the broader availability of intact habitat beyond the project footprint, the FHAC is unlikely to adversely affect habitat critical to the survival of the species.</p>
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	<p>Alpine She-oak Skinks breed in late-summer to early autumn. The proposed works along the FHAC trail have the potential to cause minor and temporary disturbance during this period – noise and habitat disturbance. These works are likely to be of short duration and localised to short sections of trail. It is, therefore, unlikely that the works will disrupt the breeding cycle of the population.</p> <p>Areas of habitat loss for the Alpine She-oak Skink along the FHAC trail are relatively small in the context of habitat available in the broader landscape and localised to minor areas adjoining existing tracks. Areas of habitat loss for the Overnight Nodes will occur within existing camping areas that support vegetation already of modified structure and quality, and which are less likely to support Alpine She-oak Skink than undisturbed areas. The project is therefore unlikely to cause the species to decline.</p>
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	<p>The Alpine She-oak Skink is threatened by deer, feral horses and feral pigs, which cause significant habitat damage, and by predation from feral Cats and the European Red Fox (DCCEEW 2024d). There are no mechanisms by which the FHAC project would introduce or cause these species to become established within areas of Alpine She-oak Skink habitat. The project utilises the existing track network and camping areas within the Alpine National Park, and therefore, will not facilitate an increase in the movement of these species, nor alter their patterns of movement.</p> <p>Weed species have the potential to degrade Alpine She-oak Skink habitat. Given that the FHAC project area is located on existing trails and camping areas, weed species are already established through areas of Alpine She-oak Skink habitat. There is a small risk that construction works for the FHAC will inadvertently introduce new weed species or spread weeds. Hygiene protocols will be implemented to manage this risk (see Section 7.9). Alpine She-oak Skinks are most threatened by Mouse-eared Hawkweed <i>Hieracium pilosella</i> (DCCEEW 2024d); this species was not recorded within the project area. In addition, there has been a sustained hawkweed eradication program in the Alpine National Park since 2011. Post-construction rehabilitation and monitoring of disturbed areas within the project area will help to detect and prevent any incursions of this species.</p>
Introduce disease that may cause the species to decline	<p>There are no identified diseases that are recognised as a threat to the Alpine She-oak Skink (DCCEEW 2024d). However, hygiene protocols will be implemented to ensure that vehicles, equipment and machinery are clean prior to entering works areas.</p>
Interfere with the recovery of the species	<p>Conservation and recovery actions for the Alpine She-oak Skink are outlined in the Conservation Advice (DCCEEW 2024d). They include actions to identify and manage climate refuges, reduce fire-related mortality and to consider the species in fire management activities, control invasive species, regulate development in alpine areas, as well as survey and monitoring. Habitat removal is considered contrary to these actions. However, the FHAC project will not involve development in new areas of Alpine She-oak Skink habitat and will involve only small areas of habitat disturbance within and immediately adjoining areas that have already been disturbed. Thus, it is unlikely to interfere with the recovery of the species.</p>

Spot-tailed Quoll

The south-eastern mainland population of the Spot-tailed Quoll *Dasyurus maculatus maculatus* occurs from southern Queensland through to south-western Victoria and Tasmania. It has suffered a significant decline in range and abundance since European Settlement and is listed as Endangered under the EPBC Act. Following historic declines throughout most of its distribution, the species is now considered to occur rarely within alpine areas on the mainland, and the Victorian alps are not considered to be a stronghold for the species. However, there are relatively recent records (from 2001 and 2007) of this species located 6 km north of Falls Creek and 7 km south-east of Mount Hotham (DEECA 2025).

The Spot-tailed Quoll is a forest-dependent, carnivorous marsupial and occurs in a wide range of habitat types characterised by predictable and high seasonal rainfall (> 600 mm/year), including wet and dry sclerophyll forest, rainforest, coastal heathland and woodland, and swamp forests. Spot-tailed Quolls have been found to preferentially use gullies and escarpments, which is thought to be related to prey-densities and availability of suitable den sites including caves, boulders and rock crevices, hollow logs and tree buttresses. The Spot-tailed Quoll occurs in low densities and ranges over large areas; adults are solitary and occupy large home ranges, and individuals can cover at least 8 km per day (DELWP 2016c).

Habitat critical to the survival of Spot-tailed Quolls has been identified as including large patches of forest with adequate denning resources, and relatively high-densities of medium-sized mammalian prey. Given the threatened status of the Spot-tailed Quoll, all habitats within its current distribution known to be occupied by the species are considered important (DELWP 2016c).

Suitable habitat for the Spot-tailed Quoll within the project area occurs in the vicinity of FHAC trail Section 12, which supports Montane Damp Forest. Works in this area are proposed to include the construction of steps (stone steps, benched steps and chiselled steps) as well as drainage works, which will impact 0.218 ha of vegetation.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Spot-tailed Quoll is given in Table 35.

Table 35 Assessment of potential impacts to Spot-tailed Quoll against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The Victorian population of the Spot-tailed Quoll is estimated at 100 – 500 mature individuals (DELWP 2021). The key threats to Spot-tailed Quoll include habitat loss and modification, predation and inappropriate fire regimes, as well as road mortality, poisoning and purposeful killing, and Cane Toads. The FHAC will result in the modification of up to 0.218 ha of potential habitat along Section 12 of the FHAC. The proposed works will primarily impact understorey species along the edges of existing tracks. These works are unlikely to significantly impact the use of habitat by any individuals within the area and would not lead to a long-term decrease in the size of the population.
Reduce the Area of Occupancy of the species	The Area of Occupancy of the Spot-tailed Quoll in Victoria is estimated at 419 km ² (DELWP 2021). A maximum of 0.0022 km ² would be impacted as a result of the proposed works. All areas of habitat impacted are at the edges of existing tracks. Hence, the project will not alter the use of surrounding areas of habitat by Spot-tailed Quolls, nor reduce their overall area of occupancy.
Fragment an existing population into two or more populations	Spot-tailed Quolls are highly mobile and range over large areas. The FHAC will utilise existing tracks that are narrow and unlikely to present a barrier to the movement of quolls. Minimal clearing will be undertaken additional to the existing track width to enable track upgrade and repair works. This work is not of a scale that would fragment a population into two or more populations.
Adversely affect habitat critical to the survival of the species	The presence of Spot-tailed Quolls within the FHAC project area is not known; however, Montane Damp Forest around FHAC Trail Section 12 was identified by Abzeco (2025) as supporting suitable habitat for the species. Given the contiguous tracts of forest vegetation in this area, it is likely that this habitat supports attributes that would be considered habitat critical for the survival of the species. The works proposed in this area will occur on existing tracks and will impact up to 0.218 ha of habitat. In addition, handrails will be attached to rock escarpment along

Significant Impact Criteria	Assessment of impacts
	300 m of trail. Given that these impacts are relatively minor and will occur at the edges of existing tracks, the works are not considered to adversely impact habitat critical for survival of the species. Rock works that will occur along the trail will be undertaken on the existing trail, and are not expected to adversely affect den or shelter sites for this species.
Disrupt the breeding cycle of the population	The Spot-tailed Quoll breeds annually in winter and may use rocks or hollow logs and trees as den sites. Activities that remove denning habitat or impact mammalian prey (e.g., forest harvesting) during the breeding season can disrupt breeding of Spot-tailed Quolls by reducing the suitability of habitat for breeding females (DELWP 2016c). The proposed FHAC will not reduce the suitability of surrounding habitat for breeding Spot-tailed Quolls. The potential impacts of noise disturbance, particularly for rock works, are likely to be limited (temporary and localised) and will be undertaken outside of the breeding season (i.e., during summer or autumn).
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The works proposed within areas of Spot-tailed Quoll habitat are minor and will result in the removal of 0.218 ha of vegetation (comprising primarily understorey vegetation) for track upgrade and repair works on existing tracks. Areas immediately surrounding the track have already been modified and subject to some level of disturbance. The proposed works will impact habitat immediately adjacent to the tracks and will not decrease the availability or quality of habitat to the extent that the species will decline.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	Introduced carnivores, including feral cats, foxes and domestic dogs are suspected to compete with, and have been known to kill Spot-tailed Quolls, which may contribute to the suppression of quoll populations (DELWP 2016c) The FHAC utilises the existing trail network and will not result in the establishment, nor facilitate an increase in the spread or movement of these species.
Introduce disease that may cause the species to decline	There are no diseases that are currently known to threaten Spot-tailed Quolls. Hygiene controls will be implemented during construction works to manage the risk of introducing or spreading pathogens, including plant pathogens that may impact habitat for the Spot-tailed Quoll.
Interfere with the recovery of the species	The National Recovery Plan outlines the strategies for the recovery of the Spot-tailed Quoll, which focuses on reducing the impact of threatening processes, and subsequently halting the current decline in distribution and abundance. This includes, increasing knowledge of the distribution and status of populations, the impact and management of threatening processes, and investigation of key biological and ecological attributes is also required to facilitate recovery (DELWP 2016c). The proposed FHAC project does not interfere with any of these strategies.

Guthega Skink

The Guthega Skink occurs in just two alpine regions above 1600 m elevation: in Kosciuszko National Park, New South Wales and on the Bogong High Plains. Within Victoria, Guthega Skink has been recorded as isolated occurrences usually associated with granite boulder fields on the Bogong High Plains (DELWP 2021). Guthega Skinks are colonial and there are only 12 known colonies in Victoria (DELWP 2021).

Guthega Skinks inhabit alpine tussocks grasslands, heathlands and Snow Gum Woodlands with an open grassy or shrubby understorey, usually with a substrate of granite boulders, or with sub-surface rock hidden beneath decomposing granite soils or dense vegetation. Habitat preferred by the Guthega Skink is typically characterised by granite boulders with narrow crevices rather than larger rock slabs and supports less canopy and ground cover than habitats occupied by the other two *Liopholis* species with which it co-occurs (Senior et al. 2019). They construct complex burrow systems, often on north or west-facing slopes, under both rock and shrubs, with their microhabitat choice influenced by specific site characteristics and fire history (Atkins et al. 2015). Burrows may have up to five entrances and support multiple individuals, comprised of adults and young (Roberston and Coventry 2019). Surface rock, and less commonly, fallen timber may also be used for shelter (DELWP 2021, DCCEEW 2024e).

The Guthega skink is active between October and May and is inactive between May and September when it hibernates beneath the snow (Atkins 2018). During the day, the species basks on bare ground, mats of vegetation or

rocks in close proximity to their burrows. The home range movements of the Guthega skink are highly localised, and adults have considerable site fidelity, with most basking and foraging occurring within proximity of familiar burrows; adults are rarely found more than 10 m from their established burrow system (DCCEEW 2024e).

Habitat critical to the survival of the Guthega skink is defined in the Conservation Advice for the species as the granite boulders, slabs, rock screes or tors and associated vegetation in subalpine and alpine areas of south-east Australia from 1600 m above sea level, which are or have been occupied by the species (DCCEEW 2024e).

The Guthega Skink is known to occur along the track alignment of the FHAC on the Bogong High Plains. Guthega Skink colonies were recorded along Section 2 of the FHAC and additional potential colonies, indicated by the presence of burrows, were recorded along Section 7 (Abzeco 2025), including within areas in Alpine Grassy Heathland interspersed with Alpine Valley Peatland, Alpine Dwarf Heathland and Alpine Damp Grassland near proposed works areas. These habitats meet the description of habitat critical to the survival of the species. A maximum of 0.206 ha of known and potential habitat will be disturbed by trail works for the FHAC for boardwalk construction and installation of stepping stones.

The primary threats to the persistence of the Guthega skink are loss of habitat caused by development (particularly ski resort development, roads and tracks), frequent fires, climate change, trampling and excessive grazing by introduced hard-hoofed animals, and human disturbance (DELWP 2021, DCCEEW 2024e). The “*proposed upgrades to the Great Alpine Walk between Falls Creek and Mt Hotham*” are also identified in the Conservation Advice as having the potential to degrade or destroy the habitat of the species with the potential threats including the destruction of burrow systems, human disturbance from rock stacking, and an increase in faecal and camping waste (DCCEEW 2024e).

All works proposed for the FHAC within Guthega Skink habitat are on existing tracks. These works will be carefully managed to avoid impacting Guthega Skinks. Pre-construction surveys will be undertaken to identify and flag potential Guthega Skink burrows and to microsite works to ensure that Guthega Skinks or their burrows are not destroyed or disturbed by construction activity. Rocky habitats will not be disturbed, and all stepping stones will consist of imported rock. The proposed works are intended to reduce the existing impacts of human disturbance through the installation of elevated boardwalks, and stepping stones to discourage off-track walking. There is no Guthega Skink habitat within Overnight Nodes.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Guthega Skink is given in Table 36.

Table 36 Assessment of potential impacts to Guthega Skink against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	Colonies of the Guthega Skink are known to occur along the FHAC trail alignment. However, it is unlikely that the FHAC will lead to a long-term decrease in the size of the population. The FHAC is aligned on existing tracks, and all works proposed in areas where colonies of the species are known or suspected to occur, will be carefully managed to ensure that individuals are not injured or disturbed. Pre-construction surveys will be undertaken to micro-site works and potential burrows will be flagged immediately prior to construction to ensure that they are not disturbed. Works proposed in these areas are limited to the construction of elevated boardwalks and installation of stepping stones to mitigate the existing impacts of the tracks. Areas of habitat disturbance resulting from these works are minor and limited to the edges of the existing track and rock habitats will not be disturbed for the installation of stepping stones.
Reduce the Area of Occupancy of the species	The Area of Occupancy for Guthega Skink is 36 km ² and includes parts of the FHAC project area along trail Sections 2 and 7 (Abzeco 2025). Works within these areas include the construction of elevated boardwalks and installation of stepping stones, resulting in a total disturbance of up to 0.002 km ² of known and potential habitat, although the actual area of disturbance is likely to be much less and limited to the edges of the existing track. With micro-siting of works, it is expected that impacts to this species can be largely avoided. In the long-term, these works are intended to reduce habitat disturbance by limiting off-track walking by hikers. The extent of works is not considered to reduce the overall area of occupancy by the species.

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Significant Impact Criteria	Assessment of impacts
Fragment an existing population into two or more populations	The re-aligned FHAC utilises the existing trail network and existing camping areas, and will therefore, not involve any works with the potential to fragment the population. Proposed trail works within Guthega Skink habitat include the construction of short sections of elevated boardwalks and the installation of stepping stones, primarily to mitigate existing impacts along the trail. These will be installed over the existing track alignment, and therefore will not result in or increase habitat fragmentation or present additional barriers to the movement of individuals.
Adversely affect habitat critical to the survival of the species	Habitat critical to the survival of the Guthega skink includes granite boulders, slabs, rock screes or tors, and associated vegetation in subalpine and alpine areas of south-east Australia from 1600 m above sea level, which are or have been occupied by the species (DCCEEW 2024e). These habitats occur near proposed works on Sections 2 and 7, however, it is not anticipated that the works will adversely impact these habitats. Pre-construction surveys and micro-siting will be undertaken to ensure that Guthega Skink colonies and surrounding habitat are not disturbed by works. Disturbance to rocky habitats will be avoided as far as possible, and all stone for the FHAC works will be imported.
Disrupt the breeding cycle of the population	Works undertaken in Guthega Skink habitat have the potential to disrupt breeding activities if they disturb burrow systems. Pre-construction surveys will be undertaken immediately prior to construction to identify and flag burrows and colonies to ensure that they are not disturbed by works. In addition, the nature of the works will be highly localised and of limited duration, and therefore, are unlikely to disrupt the breeding cycle of the species.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The FHAC includes the construction of elevated boardwalks and installation of stepping stones within areas of known or potential Guthega Skink habitat, resulting in a total disturbance of up to 0.002 km ² for construction works and activities, although the actual area of disturbance is likely to be much less and limited to the edges of the existing track. Disturbance will be limited to the installation of boardwalk footings and installation of stepping stones within the existing track footprint, as well as foot traffic and temporary placement of tools and materials, mostly along track edges. Rock habitats will not be disturbed, and pre-construction surveys will be undertaken to micro-site works and ensure that burrow systems are not disturbed. In the long-term, these works are intended to reduce habitat disturbance by limiting off-track walking by hikers. The proposed works are not expected to modify, destroy or isolate habitat to the extent that the species will decline.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	Invasive species that present a threat to Guthega Skinks include the European Red Fox, feral Cats, feral horses, deer, pigs, and environmental weeds, most of which are already established within the Victorian alps. There is some risk that construction works for the FHAC will inadvertently introduce new weed species or spread weeds that would impact Guthega Skink habitat. Hygiene protocols will be implemented to manage this risk (see Section 7.9).
Introduce disease that may cause the species to decline	There are no identified diseases that are recognised as a threat to the Guthega Skink (DCCEEW 2024e). However, hygiene protocols will be implemented to ensure that vehicles, equipment and machinery are clean prior to entering works areas.
Interfere with the recovery of the species	<p>Conservation and recovery actions for the Guthega Skink are listed in the Conservation Advice. They include actions to manage the impacts of climate change, fire and fire management, invasive species and development impacts, as well as captive breeding. Key actions to manage impacts of development include limiting new development in Guthega Skink habitat, preventing permanent and temporary habitat loss from construction, and implementing management actions to restore habitat.</p> <p>The works proposed as part of the FHAC are on existing trails that are already disturbed. Works within these areas include the construction of elevated boardwalks and installation of stepping stones, resulting in a total disturbance of up to 0.002 km² of known and potential habitat, although the actual area of disturbance is likely to be much less and limited to the edges of the existing track. In</p>

Significant Impact Criteria	Assessment of impacts
	<p>the long-term, these works are intended to reduce habitat disturbance by limiting off-track walking by hikers and will enable restoration of surrounding habitat.</p> <p>Captive-bred Guthega Skinks have recently been released on the Bogong High Plains and further releases may occur in future. Given that the FHAC is located on existing tracks and existing visitor areas, the project is unlikely to interfere with planned releases.</p>

Mountain Skink

Mountain Skinks are listed as Endangered under the EPBC Act and occur in montane and sub-alpine areas from the Bimberi Range in the Australian Capital Territory, through the Snowy Mountains in New South Wales and into the Victorian alps. Additional populations occur in the Wombat State Forest to the northwest of Melbourne at an elevation of 620 m and at Sassafra in the Dandenong ranges, at a similar elevation. Throughout its distribution, the Mountain Skink occurs as a series of isolated sub-populations between 620 m and 1800 m ASL. Despite a broad zone of overlap in altitudinal range with Guthega Skink, the two species have never been recorded within the same habitat, at the same time, throughout their range (DCCEEW 2022d).

The Mountain Skink occurs in tall, open forest, woodland heathland habitats with granite and basalt boulders, rock slabs, screes and tors, or large logs. Rocky habitats and large logs are important for providing refuge from extreme weather, fire and predators. They are used for foraging, breeding, thermoregulation and burrowing. Mountain Skinks are also a colonial species; each colony may only consist of one or two warrens and a small number of individuals.

Within the project area, suitable habitat for Mountain Skinks was identified along the Diamantina Spur Walking Track — FHAC Sections 12 and 13, with possible burrows located towards the western end of Section 13, as well as along the Razorback Track, from just below Mount Feathertop to just south of the Great Alpine Road (Abzeco 2025). Proposed works in these sections primarily involve trail drainage works, mostly along the Razorback, and the construction of short sections of steps along the Diamantina Spur Walking Track. The total area of disturbance along these sections of trail is estimated at up to 2.5 ha, which includes areas that may be required for construction activities including foot traffic, and the laydown of equipment and materials along the trail (see Sections 5.4 and 7.1). However, the actual area of disturbance and permanent loss is likely to be much less than this (0.20 ha), as drains will only be constructed every 20 – 50 m. Potential habitat for the Mountain Skink was also identified by Abzeco (2025) around High Knob, where an additional 0.25 ha is likely to be disturbed for the construction of visitor facilities.

Works within potential Mountain Skink habitat will be carefully managed to avoid injuring or disturbing Mountain Skinks and their burrows. Pre-construction surveys will be undertaken to identify and flag potential Mountain Skink burrows and to microsite works to ensure that they are not destroyed or disturbed by construction activity, which will be detailed in a Fauna Management Plan. Rocky habitats will be avoided as far as possible, and all rock used for drain construction or steps will consist of imported rock. High Knob Overnight Node is located at an existing camping area; works at High Knob Overnight Node will also be undertaken carefully to ensure Mountain Skinks are not injured or disturbed, with pre-construction surveys and micro-siting of structures to avoid Mountain Skink habitat as far as possible.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Mountain Skink is given in Table 37.

Table 37 Assessment of potential impacts to Mountain Skink against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The number of mature individuals of Mountain Skinks is unknown. The species is threatened by habitat loss, including from logging, and climate-change related threats, such as increased fire frequency and severity, and predation by feral cats and foxes. The FHAC will result in the disturbance of up to 2.75 ha of potential habitat for the species, although not all of this area will be disturbed and not all of the area is likely to be suitable for Mountain Skinks. Most of the area subject to disturbance will occur along the edges of existing tracks and at an area already used for camping. Pre-construction surveys will be undertaken to ensure that works do not injure or kill Mountain Skinks or destroy burrow systems. With careful

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Significant Impact Criteria	Assessment of impacts
Reduce the Area of Occupancy of the species	<p>management, the works are not expected to result in a long-term population decline.</p> <p>The Area of Occupancy for the Mountain Skink in Victoria is estimated at 196 km². Works proposed for the FHAC will impact a maximum of up to 0.028 km². This area is small comparative to the overall area and extent of occupancy of the species, and the final footprint of the works is likely to be less than this (0.0026 km²). All works will occur along the edges of existing tracks and in an area already disturbed and used for camping. In areas where Mountain Skinks are present, it is reasonable to assume they will occur more broadly beyond the project footprint, in adjoining habitat. Therefore, it is unlikely that the works will reduce the overall area of occupancy for the Mountain Skink.</p>
Fragment an existing population into two or more populations	<p>Given that the majority of proposed works within Mountain Skink habitat will occur largely at the edges of existing tracks, the trail works will not increase habitat fragmentation, nor fragment an existing population into two. Proposed works at High Knob involve the construction of discrete structures that will be located within areas already disturbed and used for camping. Internal gravel pathways will be constructed within the camping area to reduce visitor impact of trampling. These tracks will be 0.7 m wide, and although they will break the continuity of vegetation, they are narrow and unlikely to present a barrier to the movement of individuals.</p>
Adversely affect habitat critical to the survival of the species	<p>Habitat critical to the survival of the Mountain Skink has not been identified in the EPBC Act Approved Conservation Advice. However, it is likely that habitat within and adjoining the project area would meet the requirements of habitat critical for the survival of the species (i.e., habitat used for breeding, foraging and shelter). In particular, rocky areas and large logs are important for providing shelter from predators, refuge from extreme weather and for thermoregulation. The species also constructs burrows. Works along the trail and at High Knob will be carefully managed with pre-construction surveys to ensure that burrows are identified and are not disturbed during construction. Infrastructure will also be micro-sited to avoid removal of habitat feature such as rocky habitat or large logs, as far as possible.</p>
Disrupt the breeding cycle of the population	<p>Trail works in areas of Mountain Skink habitat may affect breeding individuals where works are proposed near Mountain Skink colonies. Pre-construction surveys will be undertaken to identify and avoid Mountain Skink colonies, including burrows or potential breeding habitat by micro-siting works. Given that the proposed works would be undertaken within areas that are already disturbed and within a small proportion of the overall habitat available, it is unlikely that the works would disrupt the breeding cycle within the broader population during the construction or operation of the FHAC.</p>
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	<p>The FHAC will result in the disturbance of a maximum of 2.75 ha of potential habitat for the Mountain Skink, although not all of this area will be disturbed and not all of the area will support habitat suitable for the species. Most of the disturbance will occur along the edges of existing tracks across approximately 10 km of the FHAC; habitat beyond a distance of 1.5m from the existing trail footprint will not be disturbed. Areas of habitat disturbance at High Knob will also occur within the existing campground that is already subject to disturbance and habitat modification. Therefore, it is unlikely that the FHAC would result in habitat loss or modification to the extent that the species would decline.</p>
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	<p>As a colonial, ground-dwelling species that inhabits burrows, Mountain Skinks are highly susceptible to predation by feral Cats, and potentially the European Red Fox (DCCEEW 2022d). The FHAC will not increase predation or access to Mountain Skink habitats by predators, as all works are on existing tracks and existing camping areas.</p> <p>There is a small risk that construction works will inadvertently introduce new weed species or spread weeds through the use of imported gravel and rock, or via equipment, tools and footwear. Strict hygiene controls will be implemented to manage this risk, as part of a Construction Environment Management Plan. Following construction, rehabilitation and monitoring of disturbed areas will be undertaken to ensure these areas are not colonised by weed species.</p>

Significant Impact Criteria	Assessment of impacts
Introduce disease that may cause the species to decline	There are no known diseases that have been identified as a threat to the Mountain Skink. Hence, it is unlikely that the FHAC would introduce a disease that would cause the species to decline.
Interfere with the recovery of the species	Conservation and recovery actions for the Mountain Skink are outlined in the Approved Conservation Advice. The priorities for the next 10 years include actions to protect and manage Mountain Skink habitat from logging, develop fire management strategies to manage habitat loss and modification from prescribed burning, control introduced herbivores, and survey, monitoring and research. The proposed FHAC project does not interfere with any of these actions.

Spotted Tree Frog

The Spotted Tree Frog *Litoria spenceri* is listed as Critically Endangered under both the EPBC Act and FFG Act, and is known from only 13 discrete populations on the north-western side of the Great Dividing Range, between Mount Kosciuszko in New South Wales and the Central Highlands of Victoria; 11 of the populations are in Victoria (DELWP 2023). Most populations are found in areas with limited human disturbance and access, and all populations are small and restricted to relatively short reaches of waterways — often only a few hundred meters in length (Gillespie and Hollis 1996).

Spotted Tree Frogs occur in large rivers and streams (greater than 3 m channel width) of dissected mountainous country, between 300 m and 1100 m ASL (West 2015). Most individuals are associated with loose rock substrates, rocky banks and areas of rapids and riffles. Individuals are usually found sheltering amongst vegetation, rocks and fallen debris, and whilst juveniles are usually found close to the banks, adults may be found in vegetation up to 30 m from the bank and in trees and shrubs up to 10 m above the waterway (TSSC 2021). Streams are used for breeding between October and April, with eggs deposited under large in-stream boulders or bedrock crevices in pools on the margins of riffle sections (Anstis 2017).

Spotted Tree Frogs are known from the Kiewa River downstream of the FHAC project area. The upstream reaches of the Kiewa River around the FHAC are considered less likely to support the Spotted Tree Frog than the downstream reaches from which they are known (M. West pers. comm., in Abzeco 2025). Nevertheless, Abzeco (2025) identified potential habitat for the species within the Kiewa River West Branch and Diamantina River around Section 12 of the FHAC. Limited surveys for the species were undertaken in and adjacent to the Diamantina River at Diamantina Horse Yards, and the Kiewa River West Branch at Blair’s Hut, which did not record the Spotted Tree Frog (see Abzeco 2025). Additional surveys would be required to confirm their presence or absence in the area, thus, for the purposes of this assessment, habitat for the Spotted Tree Frog is assumed to occur where FHAC Section 12 crosses the Diamantina River and Kiewa River West Branch.

Proposed works on Section 12 will involve trail drainage works and the construction of steps on Diamantina Spur Track to the north of where the trail crosses the Diamantina River and Kiewa River West Branch. No works will be undertaken at or adjacent to the waterway crossings, thus, habitat for this species will not be directly impacted. There is some potential for downstream impacts to Spotted Tree Frog habitat from sediment run-off or altered surface drainage, if works are not designed or managed appropriately.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Spotted Tree Frog is given in Table 38.

Table 38 Assessment of potential impacts to Spotted Tree Frog against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The Spotted Tree Frog population is estimated at 1100 to 1800 mature individuals (DELWP 2023). There are no known records of the species within or immediately adjoining the project area, however potential habitat occurs in the Diamantina and Kiewa Rivers. There is a small risk that habitat for the Spotted Tree Frog may be indirectly impacted by sediment and nutrient input from works undertaken upstream of Diamantina and Kiewa River crossings of the FHAC if works are not managed correctly. Best-practices sediment and erosion controls will be

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Significant Impact Criteria	Assessment of impacts
Reduce the Area of Occupancy of the species	implemented to manage this risk. The works are not considered to lead to a long-term decrease in the population size.
Fragment an existing population into two or more populations	The Area of Occupancy for the Spotted Tree Frog is estimated to be 132 km ² (DELWP 2023). The FHAC does not involve any works on waterway habitats where the Spotted Tree Frog is known to occur or has the potential to occur. The potential for indirect impacts to habitat is small and will be managed with best-practice sediment and erosion controls. In the long-term, works along FHAC Section 12 are intended to reduce erosion and sediment run-off from the track. Therefore, the proposed works will not reduce the area of occupancy for the species.
Adversely affect habitat critical to the survival of the species	The proposed FHAC will not result in fragmentation of habitat or create a barrier to the movement of Spotted Tree Frogs that would fragment a population. The FHAC is located on existing tracks and no works will be undertaken on waterway crossings of the Diamantina or Kiewa Rivers that provide potential habitat for the Spotted Tree Frog; existing waterway crossings will be left in-place.
Adversely affect habitat critical to the survival of the species	Habitat critical to the survival of the Spotted Tree Frog has not been defined. However, given the restricted distribution and conservation status of the species, all habitat may be considered critical for the Spotted Tree Frog. The FHAC is not expected to adversely affect habitat for the species. No works are proposed on or adjacent to waterways that provide potential habitat, and the risks of indirect impacts will be managed through best-practice sediment and erosion controls that will be implemented as part of a Construction Environment Management Plan.
Disrupt the breeding cycle of the population	Factors that may disrupt breeding of Spotted Tree Frogs include: changes in flow rates of waterways that can affect the viability of eggs or the survivorship of tadpoles; predation of tadpoles by introduced fish; fire suppression chemicals that can harm frogs and tadpoles; and increased sediment levels. Increases in sediment levels can be caused by loss of vegetation cover, damage by deer, or flood events following fire, which can affect the availability of egg deposition sites or the survivorship of tadpoles. The FHAC project will not alter the flow rates of waterways, introduce or lead to an increase in predatory fish, or involve the release of chemicals. Vegetation disturbance and excavation works along Section 12 of the trail will cause localise soil disturbance that will be managed with best-practice sediment and erosion controls; they are not expected to lead to an increase in sediment input into surrounding waterways.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Habitat for the Spotted Tree Frog will not be destroyed, modified or isolated as part of the FHAC. No works will be undertaken on or adjoining waterway habitats that provide potential habitat for this species.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	<p>Spotted Tree Frog eggs and tadpoles are known to be highly vulnerable to predation by introduced fish species. Subpopulations are thought to have declined significantly following the introduction of Brown Trout <i>Salmo trutta</i> and Rainbow Trout <i>Oncorhynchus mykiss</i> and trout are now established at all sites within the natural distributional range of the Spotted Tree Frog (West 2015). European Carp <i>Cyprinus carpio</i> and European Perch <i>Perca fluviatilis</i> have also been documented in some waterways supporting Spotted Tree Frog populations. Feral Cats may also prey on adults, although the extent of this is not known. There is no mechanics by which the FHAC project would introduce or cause any of these species to have an increased impact on the Spotted Tree Frog. Proposed works within or near areas of habitat for this species are limited to works on existing tracks.</p> <p>A number of weed species, including willows <i>Salix</i> spp. and Blackberry <i>Rubus</i> spp., have the potential to degrade riparian habitats of the Spotted Tree Frog, by encroaching into rocky habitat and choking waterways. There is a small risk that works on Section 12 may introduce or spread weeds through construction materials and equipment, or footwear. Hygiene protocols will be implemented as part of a Construction Environment Management Plan to manage this risk.</p>
Introduce disease that may cause the species to decline	Chytrid fungus <i>Batrachochytrium dendrobatidis</i> is thought to have been a leading cause in the decline of the Spotted Tree Frog since the 1980s, with populations inhabiting higher elevations and cooler and wetter climates most affected (DELWP

Significant Impact Criteria	Assessment of impacts
Interfere with the recovery of the species	<p>2023). It has been found in all known subpopulations of Spotted Tree Frog (West 2015). It is, therefore, unlikely that activity associated with the FHAC would introduce this disease to populations of the Spotted Tree Frog for the first time. Nevertheless, strict hygiene controls will be implemented during construction activities as part of best-practice hygiene controls and to ensure that new/different strains are not introduced.</p> <p>Actions for the recovery of the Spotted Tree Frog are outlined in the EPBC Conservation Advice. Primary conservation actions are focused on the management of introduced predatory fish, research into chytridiomycosis and measures to minimise its impact, and responses to the 2019 – 20 fires that include population surveys, introduced predator and herbivore control, and weed removal works. Conservation and management priorities include mechanisms to limit human disturbance around known locations, including recreational activities, land clearing and protection of environmental flows. The FHAC does not interfere with any of the actions listed in the Conservation Advice.</p>

Broad-toothed Rat

The Broad-toothed Rat *Mastacomys fuscus mordicus* (mainland subspecies) has a highly fragmented and restricted distribution across the Great Dividing Range from near Warburton in Victoria to the Brindabella Range in the Australian Capital Territory and Barrington Tops in New South Wales, with at least one poorly-known population in far East Gippsland. Knowledge of current occupancy and population sizes is limited but its distributions is known to have declined significantly since European settlement (DCCEEW 2023a). In Victoria, populations have been identified in five regions, including the alpine region, from the Yarra Ranges to the New South Wales border (DCCEEW 2023a), which is the only region in which the sub-species can now be considered locally abundant (Menkhorst 1995, Seebeck and Menkhorst 2000, Green and Osborne 2003, Menkhorst et al. 2008). However, recent reductions in site occupancy have also been recorded in the eastern Alpine National Park and around Mount Hotham (DCCEEW 2023a).

Habitats occupied by the Broad-toothed Rat are characterized by high annual rainfall, a cool climate and a dense cover of sedges and grasses, particularly *Poa* species that form a major dietary component and are restricted to cool and wet environments (Menkhorst 1995, Green et al. 2014, Shipway et al. 2020). Suitable habitat is now largely restricted to high elevation areas (> 1500 m) with annual rainfall greater than 1000 mm and mean annual temperatures below 10°C (Green and Osborne 2003, Milner et al. 2015, Shipway et al. 2020). Preferred habitats in high elevation areas include alpine and sub-alpine heathlands and grasslands adjacent to boulder outcrops, and they have also been recorded in sub-alpine woodland. Proximity to drainage lines is also important (DCCEEW 2023a). All habitat where the Broad-toothed Rat occurs, or could occur, is considered habitat critical for the survival of the species, as defined in the combined EPBC Act Conservation and Listing Advice for the species.

In summer, the Broad-toothed Rat nests in burrows in the soil. Breeding occurs in spring and summer; females may give birth to one or two litters per year between October and March. In alpine areas in winter, individuals den communally during the day in nests located in dense undergrowth or under logs beneath the snow, and are active in the vegetation layer under snow cover. Their use of well-established runways and tunnels for movement and foraging makes them more vulnerable to predation and susceptible to disturbances, such as fire.

Suitable habitat for the Broad-toothed Rat within the project area was identified by Abzeco (2025) along Section 6 of the FHAC, and Broad-toothed Rat burrows were recorded on the bank of a headwater tributary crossing the FHAC at Cope Saddle. Proposed works within Section 6 are limited to relatively low-impact trail works, including the installation of elevated boardwalks, stepping stones and rubber matting over the existing trail footprint, in order to limit the existing impacts of off-track walking. Minimal drainage works will also be undertaken to prevent erosion. A total of up to 0.0317 ha of habitat may be disturbed for these works, at the edges of the existing track.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Broad-toothed Rat is given in Table 39.

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Table 39 Assessment of potential impacts to Broad-toothed Rat against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	There are no robust estimates of population size in the Broad-toothed Rat. The Broad-toothed Rat is threatened by predation by foxes and feral cats, habitat loss and fragmentation, habitat degradation by introduced herbivores, fires and climate change. The proposed trail works on Section 6 of the FHAC will result in the disturbance of up to 0.0317 ha of habitat for the Broad-toothed Rat on the existing tracks. These areas are relatively minor in the context of broader habitat availability for the species. Elevated boardwalks will be installed over minor drainage lines or flow paths and wet areas, and stepping stones and rubber matting will also be installed on the existing track footprint to reduce off-track walking by hikers. Pre-construction surveys will be undertaken within works areas along Section 6 to identify Broad-toothed Rat runways and burrows, and to micro-site works to ensure that these are not destroyed or disturbed. With these measures in-place, the project would not be considered to lead to a long-term decrease in the population.
Reduce the Area of Occupancy of the species	The Broad-toothed Rat is estimated to have an Area of Occupancy of 912 km ² , across its distribution. This includes the project area within which a maximum of 0.0003 km ² of habitat will be disturbed for track upgrades. Given that these losses will occur at the edges of existing tracks, and large tracts of suitable habitat exist in the surrounding area, the FHAC project is considered unlikely to reduce overall availability of habitat for Broad-toothed Rats, nor alter their use or occupancy of habitat within the project area and surrounds.
Fragment an existing population into two or more populations	All works within Broad-toothed Rat habitat will occur on existing tracks that are narrow and are unlikely to present a barrier to the movement of Broad-toothed Rats. Proposed works include the installation of elevated boardwalks, which will facilitate the rehabilitation of vegetation and movement of Broad-toothed Rats beneath the boardwalk. The installation of stepping stones, rubber matting and limited drainage works will also assist with mitigating the existing impacts of off-track walking by hikers.
Adversely affect habitat critical to the survival of the species	All habitat where the Broad-toothed Rat occurs, or could occur, is considered habitat critical for the survival of the species (DCCEEW 2023a). Within the project area, all habitat within Section 6 of the FHAC is considered suitable for the Broad-toothed Rat, and therefore, habitat critical for the survival of the species. The extent of disturbance within this habitat is minor (0.0317 ha) and limited to the edges of existing tracks. In addition, proposed works are intended to reduce existing impacts of the track on surrounding habitat. Given the minor extent and type of works proposed, it is not anticipated that habitat critical to the survival of Broad-toothed Rats would be adversely impacted.
Disrupt the breeding cycle of the population	Construction activities within potential Broad-toothed Rat habitat are minor and localised to short sections of trail. Trail works will be undertaken by hand and/or using small or hand-held machinery, thus noise disturbance is likely to be relatively limited and temporary. It is not considered likely that the trail works would disrupt the breeding cycle of the population.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The FHAC is aligned on the existing trail network, and proposed trail works will occur within areas that are already modified and subject to ongoing disturbance. Areas of potential habitat loss and disturbance as part of the trail upgrades are minor and will not destroy, isolate or decrease the availability of habitat to the extent that the species would decline.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	<p>The European Red Fox is known to prey on Broad-toothed Rats, and predation rates have been found to be greater at higher elevations (Shipway et al. 2020). In sub-alpine and alpine areas, foxes were found to prey upon Broad-toothed Rats in preference to Bush Rats <i>Rattus fuscipes</i> (Green 2002). Feral Cats have also been found to specifically target Broad-toothed Rats. The FHAC utilises the existing trail network and will not facilitate the movement of predator species, nor increase access of predators to Broad-toothed Rat habitat.</p> <p>There is potential for weeds to be introduced or spread through areas of Broad-toothed Rat habitat during construction if hygiene controls are not put in place. Hygiene controls will be implemented for all works on the FHAC, as part of a</p>

Significant Impact Criteria	Assessment of impacts
Introduce disease that may cause the species to decline	<p>Construction Environment Management Plan, to ensure that works do not introduce new weeds or spread weeds during construction activities.</p> <p>There is little information on disease in Broad-toothed Rat populations, although it is possible that Toxoplasmosis, carried and transmitted by feral cats may impact the sub-species. There is no mechanism by which the FHAC would introduce or spread disease.</p>
Interfere with the recovery of the species	<p>Conservation and recovery actions for the Broad-toothed Rat are outlined in the Approved Conservation Advice (DCCEEW 2023a). Actions to address habitat loss and modification include: restoring and maintaining habitat at priority locations to increase habitat connectivity and allow dispersal; avoiding accidental damage by land managers; and supporting the recovery of Alpine Sphagnum Bogs and Associated Fens community. The FHAC is not contrary to these actions. The proposed FHAC is aligned on existing trails and will not reduce habitat connectivity between individuals or populations. Pre-construction surveys will also be undertaken to avoid impacting Broad-toothed Rat runways and burrows, and to micro-site structures to avoid accidental damage.</p>

Greater Glider

The Greater Glider (southern and central) *Petauroides volans* is an arboreal marsupial that occurs from Proserpine in Queensland, through New South Wales and the Australian Capital Territory to central Victoria, where it is restricted to eucalypt forests and woodlands, up to 1200 m ASL. It occurs in both wet and dry eucalypt-dominated habitats, but is most abundant in the taller, montane eucalypt forests on fertile soils, with abundant mature, hollow-bearing trees (DCCEEW 2022b). The Greater Glider shelters (dens) in large tree hollows (> 10 cm diameter), in both live and standing dead trees, and individuals use multiple dens. They are primarily folivorous, feeding on eucalypt leaves, buds and flowers.

Within areas of potential habitat, the occurrence of Greater Gliders is typically patchy. Occurrence is positively correlated with structural attributes of the forest overstory, particularly the availability of hollows (which are a limiting resource), canopy productivity, foliar nutrient levels and foliage amount, as well as patch size (DCCEEW 2022b). Habitat critical to the survival of the species has therefore, been broadly defined as any of the following:

- Large contiguous areas of eucalypt forest, which contain mature hollow-bearing trees and a diverse range of the species' preferred food species in a particular region.
- Smaller or fragmented habitat patches connected to larger patches of habitat, that can facilitate dispersal of the species and/or that enable recolonization.
- Cool microclimate forest/woodland areas (e.g. protected gullies, sheltered high elevation areas, coastal lowland areas, southern slopes).
- Areas identified as refuges under future climate changes scenarios.
- Short-term or long-term post-fire refuges (i.e. unburnt habitat within or adjacent to recently burnt landscapes) that allow the species to persist, recover and recolonise burnt areas.

Greater Gliders were recorded within the FHAC project area at Diamantina Horse Yards, and along trail Section 12, between Blairs Hut and the vehicle bridge crossing of the Diamantina River. The Montane Damp Forest along Section 12 provides habitat that would meet the description of habitat critical to the survival of the species. Proposed works along Section 12 will involve the construction of steps as well as track drainage works, which will impact up to 0.218 ha of vegetation. These works will primarily impact ground-layer species. No trees are proposed for removal, and it is unlikely that the shrub layer will be impacted, with the exception of small numbers of individual plants. Micro-siting will occur prior to works being undertaken to minimise encroachment on TPZs as far as possible, and a project arborist will provide advice on tree management requirements where there is potential encroachment, to ensure that trees can be retained.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Greater Glider is given in Table 40.

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Table 40 Assessment of potential impacts to Greater Glider against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The estimated population size of Greater Gliders is expected to be greater than 100,000 (DCCEEW 2022b). The proposed works within areas of Greater Glider habitat are minor and are unlikely to impact important resources for this species, e.g., hollow-bearing and food trees. Works will be micro-sited to ensure that encroachment on TPZs is minimised, and a project arborist will provide advice on managing impacts to trees where there is potential encroachment. A long-term decrease in the size of the population is unlikely to result from the works.
Reduce the Area of Occupancy of the species	The Area of Occupancy for the Greater Glider is estimated at 15,316 km ² (DCCEEW 2022b). Works proposed for the FHAC will impact up to 0.0022 km ² of habitat for trail drainage works and the construction of steps along the existing track. Habitat disturbance will occur along the edges of the track footprint and will primarily impact understorey species. The works are therefore not considered to reduce the overall area of occupancy for the species.
Fragment an existing population into two or more populations	Greater Gliders are sensitive to habitat fragmentation as they have a poor dispersal ability through cleared areas and tend to become locally extinct in small, fragmented patches of habitat (DCCEEW 2022b). The Alpine National Park supports extensive areas of intact habitat for the Greater Glider. The Diamantina Spur Track along Section 12 of the FHAC is narrow, and unlikely to present a barrier for Greater Gliders. Habitat disturbance along the edge of this track will be minor and will not impact the canopy. The works will thus not fragment habitat for this species, nor result in the population being fragmented.
Adversely affect habitat critical to the survival of the species	Habitat adjoining Section 12 of the FHAC is considered to meet the definition of habitat critical to the survival of the species. A total of up to 0.218 ha of this habitat will be disturbed, which will be limited to the edges of the existing track footprint and will primarily impact understorey species. It is not anticipated that this would have an adverse impact on this area of habitat critical to the survival of the species.
Disrupt the breeding cycle of the population	Works proposed within areas of Greater Glider habitat will not remove hollow-bearing trees that provide breeding habitat for the species. There is potential for some noise disturbance that may occur during the breeding season for the species, but this will be highly localised, temporary and of limited duration. Most works will be undertaken with hand tools and machinery, and works will be limited to daylight hours. It is unlikely that this level of disturbance would disrupt the breeding cycle of the species.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The removal of up to 0.218 ha of understorey vegetation along the edges of the existing track on Section 12 of the FHAC will not result in habitat destruction or modification, nor reduce the overall availability or quality of habitat, to the extent that the Greater Glider would be likely to decline.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	Invasive species which have the potential to impact Greater Gliders include feral cats and foxes. However, predation by cats and foxes is considered to present a low risk to Greater Gliders. The FHAC will not introduce, nor facilitate an increase in the movement of these species into areas of Greater Glider habitat.
Introduce disease that may cause the species to decline	There are no diseases identified that are known to pose a threat to Greater Gliders.
Interfere with the recovery of the species	The Conservation Advice for the Greater Glider outlines conservation and recovery actions for the Greater Glider. They include actions to protect hollow-bearing trees from post-fire timber harvesting; protecting Greater Glider habitat during prescribed burning; enforcing effective timber harvesting prescriptions; avoiding fragmentation of habitat, particularly that resulting from development of transport corridors; protecting hollow-bearing trees on private property and along roadsides; and habitat restoration. The proposed FHAC project will not interfere with any of these actions.

Long-footed Potoroo

The Long-footed Potoroo is currently known from two core sub-populations in Victoria, and a much smaller sub-population in New South Wales. In Victoria, the Long-footed Potoroo is mainly known from near-coastal East Gippsland and the adjacent uplands east of the Snowy River. The second sub-population occurs on the Great Dividing Range around the Barry Mountains, the Wonnangatta, Buffalo, Ovens and Buckland Rivers (DAWE 2022b).

The Long-footed Potoroo occupies a range of dense forest vegetation types — primarily Wet Forest, Damp Forest and Riparian Forest, from 100 to 1500 m ASL. Secondary habitat types include Montane Damp Forest, Herb-rich Foothill Forest and Shrubby Dry Forest, usually close to primary habitat types. In general, most locations for this species occur near damp forest types with moist soils, sheltered aspects, a dense understorey and mixed-species overstorey. Key habitat requirements for this species are a diverse and abundant supply of hypogeous fungi throughout the year, which form their major dietary component, as well as dense cover to provide shelter and protection from predators (DAWE 2022b).

Habitat critical to the survival of Long-footed Potoroos has been defined as areas that contain the following attributes, irrespective of the abundance or density of the species, or perceived habitat quality:

- Areas from 100 – 1500 m ASL in Victoria or southern New South Wales, with primary Long-footed Potoroo habitat.
- Areas of secondary Long-footed Potoroo habitat adjoining or close to primary habitats.
- Sites on sheltered aspects with moist soils supporting a mixed-species overstorey and a dense understorey with hypogeous fungi in the soil.
- Areas identified as refuges under future climate change scenarios.
- Short- or long-term post-fire refuges (i.e. unburnt habitat within or adjacent to recently burnt landscapes) that allow the species to persist, recover and recolonise burnt areas.

The Long-footed Potoroo has been recently recorded (2019 – 2024) north of Falls Creek at Roper Saddle, and on the western side of the Kiewa River West Branch, north and south of the Diamantina River, 0.2 – 1.3 km from the FHAC (DEECA 2025). Therefore, it is considered to be present within habitat surrounding the FHAC. Suitable habitat within the FHAC assessment area was identified along Section 12, which supports Montane Damp Forest, and along Trail Section 18, which has been removed from the FHAC trail alignment (Abzeco 2025). These areas are likely to be considered habitat critical to the survival of the species. Proposed works along Section 12 will involve the construction of steps as well as track drainage works, which will impact up to 0.218 ha of vegetation at the edges of the track.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Long-footed is given in Table 41.

Table 41 Assessment of potential impacts to Long-footed Potoroo against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The FHAC will result in the loss or modification of up to 0.218 ha of potential habitat along Section 12 of the FHAC. The proposed works will primarily impact understorey species along the edges of existing tracks. Given the extent of suitable habitat in the surrounding landscape, these works are unlikely to significantly impact the use of habitat by any individuals within the area and would not lead to a long-term decrease in the size of the population.
Reduce the Area of Occupancy of the species	The Area of Occupancy of the Long-footed Potoroo is estimated at 1,792 km ² , across its distribution (DAWE 2022b). A maximum of 0.0022 km ² would be impacted as a result of the proposed works. All areas of habitat impacted are at the edges of existing tracks. Hence, the project will not alter the use of surrounding areas of habitat by Long-footed Potoroos, nor reduce their overall area of occupancy.
Fragment an existing population into two or more populations	The FHAC will utilise existing tracks that are narrow and unlikely to present a barrier to the movement of Long-footed Potoroos. Minimal clearing will be undertaken additional to the existing track width to enable track upgrade and repair works. This work is not of a scale that would fragment a population into two or more populations.

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Significant Impact Criteria	Assessment of impacts
Adversely affect habitat critical to the survival of the species	The presence of Long-footed Potoroos within the FHAC project area is not known; however, Montane Damp Forest around FHAC Trail Section 12 was identified by Abzeco (2025) as supporting suitable habitat for the species. Given the contiguous tracts of forest vegetation in this area, it is likely that this habitat supports attributes that would be considered habitat critical for the survival of the species (i.e., secondary habitat). The works proposed in this area will occur on existing tracks and will impact up to 0.218 ha of habitat. In addition, handrails will be attached to the rock escarpment along 300 m of trail. Given that these impacts are relatively minor and will occur at the edges of existing tracks, the works are not considered to adversely impact habitat critical for survival of the species.
Disrupt the breeding cycle of the population	Breeding in the Long-footed Potoroo occurs throughout the year but peaks in late-winter and early-spring. Works along Section 12 may cause minor noise disturbance, but this is likely to be limited. The potential impacts of noise disturbance, particularly for rock works, are likely to be temporary and localised and will be undertaken outside of the peak breeding season (i.e., during summer or autumn). The works will not reduce the suitability of surrounding habitat for breeding potoroos.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Works proposed along Section 12 are minor and will result in the removal of a maximum of 0.218 ha of vegetation (comprising primarily understorey vegetation) for track upgrade and repair works on existing tracks; the shrub layer will remain relatively undisturbed. Areas immediately surrounding the track have already been modified and subject to some level of disturbance. The proposed works will impact areas immediately adjacent to the tracks (within 1.5 m) and will not decrease the availability or quality of habitat to the extent that the species will decline.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	<p>The European Red Fox is recognised as a predator of the Long-footed Potoroo and likely to have contributed to the decline of the species. The significance of predation by feral cats on Long-footed Potoroo populations is not known. Given that the FHAC project utilises the existing track network within the Alpine National Park, it will not facilitate an increase in the movement of these species, nor alter their patterns of movement.</p> <p>Weed invasion is a threat following disturbance such as fire or logging. However, there is little information on the extent to which weeds impact on Long-footed Potoroo habitat. Hygiene protocols will be implemented during construction works to manage this risk of introducing or spreading (see Section 7.9). The establishment or spread of weed species as a result of this project is, therefore, unlikely.</p>
Introduce disease that may cause the species to decline	Toxoplasmosis is an infectious disease caused by the parasite <i>Toxoplasma gondii</i> and is spread by feral cats. Toxoplasmosis is recognised as a cause of disease and mortality in Australian marsupials, including the Long-nosed Potoroo but infection and mortality in Long-footed Potoroos has not been reported (DAWE 2022b). There are no mechanisms by which the FHAC would introduce this, or other diseases to populations of the Long-footed Potoroo.
Interfere with the recovery of the species	Conservation and recovery actions for the Long-footed Potoroo are related to protecting habitat following wild fires and during prescribed burns, developing appropriate fire regimes, predator control strategies, captive breeding trials, research, and survey and monitoring. The FHAC project does not interfere with any of these priorities.

Alpine Bog Skink

The Alpine Bog Skink is restricted to alpine and sub-alpine areas of Victoria and adjacent alpine areas of New South Wales, where it occurs primarily in dense, low-growing (often treeless) vegetation in bogs, along drainage lines and adjoining habitats, and wet heaths above 1100 m. Due to the inherently patchy nature of its high-altitude distribution, the total population of Alpine Bog Skink is fragmented into 'sky islands'. The sub-populations in the Bogong High Plains, Mount Higginbotham, Mount Buller – Mount Stirling, Mount Baw Baw, and Lake Mountain areas are geographically and reproductively isolated from each other. Within isolated habitat patches, the Alpine Bog Skink can be locally common (DCCEW 2023b).

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The Alpine Bog Skink is primarily threatened by habitat loss and degradation, the effects of climate change, frequent fires, introduced herbivores and commercial development, as identified in the Approved Conservation Advice (DCCEE 2023b). The construction and maintenance of ski runs, in particular, is considered to significantly reduce the structural complexity of habitat for the Alpine Bog Skink. The upgraded FHAC project is also identified in the Conservation Advice, as having the potential to remove and degrade Alpine Bog Skink habitat, based on the Master Plan (DCCEE 2023b).

Habitat for the Alpine Bog Skink within the FHAC includes open damp heathlands, grasslands and alpine bog systems. It was recorded in Sections 6, 7 and 15, with areas of suitable habitat also identified in Sections 1a, 9, 10a, 11, 16, 17 (Abzeco 2025); Sections 9, 10a and 17 have been removed from the FHAC alignment. Within the proposed project area, habitat for the Alpine Bog Skink occurs within Alpine Valley Peatland around Section 1a, at Cope Creek and along minor drainage lines supporting Alpine Grassland and Alpine Grassy Heathland along Section 6, within areas of Alpine Valley Peatland and Alpine Damp Grassland along Section 7, and along the Razorback Track (Section 15) where multiple tributaries drain into the Diamantina Creek. Works to be undertaken as part of the upgraded FHAC will involve the installation of elevated boardwalks and stepping stones in Sections 6 and 7, and track drainage works along Section 15. The works will result in the potential disturbance of up to 2.28 ha of habitat for the species, but not all of this area is likely to be disturbed.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Alpine Bog Skink is given in Table 42.

Table 42 Assessment of potential impacts to Alpine Bog Skink against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The population size of the Alpine Bog Skink is unknown but is considered to be declining due to habitat loss and degradation, increasing fire frequency and climate change, and habitat damage caused by introduced herbivores. Habitat for the Alpine Bog Skink within the project area occurs in damp heathlands, grasslands and alpine bog systems, and around small watercourses. The FHAC has the potential to disturb up to 2.28 ha of potential habitat. Most of this will occur at the edges of the existing tracks, but not all of this area is likely to be disturbed. Works in Sections 6 and 7 will comprise elevated boardwalks and stepping stones constructed over the existing track footprint, to mitigate existing impacts and facilitate vegetation rehabilitation. Works in Section 15 will involve the construction of track drainage to reduce erosion of the track, with drains to be constructed approximately every 50 m. In the broader context of available habitat, and considering the scale and location of habitat disturbance, it is unlikely that the FHAC project would cause a long-term decrease in the population of the species.
Reduce the Area of Occupancy of the species	The estimated Area of Occupancy for the Alpine Bog Skink is 192 km ² . The FHAC project is located within this area and is estimated to disturb a maximum of up to 0.0228 km ² of habitat. Not all of this area will be lost and most of the area to be disturbed is at the edges of existing tracks that are already subject to impacts of the existing trail. Disturbed areas will be rehabilitated as necessary. The proposed works are unlikely to alter the use of habitat by the species where it occurs near the trail and is unlikely to reduce the overall Area of Occupancy of the species.
Fragment an existing population into two or more populations	The FHAC is aligned on existing tracks; trail works will predominantly result in small areas of habitat loss or modification at the edges of the tracks and will therefore not increase habitat fragmentation. In addition, elevated boardwalks will be installed along approximately 1 km of track, which will enable vegetation growth and rehabilitation beneath the structure, potentially allowing increased movement of individuals in these areas.
Adversely affect habitat critical to the survival of the species	Habitat critical to the survival of the Alpine Bog Skink has not been specifically defined. However, given that habitat within the project area is likely to support breeding, foraging and dispersal of Alpine Bog Skinks, it may be considered habitat critical to the survival of the species. Small areas of habitat suitable for the Alpine Bog Skink will be lost at the edges of existing tracks. Given that these areas are already modified and disturbed by construction and use of the existing track, and the availability of intact habitat beyond the project footprint, the FHAC is unlikely to adversely affect habitat critical to the survival of the species.

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Significant Impact Criteria	Assessment of impacts
Disrupt the breeding cycle of the population	Alpine Bog Skinks breed between December and March. Females generally give birth to between two and five live young in February, after which mating is likely to occur within a short timeframe (DCCEEW 2023b). The proposed works along the FHAC trail will take place within the same period and have the potential to cause minor and temporary disturbance during construction in the form of noise and habitat disturbance. These works are likely to be of short duration and localised to short sections of trail, and within 1.5 m of the trail. It is, therefore, unlikely that the works will disrupt the breeding cycle of the population.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Areas of habitat loss for the Alpine Bog Skink along the FHAC trail are relatively small in the context of habitat available in the broader landscape, and localised to minor areas adjoining existing tracks. Areas of habitat adjoining the existing track are likely to be subject to ongoing disturbance and impacts of the existing trail. The proposed trail works are intended to ameliorate some of the existing impacts. The project is therefore unlikely to cause habitat loss, modification or degradation to the extent that the species would decline.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.	<p>The Alpine Bog Skink is threatened by deer, feral horses and feral pigs that cause significant habitat damage, and by predation from feral Cats and the European Red Fox (DCCEEW 2023b). There are no mechanisms by which the FHAC project would introduce or cause these species to become established within areas of Alpine Bog Skink habitat. The project utilises the existing track network within the Alpine National Park, and therefore, will not facilitate an increase in the movement of these species, nor alter their patterns of movement.</p> <p>Weed invasion is also identified as a threat to the Alpine Bog Skink. As the FHAC project area is located on existing trails, weed species are already established through areas of Alpine Bog Skink habitat. There is a small risk that construction works for the FHAC will inadvertently introduce new weed species or spread weeds. Hygiene protocols will be implemented to manage this risk (see Section 7.9).</p>
Introduce disease that may cause the species to decline	There are no identified diseases that are recognised as a threat to the Alpine Bog Skink (DCCEEW 2023b). However, hygiene protocols will be implemented to ensure that vehicles, equipment and machinery are clean prior to entering works areas.
Interfere with the recovery of the species	The conservation and management priorities identified for the Alpine Bog Skink in the Approved Conservation Advice include strategies to mitigate the impacts of climate change by identifying and protecting climate refuges, the development of captive breeding programs, manage the impacts of introduced herbivores, and to promote and regulate sustainable ecological development. The FHAC project is not inconsistent with these objectives. The project promotes an improved hiking experience for visitors to enjoy the natural environment and visit key landmarks, while minimising environmental impacts by utilising the existing track network and existing camping areas, with trail upgrades to improve the sustainability of existing tracks.

Smoky Mouse

The Smoky Mouse (or Konoom) occurs in extant populations in Victoria within the Greater Grampians, Victorian Alps and Eastern Highlands (Seebeck and Menkhorst 2000, TSSC 2020). It occupies a wide variety of vegetation types, from coastal and subalpine heath to dry sclerophyll forest and sub-alpine woodland, especially along ridgetops with a heath understorey, and occasionally adjacent wetter habitats, such as fern gullies. Suitable habitats (except for those in wet gullies) typically support a floristically diverse shrub layer with species of the plant families Epacridaceae (Ericaceae), Fabaceae and Mimosaceae well represented. Ground cover is often dense and low, such as occurs in heaths; in more open habitats, grass tussocks, rocks and logs provide shelter sites. Soil conditions also need to be conducive to burrowing, and growth of hypogean fungi, a major component of the diet (Cockburn 1981a,b; Seebeck and Menkhorst 2000, TSSC 2020). The Smoky Mouse shelters in shallow burrows or surface nests, which make them vulnerable to disturbance and predation. They live in small, discrete colonies with each colony occupying a burrow system.

Habitat for the Smoky Mouse is modelled to occur in the dissected uplands west of Mount Hotham and the Razorback (DEECA 2025c). Within the project area, Abzeco (2025) identified suitable habitat in Montane Damp Forest adjoining

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Section 12. Suitable habitat was also identified along Section 18, which has been removed from the FHAC project. Works along Section 12 will involve the construction of steps as well as track drainage works, which will impact up to 0.218 ha of vegetation at the edges of the track.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Smoky Mouse is given in Table 43.

Table 43 Assessment of potential impacts to Smoky Mouse against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	It is estimated that there are between 3,000 and 10,000 mature individuals in Victoria. The occurrence of the Smoky Mouse within the project area is not known. The species has not previously been recorded within the West Kiewa Valley, but this may be due to lack of survey effort, and habitat for the Smoky Mouse has been modelled to occur and is identified on-ground in Montane Damp Forest adjacent to FHAC Section 12 (Abzeco 2025, DEECA 2025c). The FHAC will result in the loss or modification of up to 0.218 ha of potential habitat along Section 12. The proposed works will primarily impact understorey species along the edges of existing tracks. Given the extent of suitable habitat in the surrounding landscape, these works are unlikely to significantly impact the quality or extent of habitat to the extent that it would lead to a long-term decrease in the size of the population.
Reduce the Area of Occupancy of the species	The Area of Occupancy for the Smoky Mouse in Victoria is estimated at 480 km ² (DELPW 2021). The FHAC is outside of the known area of occupancy for the species but is located within habitat that is considered suitable. A maximum of up to 0.0022 km ² may be disturbed for track upgrades along the FHAC. These areas are small in relation the extent of available habitat and will occur at the edges of the existing track. Thus, the works would not be considered to reduce the area of occupancy for the species.
Fragment an existing population into two or more populations	There are no known records or populations of Smoky Mouse within or adjacent to the project area, but the species may be assumed to be present for the purposes of this assessment, based on the presence of suitable habitat and likely lack of survey effort. The proposed works through areas of Smoky Mouse habitat are minor and will occur on the Diamantina Spur Walking Track. This track is narrow and unlikely to present a barrier to the movement of Smoky Mouse. Proposed track upgrades would not increase habitat fragmentation, nor create a barrier that would impede the movement of individuals or cause the species to be fragmented.
Adversely affect habitat critical to the survival of the species	Habitat critical to the survival of Smoky Mouse has not been identified. However, suitable habitat was identified in areas of Montane Damp Forest, and it is likely that this habitat would support attributes required for the species to breed, forage and disperse. Given that the works will be limited to existing tracks, and the extent of suitable habitat within the broader landscape, it is unlikely that the works would adversely affect habitat critical to the survival of the species.
Disrupt the breeding cycle of the population	Breeding in the Smoky Mouse is seasonal, with most births occurring between October and January. Breeding may also be communal, with several females co-habiting a burrow. The presence of the Smoky Mouse within the project area and surrounds is unknown — there are no nearby records of this species. If present, then works that disturb burrows may disrupt the breeding of individuals. Pre-construction surveys will be undertaken within works areas on Section 12 to check for burrows and ensure that they are not disturbed.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The Smoky Mouse generally does not occur in disturbed areas. Therefore, it is unlikely that they will occur immediately adjacent to the Diamantina Spur Track where works will occur. However, large areas of undisturbed habitat occur in the broader landscape surrounding the track. The FHAC will not involve the construction of new tracks or infrastructure through undisturbed areas of habitat or lead to habitat degradation beyond the track footprint. The works will therefore, not modify, destroy or reduce the quality of habitat for the species.
Result in invasive species that are harmful to the critically endangered or endangered species becoming	The Smoky Mouse is highly susceptible to predation by feral Cats. Smoky Mouse has also been detected in the diet of the European Red Fox. These species are already established within the landscape. Given that the FHAC project utilises the existing

Significant Impact Criteria	Assessment of impacts
established in the endangered or critically endangered species' habitat.	<p>track network within the Alpine National Park, it will not facilitate an increase in the movement of these species, nor alter their patterns of movement.</p> <p>Weed species have the potential to degrade habitat for the Smoky Mouse. Construction works have the potential to introduce or spread weeds into adjoining habitat. The Construction Environment Management Plan for the project will include strict hygiene protocols to manage this risk (see Section 7.X). The establishment or spread of weed species as a result of this project is, therefore, unlikely.</p>
Introduce disease that may cause the species to decline	<p>Cinnamon fungus is known to impact habitat for the Smoky Mouse. The Construction Environment Management Plan will include hygiene protocols to control the introduction or spread of plant pathogens such as Cinnamon Fungus.</p>
Interfere with the recovery of the species	<p>The National Recovery Plan for the Smoky Mouse details objectives and strategies for the recovery of the species (Menkhorst and Broome 2000). They include designating protection zones around known populations, refining knowledge of distribution and abundance, invasive species management, establishing small mammal refuges and captive breeding colonies, assessing the risk of habitat loss due to Cinnamon fungus, and managing burning regimes. The FHAC project will not interfere with any of these objectives.</p>

Alpine Stonefly

The Alpine Stonefly *Thaumatoperla alpina* is endemic to the Bogong High Plains, occurring in the major catchments of West Kiewa, East Kiewa and Mitta Mitta Rivers at altitudes above 700 m ASL, but most known locations are in the east Kiewa catchments (DELWP 2021). There are six known locations within the Falls Creek Alpine Resort, and a number of locations within the Alpine National Park, including two relatively recently known location south of Falls Creek: one from 2000 (below the Rocky Valley Dam) and from 2016 near Jaithmathang Creek, north of Westons Spur Track (at Section 11) and east of Pole 333 (DSEWPC 2011, DEECA 2025).

The Alpine Stonefly is restricted to high-altitude, first-order alpine streams, and it is likely that water temperature is a key factor limiting the species' distribution. The successful development of the eggs only occurs within a temperature range of 5-15 °C (McKay et al. 2005). Alpine Stonefly nymphs are typically found in steep, cool and stony streams, often beneath cascading water, cobblestones or detritus (DELWP 2021). Narrow streams, typically 1 m wide and 15 cm deep, are preferred (McKay et al. 2005). They are believed to spend approximately three to four years as larvae, before emerging as adults. The adult emergence periods are very synchronous across the Bogong High Plains through late January in West Kiewa, to early May in Mitta Mitta. The adult's life history is short, ranging from 2 - 4 weeks. The flight capabilities of Alpine Stonefly are highly restricted; adults are therefore generally found on riparian vegetation immediately beside the stream from which they emerged (DELWP 2021). Vegetation types associated with the Alpine Stonefly include open eucalypt or alpine treeless heath, but not alpine grassland (DSEWPC 2011).

Suitable habitat for the Alpine Stonefly within the project area occurs in small tributaries crossing Sections 4, 6, 7 and 12. Potential habitats include an unnamed tributary on Section 4, Cope Creek and an unnamed tributary on Cope Saddle crossing Section 6, alpine peatlands in Section 7, and a tributary of the Kiewa River West Branch where it crosses Section 12. Works are proposed in only two of these areas in Section 4 and 7, consisting of boardwalks and stepping stones.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Alpine Stonefly is given in Table 44.

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Table 44 Assessment of potential impacts to Alpine Stonefly against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of the population	The Alpine Stonefly has previously been recorded in close proximity to the project area in one location, from an area north of Westons Spur Track and east of Pole 333, in 2016 (DEECA). This area includes tributaries of Jaithmathang Creek, alpine peatlands and alpine pond herbland. Limited works are proposed in this area, which include the installation of 158 m of boardwalk. The boardwalks are intended to mitigate existing impacts of the trail, including erosion, trampling and sedimentation. Works will be undertaken sensitively to manage disturbance and involve no excavation. This includes ‘building from the trail’ as far as possible; using the existing track for laydown of materials, minimising disturbance such as foot traffic in habitat adjoining the track; and avoiding the disturbance or rock, which Alpine Stonefly nymphs may be sheltering beneath. With these measures in-place, it is unlikely the works will lead to a long-term decrease in the population size.
Reduce the Area of Occupancy of the species	The Area of Occupancy of the Alpine Stonefly is estimated to be 36 km ² and there is only one previously known location for the Alpine Stonefly near the project area (DEECA 2025). The FHAC will disturb a maximum total of 0.0008 km ² of potential habitat for the Alpine Stonefly within this area, and in other parts of the FHAC. All works will be undertaken on existing trails, and any habitat disturbance will be minimal and limited to the edges of existing trails. The works are therefore, not expected to alter the overall availability or quality of habitat for the Alpine Stonefly.
Fragment an existing population into two or more populations	The distribution of the Alpine Stonely is highly fragmented, separated by natural and anthropogenic barriers. The proposed FHAC is located on existing tracks and will not result in additional fragmentation of habitat.
Adversely affect habitat critical to the survival of the species	There is no information on habitat critical for the survival of the Alpine Stonefly but given that the species is highly restricted and specialised in its habitat requirements, it would be reasonable to conclude that all habitat for this species would be considered habitat critical for survival. This includes first-order streams within the Kiewa River catchment that occur over 760 m above sea level, with water temperatures between 5–15°C (DSEWPC 2011). Within the project area, works are proposed on two minor, unnamed tributaries in Sections 4 and 6, and in alpine peatlands in Sections 7 and 11. These works are for the installation of boardwalks and stepping stones on the existing track. In the long-term these are expected to improve surrounding habitats and water quality. With the implementation of strict controls as part of a CEMP, these works are not anticipated to adversely affect critical habitat.
Disrupt the breeding cycle of the population	Factors that are critical for breeding and development in the Alpine Stonefly include water temperatures between 5–15°C, high oxygen levels, and rocky habitats. Works within potential Alpine Stonefly habitat will be undertaken carefully to ensure that breeding habitat is not disturbed. This includes limiting disturbance to the existing track footprint as far as possible, including for placement of materials and foot traffic, and avoiding the disturbance or rock, which Alpine Stonefly nymphs may be sheltering beneath.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The Alpine Stonefly relies on narrow streams with slow water flow and high oxygen content in the water (DSEWPC 2011). Degradation of water quality from chemical and sediment inputs, and the loss of streamside vegetation, which can affect water temperature, are key threats to the Alpine Stonefly. It is not expected that works proposed within Alpine Stonefly habitat would destroy, modify or degrade habitat, including water quality. The works proposed in these areas are low impact, involving no to minimal excavation and will be undertaken sensitively. Boardwalks will be constructed of mild steel to avoid potential impacts of heavy metal contamination.
Result in invasive species that are harmful to the critically endangered or endangered species becoming established in the endangered or critically endangered species’ habitat.	Rainbow Trout <i>Oncorhynchus mykiss</i> and Brown Trout <i>Salmo trutta</i> are known from the Kiewa River east and west branches at altitudes in which the Alpine Stonefly occurs, and it is likely that these species have restricted the distribution of Alpine Stonefly through predation and competition. The FHAC will not result in these species increasing in abundance, or any other potential predatory fish becoming established within the habitat of the Alpine Stonefly.

Significant Impact Criteria	Assessment of impacts
Introduce disease that may cause the species to decline	There are no diseases which are known to affect the Alpine Stonefly.
Interfere with the recovery of the species	Actions for the recovery of the Alpine Stonefly are focused on protecting habitat from anthropogenic disturbances, protecting water quality, managing any changes in hydrology or disruption to water flows, and restricting public access and activities in known sites. The FHAC project is not inconsistent with these objectives. Trail works in areas of potential Alpine Stonefly habitat are intended to improve vegetation growth and reduce erosion along the track and will not disrupt water flows.

Murray Spiny Crayfish

The Murray Spiny Crayfish *Euastacus armatus* is the second largest freshwater crayfish in the world. Once widespread and abundant throughout the Murray, Murrumbidgee, Mitta Mitta, Kiewa, Ovens and Goulburn Rivers and their tributaries, from semi-arid to sub-alpine areas, the species has undergone significant decline in range and abundance and is now listed as Vulnerable under the EPBC Act. The Murray Spiny Crayfish is now patchily distributed in the Murray River between Euston and Tocumwal in New South Wales and Victorian tributaries such as the Edward, Kiewa and Goulburn rivers (TSSC 2025). The closest records to the FHAC are from the Kiewa River East Branch, approximately 12 km north-west of Falls Creek, and from the Ovens River East Branch around Harrietville.

The Murray Spiny Crayfish is a slow-growing species and is relatively long-lived (35 – 50 years). It is a late-maturing crayfish, with females only reaching reproductive maturity after 5 – 10 years (TSSC 2025). Breeding is thought to be initiated by a drop in water temperature, with mating occurring in late summer to autumn and eggs are carried over winter. In large individuals, breeding may occur in alternate years with moulting, as both activities have high energetic costs.

The species occupies a range of waterways, from small upland streams to large, lowland rivers. Instream habitats also vary, but the crayfish shows a preference for cool, deep, flowing-water habitats with well-oxygenated water and clay banks with wood and rock cover. Studies have shown a higher density of Murray Spiny Crayfish within areas of intermediate water flow velocity, deeper water, gravel and boulder stream beds with a high cover of overhanging riparian vegetation (TSSC 2025). The species typically has small home ranges and low dispersal abilities, with tagged individuals often recaptured within meters of where they were first recorded. The average distance of individuals that do move, is around 3.5 km (TSSC 2025).

Suitable habitat for Murray River Crayfish was identified around FHAC Trail Section 12 (Abzeco 2025), which follows the West Kiewa Logging Road, parallel to the Kiewa River West Branch and the eastern end of Diamantina Spur Walking Track. The trail also crosses the Kiewa River West Branch near the intersection with Westons Track, as well as number of its minor tributaries, and the Diamantina Creek just south of the intersection with Diamantina Spur Walking Track.

No works are proposed along Trail Section 12 at or around the crossing of Diamantina Creek, Kiewa River West Branch or minor tributaries. Track works along Section 12 are proposed at the eastern end of Diamantina Spur Walking Track, approximately 150 m west of the Kiewa River and 230 m north of Diamantina Creek. These works will comprise drainage to improve the track surface. There is very small risk of indirect impacts to Murray Spiny Crayfish habitat as a result of the drainage works, such as soil instability and sediment input into waterways, and reduced water quality.

Drainage works along the FHAC trail alignment are designed to address existing impacts of surface water accumulation on the trail, erosion and concentrated run-off. The drainage infrastructure has been designed to control and direct run-off and prevent erosion of the trail. Indirect impacts on waterways during construction will be avoided through the use of best practise erosion and sediment controls and contamination control measures (see Section 7.9). With these measures in-place, impacts to the Murray Spiny Crayfish from the project are considered unlikely.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Murray Spiny Crayfish is given in Table 45.

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Table 45 Assessment of potential impacts to Murray Spiny Crayfish against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	<p>No important populations of the Murray Spiny Crayfish have been identified in the Conservation Advice for the species (TSSC 2025). The total population size is estimated to exceed 10,000 individuals (TSSC 2025); the number of individuals within Victoria is not known. Given the narrow distribution of Murray Spiny Crayfish and the inter-connected nature of the habitat, occurrences of this species could be considered one large important meta-population. The key threats to the species, include: extreme weather; commercial and recreational fishing; habitat loss and disturbance including blackwater events; pollution of waterways; and exotic and invasive species (TSSC 2025).</p> <p>There are no works proposed on waterways along Trail Section 12, where suitable habitat for the Murray Spiny Crayfish was identified, including the Kiewa River and its tributaries. There is a chance that proposed works along parts of Section 12, including drainage works, the construction of stone steps, including benched/chiselled steps, will lead to sediment mobilisation and input into waterways that may provide habitat for the Murray Spiny Crayfish. To manage these risk, all works will be undertaken in accordance with a site-specific CEMP that will include measures to protect waterways and aquatic habitats during construction works. In addition, any potential disturbances will be temporary. As such, project works are not anticipated to result in any significant impacts on an important population of the Murray Spiny Crayfish in the form of mortalities, habitat removal or degradation.</p>
Reduce the area of occupancy of an important population	<p>The estimated Area of Occupancy for Murray Spiny Crayfish ranges between 1,280 km² and 2,012 km² (TSSC 2025). No works are located near known records of Murray Spiny Crayfish. The nearest known records of the Murray Spiny Crayfish are located approximately 5 km west of the Diamantina Spur and Razorback Tracks in the Ovens River East Branch. Although there are no known records of this species within the project area, they may occur in the Kiewa River and tributaries. The FHAC will not remove or disturb potential habitat for this species. There are no structures proposed on waterways that provide suitable habitat for this species. Works along Trail Section 12 are intended to improve trail condition and reduce erosion of the track and prevent sediment input into local waterways. These works will be undertaken in accordance with a CEMP to reduce potential impacts on waterway habitats during construction.</p>
Fragment an existing important population into two or more populations	<p>The FHAC will not create a barrier or impede any movement of the Murray Spiny Crayfish population. The FHAC project utilises the existing trail network, and trail upgrades will not involve any works on waterways in areas where the Murray Spiny Crayfish may occur.</p>
Adversely affect habitat critical to the survival of species	<p>The Kiewa River may be considered to provide habitat critical for the survival of the Murray Spiny Crayfish. The track works proposed along Section 12 are unlikely to adversely affect habitat within the Kiewa River. There are no works proposed on the waterway crossings of the Kiewa River West Branch along the FHAC. Best practice sediment and erosion controls adopted during construction will ensure there are no indirect impacts from nearby works.</p>
Disrupt the breeding cycle of an important population.	<p>The Murray Spiny Crayfish is a winter brooder, i.e. mating occurs in late summer/autumn and the eggs are carried over winter. In larger individuals, it is thought that egg laying and moulting occur in alternate years due to the large energetic costs of both egg laying and moulting (TSSC 2025). No works are proposed at or near breeding habitat as part of the FHAC project that may disrupt the breeding cycle of the population.</p>
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	<p>The FHAC will not result in impacts to in-stream aquatic habitat for the Murray Spiny Crayfish and there will be no changes to water flows or barriers to movement. The potential for indirect impacts on water quality is low, and these risks will be managed with best-practice erosion and sediment controls during construction. The proposed trail works are not expected to impact upon areas of habitat for this species to the extent that it is likely to decline.</p>

Significant Impact Criteria	Assessment of impacts
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	A number of introduced fish species are known to affect Murray Spiny Crayfish populations, including salmonids, Carp <i>Cyprinus carpio</i> and Redfin Perch <i>Perca fluviatilis</i> . These species are present in waterways inhabited by the Murray Spiny Crayfish due to recreational stocking (TSSC 2025). The FHAC will not result in these species becoming established or increasing in abundance.
Introduce disease that may cause the species to decline.	Diseases known to occur within Australia have not been identified as a key threat to Murray Spiny Crayfish. The FHAC project is not anticipated to introduce any diseases that may cause the species to decline.
Interfere substantially with the recovery of the species	The Conservation Advice for Murray Spiny Crayfish (TSSC 2025) identifies actions for the recovery of the species. Key conservation actions include monitoring and understanding climate change and severe weather impacts to the species; reducing harvesting pressure; protection of habitat and reducing disturbance to habitat (e.g. waterflow management practices and managing pollution entering waterways); development of disease prevention measures; and control of exotic fish species. The project is not contrary to any of these objectives or actions (TSSC 2025). A CEMP will be developed to manage any risks associated with increased pollution and sediment input into waterways that may provide habitat for the Murray Spiny Crayfish, during construction.

Alpine Water Skink

The Alpine Water Skink is found at isolated high-elevation locations (above 1300 m ASL) in Victoria, New South Wales and the Australian Capital Territory, where it is largely confined to alpine sphagnum bogs, fens, small watercourses, wet heaths and seeps. Alpine Water Skinks construct and shelter in burrows beneath *Sphagnum* and may also shelter beneath large logs and rocks, where they overwinter (DSE 2003, Green and Osborne 2012). The cover of *Sphagnum* is thought to be particularly important for shelter and thermoregulation. During the day, Alpine Water Skinks may be found basking on granite boulders, tussocks and Sphagnum moss (Robertson and Coventry 2019).

Habitat critical to the survival of Alpine Water Skinks is considered to include the area of the known population and areas of similar adjoining habitat, which may provide the potential for range expansion. This includes adjoining areas supporting alpine sphagnum bogs, seepage areas, wet tussock grasslands, and sometimes the banks of slow-moving streams. The FHAC project is located within habitat critical for the survival of the species.

The Alpine Water Skink was detected during surveys for the FHAC along Cope Creek and smaller drainage flow paths intersecting the FHAC trail alignment on Cope Saddle (Section 6), as well as between Mount Jim and Cope Saddle (Section 7), and at Tawonga Huts (Section 9) — see Abzeco (2025); areas of habitat identified within Section 9 are no longer within the FHAC project area. Within the project area, habitat for the Alpine Water Skink occurs in Sections 6 and 7, where the species was recorded, as well as Section 11, where alpine bogs and Alpine Damp Grasslands, and small drainage lines provide suitable habitat. Works along these sections predominantly comprise the installation of elevated boardwalks and stepping stones, which result in the disturbance of up to 0.127 ha of habitat, although the area of actual disturbance is likely to be less than this.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Alpine Water Skink is given in Table 46.

Table 46 Assessment of potential impacts to Alpine Water Skink against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	The population of Alpine Water Skink in Victoria is estimated at 500 – 5000, and all populations of the Water Skink are considered important, given the geographical isolation between them (DCCEE 2024). The FHAC is not expected to result in a decrease in the size of the Alpine Water Skink population on the Bogong High Plains. The upgraded FHAC will be located on existing trails and areas already used for camping. All works in areas of Alpine Water Skink habitat will be on existing tracks. Trail upgrade works along the tracks will be undertaken sensitively to ensure minimal disturbance to habitats beyond the area necessary for the construction of elevated boardwalks and placement of stepping stones. Pre-construction surveys

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Significant Impact Criteria	Assessment of impacts
Reduce the area of occupancy of an important population	will be undertaken to ensure that works will be micro-sited and do not inadvertently disturb or injure Alpine Water Skinks or their burrows.
Fragment an existing important population into two or more populations	The known Area of Occupancy is 192 km ² . Works for the FHAC project will result in a maximum total of 0.0013 km ² of potential habitat being disturbed. However, the actual area of disturbance is anticipated to be less than this. The proposed works include the installation of boardwalks and stepping stones. These works will be undertaken sensitively to manage disturbance. This includes 'building from the trail' as far as possible; using the existing track for laydown of materials, minimising disturbance such as foot traffic in habitat adjoining the track; and avoiding the disturbance of site rock and logs that provide shelter for Alpine Water Skinks as well as potential burrows. With these measures in-place, the works are not considered to lead to a long-term decrease in the population size.
Adversely affect habitat critical to the survival of species	The proposed FHAC will not result in fragmentation of habitat or create a barrier to the movement of Alpine Water Skinks that would fragment a population. The FHAC is located on existing tracks and works in these areas are intended to ameliorate existing impacts from erosion of the track. Elevated boardwalks will allow vegetation growth beneath and these structures, which along with stepping stones, are designed to encourage hikers to stay on the formed track.
Disrupt the breeding cycle of an important population.	The FHAC project area is located within habitat critical to the survival of the species. The works proposed are not expected to adversely affect this habitat. Areas of habitat disturbance are relatively small and will be confined to the edges of existing tracks. Works will be undertaken sensitively so as not to disturb areas of <i>Sphagnum</i> , rocks or logs, which are important habitat feature for the Alpine Water Skink.
Disrupt the breeding cycle of an important population.	Trail works in areas of Alpine Water Skink habitat may affect breeding individuals where works are proposed near Alpine Skink territories. Pre-construction surveys will be undertaken to identify and avoid Alpine Water Skink burrows or sheltering sites, by micro-siting works (e.g., boardwalk footings, stepping stone placement). Given that the proposed works would be undertaken within areas that are already disturbed and within a small proportion of the overall habitat available, it is unlikely that the works would disrupt the breeding cycle within the broader population, during the construction or operation of the FHAC.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The FHAC will not result in the destruction of habitat for the Alpine Water Skink. A maximum area of up to 0.13 ha of potential habitat for the Alpine Water Skink, will be disturbed for track upgrade works, although the actual area will be much less, and areas of permanent loss would be considered negligible. Most of the disturbance will occur along the edges of existing tracks, caused by construction activity (e.g., foot traffic); habitat beyond a distance of 1.0 m from the existing track footprint will not be disturbed. Therefore, it is unlikely that the FHAC would result in habitat loss or modification to the extent that the species would decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	Habitat damage caused by introduced herbivores, such as feral horses, deer and pigs are considered to present a serious threat to Alpine Water Skinks. Predation by feral Cats and the European Red Fox are also recognised as impacting the species. The FHAC will not introduce or increase the access of any of these species to the habitat of Alpine Water Skinks.
Introduce disease that may cause the species to decline.	There are no diseases recognised to present a serious threat to the Alpine Water Skink. Thus, it is unlikely that the FHAC would introduce a disease that would cause the species to decline.
Interfere substantially with the recovery of the species	Actions identified for the recovery of the Alpine Water Skink are outlined in the Approved Conservation Advice for the species. They include actions to identify and protect climate refuges, manage impacts caused by introduced herbivores, develop fire management plans, and to retain and protect areas of known and potential habitat. The FHAC project will cause minor disturbance to small areas of potential habitat along existing tracks for track upgrades. These works are intended to manage existing impacts along the trail from off-track walking, and erosion. In the long-term, works are expected to facilitate increased vegetation cover. The project

Significant Impact Criteria	Assessment of impacts
	is therefore not considered contrary to these actions or to interfere substantially with the recovery of the species.

Latham’s Snipe

Latham’s Snipe is a summer migrant to Australia from its breeding grounds in the northern hemisphere. Latham’s Snipe breeds in Japan and the Kurile Islands. It is thought that the entire world population migrates to Australia (predominantly south-eastern Australia) for the non-breeding season, arriving in Victoria from late-August, with numbers peaking between December and January (Higgins and Davies 1996, Menkhorst et al. 2017, Weller et al. 2020). During the non-breeding season, Latham’s Snipe occupies a wide range of permanent and ephemeral wetlands with low, dense vegetation, including marshes and flooded grasslands, brackish or saline wetlands and modified wetlands. They typically keep to dense cover during the day and venture to more open habitats, such as exposed mud, to forage at dawn or dusk (Menkhorst et al. 2017). The distribution of Latham’s Snipe is naturally fragmented due to the patchy availability of habitat, and it is usually found singly or in small groups.

Habitat critical to the survival of Latham’s Snipe includes all areas identified as ‘internationally important’ or ‘nationally important’ habitat for Latham’s Snipe, or habitat which meets the significance thresholds under these categories. Important shorebird habitats in Australia are identified in the ‘Australian National Directory of Australian Shorebird Habitat’ (Weller et al. 2020). Moroka Gap in the Alpine National Park (40 km north-east of Licola) has been identified as a Nationally important site for Latham’s Snipe (Weller et al. 2020).

The Bogong High Plains supports suitable roosting and foraging habitat for Latham’s Snipe but is not known to support important habitat. Habitat within the project area includes areas of grasses, sedges and rushes adjacent to alpine bogs and riparian areas along Trail Sections 6 and 7 (Abzeco 2025). Works within these areas include the installation of boardwalks and stepping stones, and will result in the disturbance of up to 0.09 ha of habitat. These works are not expected to have a significant impact on Latham’s Snipe.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for Latham’s Snipe is given in Table 47.

Table 47 Assessment of potential impacts to Latham’s Snipe against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	The population of Latham’s Snipe has been estimated at between 19,000 (DCCEEW 2024) and 30,000 (Weller et al. 2020), and the entire populations is thought to migrate to Australia in summer, where individuals disperse widely to wetland habitats. Habitat for Latham’s Snipe within the project area occurs in alpine bogs and drainage lines in Sections 6 and 7. Works in these habitats include construction of boardwalks and stepping stones to ameliorate existing impacts of the trail. These works will result in the total disturbance of up to 0.09 ha of potential habitat. However, the actual area of disturbance will be much less than this. Works will be undertaken sensitively to manage disturbance. This includes ‘building from the trail’ as far as possible; using the existing track for laydown of materials; and minimising disturbance such as foot traffic in habitat adjoining the track.
Reduce the area of occupancy of an important population	The Area of Occupancy for Latham’s Snipe is estimated at 13,000 km ² . The proposed works will impact a maximum of 0.0009 km ² of potential habitat, although the actual area of loss will likely be less than this. This area is considered negligible in the broader context of habitat available in the landscape and is not expected to alter the potential use of habitats or movement patterns of Latham’s Snipe in the Victorian alps.
Fragment an existing important population into two or more populations	As an international migratory bird species, Latham’s Snipe is highly mobile. All works proposed in Latham’s Snipe will be undertaken on existing track alignments, with potential losses of vegetation occurring at the edges of existing tracks. Structures proposed for installation in these areas aim to facilitate the rehabilitation

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Significant Impact Criteria	Assessment of impacts
	of areas impacted by off-track walking and increase vegetation cover in the long-term. The works will therefore not alter the functional connectivity of habitats.
Adversely affect habitat critical to the survival of species	Habitats critical to the survival of Latham's Snipe include habitats that are identified as internationally or nationally important for the species. The project area is not known to support internationally or nationally important habitat.
Disrupt the breeding cycle of an important population.	Latham's Snipe breeds exclusively in the northern hemisphere. The project can therefore, not disrupt the breeding cycle of the species.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Areas of potential habitat loss or disturbance for Latham's Snipe are small (0.09 ha) and will be limited to existing tracks. This will not substantially decrease the overall area or quality of available habitat for the species. Important habitat features for the Latham's Snipe, such as vegetation cover, particularly of sedges, rushes and grasses, will not be substantially modified.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	Latham's Snipe is likely to be susceptible to predation by feral Cats and the European Red Fox, particularly in wetlands with reduced vegetation cover. These species are already established through sub-alpine and alpine areas of Victoria. There is no mechanism by which the FHAC would introduce these or other invasive species to areas of Latham's Snipe habitat or provide increased access for these species to Latham's Snipe habitat.
Introduce disease that may cause the species to decline.	There are no diseases that could be introduced by the FHAC project that may impact Latham's Snipe.
Interfere substantially with the recovery of the species	Actions for the recovery of Latham's Snipe are listed in the Approved Conservation Advice under the EPBC Act. They include actions to identify and protect important habitat for the species, facilitate the restoration of historically important habitats heavily affected by human developments, protect habitats from grazing pressures and identifying, and protecting drought and flood refuges in Australia. The FHAC project does not interfere with any of these actions.

Alpine Tree Frog

The Alpine Tree Frog *Litoria verreauxii alpina* is listed as Vulnerable under the EPBC Act and Critically Endangered under the FFG Act. It is the only frog species known to occur above the winter snowline on the mainland, occurring in the alpine and sub-alpine zones of south-eastern New South Wales and Victoria, generally above 1100 m (DoE 2014). Despite declines across the Victorian high country, a population is known to persist at Mount Hotham, and historic records (dating to 2000 and 2004) are scattered across the Bogong High Plains, including around Watchbed Creek near the Big River Firetrail (west of Section 3 and north of Section 5), around the Langford West Aqueduct at Langford Gap (Section 5), around Pretty Valley Track and Cope West Aqueduct at the intersection with the Australian Alps Walking Track (Section 6), and on Jaithmathang Creek off Westons Spur Track (Section 11) (DEECA 2025).

The current status of populations on the Bogong High Plains is not known. However, there are plans to re-introduce the species to parts of its former range (N. Clemann, pers. comm. in Abzeco 2025) and so, the protection of suitable habitat remains a long-term conservation objective. Within the project area, suitable habitat for the Alpine Tree Frog was identified by Abzeco (2025) along FHAC Sections 4, 6, 7 and 11. Therefore, for the purposes of this assessment, the Alpine Tree Frog is presumed to be present within and surrounding the FHAC project area.

Alpine Tree Frogs use natural and artificial wetlands, including ponds and pools in creeks, alpine bogs and fens, dams, and drainage channels with still or flowing water; permanent and deep, but artificial ponds and dams are preferred (DELWP 2021). Breeding takes place in December and eggs are laid in pools in which tadpoles also complete development. Non-breeding habitats and overwintering refuges are poorly known but likely to include flat rocks, fallen logs and leaf litter. The use of terrestrial and dispersal habitat between breeding and non-breeding habitat is also largely unknown (NSW OEH 2012).

The main threats to Alpine Tree Frogs include infection with amphibian chytrid fungus *Batrachochytrium dendrobatidis*, trampling of alpine bog and fen habitats by feral horses, climate change, fire, and developments such as construction and management of hydroelectric facilities and ski resorts.

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An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Alpine Tree Frog is given in Table 48.

Table 48 Assessment of potential impacts to Alpine Tree Frog against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	<p>The population of the Alpine Tree Frog in Victoria is estimated at 1100 – 7500 individuals. The current status of the population at Mount Hotham and on the Bogong High Plains is unknown. However, there are records dating to between 2000 and 2004 scattered along the Bogong High Plains. This includes one record dating to 2000 on Jaithmathang Creek north of Westons Spur Track on Section 11. For the purposes of this assessment, the species is assumed to be present in the landscape, and the population would be assumed to be important.</p> <p>Habitat for the species within the project area occurs in alpine bogs and creeks in Sections 4, 6, 7, and 11. Works in these habitats include construction of boardwalks and stepping stones to ameliorate existing impacts of the trail. These works will result in the total disturbance of up to 0.13 ha of potential habitat. However, the actual area of disturbance will be much less than this. Works will be undertaken sensitively to manage disturbance. This includes ‘building from the trail’ as far as possible; using the existing track for laydown of materials, minimising disturbance such as foot traffic in habitat adjoining the track; and avoiding the disturbance of site rock and logs that provide shelter for Alpine Tree Frogs. In addition, pre-construction surveys will be undertaken to ensure that works will be micro-sited and do not inadvertently disturb or injure Alpine Tree Frogs, if found to be present. With these measures in-place, the works are not considered to lead to a long-term decrease in the population size.</p>
Reduce the area of occupancy of an important population	<p>The Area of Occupancy for the Alpine Tree Frog is 612 km². The FHAC will disturb a maximum of 0.0013 km² of potential habitat for the Alpine Tree Frog. All works will be undertaken on existing trails, and any habitat disturbance will be limited to the edges of existing trails. The works are therefore, not expected to alter the overall availability or quality of habitat for the Alpine Tree Frog on the Bogong High Plains, nor alter their use of habitat, if a population persists in the landscape.</p>
Fragment an existing important population into two or more populations	<p>The proposed FHAC will not result in fragmentation of habitat or create a barrier to the movement of Alpine Tree Frogs that would fragment a population. The FHAC is located on existing tracks and no works will be undertaken on waterway crossings where the species has previously been recorded.</p>
Adversely affect habitat critical to the survival of species	<p>Habitat critical to the survival of the Alpine Tree Frog has not been defined. However, given the restricted distribution and conservation status of the species, all habitat may be considered critical for the species. The FHAC is not expected to adversely affect habitat for the species. No works are proposed on or adjacent to waterways where the species has previously been recorded. Works within areas of potential habitat will be undertaken sensitively to ensure minimal disturbance, and in the long-term are intended to enable the rehabilitation of habitat that has been disturbed by off-track walking on the existing track.</p>
Disrupt the breeding cycle of an important population.	<p>Breeding habitats for the Alpine Tree Frog include natural and artificial wetlands, natural waterways and artificial channels, with still or flowing water, although large, deep artificial waterbodies appear to be preferred. There are no known breeding habitats for the Alpine Tree Frog around the FHAC project area (Abzeco 2025). The FHAC project will not alter the flow rates of waterways, introduce or lead to an increase in predatory fish, or involve the release of chemicals.</p>
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	<p>Habitat for the Alpine Tree Frog will not be destroyed, modified or isolated as part of the FHAC. No works will be undertaken in habitats where the species has previously been recorded. Disturbance in areas of potential habitat will be minimal and limited to the edge of existing tracks for the installation of boardwalks and stepping stones. These works will be undertaken sensitively, in accordance with a Construction Environment Management Plan. Habitat features such as rocks, logs and timber in areas of works and near waterways will be retained.</p>
Result in invasive species that are harmful to a vulnerable species	<p>Habitats of the Alpine Tree Frog are threatened by trampling by introduced herbivores, particularly feral horses. There are no mechanics by which the FHAC</p>

Significant Impact Criteria	Assessment of impacts
becoming established in the vulnerable species' habitat.	project would introduce or cause this, or any other invasive species, to areas of Alpine Tree Frog habitat.
Introduce disease that may cause the species to decline.	The Alpine Tree Frog is highly susceptible to chytridiomycosis, which is considered to be the leading cause in the decline of the subspecies in Victoria (DELWP 2021). Hygiene controls will be implemented during works to prevent against further outbreaks of amphibian chytrid fungus <i>Batrachochytrium dendrobatidis</i> or the introduction of new strains.
Interfere substantially with the recovery of the species	Actions for the recovery of the Alpine Tree Frog are outlined in the EPBC Approved Conservation Advice. Primary conservation actions are focused on the management of threats, which includes amphibian chytrid fungus, trampling of habitats by introduced herbivores, damage to alpine bogs and fens, pollution of artificial water impoundments, groundwater extraction and changes to hydrology, climate change, fire and hydro-electric facilities. The FHAC does not interfere with any of the actions listed in the Conservation Advice.

Yellow-bellied Glider

The Yellow-bellied Glider *Petaurus australis australis* (south-eastern subspecies) is an arboreal and nocturnal marsupial that is listed as Vulnerable under the EPBC Act. It has a disjunct distribution from south-eastern Queensland to far south-eastern South Australia, and occurs at altitudes of up to 1400 m. In Victoria, it occurs primarily in the eastern half of the State with a distribution that extends from the ranges east of Melbourne to far East Gippsland and the Victorian Alps; isolated populations occur in western Victoria around Edenhope, Portland, Timboon and the Otway Ranges (DCCEE 2022c). The species generally has a disjunct distribution, even in areas of contiguous habitat, and typically occurs at low densities.

Yellow-bellied Gliders occur in eucalypt-dominated forests and woodlands, including wet and dry sclerophyll forests. They require mature, hollow-bearing trees for den sites and feed on the tree sap, invertebrates, eucalypt pollen and nectar, as well as insect exudate and manna. Their abundance within forest habitats is related to both forest age and floristics, with a preference for large patches of mature, old-growth forest. Floristic diversity is also important for ensuring a year-round supply of foraging resources. Habitat critical for the survival of the species is considered to include areas containing the following features (DCCEE 2022c):

- Large contiguous areas of floristically diverse eucalypt forest, which are dominated by winter-flowering and smooth-barked eucalypts, including mature living hollow-bearing trees and sap trees.
- Areas identified as refuges under future climate change scenarios.
- Short or long-term post-fire refuges (i.e., unburnt habitat within or adjacent to recently burnt landscapes) that allow the species to persist, recover and recolonise burnt areas.
- Habitat corridors required to facilitate dispersal of the subspecies between fragmented habitat patches and/or that enable recolonisation or movement away from threats. Yellow-bellied gliders (south-eastern) have a glide ratio (horizontal distance/height dropped) of around 2.0, and corridors spanning gaps larger than the distance gliders are likely to be able to travel should be considered critical to the survival.
- Areas in which some trees have evidence of use for sap extraction by yellow-bellied glider (south-eastern).

The Yellow-bellied Glider was recorded by Abzeco (2025) at Diamantina Horse Yards and Blairs Hut, with two individuals recorded in each location. The species is therefore, considered highly likely to occur elsewhere in the West Kiewa valley, including in forest habitat adjoining Section 12, as well as Section 18 of the FHAC. Proposed works along Section 12 will involve the construction of steps as well as track drainage works, which will impact up to 0.218 ha of vegetation. These works will primarily impact ground-layer species. No trees are proposed for removal, and it is unlikely that the shrub layer will be impacted, with the exception of small numbers of individual plants. Micro-siting will occur prior to works being undertaken to minimise encroachment on TPZs as far as possible, and a project arborist will provide advice on tree management requirements where there is potential encroachment, to ensure that trees can be retained. Trail Section 18 and Blairs Hut have been removed from the FHAC project.

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An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Yellow-bellied Glider is given in Table 49.

Table 49 Assessment of potential impacts to Yellow-bellied Glider against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	Yellow-bellied Gliders within the project area (and eastern Victoria) have not been identified as supporting a known, important population. However, in the absence of further information, the Conservation Advice considers that all known populations should be considered important (DCCEEW 2022c). The proposed works within areas of Yellow-bellied Glider habitat are minor and are unlikely to impact important resources for this species, e.g., hollow-bearing trees, feeding trees. Works will be micro-sited to ensure that encroachment on TPZs is minimised, and a project arborist will provide advice on managing impacts to trees where there is potential encroachment. A long-term decrease in the size of the population is unlikely to result from the works.
Reduce the area of occupancy of an important population	The Area of Occupancy for the Yellow-bellied Glider is estimated at 12,724 km ² , across its distribution. Works proposed for the FHAC will impact up to 0.0022 km ² of habitat for trail drainage works and the construction of steps along the existing track. Habitat disturbance will occur along the edges of the track footprint and will primarily impact understorey species. Extensive tracts of suitable habitat occur within the broader landscape, in the West Kiewa valley surrounding the FHAC. The works are therefore not considered to alter the use of surrounding habitat or reduce the overall area of occupancy for the species.
Fragment an existing important population into two or more populations	The Yellow-bellied Gliders is particularly sensitive to habitat fragmentation due to their large, exclusive home ranges, requirement for large areas of forest, and poor ability to cross areas of cleared land. The average gliding distance of a Yellow-bellied Glider in low-canopy forest is considered to be 25.2 m (DCCEEW 2022c). The Alpine National Park supports extensive areas of intact habitat for the Yellow-bellied Glider. The Diamantina Spur Track along Section 12 of the FHAC is narrow (<1m), and unlikely to present a barrier for Yellow-bellied Gliders. Habitat disturbance along the edge of this track will be minor and will not impact the canopy. The works will thus not fragment habitat for this species, nor result in the population being fragmented.
Adversely affect habitat critical to the survival of species	Habitat adjoining Section 12 of the FHAC is considered to meet the definition of habitat critical to the survival of the species. A total of up to 0.218 ha of this habitat will be disturbed, which will be limited to the edges of the existing track footprint and will primarily impact understorey species. It is not anticipated that this would have an adverse impact on this area of habitat critical to the survival of the species.
Disrupt the breeding cycle of an important population.	Works proposed within areas of Yellow-bellied Glider habitat will not remove hollow-bearing trees that provide breeding habitat for the species. There is potential for some noise disturbance that may occur during the breeding season for the species, but this will be highly localised, temporary and of limited duration. Most works will be undertaken with hand tools and machinery, and works will be limited to daylight hours. It is unlikely that this level of disturbance would disrupt the breeding cycle of the species.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	The removal of up to 0.218 ha of understorey vegetation along the edges of the existing track on Section 12 of the FHAC will not result in habitat destruction or modification, nor reduce the overall availability or quality of habitat, to the extent that the Yellow-bellied Glider would be likely to decline.
Result in invasive species that are harmful to a vulnerable species	Invasive species that have the potential to impact Yellow-bellied Gliders include feral cats and foxes. However, predation by cats and foxes is considered to present

Significant Impact Criteria	Assessment of impacts
becoming established in the vulnerable species' habitat.	a low risk. The FHAC will not introduce, nor facilitate an increase in the movement of these species, into areas of Yellow-bellied Glider habitat.
Introduce disease that may cause the species to decline.	There are no diseases identified that are known to pose a threat to Greater Gliders.
Interfere substantially with the recovery of the species	The Conservation Advice for the Yellow-bellied Glider outlines conservation and recovery actions for the Greater Glider. They include actions to protect habitat from wildfire, prescribed burning, and timber harvesting; restore connectivity between subpopulations fragmented by major roads; protecting climate refuges; and further survey and monitoring. The proposed FHAC project will not interfere with any of these actions.

Pilotbird

The Pilotbird is a small, sedentary, ground-dwelling bird endemic to south-eastern Australia, with two recognised subspecies — upland and lowland, and is listed as Vulnerable under the EPBC Act. The upland Pilotbird *Pycnoptilus floccosus floccosus* occurs above 600 m in the Brindabella Ranges in the Australian Capital Territory, and Snowy Mountains of New South Wales and north-east Victoria. There are historic records (1967 – 1997) around Falls Creek and scattered on the Bogong High Plains. A more recent record, from 2022 was collected just north of the Diamantina Spur Walking Track (Section 12).

Pilotbirds occur in wet sclerophyll forests with a dense understorey, rainforest and coastal heath, and are strictly terrestrial, foraging on the forest floor on damp ground or amongst leaf litter, and nesting on the ground (Higgins and Peter 2002, DAWE 2022c). Pilotbirds seldom fly and rarely venture far from cover, ascending into shrubs 1 - 2 m above ground, if disturbed (Menkhorst et al. 2017, DAWE 2022c).

Habitat critical to the survival of the species has been defined in the Conservation Advice for the species as:

- Wet sclerophyll forest in temperate zones in moist gullies with dense undergrowth.
- Dry sclerophyll forest and woodlands occupying dry slopes and ridges.

Suitable habitat for the Pilotbird within the study area was identified within the montane forests of the West Kiewa Valley, adjoining FHAC Section 12. Proposed works along Section 12 will involve the construction of steps as well as track drainage works, which will impact up to 0.218 ha of vegetation. These works will primarily impact ground-layer species. No trees are proposed for removal, and it is unlikely that the shrub layer will be impacted, with the exception of small numbers of individual plants.

An assessment of the potential impacts against the EPBC Act Significant Impact Criteria for the Pilotbird is given in Table 50.

Table 50 Assessment of potential impacts to Pilotbird against EPBC Act Significant Impact Criteria

Significant Impact Criteria	Assessment of impacts
Lead to a long-term decrease in the size of an important population.	Important populations of the Pilotbird have not yet been identified. The FHAC will result in the loss or modification of up to 0.218 ha of potential habitat along Section 12 of the FHAC. The proposed works will primarily impact understorey species along the edges of existing tracks. Given the extent of suitable habitat in the surrounding landscape, these works are unlikely to significantly impact the use of habitat by any individuals within the area and would not lead to a long-term decrease in the size of the population.
Reduce the area of occupancy of an important population	The Area of Occupancy for the upland Pilotbird is estimated to be 2,800 km ² , across the distribution. A maximum of 0.0022 km ² would be impacted as a result of the proposed works. All areas of habitat impacted are at the edges of existing tracks. Extensive areas of habitat that are likely to provide habitat for the Pilotbird occur in the broader landscape. Hence, the project will not alter the use of surrounding areas of habitat by Pilotbirds, nor reduce their overall area of occupancy.

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Significant Impact Criteria	Assessment of impacts
Fragment an existing important population into two or more populations	The Pilotbird is not considered to be severely fragmented (DAWE 2022c). FHAC will utilise existing tracks that are narrow and unlikely to present a barrier to the movement of Pilotbirds. Minimal clearing will be undertaken additional to the existing track width to enable track upgrade and repair works. This work is not of a scale that would fragment a population into two or more populations.
Adversely affect habitat critical to the survival of species	Montane Damp Forest around FHAC Trail Section 12 was identified by Abzeco (2025) as supporting suitable habitat for the Pilotbird, and this habitat meets the requirements of habitat considered critical to the survival of the species (DAWE 2022c). The works proposed in this area will occur on existing tracks and will impact up to 0.218 ha of habitat. Given that these impacts are relatively minor and will occur at the edges of existing tracks, the works are not considered to adversely impact habitat critical for survival of the species.
Disrupt the breeding cycle of an important population.	Important populations of the Pilotbird have not been identified. Their presence within the project area is not known, but for the purposes of this assessment, are assumed to be present within Montane Damp Forest adjoining FHAC Section 12. Breeding in Pilotbirds occurs between August and January, and adults nest on the ground. Given that the area of habitat to be disturbed for track upgrades along Section 12 is located immediately adjacent to the track (within 1.5 m) and is already subject to disturbance, it is unlikely to be used for breeding. However, pre-clearance surveys will be undertaken prior to works to ensure that nesting sites are not disturbed during construction works.
Modify, destroy, remove, isolate or decrease the availability or quality of habitats to the extent that the species is likely to decline.	Works proposed along Section 12 are minor and will result in the removal of a maximum of 0.218 ha of vegetation (comprising primarily understorey vegetation) for track upgrade and repair works on existing tracks; the shrub layer will remain relatively undisturbed. Areas immediately surrounding the track have already been modified and subject to some level of disturbance. The proposed works will impact areas immediately adjacent to the tracks (within 1.5 m) and will not decrease the availability or quality of habitat to the extent that the species will decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat.	As a ground-dwelling species, Pilotbirds are considered susceptible to predation by feral Cats and the European Red Fox. These species are already established within areas of Pilotbird habitat. Given that the FHAC project utilises the existing track network within the Alpine National Park, it will not facilitate an increase in the movement of these species, nor alter their patterns of movement.
Introduce disease that may cause the species to decline.	There are no known diseases that could be transmitted to Pilotbirds resulting from the proposed track works along the FHAC.
Interfere substantially with the recovery of the species	Actions that remove habitat critical to the survival of the species are considered to interfere with the recovery of the Pilotbird, and the maintenance of both breeding and foraging habitat is considered important (DAWE 2022c). Works along the Diamantina Spur Track (Section 12) will remove small areas of habitat that may be considered habitat critical to the survival of the species. The areas of habitat removal are relatively small (0.218 ha in total) and will occur in discrete segments across approximately 10 km of track. Given that all habitat disturbance will occur along the edges of the existing track, it is unlikely that the works would interfere substantially with the recovery of the species.

Appendix 4 Assessment of EES referral criteria

The Ministerial EES Guidelines (DTP 2023) contain referral criteria to guide proponents in assessing whether to refer a project to the Minister for Planning for a determination as to whether an EES is required. These criteria consist of both individual criteria and combined criteria:

- Individual criteria comprise a category of potential environmental effects that may be of State or regional significance such that if any of the specified individual criteria are met, the project should be referred.
- Combined criteria comprise a category of potential environmental effects that may be of State or regional significance such that if two or more of the specified criteria are met, referral of the project is warranted.

The following sections provide an assessment of the proposed FHAC project against individual and combination referral criteria.

Individual criteria

Table 51 provides an assessment against individual referral criteria outlined in DTP (2023). The assessment under each of the criteria draws upon the information presented in this report, including the existing environment, project description, potential impacts, and avoidance and mitigation measures.

Table 51 Assessment of the proposed FHAC project against EES individual referral criteria (DTP 2023)

Referral criteria	Assessment outcome
<p>Potential removal, destruction or lopping of 10 hectares or more of native vegetation, that consists of, or comprises a combination of:</p> <ul style="list-style-type: none"> ▪ an ecological vegetation class (EVC) classified as endangered; or ▪ an EVC that is classified as vulnerable (with a condition score of 0.5 or more) or rare (with a condition score of 0.6 or more); and ▪ that is not authorised for removal under an approved forest management plan or fire protection plan. 	<p>Six threatened EVCs will be impacted by the project, totalling 2.6 ha, including:</p> <ul style="list-style-type: none"> ▪ Alpine Damp Grassland (Rare) – 0.073 ha ▪ Alpine Grassland (Rare) – 0.682 ha ▪ Alpine Grassy Heathland (Rare) – 0.563 ha ▪ Alpine Valley Peatland (Endangered) – 0.074 ha ▪ Snowpatch Grassland (Vulnerable) – 0.074 ha ▪ Sub-alpine Shrubland (Rare) – 1.141 ha <p>Three additional EVCs will be impacted by the project that have not been assigned a Bioregional Conservation Status. These EVCs may be assigned the default conservation status for Sub-alpine Treeless Vegetation of Rare:</p> <ul style="list-style-type: none"> ▪ Alpine Dwarf Heathland – 0.066 ▪ Alpine Rocky Outcrop Heathland – 0.029 ▪ Snowpatch Grassland – 0.074 ha <p>In total, 2.77 ha of these EVCs will be impacted by the project.</p>
<p>Potential clearing of an area determined as ‘critical habitat’ under the <i>Flora and Fauna Guarantee Act 1988</i>.</p>	<p>There are currently no ‘critical habitat’ determinations in place under the <i>Flora and Fauna Guarantee Act 1988</i>.</p>
<p>Potential for loss of a significant proportion (e.g. 1 percent or greater) of known remaining habitat or population of a threatened species within Victoria.</p>	<p>Flora</p> <p>The establishment of the three Overnight Nodes will impact more than 1% of the lower estimate of the Victorian population for four flora species listed under the FFG Act:</p> <ul style="list-style-type: none"> ▪ Bogong Daisy-bush <i>Olearia frostii</i> ▪ Rusty Daisy-bush <i>Olearia brevipedunculata</i> ▪ Dusty Daisy-bush <i>Olearia phlogopappa flavescens</i> ▪ Alpine Phebalium <i>Phebalium squamulosum alpinum</i> <p>These species can be locally abundant. Given that these species were recorded in high numbers within relatively small areas of habitat, and within areas already disturbed, it is unlikely that these losses actually represent 1% of the populations; population sizes of these species are probably larger than estimated due to a general lack of survey effort.</p>

Referral criteria	Assessment outcome
	<p>The numbers of threatened flora potentially impacted by trail works has not yet been assessed, as targeted surveys have not been undertaken along trails. Pre-construction surveys will be undertaken for threatened species in areas proposed for trail works. Works will be micro-sited to avoid impacts wherever possible. Where avoidance is not possible, impacts will be minimised and numbers of individuals to be impacted will be recorded. Due to the small and linear nature of the trail works, it is unlikely that they will result in the loss of 1% of the known population of threatened flora species.</p> <p>The project will not result in the loss or disturbance to more than 1% of the known remaining habitat for any of the 150 threatened flora species considered likely to occur in the project area, based on vegetation losses and the estimated Areas of Occupancy for the species (See Table 21).</p> <p>Fauna</p> <p>The FHAC project is not expected to result in the direct loss of any threatened fauna species. Pre-construction surveys will be undertaken for all works to ensure that threatened fauna are not inadvertently injured or killed. Works will also be micro-sited to avoid critical habitat features for threatened fauna.</p> <p>Habitat losses calculated for the project area will not impact more than 1% of the known remaining habitat for any threatened fauna species considered likely to occur within the project area, based on vegetation losses and estimated Areas of Occupancy for the species (see Table 22).</p>
Potential for long-term change to the ecological character of a wetland listed under the Ramsar Convention or in A Directory of Important Wetlands in Australia.	There are no wetlands listed under the Ramsar Convention, or in the 'Directory of Important Wetlands in Australia' within or near to the FHAC project area.
Potential for extensive or major effects on the use and environmental values of water resources due to changes in water quality, water availability, stream flows, water system function, or regional groundwater levels, or the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term.	<p>Works and infrastructure associated with the FHAC are not expected to alter groundwater, stream flows, surface water flows or water quality. Drainage works along the trail will be undertaken to ameliorate the impacts of existing tracks, where tracks concentrate flows following heavy rainfalls and snow melt, creating rutting and erosion. Drainage arrangements will direct flows off the track for dispersion into adjoining vegetation, through a sedimentation pit.</p> <p>There are no works proposed on waterway crossings of the FHAC. Works proposed where the FHAC crosses the Diamantina Creek and Blanket Creek will be micro-sited to ensure that they do not impact instream or riparian habitats.</p>
Potential for extensive or major effects to human health or the environment, or displacement of residents, from pollution or waste emitted to air, land, water or groundwater.	<p>This criterion is not considered relevant due to location and low impact nature of the proposal. The project will not result in pollution or wastes emitted to air, land or groundwater. Toilet facilities to be installed at Westons Hut and High Knob will collect wastes in a sealed, transportable pods system for disposal off-site at an approved waste treatment facility. This improves the current situation with hikers burying waste in the surrounding environment.</p> <p>The FHAC is located within the Alpine National Park and there are no residents nearby that would be affected by the project.</p>
Potential for greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per annum (direct and indirect) attributable to the operation of the facility.	The operation of the FHAC will not result in greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide per annum. The operation of the Overnight Nodes will require two additional helicopter trips per annum to remove waste from the toilet facilities.

Combination criteria

Table 52 provides an assessment against combination referral criteria outlined in DTP (2023). The assessment under each of the criteria draws upon the information presented in this report, including the existing environment, project description, potential impacts and avoidance and mitigation measures.

Table 52 Assessment of the FHAC project against EES combination referral criteria (DTP 2023)

Referral criteria	Assessment outcome
<p>Potential removal, destruction or lopping of 10 hectares or more of native vegetation, unless it is authorised for removal under an approved forest management plan or fire protection plan.</p>	<p>The total extent of native vegetation disturbance for the proposed FHAC project is 3.55 ha.</p>
<p>Matters listed under the <i>Flora and Fauna Guarantee Act 1988</i>:</p> <ul style="list-style-type: none"> ▪ potential loss of a significant area of a listed ecological community; or ▪ potential loss of a genetically important population of an endangered or threatened species (listed or nominated for listing), including from loss or fragmentation of habitats; or ▪ potentially significant effects on habitat values of a wetland supporting migratory bird species 	<p>Listed Ecological Communities</p> <p>Two ecological communities listed under the FFG Act will be impacted by the project. They include:</p> <ul style="list-style-type: none"> ▪ Alpine Bog Community — 0.074 ha ▪ Alpine Snowpatch Community — 0.074 ha <p>The area of Alpine Bog Community current estimated in Victoria is 4372 ha. Areas of potential disturbance of this community as a result of the FHAC will occur on existing tracks, for the installation of board walks and stepping stones, and are considered negligible with regard to their total extent. Permanent losses are likely to be much less (0.016 ha) and are intended to facilitate the rehabilitation of this community along existing hiking tracks, where off-track walking has caused damage.</p> <p>The area of Snowpatch Community within Victoria is not known, although it is likely to be highly restricted. The FHAC will result in the total disturbance of 0.074 ha of this community for track upgrade works that include stone pitching and trail drainage works. The area of permanent loss is estimated to be much less (0.013 ha). These losses will occur for the construction of stone drains and pitching at the edges of the existing track, which is not likely to constitute the loss of a significant area of this community.</p> <p>Genetically important populations</p> <p>Genetically important populations are difficult to identify. However, given that many of the species that occur within the Victorian alps are highly restricted in distribution, it is likely that many would be considered genetically important. The proposed works are not expected to lead the loss of any populations that may be impacted by the project. The areas of habitat removal or modification for these species are relatively small with most of the potential impacts occurring along the edges of existing tracks and in small discrete areas at existing camping areas. Critical habitat features (e.g., rocky outcrops, hollow-bearing trees) will not be disturbed as part of the works.</p> <p>Wetlands supporting migratory species</p> <p>Wetland habitats within the project area provide habitat for one migratory bird species — Latham’s Snipe <i>Gallinago hardwickii</i>, which uses different habitats to most other migratory wetland birds. The FHAC may lead to the disturbance of up to 0.09 ha of habitat along two sections of trail. These areas will experience minor disturbance for the installation of boardwalks and stepping stones and will not remove habitat features critical for Latham’s Snipe, nor change hydrological aspects of the wetland.</p>

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Referral criteria	Assessment outcome
<p>Potential for extensive or major effects on landscape values of regional importance, especially:</p> <ul style="list-style-type: none">▪ where recognised by a Planning Scheme Overlay;▪ declared as a distinctive area and landscape under the <i>Planning and Environment Act 1987</i>; or▪ within or adjoining land reserved under the <i>National Parks Act 1975</i>.	<p>The FHAC is located within the Alpine National Park, reserved under the <i>National Parks Act 1975</i> and is recognised for its unique landscape features, topography and geomorphology. The FHAC project has been designed to be consistent with the Act requirements and the Greater Alpine National Parks Management Plan 2016.</p> <p>The FHAC project area is not affected by Significant Landscape Overlay or Environmental Significance Overlay under a planning scheme applying to it. The FHAC project area is not located within an area declared as a distinctive area and landscape under the <i>Planning and Environment Act 1987</i>.</p>
<p>Potential for extensive or major effects to the environment due to changes in land stability, disturbance of acid sulphate soils or project induced soil erosion over the short or long term.</p>	<p>Geomorphological assessments and geotechnical assessments have been undertaken across the FHAC, which have included geotechnical hazard assessments and assessments of landslide risks. A large landslide was identified using LiDAR south of Westons Hut. A geotechnical assessment found no evidence of recent ground movement or instability (see Section 7.6.2). Most of the landslide morphological features that have been observed within the project area were triggered under climate conditions during the Pleistocene that are no longer active under present-day conditions.</p> <p>Most of the works proposed for the FHAC relate to relatively minor trail works, and construction of small structures. Excavation and vegetation removal required for these works has been minimised as far as possible through siting and design. Rehabilitation of disturbed areas will be undertaken as appropriate. The risks of instability and erosion are therefore low.</p> <p>Geotechnical hazards to visitors along the FHAC trail were also assessed. None of the hazards were assessed as being unacceptable (see Section 7.6.2).</p>
<p>Potential for extensive or major effects on social or economic well-being due to direct or indirect displacement of non-residential land use activities.</p>	<p>There are no land-use changes proposed by the FHAC project. Non-residential land use activities include snow recreation, hiking and camping, which will not be affected.</p>
<p>Potential for extensive displacement of residents or severance of residents' access to their community resources.</p>	<p>The FHAC project is located on public land and there are no land use changes. There will be no displacement of residents or access to community resources resulting from this project.</p>
<p>Potential for significant effects on the amenity of a substantial number of residents, due to extensive or major, long-term changes in visual, noise and traffic conditions.</p>	<p>The FHAC is located within a National Park and will not impact and will have no impact on residents or residential land uses.</p>
<p>Potential for extensive or major effects on Aboriginal cultural heritage values protected under the <i>Aboriginal Heritage Act 2006</i>.</p>	<p>The CHMP process has involved redesign of the project to minimise harm by avoiding six registered Aboriginal places and two areas of high cultural significance (Tawonga Huts campground and West Kiewa Valley) from the activity area (Latitude Heritage 2025)</p>
<p>Potential for extensive or major effects on cultural heritage places and sites listed on the Victorian Heritage Register or the Victorian Heritage Inventory under the <i>Heritage Act 2017</i>.</p>	<p>The FHAC project area includes one site under the Victorian Heritage Register — Wallace Hut (HI1616). Two other sites, Cope Hut and the Tawonga Huts complex are listed on the non-statutory National Heritage Trust Register under a group listing of Mountain Huts (B6018). No new archaeological sites were located within the project area during archaeological surveys (Extent Heritage 2022, 2023a, 2023b).</p> <p>The FHAC does not propose any works that would impact known historical archaeological sites (refer Extent Heritage 2022, 2023a, 2023b).</p>

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