Department of Planning
Housing and Infrastructure

Issued under the Environmental Planning and Assessment Act 1979

Approved Application No DA 23/14870

Granted on the 15 March 2024

Signed E Murphy

Sheet No 1 of 19

STATEMENT OF ENVIRONMENTAL EFFECTS

Extension to Smiggin Holes Lift Operators HQ Building

Lot 246 DP721845, Smiggin Holes NSW 2624

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Prepared for Perisher Ski Resort

October 2023

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1 INTRODUCTION

This statement of environmental effects has been prepared by Perisher Blue Pty Ltd to accompany a development application for a single storey addition to the existing Smiggin Holes Lift Operators Headquarters on Lot 246 DP721845 at Smiggin Holes. The application is being lodged by Perisher Blue, pursuant to Clause 4.12 of the Environmental Planning and Assessment Act 1979.

The proposal has been designed to achieve the relevant provisions of State Environmental Planning Policy (Precincts Regional) 2021, and Clause 4.15 of the Environmental Planning and Assessment Act 1979 (as amended).

This statement has been prepared having regard to the following documentation:

- Flora and Fauna Assessment – Ecological – 25/01/2023
- Structural Design Certificate – Camstruct Consulting – 8/09/2023
- Structural Plans – Camstruct Consulting – 8/09/2023
- Geotech Form 4 – Asset Geotechnical Engineering - 14/09/2023.
- Plans – CLM Civil – 29/08/2023
- Architectural Plans - Mathew Murtagh – 11/08/2023

1.1 Objectives of the project

The extension of the building will provide additional room for lift operators in Smiggin Holes, including a storage area for their personal items, lunchroom, and meeting room.

2 SITE DESCRIPTION

2.1 Subject Site

The subject site is lot 246 DP 721845.

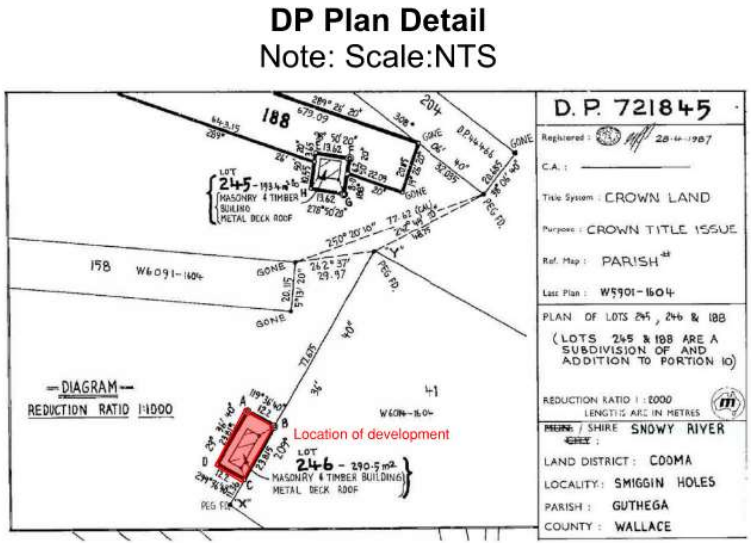


Figure 1 - Deposited plan 721845, lot 246 indicated in red.

The site is located in Smiggin Holes Village part of the Perisher Range Resort situated within the Kosciuszko National Park. Smiggin Holes is a highly utilised area of Perisher Ski Resort, particularly for families and beginner skiers and snowboarders.

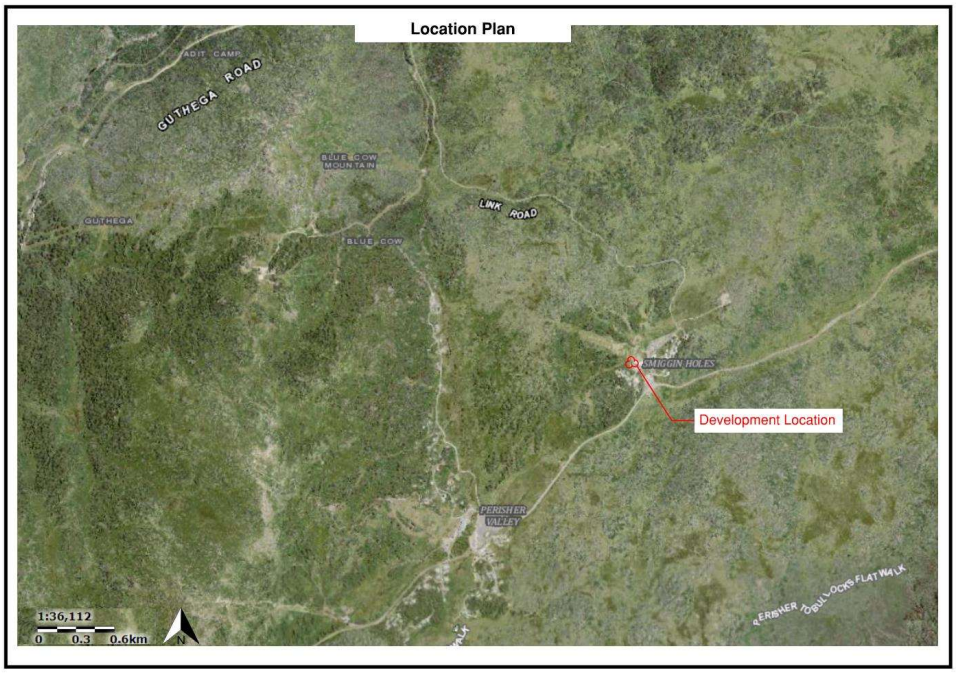


Figure 2 - Locality Plan

The lot is developed, and the existing building used as the Smiggin Holes Lift Operators Headquarters which includes a maintenance workshop, storage, lift operator's locker room, meeting and lunch room. The building is accessed in winter over snow from the surrounding ski area and in summer via Corroboree Road, through the Smiggins Hotel carpark or via existing formed tracks.

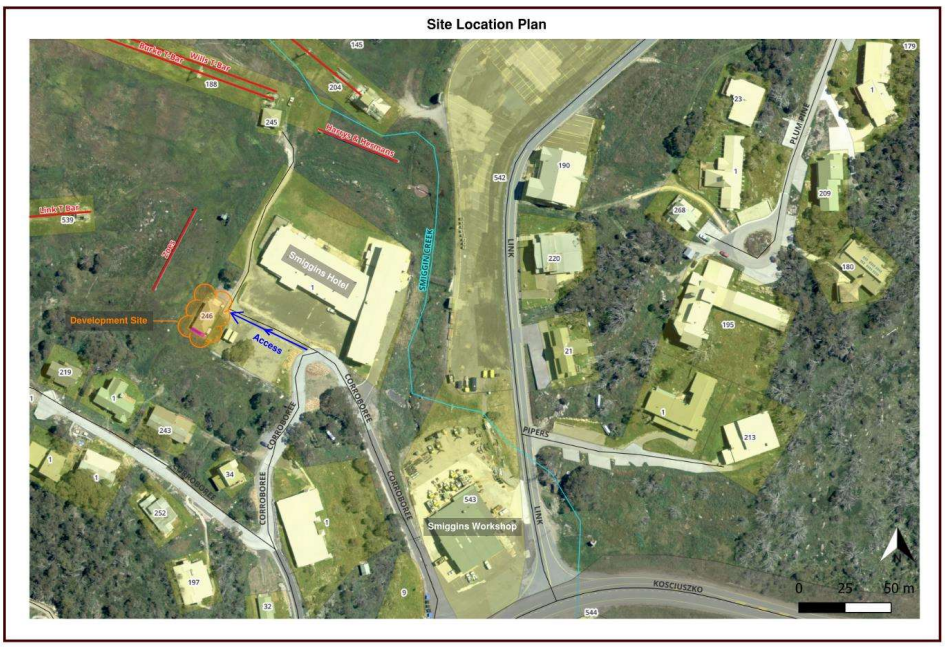


Figure 3 - Site and Location Plan Smiggin Holes

2.2 Surrounding Development

The site sits within the ski slope infrastructure area of Smiggin Holes and adjoins the rear utility areas of the Smiggins Hotel including the hotel car park. To the rear of the site are tourist accommodation buildings which due to the topography look over the subject building.

Figure 4 Tourist Accommodation to the rear of the subject site

Figure 5 - Looking south from the Smiggin Hotel Carpark to the tourist accommodation at the rear of the subject site

Figure 6 - View from the Smiggins Hotel Carpark looking northwest to the adjoining ski slopes

Figure 7 - View from the site looking east to the Smiggins Hotel carpark and the back of the hotel.

2.3 Suitability of the Site

The site is suitable for the development as proposed as it is an extension of the existing building on site. There is no change proposed to the existing use of the subject building and the extension is wholly within the boundary of the lot. The extension will be single storey and follow the roof line of the exiting building. It will have no material impact on the surrounding development as it sits below the tourist accommodation buildings to the rear so will not impact on views or privacy. It is situated to the rear of the building which is to the rear of the Smiggins Hotel carpark area and have no additional impact on the use of the adjoining property. The area of the site to be utilised for the extension includes no significant vegetation and will require minimal ground disturbance.

3 DETAILS OF PROPOSAL

3.1 Project Overview

Broadly, this proposal involves the following:

- Site preparation and installation of environmental controls.
- Minor excavation for installation of screw piers, strip footings and drainage.
- Onsite construction of a 15sqm building extension.
- Site restoration and rehabilitation, as required.

Figure 8 - Existing building

Figure 9 - Rear of existing building (location of development) window to be relocated to the western elevation. Part of this external wall (that with the window) will be removed to facilitate the addition.

Figure 10 - front of existing workshop building no changes proposed to this elevation.

Figure 11 - Western elevation of building to be extended (window at the rear to be relocated to this elevation)

The proposed 15sqm extension will be connected to the existing building and necessitate the partial removal of the rear wall and relocation of an existing window. The extension will be constructed on previously disturbed land behind the existing building causing minimal impacts to the surrounding environment.

The current area of the building used for staff lockers and a meeting/lunch room is small and causes congestion. The extension of the current locker room is necessary to provide staff with a safe place to meet, take a break and store their belongings.

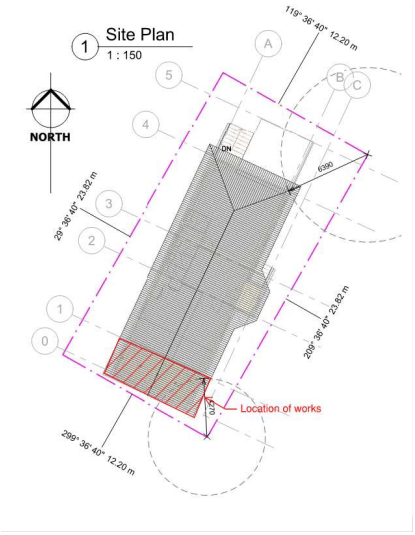


Figure 12 - Extent of proposed works

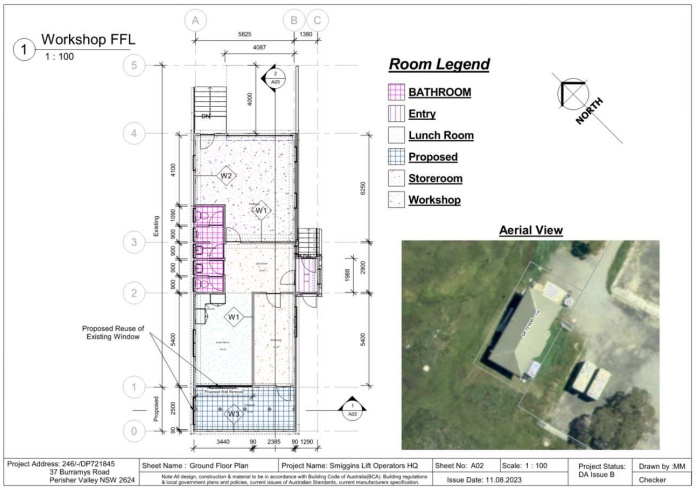


Figure 13 - Proposed floor plan

3.2 Site Access and Construction Material Storage

Access to the site will be via the formed Corroboree Road, located off Kosciuszko Road through the Smiggins Hotel carpark. The access route is shown in Figure 14 below. Due to the lot constraints, it is not practical to store all materials within lot 246 and as such an area for clean material storage will be made available within the Smiggins Hotel Carpark adjacent to the construction site. No waste material of rubbish will be stored in this area.

The manager of the Smiggins Hotel has been consulted and has no objection to the access arrangements or storage of building materials in the carpark for the duration of the works. The access route from the carpark to the locker room site is predominantly disturbed exotic grasses.

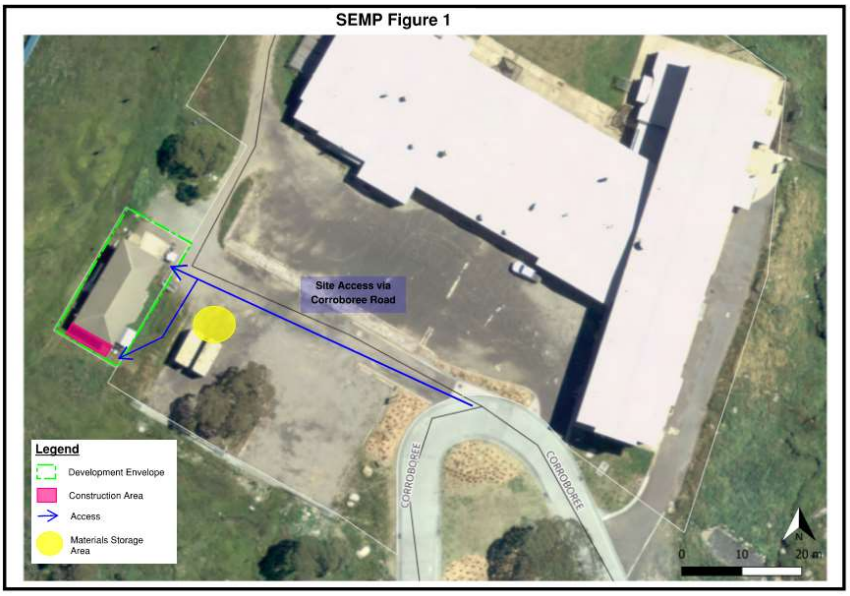


Figure 14 - Site Environmental Management Plan Map showing access, disturbance areas and material storage areas.

3.3 Excavation

Minimal excavation is required for the strip footings to support the rock work at the base of the new wall to match existing, installation of drainage surrounding the extension and the installation of screw piers. Heavy machinery will not be required to undertake the works.

3.4 Construction timeframes

The development is to be carried out in the summer period of 2023/2024 and will be completed prior to the 2024 ski season.

3.5 Waste Management

All litter and waste will be contained on site and removed regularly. Any recyclable or reusable material will be separated for use or disposal. No waste material or rubbish will be stored in the Smiggins Hotel carpark which is being used for access and construction material storage.

3.6 Power and Communication

The extension will utilise the existing power and communications connections.

4 MATTERS FOR CONSIDERATION

4.1 Biodiversity

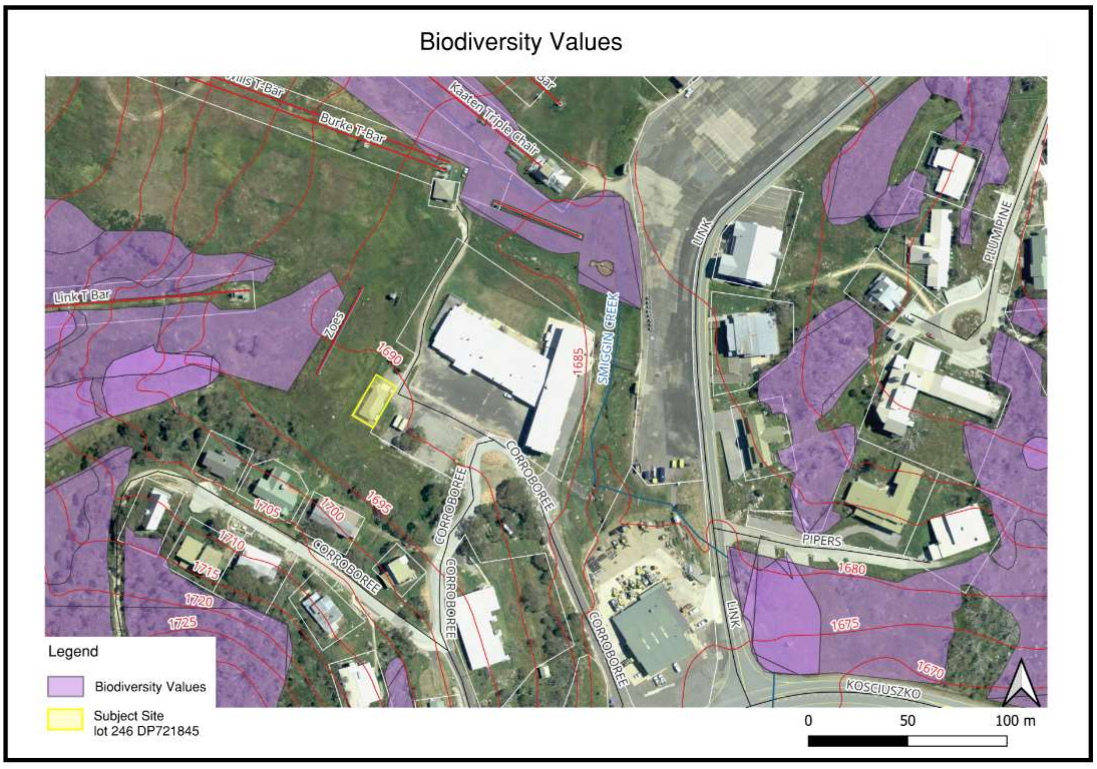


Figure 15 - Site in relation to areas mapped with high biodiversity value (Source: Biodiversity Values Map)

The site is outside any areas identified as having high biodiversity value on the Biodiversity Values Map (Biodiversity Conservation Act, 2016), and the clearing of native vegetation is below the threshold, therefore the Biodiversity Offset Scheme does not apply to this proposal.

To avoid any potential biodiversity impacts Ecological was engaged to inspect the site and provide advice. It was observed that the area of the site proposed for the development is highly disturbed and vegetated

predominantly with exotic grasses and forbs. The ecologist noted that there are scattered natives common in disturbed wet areas such as *Carex echinata* and *Oreobolus distichus* and there is a small patch of remnant bog/wet heath immediately adjoining the proposed extension footprint. The development has been designed to avoid impacts on this remnant vegetation.

Further the inspection undertaken by Ryan Smithers determined that:

- *On the basis of the inspection, it is concluded that there will be no direct impacts on native vegetation communities or associated fauna habitats, and the indirect impacts, such as shading, will be minor given the existing disturbances. Similarly, there will not be any impacts on threatened flora or important fauna habitats, nor will the proposed works adversely affect habitat connectivity or any other biodiversity values of conservation significance.*

- *The proposed works will not result in any significant impacts on threatened species, populations or ecological communities pursuant to the NSW Biodiversity Conservation Regulation 2016 or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.*

A copy of the inspection report is attached in Appendix E

Site environmental management measures to avoid impacts are outlined in Appendix C – Site Environmental Management Plan.

4.2 Aboriginal Cultural Heritage

A search of the AHIMS database did not identify any recorded Aboriginal Cultural Heritage items in the area of the development. The land is not identified as “archaeologically sensitive land” on the State Environmental Planning Policy (Precincts-Regional) 2021 Kosciuszko Alpine Region Aboriginal Archaeological Heritage Map (see figure 16 below).

A due diligence assessment was carried out, and is attached in appendix D and based on the outcome of the assessment it is reasonable to conclude that there are no known Aboriginal objects or a low probability of objects occurring in the area of the proposed activity, and the development can proceed with caution without applying for an Aboriginal heritage impact permit or the need to carry out further assessment via an Aboriginal Cultural Heritage Assessment Report.

The SEMP includes measures in the case of unexpected finds.

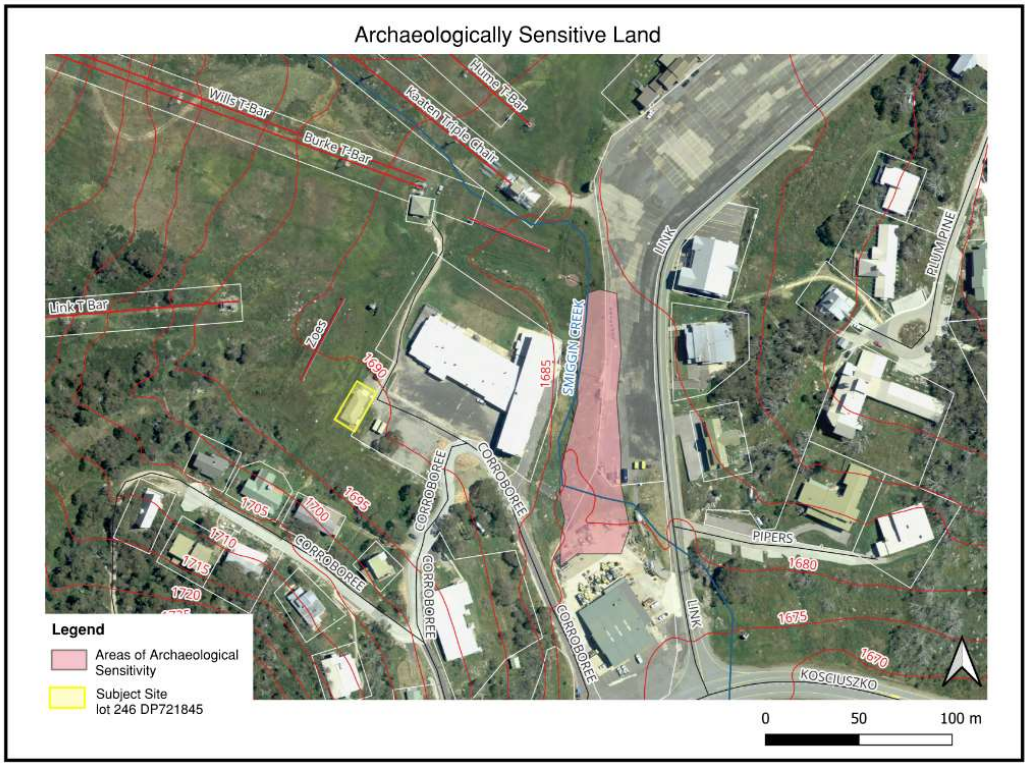


Figure 16 - The site in relation to mapped areas of Archaeological significance (Source: Kosciuszko Alpine Region Aboriginal Archaeological Heritage Map (Precincts Regional SEPP 2021))

4.3 Historic Heritage

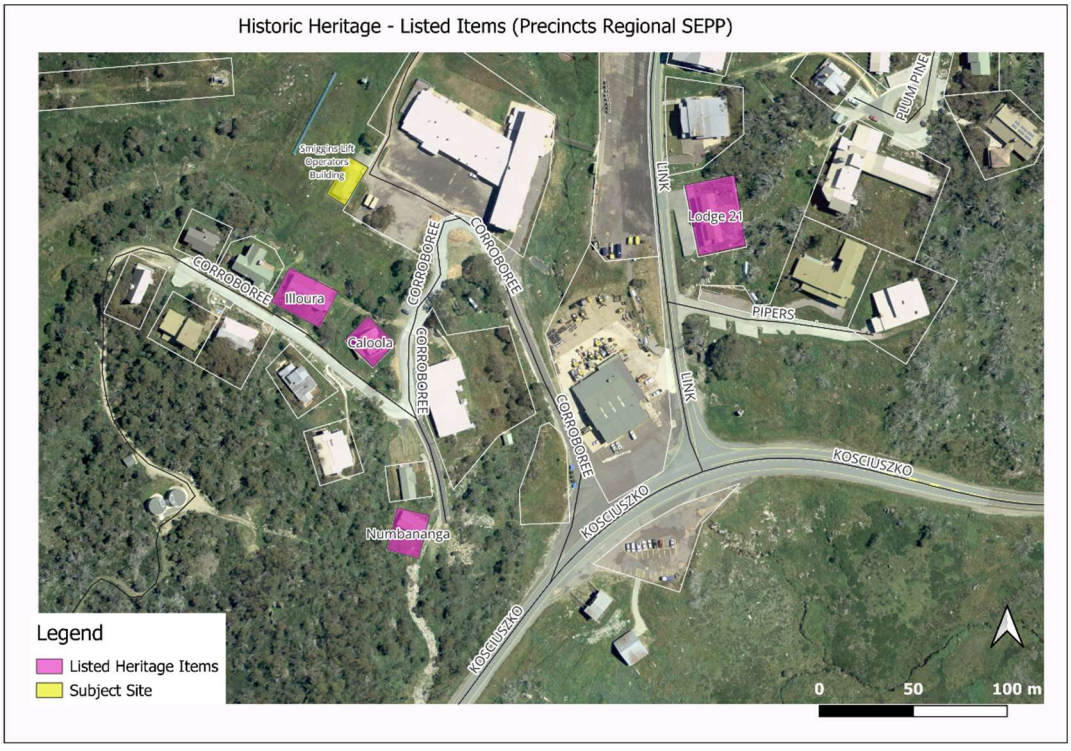


Figure 17 Historic Heritage Items in Smiggin Holes

The site or subject building is not listed under Schedule 4 of Chapter 4 of the Precincts Regional SEPP.

There are four heritage listed buildings in Smiggin Holes and none of these buildings will be impacted by the proposed development due to their location and the scale of the alterations and additions.

4.4 Impacts on Aquatic Ecosystems

The proposed works will have no impact on aquatic ecosystems and are not within a riparian zone.

4.5 Construction Impacts

Localised noise impacts will occur during construction however they will be temporary. There will be no ongoing impacts on noise and air quality from the proposed works. Waste generated during construction will be managed onsite in accordance with the measures outlined in the SEMP.

4.6 Geotechnical Considerations

The site is not within an area marked with "G" in which a geotechnical report is required under the provisions of the *Geotechnical Policy Kosciuszko Alpine Resorts* (illustrated in figure 17 below). As the development involves minor earthworks for the installation of footings and screw piers, a geotechnical assessment was undertaken by AssetGeo and an associated Form 4 has been submitted with the development application. These documents are included in the SEE in Appendix F.

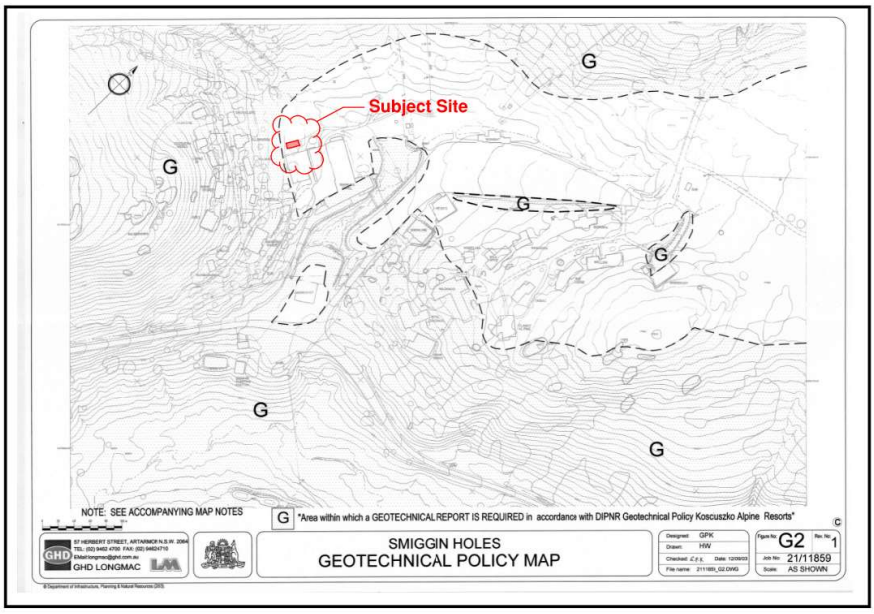


Figure 18 - Development site indicated on Geotech Policy Plan

4.7 Soil Impacts

Minor ground disturbance is planned for the installation of strip footings for the ground level rock work, the installation of drainage and screw piers. These works are of a minor nature and not considered to have significant soil impacts that cannot be managed through the mitigation measures outlined in the SEMP. Appropriate sediment and erosion control measures will be employed on site during construction and rehabilitation of disturbed areas will occur at completion of the project. Any excess soil removed to the Smiggin Holes stockpile site.

4.8 Bushfire

The site is mapped as Bushfire Prone Land (Category 1) due to the nature of the development and the use of the site the development is "Other Development" as described in Chapter 8 of Planning for Bushfire Protection 2019. The use is not considered to be a special fire protection purpose, nor does it include any residential component.

Section 8.1 requires that "other development" must meet the following conditions in order to comply with PBP:

1.Satisfy the Aims and Objectives of Planning for Bushfire Protection (Chapter 1)

The aim of PBP is to provide for the protection of human life and minimise impacts on property from the threat of bush fire, while having due regard to development potential, site characteristics and protection of the environment.	The development is a minor addition to an existing building, it will have little to no impact on the bushfire risk associated with the existing building. The site is surrounded by managed land with the only risks upslope from the site. Due to the location of the building, there is significant defendable space surrounding the site and access from a public road through a large open gravel car park area. The building has access to reticulated water and the proposed addition does not seek it make changes to any existing utility services.
The objectives are to:	
afford buildings and their occupants protection from exposure to a bush fire; provide for a defendable space to be located around buildings	The site is surrounded by managed land with the only risk upslope from the subject building. The site is bounded on the eastern and northeastern sides by a large parking area with only limited landscaping vegetation. There is no connective vegetative canopy of trees within 100m of the building. As such there is existing appropriate defendable space around the existing building including the minor rear addition.
provide appropriate separation between a hazard and buildings which, in combination with other measures, prevent the likely fire spread to buildings	The site is separated from the adjoining tourist accommodation to the south by managed land to a distance of 55m to the closest building upslope from the development site. To the northeast and east of the site is a large hotel and hard stand carparking area. This cleared distance from the building coupled with reticulated water supply, access from a public road and alterative access onto ski slope area provides a combination of measures that will prevent the lively fire spread to this building and allow it to be defended in advent of fire.
ensure that appropriate operational access and egress for emergency service personnel and occupants is available	Access to the site is via an open gravel carpark from a public road or via an unnamed access track allowing It can be easily accessed by emergency

	service personal and allows for safe egress of occupants in the event of an emergency.
provide for ongoing management and maintenance of BPMs	The building is used as a workshop and ancillary storage and lunchroom area for lift operators. It is an essential building for the operation of the Smiggin Holes ski area and is maintained by Perisher on a scheduled basis.
and ensure that utility services are adequate to meet the needs of firefighters	The subject site is serviced by reticulated water and has access to a hydrant system.

2. consider any issues listed for the specific purpose for the development set out in this chapter.

The proposed development is to extend a building used principally as a workshop with ancillary staff storage areas and lunchroom. The extension proposed is to increase the size of these ancillary staff areas. As such the development must consider the specific requirements of Section 8.3.1 & 8.3.10 of PBP.

The NCC does not provide for any bush fire specific performance requirements for these particular classes of buildings. As such AS 3959 and the NASH Standard are not considered as a set of Deemed to Satisfy provisions, however compliance with AS 3959 and the NASH Standard must be considered when meeting the aims and objectives of PBP.

The proposed extension will be built in compliance with any relevant requirements of AS3959. The NASH standard in this case is not applicable due to the construction method being used.

8.3.1 acknowledges that bushfire is not captured in the NCC for Class 5-9 buildings however the following objectives should be applied in relation to access, water supply and services and emergency and evacuation planning:

to provide safe access to/from the public road system for firefighters providing property protection during a bush fire and for occupant egress for evacuation	The development is accessible from Corrobboree Road a two-wheel drive paved public road which is accessible in all seasons (subject to 4WD and chain requirements). From Corrobboree Road the building is access through a paved carpark which is cleared in winter for the operation of the Smiggins Hotel. The width and gradient of the access is suitable for fully loaded firefighting vehicles. Due to the location of the building in a cleared area allows for unobstructed egress of occupants in the case of an emergency.
to provide suitable emergency and evacuation (and relocation) arrangements for occupants of the development	a revised building evacuation diagram, site layout diagram and Statement of Action will be prepared and provided in the subject building in accordance with the NSW Rural Fire Service Guidelines for the Preparation of Emergency/Evacuation Plan and with Australian Standard AS 3745 2010 'Planning for Emergencies in Facilities'.

	The building is subject to fire safety inspections and annual fire safety statements.
to provide adequate services of water for the protection of buildings during and after the passage of bush fire, and to locate gas and electricity so as not to contribute to the risk of fire to a building; and	The building is serviced by reticulated water and the development does not require any additional water or utility connections.
provide for the storage of hazardous materials away from the hazard wherever possible	The development does not include any hazardous materials that require storage.

8.3.10 relates specifically to Commercial and Industrial Development and requires development to address the aims and objectives of PBP 2019 as there is no residential component. How the development assesses the aims and objectives has been provided above.

3. Propose an appropriate combination of Bushire Protection Measures.

8.3.10 requires that suitable combination of BPM commensurate to the level of risk to the development, the scale of the development and the numbers of people likely to be occupancy the building. The BPM listed below have been based on the relevant provisions of Chapter 7 of PBP

The following are the proposed Bushfire Protection Measures

Water: The development will have access to the buildings existing reticulated water and has access to a hydrant system

Emergency Management including Evacuation of Occupants: Prior to the occupation of the extension a revised building evacuation diagram, site layout diagram and Statement of Action are to be provided in the subject building accordance with the NSW Rural Fire Service Guidelines for the Preparation of Emergency/Evacuation Plan and with Australian Standard AS 3745 2010 'Planning for Emergencies in Facilities'.

4.9 Visual Impacts

The submitted plans demonstate that the extenstion will be consitant in form and materality as the eixsting building. As such there are no visual impacts anticipated from the subject development. The tourist accommodation buildings to the south of the site are elevated and have views to the ski slopes over the existing building. The extension will use the same materials and form as the existing building to allow for a seamless visual form.

4.10 Effects on Ski Resort Operation

The proposed works will have positive impacts on ski resort operation, as they will provide lift operators and managers with additional locker room space in the highly utilised area of Smiggin Holes. Works are to be carried out during the non-operational summer season.

4.11 Notification

The application is expected to be exhibited due to being within 50m of tourist accommodation, however due to the minor nature of the development it is unlikely that objections will be received. The closest tourist accommodation (the Smiggins Hotel) has been consulted in the planning of the extension and

they advised that they have no objection to the development as proposed and the use of the hotel carpark for access and storage of construction materials.

4.12 Public Interest

The development is in the public interest as it will provide for additional facilities for lift operators during the winter season in a highly utilised area of the resort.

4.13 Social and Economic Impacts

The proposed works will have positive social and economic impacts providing for improved facilities to benefit the staff and operations at Smiggin Holes.

5 STATUTORY CONSIDERATIONS

5.1 NSW Environmental Planning and Assessment Act 1979 – S4.15

Section 4.15 (1) of the *Environmental Planning and Assessment Act* lists the matters which must be taken into consideration by the consent authority when determining a development application. *Table 6.1* lists these matters and provides a summary assessment of each of these matters including, where appropriate, a cross reference to the relevant sections in this report.

Table 1 - Environmental Planning and Assessment Act checklist

Matter	Impacts / comments
(1)(a) the provisions of: **(i) any environmental planning instrument** **(ii) any proposed instrument** **(iii) any development control plan** **(iiia) any planning agreement** **(iv) the regulations**	(i) The development complies with the provisions of State Environmental Planning Policy (Precincts Regional) 2021 – Chapter 4 (ii) there are no proposed instruments applicable to the subject land. (iii) there are no development control plans applicable to the subject land. (iiia) there are no know planning agreements relating to the subject land. (iv) The development application has been made in accordance with the requirements contained in the Environmental Planning and Assessment Regulation 2021.
(b) the likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality	The likely impacts of the development have been outlined above.
(c) the suitability of the site for the development	The site is suitable for the development as proposed and matters concerning site suitability have been addressed above
(d) any submissions made in accordance with this Act or the regulations	As per the Community Participation Plan the development application will be placed on exhibition. Should submissions be received they will be addressed through the assessment process.
(e) the public interest	The assessment addresses the relevant requirements of Chapter 4 of SEPP (Precincts- Regional) 2021 and therefore considered to be meets the public interest test.

5.2 State Environmental Planning Policy (Precincts Regional) 2021

The development is subject to the provisions of Chapter 4 – Kosciuszko Alpine Region, of the Precincts Regional SEPP.

Table 5.2 - Assessment of the relevant provisions of Chapter 4

PART 4.1 AIM AND OBJECTIVES OF CHAPTER

(1) The aim of this Chapter is to protect and enhance the Alpine Region by ensuring development is managed with regard to the principles of ecologically sustainable development, including the conservation and restoration of ecological processes, natural systems and biodiversity.

The proposed development will provide improved facilities for lift operators at Smiggin Holes. The small extension is proposed on disturbed land at the rear of the building. The design has considered potential environmental impacts in its size, location, design and limiting of excavation. This will minimise environmental impacts which can be further mitigated through the implementation of the Site Environmental Management Plan.

(2) The objectives of this Chapter are as follows—

(a) to encourage the carrying out of a range of development to support sustainable tourism in the Alpine Region all year round, if the development does not result in adverse environmental, social or economic impacts on the natural or cultural environment of the Alpine Region, including cumulative impacts on the environment from development and resource use,

The improvement of facilities for lift operators directly supports tourism by providing suitable facilities for staff in the resort.

The proposed development is expected to generate positive social impacts by supporting staff operating the busy resort area of Smiggin Holes. Improved staff facilities have a positive economic impact with respect to attraction and retention. The environmental impacts of the development are minor due to its small size and minimal use of excavation.

The works will be managed appropriately to have regard for the principles of ecologically sustainable development.

The proposed development does not require any measures to mitigate environmental hazards that would impact on the conservation of the natural environment.

(b) to establish planning controls

Not applicable

(c) to minimise the risk to the community of exposure to environmental hazards, particularly geotechnical hazards, bush fires and flooding, by—

(i) generally requiring development consent on land in the Alpine Region, and

(ii) establishing planning controls for buildings to ensure the safety of persons using the buildings if there is a fire.

(c)(i) The application meets the intent of the objective as it is seeking development consent for an addition to the Smiggin Holes lift operations HQ building.

(c)(ii) Not applicable as the objective relates to the preparation of planning controls.

4.2 Land to Which Chapter Applies.

The proposed development is within the Perisher Range Alpine Resort Alpine Subregion.

4.3 Definitions

The proposed development is an addition to an existing building servicing the ski infrastructure at Smiggin Holes as a base for lift operations and lift/machinery maintenance. As such the proposed development does not fall within in specific definition listed in the Precincts Regional SEPP or the Standard Instrument.

The best fit would be alterations and additions to a "depot" or "vehicle repair station" defined in the Standard Instrument as:

Depot *- a building or place used for the storage (but not sale or hire) of plant, machinery or other goods (that support the operations of an existing undertaking) when not required for use but does not include a farm building.*

Vehicle repair station *- a building or place used for the purpose of carrying out repairs to, or the selling and fitting of accessories to, vehicles or agricultural machinery, but does not include a vehicle body repair workshop or vehicle sales or hire premises.*

The development could utilise the exiting use provisions of the Act and Regulations due to the age and ongoing use of the building however it is considered the the development can be defined as alterations and additions to a mixed-use development incorporating a depot and vehicle repair station with ancillary staff facilities associated with the primary use.

PART 4.2 PERMITTED OR PROHIBITED DEVELOPMENT

4.7 Land Use Table

The development proposed is defined *alterations and additions to a mixed-use development incorporating a* ***depot*** *and* ***vehicle repair station*** *with ancillary staff facilities associated with the primary use.* As such it is permitted development in the subregion.

Perisher Range Alpine Resort

1 Permitted without consent

Nil

2 Permitted with consent

Advertising structures; Building identification signs; Business identification signs; Car parks; Commercial premises; Community facilities; ***Depots****; Eco-tourist facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Fences; Function centres; Helipads;*

Information and education facilities; Infrastructure facilities; Lifting facilities; Management trails; Medical centres; Monitoring stations; Places of public worship; Public utility undertakings; Recreation facilities (indoor); Recreation facilities (outdoor); Recreation infrastructure; Ski slope huts; Ski slopes; Snow-making infrastructure; Staff accommodation; Telecommunications facilities; The Skitube; Tourist and visitor accommodation; Transport depots; ***Vehicle repair stations***

3 Prohibited

Bed and breakfast accommodation; Farm stay accommodation; Any other development not specified in item 1 or 2

4.8 Subdivision

Not applicable

4.9 Demolition

Minor demolition of part of an external wall is required to facilitate the development and the details of which have been included as part of this development application.

4.10 Temporary Use of Land

Not applicable

PART 4.3 EXEMPT AND COMPLYING DEVELOPMENT

Not applicable - The development is neither exempt nor complying as such a development application has been lodged for approval.

PART 4.4 OTHER DEVELOPMENT CONTROLS

4.14 Development by Crown, public authorities, or Snowy Hydro

Not applicable

4.15 Development on land on Kosciuszko Road and Alpine Way

Not applicable - this clause only applies to land outside of an Alpine Subregion. The proposed development is within the Perisher Range Alpine Resort Subregion.

4.16 Development near Kangaroo Ridgeline

Not applicable - this clause only applies to land identified as Kangaroo Ridgeline" on the State Environmental Planning Policy (Precincts—Regional) 2021 Charlotte Pass Alpine Resort Map. This is outside of the Perisher Range Alpine Resort Subregion.

4.17 Classified roads

Not applicable - the development is not on land that has direct frontage to a classified road.

4.18 Bush fire hazard reduction

Not applicable

4.19 Public utility infrastructure

The addition will utilise the power connections from the existing building. The development will not require augmentation of any public utility infrastructure.

4.20 Conversion of fire alarms

Not applicable

4.21 Heritage conservation

Not applicable - There are no historic heritage items, aboriginal heritage items or places being impacted by this development. The SEE includes further information on Aboriginal Cultural heritage impact and historic heritage impact.

4.22 – 4.24 Conservation incentives, Eco-tourist facilities and Flood planning

Not applicable

4.25 Earthworks

(3) In deciding whether to grant development consent for earthworks, or for development involving ancillary earthworks, the consent authority must consider the following matters—

(a) the likely disruption of, or adverse impact on, drainage patterns and soil stability in the locality of the development,

Erosion impacts will be managed with appropriate controls, as outlined in Site Environmental Management Plan (Appendix C).

There are no foreseen impacts on drainage patterns and drainage around the building is included in the engineering details submitted with the application.

A geotechnical assessment has been undertaken and is provided as part of the application.

(b) the effect of the development on the likely future use or redevelopment of the land,

The area to be developed immediately adjoins the existing building and is the best future use of this space.

(c) the quality of the fill or the soil to be excavated, or both,

Minor excavation will be required for the installation of strip footings and drainage. No fill is proposed and minor amount of soil to be excavated is of no particular value with respect to quality.

(d) the effect of the development on the existing and likely amenity of adjoining properties,

Due to the minor nature of the development and its location there are no amenity impacts on surrounding development. The use of the building is not proposed to change, and the current rear window is to be relocated to the western side of the proposed development and will not overlook any adjacent or adjoining properties.

(e) the source of any fill material and the destination of any excavated material,

No fill is required to facilitate the development. Any additional excavated material be conveyed to the Smiggin Holes stockpile site.

(f) the likelihood of disturbing relics,

The SEE has considered the likely impact of the development on Aboriginal Cultural Heritage and has confirmed that the area is outside of any areas identified as having potential archaeological significance. Aboriginal Cultural Heritage Due Diligence Assessment has been undertaken and is attached in Appendix

D. In the unlikely event that that relics are found on site those undertaking the works will following the relevant unexpected finds protocols.

(g) the proximity to, and potential for adverse impacts on, a waterway, drinking water catchment or environmentally sensitive area,

The proposed development will not impact on any mapped Riparian zones due to the distance of the works from these areas. As such the proposed works will have no impact on a waterway, drinking water catchment.

The project area is located outside an area identified as having high biodiversity value on the Biodiversity Values Map (Biodiversity Conservation Act, 2016).

An inspection was carried out by an ecologist and the associated inspection report has been attached in Appendix E to the SEE.

The inspection determined that:

- *On the basis of the inspection, it is concluded that there will be no direct impacts on native vegetation communities or associated fauna habitats, and the indirect impacts, such as shading, will be minor given the existing disturbances. Similarly, there will not be any impacts on threatened flora or important fauna habitats, nor will the proposed works adversely affect habitat connectivity or any other biodiversity values of conservation significance.*

- *The proposed works will not result in any significant impacts on threatened species, populations or ecological communities pursuant to the NSW Biodiversity Conservation Regulation 2016 or the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.*

As such the works do not trigger inclusion into the Biodiversity Offsets Scheme (BOS) and the associated preparation of a Biodiversity Development Assessment Report (BDAR).

(h) appropriate measures proposed to avoid, minimise, or mitigate the impacts of the development.

The assessments carried out and the location of the development demonstrate the principles of avoid, minimise, or mitigate with respect to the impacts of the development.

PART 4.5 DEVELOPMENT ASSESSMENT AND CONSENT

4.26 Master plans

The Snowy Mountains Special Activation Precinct Master Plan 2022 applies to the subject site.

4.27 Consultation with National Parks and Wildlife Service

Consultation will be carried out by the assessing officer in relation to this development application in accordance with these provisions.

4.28 Consideration of master plans and other documents

(1) In deciding whether to grant development consent to development in the Alpine Region, the consent authority must consider the following—

(a) the aim and objectives of this Chapter set out in section 4.1

See consideration of the proposed development against the aim and objectives of Chapter 4 above

(b) a draft development control plan that is intended to apply to the land and has been published on the NSW planning portal,

Not applicable there is no DCP or Draft DCP applicable to the subject site.

(c) a conservation agreement under the Environment Protection and Biodiversity Conservation Act 1999 of the Commonwealth that applies to the land,

Not applicable there is no known conservation agreement applying to the subject land.

(d) the Geotechnical Policy — Kosciuszko Alpine Resorts published by the Department in November 2003,

A geotechnical assessment and associated Form 4 Certificate have been prepared for the proposed works by AssetGeoeEnviro and forms part of the SEE (Appendix F).

(e) for development in the Perisher Range Alpine Resort—

(i) the Perisher Range Resorts Master Plan, published by the National Parks and Wildlife Service in November 2001, and

The proposal is generally consistent with relevant guiding principles, objectives, and controls of the Perisher Master Plan.

(e)(ii) the Perisher Blue Ski Resort Ski Slope Master Plan adopted by the National Parks and Wildlife Service in May 2002.

The proposed development is generally consistent with the Perisher Blue Ski Resort Ski Slope Master Plan, as the building provides a service function to lifts in Smiggin Holes. There is reference to the relocation of the functions contained in this building to other buildings as part of a larger consolidation of workshop functions and development in the resort. The relocation of this workshop would necessitate the construction of a new workshop at Smiggin Holes Saddle or into another (yet to be constructed) building for snowmaking or into the drive station of an updated Kaaten Chairlift. None of these options are available at present and as such the minor extension proposed to the existing workshop building is reasonable and not inconsistent with the Ski Slope Master Plan.

(2) In deciding whether to grant development consent to development in the Alpine Region, the consent authority must consider—

(a) a master plan approved by the Minister under section 4.26 that applies to the land,

Snowy Mountains Special Activation Precinct Master Plan 2022 applies to the land. The subject site is located in the development area of the Smiggin Holes Structure Plan. The proposed development is consistent with the approved master plan (further consideration of the Master Plan is included in Appendix B).

4.29 Consideration of environmental, geotechnical, and other matters

(1) In deciding whether to grant development consent to development in the Alpine Region, the consent authority must consider the following—

(a) measures proposed to address geotechnical issues relating to the development,

A geotechnical assessment and associated Form 4 Certificate have been prepared for the proposed works by AssetGeoeEnviro and have been submitted as part of this application.

(b) the extent to which the development will achieve an appropriate balance between—

(i) the conservation of the natural environment, and

(ii) taking measures to mitigate environmental hazards, including geotechnical hazards, bush fires and flooding,

The SEE and associated application documentation addresses impacts to the natural environment and associated mitigation measures. The project will not increase the risk of environmental hazards, including geotechnical hazards, bushfires and flooding.

No additional vegetation removal will be required to facilitate the development.

(c) the visual impact of the proposed development, particularly when viewed from the land identified as the Main Range Management Unit in the *Kosciuszko National Park Plan of Management*,

The site is not visible from land identified as the Main Range Management Unit. Due to the minor nature of the extension and as it will follow the current form and materiality of the existing development there will be little to no visual impact from the proposal.

(d) the cumulative impacts of development and resource use on the environment of the Alpine Subregion in which the development is carried out,

The proposal is for a small addition to an existing workshop/lift operators headquarters and therefore it will have little impact on resource use and will not have a negative cumulative impact on the Alpine Environment.

(e) the capacity of existing infrastructure and services for transport to and within the Alpine Region to deal with additional usage generated by the development, including in peak periods,

Due to the nature of the development, it will not generate additional usage of existing infrastructure including transport services.

(f) the capacity of existing waste or resource management facilities to deal with additional waste generated by the development, including in peak periods.

The proposal will not impact upon waste or resource management facilities.

(2) For development involving earthworks or stormwater draining works, the consent authority must also consider measures to mitigate adverse impacts associated with the works.

The minor earthworks required for the installation of strip footings, drainage and screw piers to facilitate the development will have no adverse impacts that cannot be mitigated by the measures included in the SEMP.

(3) For development the consent authority considers will significantly alter the character of an Alpine Subregion, the consent authority must also consider—

(a) the existing character of the site and immediate surroundings, and

(b) how the development will relate to the Alpine Subregion.

The proposed development being the expansion and upgrade of the learning area over an area previously used for aerial jumps and a halfpipe within a ski resort will not significantly alter the character of the Alpine Subregion. The proposed expanded learning area with additional skier conveyors will be situated amongst other ski resort related infrastructure including ski runs, ski lifts and buildings.

Therefore, the proposed development will not significantly alter the character of the alpine resort and as such no further consideration of the existing character of the site and immediate surrounds is required. Nor is an assessment of how it relates to the Alpine Subregion is warranted.

4.30 Kosciuszko National Park Plan of Management

(1) Development consent may be granted to development in the Alpine Region even if the application has not established that the development is consistent with the Kosciuszko National Park Plan of Management.

(2) This section does not prevent the consent authority from refusing to grant consent to development on the basis that the development is not consistent with the Kosciuszko National Park Plan of Management.

The proposed development is consistent with the relevant provisions of the Kosciuszko National Park Plan of Management.

5.3 Snowy Mountains Special Activation Precinct Master Plan

The proposal is consistent with the desired future character of Smiggin Holes as it maintains the low-density nature of the area and is wholly within the development areas shown in the structure plan.

A full assessment against the relevant provisions of the Master Plan is included in Appendix B

5.4 Environment Protection and Biodiversity Conservation Act (EPBC Act)

The factors which need to be considered under the Commonwealth *Environment Protection and Biodiversity Conservation Act* (*EPBC Act*)are listed in *Table 5.3* together with an assessment of each of these factors. None of these factors are considered to result in impacts which would be considered significant under the guidelines applying to the *EPBC Act.*

Table 2 – Environment Protection and Biodiversity Conservation Act checklist

Factor	Impacts / comments
Matters of National Environmental Significance	
Any environmental impact on a World Heritage Property?	No impact
Any environmental impact on a National Heritage Place?	No impact on the Australian Alps National Heritage Place.
Any environmental impact on wetlands of international importance?	No impact
Any environmental impact on Commonwealth listed species or ecological communities?	No impact
Any environmental impact on Commonwealth listed migratory species?	No impact
Does any part of the proposal involve a nuclear action?	No nuclear action
Any environmental impact on a Commonwealth Marine Area?	No impact
Impact on Great Barrier Reef Marine Park?	No impact
Impact on Commonwealth land?	No impact
Impact on the environment, from action taken by the Commonwealth?	No impact
Commonwealth heritage places outside of Australian jurisdiction?	No impact

6 CONCLUSION

The proposal for the extension of the Smiggin Holes Lift Operators HQ, providing staff with additional meeting space and areas to store personal belongings will improve the staff working environment. The development complies with all provisions of relevant legislation and will have minimal impact on surrounding properties and uses and as such the development can be approved as proposed.

7 APPENDICES

APPENDIX	**A**	**Site Photographs**
APPENDIX	**B**	**SAP Master Plan Assessment Table**
APPENDIX	**C**	**Site Environmental Management Plan**
APPENDIX	**D**	**Aboriginal Cultural Heritage Due Diligence Assessment**
APPENDIX	**E**	**Flora and Fauna Inspection Report**
APPENDIX	**F**	**Geotechnical Report**

Appendix A Site Photographs

Views to tourist accommodation buildings to the south of the site, above the area of the proposed extension

Views to tourist accommodation buildings to the south of the site, above the area of the proposed extension

Existing eastern elevation with tourist accommodation shown to the south of the site

Parking area of the Smiggins Hotel adjacent to the subject site – area proposed for site access and storage of construction materials.

Eastern elevation of existing building showing site access

Area of the rear of the building which will accommodate the new addition. The window shown will be relocated to the western elevation as this part of the wall is proposed to be demolished to facilitate the extension. The tape measure in the photograph denotes the approximate extent of the extension.

APPENDIX B – SAP Master Plan Assessment Table

Snowy Mountains Special Activation Precinct Master Plan 2022

PROVISION	RESPONSE
10 ALPINE PRECINCT PROVISIONS	
10.1 LAND USE	
A. Development is to be permissible and consistent with the: • Master Plan • Precincts—Regional SEPP • Alpine Development Control Plan • Kosciuszko National Park Plan of Management • National Parks and Wildlife Act	*Complies* *The development is permissible under the Precincts Regional SEPP and complies with the relevant provisions of all documents listed (Excepting the Alpine DCP which is yet to be placed on exhibition and as such is not a matter for consideration for this application).*
B. In considering the suitability of the development, the consent authority must be satisfied that the development meets the performance criteria and development controls in this Master Plan and in the Alpine Development Control Plan.	*Complies* • *The development complies based on an assessment against the performance criteria of the Master Plan is carried out below.* • *There is currently no Alpine Development Control Plan.*
C. Development consent can only be issued for development in the Alpine Precinct where: i. the uses will support the diversification of the Alpine Precinct's tourism offering and year-round economic viability. ii. the uses will not compromise the environmental, heritage and cultural values of the Alpine Precinct. iii. the uses will not exceed the established carrying capacity of the Alpine Precinct.	*Complies* *i. The development is not for a new use, but for an existing building to allow for better use of the facility for staff. The building whilst predominantly used in winter is used throughout the year to carry out maintenance on resort infrastructure.* *ii. An assessment of the impact of the development on the environment, heritage and cultural values which has demonstrated that the development will not compromise any of these factors.* iii. *The development has no impact on carrying capacity as it provides facilities for existing staff.*
D. The location of future development should align with the relevant structure plan and be focused on land marked 'Development area'. Where development is proposed on land outside these areas, additional technical investigation may be required.	*Complies - The development is located within the Smiggin Holes structure plan "development area".*
E. Development for new or upgraded accommodation will meet the indicative sub-precinct yields and visitor	*Not applicable- The development does not involve new or upgraded accommodation.*

thresholds set out in the Kosciuszko National Park Plan of Management and leasing arrangements.	
10.2 Alpine Resorts	
A. Development should contribute to visitor attraction. and village experience through: i. the prioritisation of infill development. ii. improvements to pedestrian and active transport connections. iii. creation and implementation of active street frontages.	*Complies* *The development will contribute to the visitor experience by providing better facilities for staff that service these guests. The development being an addition is infill development Due to the nature of the development, transport connections and active street frontage requirements are not relevant in this case.*
B. Development should integrate public transport opportunities and should create gateways and nodes to create a sense of place and community in Alpine Resort sub-precincts.	*Not applicable*
C. Development should provide a range of tourist accommodation offerings and seasonal worker accommodation.	*Not applicable*
D. Development should be designed to reduce on-site power consumption and improve environmental performance	*Not applicable – due to the minor nature of the addition it will not have a material impact on site power consumption.*
E. Development should be designed to contribute to the alpine character of the Alpine Resorts and reflect the alpine landscape and natural environment.	*Complies – The development is in keeping with the existing built form. It extends using the same roof line, and colours and materials. The building currently sits within the landscape in keeping with the surrounding development.*
10.3 Alpine Accommodation	
A – E	*Not applicable – the proposed development does not include accommodation.*
10.4 Alpine Experience	
A. Public transport or mass transit connections should be integrated into the design of new developments, particularly in Alpine Resort and Alpine Accommodation sub-precincts.	*Not applicable -The proposed development is not of a scale that would require transport connections.*
B. Transport development must provide safe, reliable and accessible connections into and around the Kosciuszko National Park.	*Not applicable -The proposed development is not of a scale that would require transport connections.*
C. Development should be designed and staged to support and enable the ultimate growth of accommodation and attractions in the Alpine Region.	*Not applicable*

D. Development of new and upgraded shared trails and paths should provide appropriate facilities and amenities.	*Not applicable - The proposed development does not include the construction of new or upgraded shared trails or paths.*
E. Development should provide adequate car parking as part of a range of transport solutions (including the provision of accessible parking spaces).	*Not applicable - The development will not generate the need for new carparking*
F. Visitor attractions must be supported by appropriate amenities, facilities and car parking and must minimise its impact to the natural environment.	*Not applicable – the development is not a visitor attraction*
G. Visitor attractions should be designed and staged to support and enable the ultimate growth of attractions in the Alpine Region.	*Not applicable – the development is not a visitor attraction*
CHAPTER 11 ENVIRONMENT AND SUSTAINABILITY	
11.1 Biodiversity	
A. All development is to apply the avoid, minimise, and offset methodology.	*Complies – The development has taken regard of this methodology; a flora and fauna inspection report has been prepared by a suitably qualified ecologist and is attached in appendix E*
B. Development is to avoid threatened ecological communities and threatened species habitat; such vegetation should not be removed. Development may occur in these areas if it is for essential infrastructure.	*Complies – The development has taken regard of this methodology; a flora and fauna inspection report has been prepared by a suitably qualified ecologist and is attached in appendix E*
C. Development should be focused on colocation and infill to minimise biodiversity impacts	*Complies – the development is infill as it is adding to an existing building.*
D. Development should be concentrated in and around already disturbed areas. Where possible, development should provide a buffer between areas of high ecological value and buildings and structures.	*Complies – the development is to be constructed on a previously disturbed part of the site with minimal biodiversity value.* *The development is outside of the surveyed area shown in Figure 50 of the Masterplan.*
E. Development should consider the biodiversity impacts of bushfire asset protection zones (APZ) and associated vegetation management.	*Complies – no clearing for APZs is required as the land surrounding the development site is cleared and managed land.*
F. Development must offset any impacts to biodiversity through direct management measures within Kosciuszko National Park and should be related to the biodiversity impacted.	*Not applicable – the development does not trigger the Biodiversity Offsets Scheme due to its location and extent.*
G. Riparian corridors must be preserved while ensuring consistency with the proposed Flooding and Drainage Strategy for the Precinct.	*Not applicable – the development has no impact on riparian corridors*

H. Any revegetation or planting within Kosciuszko National Park should follow the Rehabilitation Guidelines for the Resort Areas of Kosciuszko National Park	*Complies – Revegetation and stabilisation of areas disturbed during construction will be carried out in compliance with the Rehabilitation Guidelines.*
11.2 Geotechnical	
A. Development must address the requirements of the Geotechnical Policy – Kosciuszko National Park (DPNIR, 2003).	*Complies – The development has addressed the requirements of the policy and a Form 4 has been completed and is submitted with the application (Appendix F).*
B. Development must include an assessment of geotechnical risks.	*Complies – The development has been reviewed by a Geotechnical Engineer and a Form 4 submitted with the application (Appendix F)*
C. Buildings and structures must be designed to accommodate the specific geotechnical risks identified for the site.	*Complies – The development has been reviewed by a Geotechnical Engineer and the Structural Engineering drawings have been prepared taking into consideration the results of the Geotech testing on site.*
D. Excavations required for new developments must consider the potential to cause widespread slope instability and ensure appropriate mitigation measures are implemented to minimise and manage risk.	*Complies – only minor excavation is required to facilitate the development. Due to the site/soil constraints screw piers are being proposed with small perimeter strip footings.*
11.3 Flood Risk Management	
A. The Flood Planning Level is the 1% AEP plus 500mm freeboard to ensure consistency across the Precinct. Development must generally occur outside the Flood Planning Level unless it can demonstrate that risks can be suitably managed. This allows for the maintenance of flood function and to avoid adverse effects on flood behaviour to the detriment of other properties or the environment of the floodplain.	*Complies – the development site is not planned in or near the Smiggin Creek watercourse and is not considered to be within the Flood Planning Level.*
B. Development within the Flood Planning Level	*Not applicable – the development is not within the Flood Planning Level*
C. Development within the Probable Maximum Flood area	*Not applicable – There are no plans indicating the PMF for Smiggin Holes and due to the location of the site it would be unlikely that it would be subject to flooding.*
D. Development should mitigate the impacts of local overland flooding through the provision of adequate site drainage systems, where possible	*Complies – the development will have no impact on overland flooding.*
E. Development must consider and plan for emergency evacuation situations to ensure the safety of all areas within the Probable Maximum Flood extent.	*Not applicable – Whilst there is no PMF mapping for Smiggin Holes it would be very unlikely that the site would be impacted by a flood event that would require emergency evacuation.*
11.4 Water Quality	

A. Maintain or improve the ecological condition of waterbodies and their riparian zones in catchments over the long term.	*Not applicable – the development will have no impact on riparian environments.*
B. Development in the Alpine Precinct should implement on-site water management and water quality systems through: i. the capture and re-use of water on-site. ii. the treatment of water on-site with any water discharged back into catchments having a neutral or beneficial effect on water quality. iii. incorporating water sensitive urban design principles into the development's-built form and landscaping, where possible	*Not applicable due to the size and nature of the development proposed. Stormwater from the extension will be dealt with in the same manner as existing due to the continuation of the existing roof line.*
C. The quality of stormwater discharged into receiving catchments must be pre-development quality or better in relation to pH, total suspended solids, total phosphorus, total nitrogen and gross pollutants.	*Complies – the development will not have an impact on ground stormwater. The stormwater disposal from the extension will be connected to the existing stormwater drainage system of the building. No additional hard stand areas are proposed.*
D. The quality of water discharged into receiving catchments should maintain electrical conductivity levels. Water quality should aim to maintain an electrical conductivity below the 30 µS/cm ANZG 2018 Guideline value for upland rivers of South-East Australia.	*Complies – the new roof section will be connected to the buildings existing stormwater drainage. This minor addition will have little to no measurable impact on the receiving catchments.*
E. Monitor macroinvertebrates to ensure they are consistently within Band A of the NSW AUSRIVAS model	*Not applicable due to the scale of the proposed development*
F. Erosion and sediment control should be managed during construction to ensure impacts to waterways are minimised in accordance with Managing Urban Stormwater Soils and Construction, also known as the Blue Book (current edition).	*Complies – Sediment and erosion control measures will be in place in accordance with the SEMP for the minor ground disturbance associated with the development.*
G. Discharge of wastewater and/or contaminated stormwater to watercourses or waterways is not permitted unless other specified in an environmental protection licence issued under the Protection of the Environment Operations Act 1997. Development must obtain the appropriate water licenses in accordance with the Water Act 1912 and the Water Management Act 2000 and consider the relevant Water Sharing Plan	*Not applicable – due to the nature and scope of the development there will be no wastewater or contaminated stormwater generated.*
11.5 Bushfire	

A. Development is to: i. minimise perimeters exposed to the bushfire hazard. ii. minimise vegetated corridors that permit the passage of bushfire towards development. iii. provide for the siting of future development away from ridge-tops and steep slopes, within saddles and narrow ridge crests. iv. ensure capacity of existing infrastructure (such as roads and utilities) can accommodate the increase in demand during emergencies as a result of the development.	*Complies – An Assessment of the development against the provisions of Chapter 8 of Planning for Bushfire Protection 2019 has been carried out in the body of the SEE and achieves an acceptable level of compliance.*
B. Asset Protection Zones are to be provided and maintained between a bushfire hazard and future development and are designed to address the relevant bushfire attack mechanisms.	*Complies – no asset protection areas are proposed for the extension or the existing building. It is surrounded on all sides by defendable space and managed land.*
C. Adequate access is to be provided from all properties to the wider road network for park users emergency services and to provide access to hazard vegetation to facilitate bushfire mitigation works and fire suppression.	*Complies – no change is being proposed to the access to the property which allows for vehicular access to a public road through a hard stand unvegetated carparking area. The site can easily be accessed by emergency services if required.*
D. Development is to minimise levels of radiant heat, localised smoke and ember attack through development design and siting.	*Complies – the building extension will be required to meet the standards in AS….*
E. The subdivision of land and location of developments should consider the future uses of land and the inclusion of roads into Asset Protection Zones.	*Not applicable – the development does not include subdivision*
11.6 Sustainability and Climate Change	
A. Development must be inclusive and sustainable and promote year-round use.	*Not applicable – due to the scale and particulars of the development proposed*
B. Development should preserve the Precincts landscape, cultural, heritage and biodiversity values by avoiding and minimising impact.	*Complies – the development will have minimal impact. Impact on biodiversity, landscape and cultural values have been addressed in the body of the SEE.*
C. Development should support sustainable and active transport opportunities and integrate open space.	*Not applicable – due to the scale and particulars of the development proposed*
D. Development should comply with applicable sustainability tools and programs for design, construction and operation.	*Complies – The development has been designed to be in keeping with the existing development and proposes to reuse materials where possible.*
E. Consideration must be given to climate responsiveness and resilience. Climate change risks, hazard and	*Complies - Due to the size of the site, its use and the works proposed there are limited alternatives other than what is proposed to achieve a better workplace outcome for staff operating from the building.*

opportunities must be considered in the design, construction and operation of development within the Precinct	
F. Operators, lessees and licensees within the Precinct must prepare and maintain an Environmental Management System in accordance with ISO14001:2015 – Environmental management systems and the requirements of the Plan of Management for Kosciuszko National Park	*Not applicable – the EMS as described has yet to be finalised. The EMS is being prepared currently by NPWS to meet this standard as such the this requirement is currently not applicable.*
12. PLACE AND LANDSCAPE	
12.1 Aboriginal Cultural Heritage	
A. Areas of Aboriginal cultural heritage (included as part of the environmentally sensitive areas map) should not be developed. Development may occur in these areas if it is for essential infrastructure and where further Aboriginal cultural heritage assessment will be undertaken to appropriately mitigate and manage any impacts to Aboriginal cultural heritage items, places or areas.	*Complies –The land is not identified as "archaeologically sensitive land" on the State Environmental Planning Policy (Precincts-Regional) 2021 Kosciuszko Alpine Region Aboriginal Archaeological Heritage Map (figure 16).* *A search of the AHIMS database did not identify any recorded Aboriginal Cultural Heritage items in the area of the development.* *A due diligence assessment was carried out, and is attached in appendix D and based on the outcome of the assessment it is reasonable to conclude that there are no known Aboriginal objects or a low probability of objects occurring in the area of the proposed activity, and the development can proceed with caution without applying for an Aboriginal heritage impact permit or the need to carry out further assessment via an Aboriginal Cultural Heritage Assessment Report.* *The SEMP includes measures in the case of unexpected finds.*
B. Aboriginal culturally significant places and sites should be integrated with areas of environmental significance and green space (where appropriate) across the Precinct. This may continue to evolve as greening opportunities across the Precinct are established	*Not applicable - there are no aboriginal cultural significant places and sites impacted by the development.*

C. Development is to be assessed against the mapped zones of archaeological potential as required by the following: i. development within areas identified as 'disturbed land' do not require any further investigation beyond considering the potential for subsurface archaeological deposits. If current disturbances are considered to cover intact archaeological deposits, further investigation should take place that may include test excavation. Should development encounter any unexpected finds during construction, the procedures under the relevant unexpected finds protocol should be followed. ii. works within areas identified as ''moderate ACH potential' or 'high ACH potential' should be avoided. Where development will impact these areas, further Aboriginal cultural heritage assessment must be undertaken. This assessment should include a visual inspection, possibly test excavation if warranted, and participation from the Aboriginal community.	*Complies – the development is within the area mapped in the Kosciuszko Alpine Region Aboriginal Archaeological Heritage Map and not identified in that document as "archeologically sensitive land"* *In figure 60 the land is described as "disturbed land", an AHIMS database search did not identify any recorded Aboriginal Cultural Heritage items in the area of the development. In addition, a due diligence assessment was carried out and the SEMP includes unexpected finds processes.*
D. Development planned on land in which an Aboriginal object is located should be supported by a heritage impact assessment which should be prepared to assess the extent to which a proposed development would harm Aboriginal objects.	*Not applicable – AHIMS search, and due diligence process undertaken and concluded that there were no likely impacts and as such an ACHAR was not required for this development.*
E. If impact to an Aboriginal object is unavoidable, an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the National Parks and Wildlife Act 1974 would be required.	*Not applicable – no AHIP required.*
12.2 Historic Heritage	
A. Development in areas defined as 'disturbed land' can occur without further historic heritage investigation however must consider neighbouring heritage items and broader heritage values.	*The land is not defined as "disturbed land" in Figure 70 as such impact on historic heritage has been considered – no impact was determined due to the nature scale and size of the development and the location of the heritage items in Smiggin Holes.*
B. Development on land where a heritage item is situated, that is a heritage item or is on land adjacent to a heritage item must prepare a statement of heritage impact.	*Not applicable – no listed items of historic heritage are located on the site*

C. Development in areas defined as 'high risk' or 'moderate risk' requires further heritage assessment where the development is likely to materially have a major affect on a heritage item or its value.	*Not applicable – the development is not within an area defined as "high or moderate risk" in Figure 70*
D. Development in areas defined as 'high risk' or 'moderate risk' requires further heritage assessment where the development is likely to materially have a minor affect on a heritage item or value.	*Not applicable – the development is not within an area defined as "high or moderate risk" in Figure 70*
E. Where development is likely to materially have a major effect on a heritage item or value, further heritage assessment is required.	*Not applicable – provisions B, C & D do not apply to the development therefore consideration of this provision is not required.*
F. Where development will have minor effect on a heritage item or value, a heritage assessment may be required.	*Not applicable – provisions B, C & D do not apply to the development therefore consideration of this provision is not required.*
G. Development that is likely to have a materially major or minor effect on a heritage item or its value	*Not applicable – provisions B, C & D do not apply to the development therefore consideration of this provision is not required.*
H. Development adjacent to a heritage item should ensure impacts to the heritage item are minimised, including through the provision of appropriate curtilages. There may be opportunities to reduce the curtilage to some heritage items if it can be demonstrated the development will not have a significant impact on the heritage item or its value.	*Complies – Whist there are no heritages items immediately adjacent to the subject site there are two items located on Corroboree Road to the south of lot 246. Due to the location of the buildings being upslope from the subject site and the size and nature of the development there will be no negative impact.*
I. Heritage items must be used for purposes that are appropriate to their heritage significance, including adaptive re-use where appropriate.	*Not applicable – the site does not include a heritage item*
J. Development is to ensure long-term heritage conservation outcomes are retained or interpreted to reflect the history of heritage items and places.	*Not applicable – the site does not include a heritage item*
K. Development should through redevelopment or upgrades remove inappropriate or unsympathetic alterations and additions to heritage items and reinstate significant missing details and building elements, where possible.	*Not applicable – the site does not include a heritage item*
12.3 Landscape, Character and Open Space	

A. Development should be designed to sensitively integrate into the landscape and should respond appropriately to the topography and climate of the Alpine Precinct.	*Complies – The development follows the roofline of the existing building, is small and will use materials to seamlessly integrate with the existing building.*
B. Development should protect, conserve and enhance the Alpine Precinct's natural environment and create a green infrastructure network, where possible.	*Not applicable due to the scale, size, and nature of the proposed development*
C. Landscaping and public open spaces should include plantings of native species found in surrounding plant communities, which aim to achieve the re-establishment of biodiversity in addition to aesthetic appeal and enhancement of the functionality of an area.	*Not applicable no landscaping is proposed due to the scale, size, and nature of the proposed development.*
D. Revegetation and new plantings should follow the Rehabilitation guidelines for the Resort Areas of Kosciuszko National Park	*Complies – any revegetation that is required to stabilise disturbed areas of the site will be done in accordance with required guidelines and the submitted SEMP.*
E. Development should integrate stormwater management infrastructure with open spaces, where possible.	*Not applicable due to the scale, size, and nature of the proposed development*
12.4 Built Form	
General criteria for all development in the Alpine Region	
A. Buildings should be efficient, well designed, and successfully integrated with the surrounding landscape.	*Complies – the proposed additions mirror the bulk and scale of the existing building which is part of the built landscape in Smiggin Holes. The development is proposed on the rear of the lot which is previously disturbed land without significant vegetation value. The construction requires only limited excavation*.
B. Site earthworks must respond to local topography and geotechnical characteristics and be appropriate for the intended land use	*Complies – the footings and piers proposed are designed to reduce excavation and to respond to the geotechnical characteristics of the site*
For village centres and public domain	
A. Development should create an integrated streetscape where active frontages promote movement between the private and public realms.	Not applicable due to the nature and scale of the development
B. Building entries should connect to an accessible (providing equitable access to all pedestrians) pedestrian network through design features, wayfinding, and landscape treatments	*Not applicable due to the nature and scale of the development*

C. Development should integrate and provide public seating, shelter and lighting to contribute to increased activity and safety in the public realm.	*Not applicable due to the nature and scale of the development*
D. Development should provide human-scale buildings ensuring building envelopes allow adequate solar access and views, including ensuring significant views to natural features are protected.	*Complies – the building is single storey with no impact on views or solar access.*
E. Development should provide for year-round weather protection that reduces the impacts of wind and snow accumulation in winter and provides adequate shade in summer.	*Compiles – the addition has been designed to seamlessly integrate with the existing building. The alterations and additions will not impact on how the building currently manages seasonal environmental factors.*
F. Development should provide clearly defined and separate pedestrian and vehicle entries to minimise conflicts.	*Complies – no changes are proposed to be made to the pedestrian and vehicular access to the subject building or site. The development will not impact on these existing arrangements.*
G. Development should allow for snow clearing and adequate interface with oversnow vehicles, where appropriate.	*Complies – the development will not impact on the ability to clear snow or on the operation of oversnow vehicles. It has been designed using the same design and materials as the existing building which is currently subject to snow clearing and oversnow operations.*
13. TRANSPORT AND INFRASTRUCTURE	
13.1 Transport network	
A. Transport infrastructure should integrate the public transport network with the existing road network.	*Not applicable due to the size, nature and scale of the development.*
B. Development must provide operational access and egress for emergency services and occupants	*Complies – the proposed addition will have no impact on the existing measures for operational access and egress for emergency services and occupants of the building.*
C. Development should integrate active transport connections that promote movements between the Alpine resorts, where possible.	*Not applicable due to the size, nature and scale of the development.*
D. New development must provide and integrate new technologies, such as electric vehicle charging and electronic checkpoints, where possible.	*Not applicable due to the size, nature and scale of the development.*
13.2 Utilities, services and infrastructure	
A. Development within the site must have access to water, wastewater, digital connectivity and telecommunications, energy and drainage infrastructure.	*Complies – the development will connect to the services of the existing building*
B. Utilities and services must be integrated with existing infrastructure and services, where possible	*Complies – the development will connect to the services of the existing building*

C. Utilities and services should be integrated into road reserves, active transport corridors or the public domain, where possible.	*Not applicable – no additional utility or service connections are required to facilitate the development.*
D. Infrastructure and services must be designed to provide for the ultimate growth and development in Alpine Resorts.	*Not applicable due to the size, nature and scale of the development.*
E. Development should provide and integrate water cycle management and renewable energy solutions into the design of buildings and structures, where possible	*Not applicable due to the size, nature and scale of the development.*

Appendix C Site Environmental Management Plan

APPENDIX B – Site Environmental Management & Rehabilitation Plan

PROJECT & EMERGENCY CONTACTS	
Project Name	Extension to Smiggin Holes Lift Operators HQ
Perisher Project Manager	Andrew Kennedy – 02 6459 4402
Perisher Operations	Mountain Office - 02 6459 4408
Perisher Environment Manager	Rhia Martin – 02 6459 4487
Perisher HSE Officer	Tilka Hassing – 02 6459 4504
Emergency	000
DPE	Sarah Collum – 02 6450 5543
EPA	131 555

ENVIRONMENTAL MANAGEMENT MEASURES	
PRIOR TO CONSTRUCTION	
Induction	• All project staff to be made aware of disturbance footprint and environmental safeguards prior to works commencing.
Access	• Site works to be limited to dry periods, to minimise soil disturbance. • Fence off all approved construction areas and access corridors. • Machinery from offsite to be cleaned prior to accessing site. • All access to site via the carpark off the formed Corroboree Road and Kosciuszko Road.
Storage	• All equipment to be stored in areas of exotic grass only and within the sealed carpark adjoining the site. No storage of equipment or machinery on native vegetation.
Disturbance to Soil	• Sedimentation and erosion controls to be installed in areas likely to experience soil loss into the surrounding environment.
DURING CONSTRUCTION	
Disturbance to Soil	• For erosion control, the combined use of straw bale filters and sediment fencing are to be used. • Erosion and sedimentation controls shall be monitored & maintained daily and immediately following a rainfall event.
Flora & Fauna	• No unapproved removal or disturbance of native vegetation • Refuel away from areas of native vegetation. • No storage of material on native vegetation

	• Any excavations left open overnight will be left such that any fauna is able to escape easily
Machinery / Fuel & Concrete	• Spill kits shall be readily accessible. • Spills of any liquids shall be controlled and cleaned up immediately. • No maintenance other than emergency repairs shall be undertaken on site. • No concrete washout shall be undertaken on the project site.
Work Hours	• Limit work to approved hours only (daylight)
Waste	• All litter and waste to be contained and removed from site regularly. Any recyclable material will be separated and disposed of accordingly.
FOLLOWING CONSTRUCTION	
Stabilisation & revegetation	• All disturbance to be stabilised immediately as works cease in an area. • Revegetation to be carried out as soon as practical following works. • Mulch disturbed areas with straw, with brush-matting if possible to stabilise. • Control weeds annually, or as required in the area
Disturbance to Soil	• All erosion and sedimentation controls to be removed from site once ground has stabilised

REHABILITATION PLAN		
Project Area	**Existing Environment**	**Rehabilitation Methods**
Corrobooree Road	Access Track	- Reinstate to trafficable access track
Heavily Disturbed Vegetation – Exotic Grassland	Disturbed, exotic grassland	- Sod replace trench - Seed with *Chewings fescue* - Mulch with straw - Assess need for further stabilisation / rehabilitation - Monitor site stability and drainage - Monitor & manage weed incursions annually, or as required
PCT 643	Dry heath	- Sod replace trench - Seed with *Poa fawcettiae* - Mulch with straw - Assess need for further stabilisation / rehabilitation (species include *Poa fawcettiae, Grevillea australis, Ozothamnus alpinus*) - Monitor site stability and drainage

		- Monitor & manage weed incursions annually, or as required
PCT 637	Wet heath	- Sod replace trench - Seed with *Poa costiniana* (wet) - Mulch with straw - Assess need for further stabilisation / rehabilitation (species include *Carex sp, Baeckea gunnii, Poa costiniana*) - Monitor site stability and drainage - Monitor & manage weed incursions annually, or as required

SEMP Figure 1

Appendix D Archaeological Due Diligence

Project: Smiggin Holes – Lift Operators HQ Extension

The due diligence assessment below is taken from the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales, DECCW 2010. The assessment was undertaken by Sophie Ballinger, Mountain Planning Manager for Perisher Resort, September 2023.

Generic Due Diligence Process

Step 1 – Will the activity disturb the ground surface?

Whilst minimal there will be ground disturbance to facilitate the development. The disturbance will include excavation for the installation of screw piers and strip footings. There are no culturally modified trees within the development site.

Step 2a – Search of AHIMS database

An AHIMS search was undertaken on the subject lot which has shown, no aboriginal sites or places are recorded or declared in or near the location. A copy of the search result is reproduced below:

AHIMS Web Services (AWS)
Search Result

Your Ref/PO Number : Smiggins LOHQ
Client Service ID : 819230

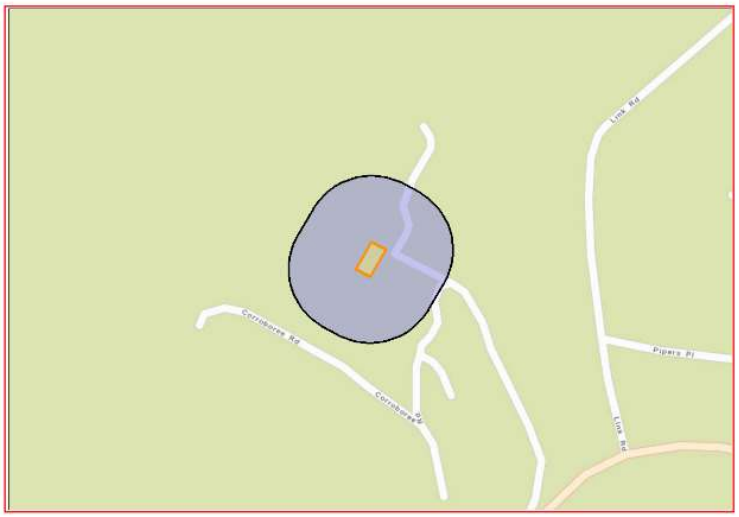
Vail Resorts - Australia
PO Box 42
Perisher Valley New South Wales 2624
Attention: Sophie Ballinger
Email: sophie.ballinger@vailresorts.com.au

Date: 13 September 2023

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lot : 246, DP:DP721845, Section : - with a Buffer of 50 meters, conducted by Sophie Ballinger on 13 September 2023.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

2b – Is the activity in an area where there are landscape features which indicate the presence of Aboriginal objects.

The activity whilst within 200m of waters, being Smiggin Creek, is to occur on land disturbed by a previous activity being the construction of the existing building on site. It is considered that the land on which the extension is to be undertaken is “disturbed land” due to the site size and location of the existing building. The disturbance footprint when the existing building was constructed would have extended into the area proposed to be developed.

Conclusion

Based on the outcomes of steps 2a and 2b it is reasonable to conclude that there are no known Aboriginal objects or a low probability of objects occurring in the area of the proposed activity, and the development can proceed with caution without applying for an AHIP.

Appendix E – Flora and Fauna Inspection Report

5/20 Canty Street
Narooma
NSW 2546

Date: 25 January 2023

Our ref: 22HNC-4418

Perisher Blue Pty Limited
Perisher Centre
PO Box 42
Perisher Valley NSW 2624

Attention: Andrew Kennedy

Dear Andrew,

Smiggin Holes Workshop Extension - Perisher Ski Resort

As requested, on24 November 2022, I inspected the footprint of the proposed extension of the workshop at Smiggin Holes.

The footprint of the proposed extension is a highly disturbed area dominated by exotic grasses and forbs with scattered natives common in disturbed wet areas such as *Carex echinata* and *Oreobolus distichus*, as shown in Photos 1-4. Much of the area surrounding the existing workshop is highly disturbed, however there is a small patch of remnant bog/wet heath immediately adjoining the footprint which includes characteristic native species such as *Baeckea gunniana*, *Richea continentis, Empodisma minus, Carex gaudichaudiana*, *Poa costiniana* and *Oreobolus distichus*. My understanding is that the proposed extension has been designed to avoid impacts on this remnant vegetation.

The footprint of the proposed extension was searched for threatened flora species, in particular *Rytidosperma vickeryae* (Perisher Wallaby Grass). No threatened flora species were observed within or immediately adjacent to the footprint.

On the basis of the inspection, it is concluded that there will be no direct impacts on native vegetation communities or associated fauna habitats, and the indirect impacts, such as shading, will be minor given the existing disturbances. Similarly, there will not be any impacts on threatened flora or important fauna habitats, nor will the proposed works adversely affect habitat connectivity or any other biodiversity values of conservation significance.

The proposed works will not affect directly or indirectly any area of land mapped within the Biodiversity Values Map as defined in the NSW *Biodiversity Conservation Regulation 2017* (BC Reg), as shown in Figure 1.

The proposed works will not result in any significant impacts on threatened species, populations or ecological communities pursuant to the NSW *Biodiversity Conservation Regulation 2016* or the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

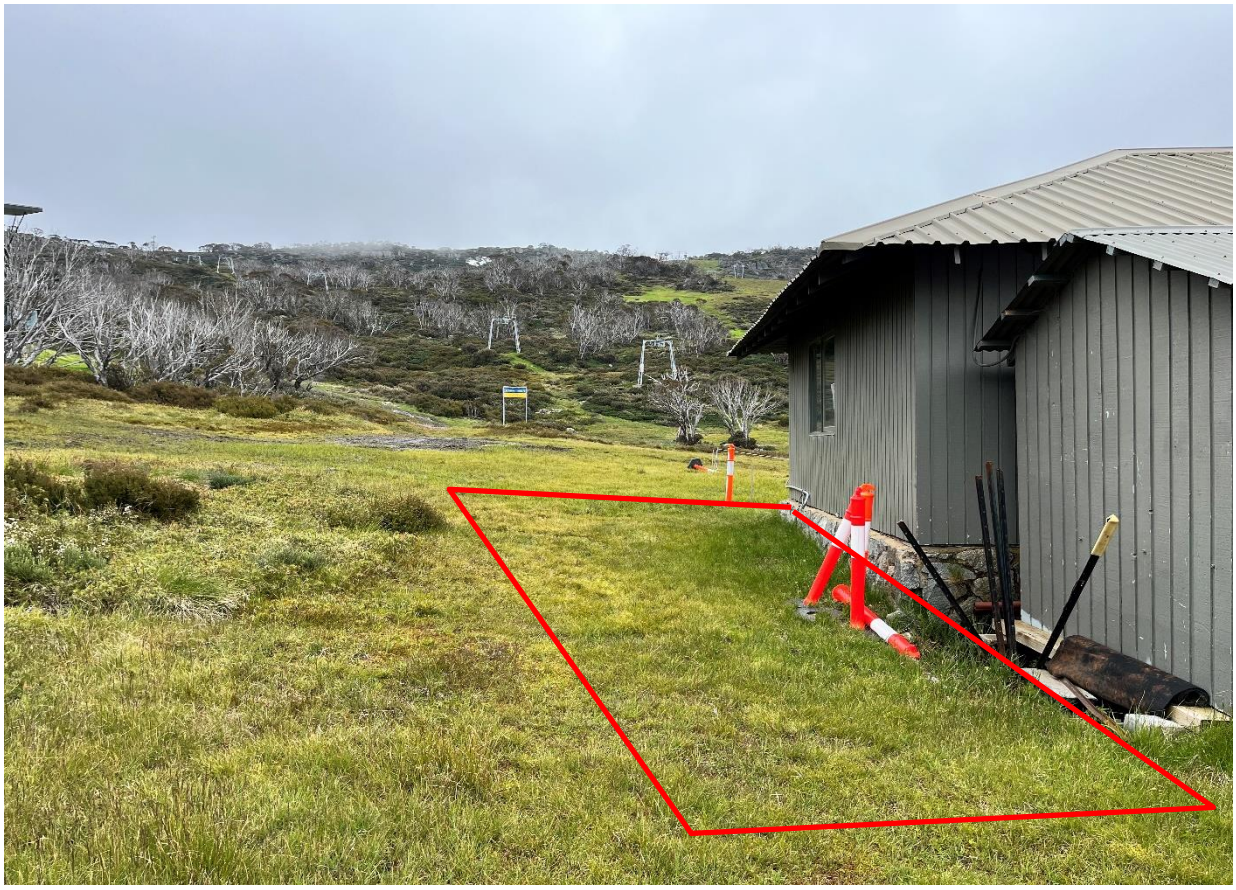


Photo 1: Approximate footprint of the proposed workshop extension.

Photo 2: The small patch of remnant bog/wet heath to the south of the workshop is surrounded by heavily disturbed areas.

Photo 3: Looking north showing disturbance around the existing workshop.

Photo 4: Looking west showing disturbance around the existing workshop.

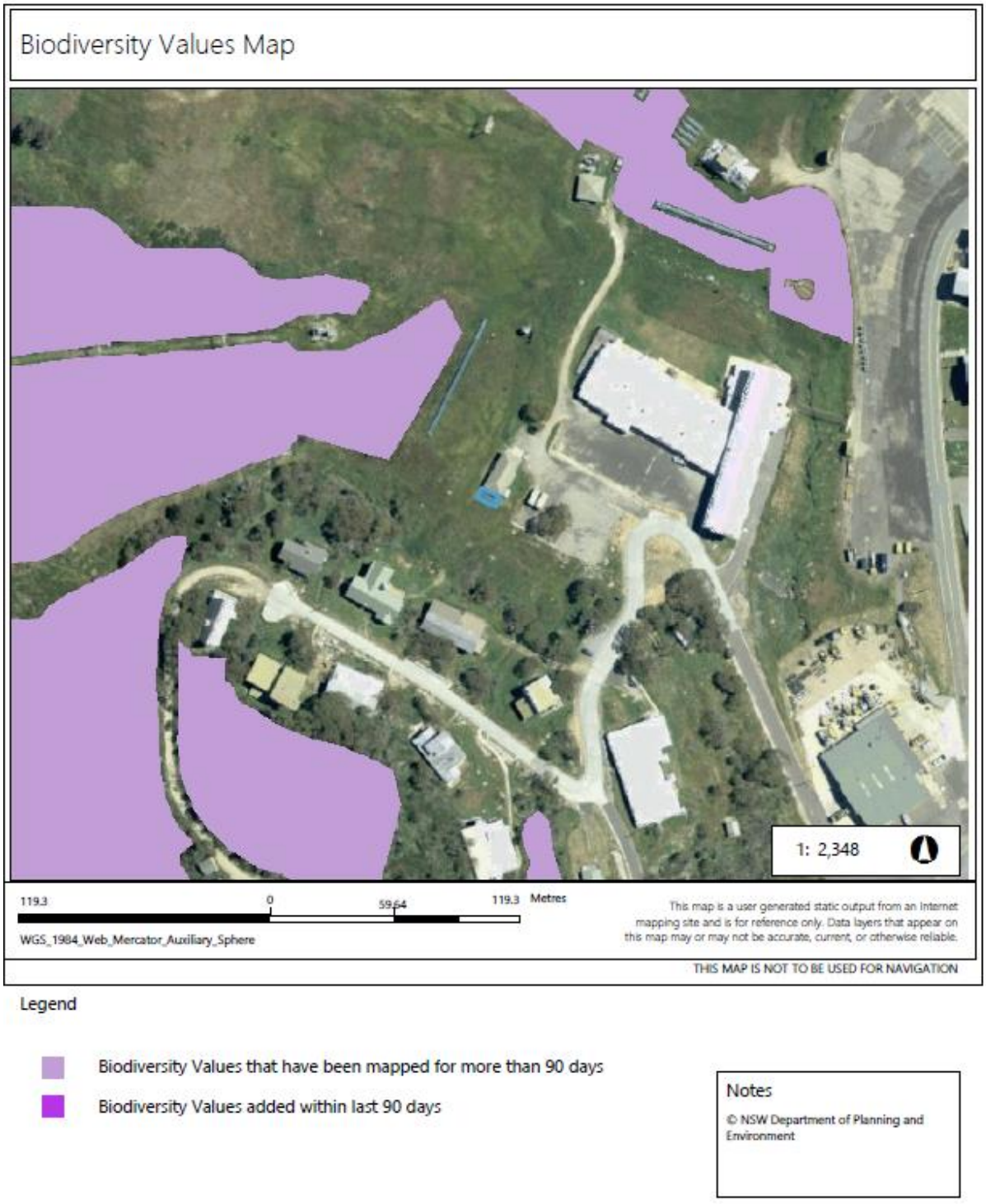


Figure 1: Proposed works relative to Biodiversity Values Map.

Should you require any further information please contact me on 0422 802 447.

Regards,

Ryan Smithers
Senior Ecologist

Appendix F – Geotechnical Report and Form 4

Form 4 – Minimal Impact Certification

DA Number: PAN - 375928

This form may be used where minor construction works which present minimal or no geotechnical impact on the site or related land are proposed to be erected within the "G" line area of the geotechnical maps.

A geotechnical engineer or engineering geologist must inspect the site and/or review the proposed development documentation to determine if the proposed development requires a geotechnical report to be prepared to accompany the development application. Where the geotechnical engineer determines that such a report is not required then they must complete this form and attach design recommendations where required. A copy of Form 4 with design recommendation, if required, must be submitted with the development application.

Please contact the Alpine Resorts Team in Jindabyne for further information - phone 02 6456 1733.

To complete this form, please place a cross in the appropriate boxes ☐ and complete all sections.

1. Declaration made by geotechnical engineer or engineering geologist in relation to a nil or minimal geotechnical impact assessment and site classification

I,

Mr ☒ Ms ☐ Mrs ☐ Dr ☐ Other ☐

First Name	Family Name
Mark	Bartel

OF

Company/organisation

Asset Geotechnical Engineering Pty Ltd (trading as AssetGeoEnviro)

certify that I am a geotechnical engineer /engineering geologist as defined by the "Policy" and I have inspected the site and reviewed the proposed development known as

Smiggin Holes Relocatable Locker Room

As a result of my site inspection and review of the following documentation

(List of documentation reviewed)

Plans by CLM Civil; project: U-214; drawing numbers: U-214-1, 2, 3; rev: D; dated 29/08/2023

Structural Design by Camstruct Consulting; project: 23023-S01 to S05; rev: A; dated: 08/09/2023

Structural Design Certificate by Camstruct Consulting, ref: 23023 CERT; dated: 08/09/2023

I have determined that;

- ☒ the current load-bearing capacity of the existing building will not be exceeded or adversely impacted by the proposed development, and
- ☒ the proposed works are of such a minor nature that the requirement for geotechnical advice in the form of a geotechnical report, prepared in accordance with the "Policy", is considered unnecessary for the adequate and safe design of the structural elements to be incorporated into the new works, and
- ☒ in accordance with AS 2870.1 Residential Slabs and Footings, the site is to be classified as a type

(insert classification type)

Class P (low bearing capacity soils present)

- ☒ I have attached design recommendations to be incorporated in the structural design in accordance with this site classification.

I am aware that this declaration shall be used by the Department as an essential component in granting development consent for a structure to be erected within the "G" line area (as identified on the geotechnical maps) of Kosciuszko Alpine Resorts without requiring the submission of a geotechnical report in support of the development application.

2. Signatures

Signature

Mark Bartel

Chartered professional status

CPEng 35641 NER (Civil)

Name

Mark Bartel

Date

14 September 2023

3. Contact details

Alpine Resorts Team
Shop 5A, 19 Snowy River Avenue
P O Box 36, JINDABYNE NSW 2627
Telephone: 02 6456 1733
Facsimile: 02 6456 1736
Email: alpineresorts@planning.nsw.gov.au

Investigation findings and design recommendations:

Ground surface at building location is saturated with surface water flow. DCP conducted (attached) indicated loose and very loose soils to 0.5m below ground level (bgl), medium dense to about 1.5m, dense to about 2m, and very dense from 2m to termination at 2.5m depth. Screw piles are recommended, and should be founded within assessed very dense soils below nominal 2m bgl, designed for maximum allowable end bearing pressure of 600 kPa.

This advice to be read in conjunction with attached Important Information about your Geotechnical Report and Explanation Sheets.

AssetGeoEnviro accepts no liability where our recommendations are not followed or are only partially followed.

Important Information about your Geotechnical Report

Scope of Services

The geotechnical report ("the report") has been prepared in accordance with the scope of services as set out in the contract, or as otherwise agreed, between the Client and Asset Geotechnical Engineering Pty Ltd ("Asset"), for the specific site investigated. The scope of work may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

The report should not be used if there have been changes to the project, without first consulting with Asset to assess if the report's recommendations are still valid. Asset does not accept responsibility for problems that occur due to project changes if they are not consulted.

Reliance on Data

Asset has relied on data provided by the Client and other individuals and organizations, to prepare the report. Such data may include surveys, analyses, designs, maps, and plans. Asset has not verified the accuracy or completeness of the data except as stated in the report. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations ("conclusions") are based in whole or part on the data, Asset will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented, or otherwise not fully disclosed to Asset.

Geotechnical Engineering

Geotechnical engineering is based extensively on judgment and opinion. It is far less exact than other engineering disciplines. Geotechnical engineering reports are prepared for a specific client, for a specific project and to meet specific needs, and may not be adequate for other clients or other purposes (e.g., a report prepared for a consulting civil engineer may not be adequate for a construction contractor). The report should not be used for other than its intended purpose without seeking additional geotechnical advice. Also, unless further geotechnical advice is obtained, the report cannot be used where the nature and/or details of the proposed development are changed.

Limitations of Site Investigation

The investigation program undertaken is a professional estimate of the scope of investigation required to provide a general profile of subsurface conditions. The data derived from the site investigation program and subsequent laboratory testing are extrapolated across the site to form an inferred geological model, and an engineering opinion is rendered about overall subsurface conditions and their likely behavior regarding the proposed development. Despite investigation, the actual conditions at the site might differ from those inferred to exist, since no subsurface exploration program, no matter how comprehensive, can reveal all subsurface details and anomalies.

The engineering logs are the subjective interpretation of subsurface conditions at a particular location and time, made by trained personnel. The actual interface between materials may be more gradual or abrupt than a report indicates.

Therefore, the recommendations in the report can only be regarded as preliminary. Asset should be retained during the project implementation to assess if the report's recommendations are valid and whether changes should be considered as the project proceeds.

Subsurface Conditions are Time Dependent

Subsurface conditions can be modified by changing natural forces or man-made influences. The report is based on conditions that existed at the time of subsurface exploration. Construction operations adjacent to the site, and natural events such as floods, or ground water fluctuations, may also affect subsurface conditions, and thus the continuing adequacy of a geotechnical report. Asset should be kept appraised of any such events and should be consulted to determine if any additional tests are necessary.

Verification of Site Conditions

Where ground conditions encountered at the site differ significantly from those anticipated in the report, either due to natural variability of subsurface conditions or construction activities, it is a condition of the report that Asset be notified of any variations and be provided with an opportunity to review the recommendations of this report. Recognition of change of soil and rock conditions requires experience, and it is recommended that a suitably experienced geotechnical engineer be engaged to visit the site with sufficient frequency to detect if conditions have changed significantly.

Reproduction of Reports

 Where information from the accompanying report is to be included in contract documents or engineering specification for the project, the entire report should be included to minimize the likelihood of misinterpretation from logs.

Report for Benefit of Client

The report has been prepared for the benefit of the Client and no other party. Asset assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of Asset or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own inquiries and obtain independent advice in relation to such matters.

Data Must Not Be Separated from The Report

The report presents the site assessment and must not be copied in part or altered in any way.

Logs, figures, drawings, test results etc. included in our reports are developed by professionals based on their interpretation of field logs (assembled by field personnel) and laboratory evaluation of field samples. These data should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

Report Recommendations not Followed

Where the recommendations of the report are not followed or are only partially followed, there may be significant implications for the project (e.g., commercial loss, property loss or damage, personal injury, or loss of life). Consult Asset if you are not intending to follow all the report recommendations, to assess what the implications could be. Asset does not accept responsibility where the report recommendations have not been followed or have only been partially followed.

Other Limitations

Asset will not be liable to update or revise the report to consider any events or emergent circumstances or fact occurring or becoming apparent after the date of the report.

Soil and Rock Explanation Sheets (1 of 2)

Log Abbreviations & Notes

METHOD

borehole logs

AS	auger screw *
AD	auger drill *
RR	roller / tricone
W	washbore
CT	cable tool
HA	hand auger
D	diatube
B	blade / blank bit
V	V-bit
T	TC-bit

* bit shown by suffix e.g. ADV

excavation logs

NE	natural excavation
HE	hand excavation
BH	backhoe bucket
EX	excavator bucket
DZ	dozer blade
R	ripper tooth

coring
NMLC, NQ, PQ, HQ

SUPPORT

borehole logs

N	nil
M	mud
C	casing
NQ	NQ rods

excavation logs

N	nil
S	shoring
B	benched

CORE—LIFT

casing installed

barrel withdrawn

NOTES, SAMPLES, TESTS

D	disturbed
B	bulk disturbed
U50	thin-walled sample, 50mm diameter
HP	hand penetrometer (kPa)
SV	shear vane test (kPa)
DCP	dynamic cone penetrometer (blows per 100mm penetration)
SPT	standard penetration test
N*	SPT value (blows per 300mm)
	* denotes sample taken
Nc	SPT with solid cone
R	refusal of DCP or SPT

USCS SYMBOLS

GW	Gravel and gravel-sand mixtures, little or no fines.
GP	Gravel and gravel-sand mixtures, little or no fines, uniform gravels
GM	Gravel-silt mixtures and gravel-sand-silt mixtures.
GC	Gravel-clay mixtures and gravel-sand-clay mixtures.
SW	Sand and gravel-sand mixtures, little or no fines.
SP	Sand and gravel sand mixtures, little or no fines.
SM	Sand-silt mixtures.
SC	Sand-clay mixtures.
ML	Inorganic silt and very fine sand, rock flour, silty or clayey fine sand or silt with low plasticity.
CL, CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays.
OL	Organic silts
MH	Inorganic silts
CH	Inorganic clays of high plasticity.
OH	Organic clays of medium to high plasticity, organic silt
PT	Peat, highly organic soils.

MOISTURE CONDITION

D	dry
M	moist
W	wet
Wp	plastic limit
Wl	liquid limit

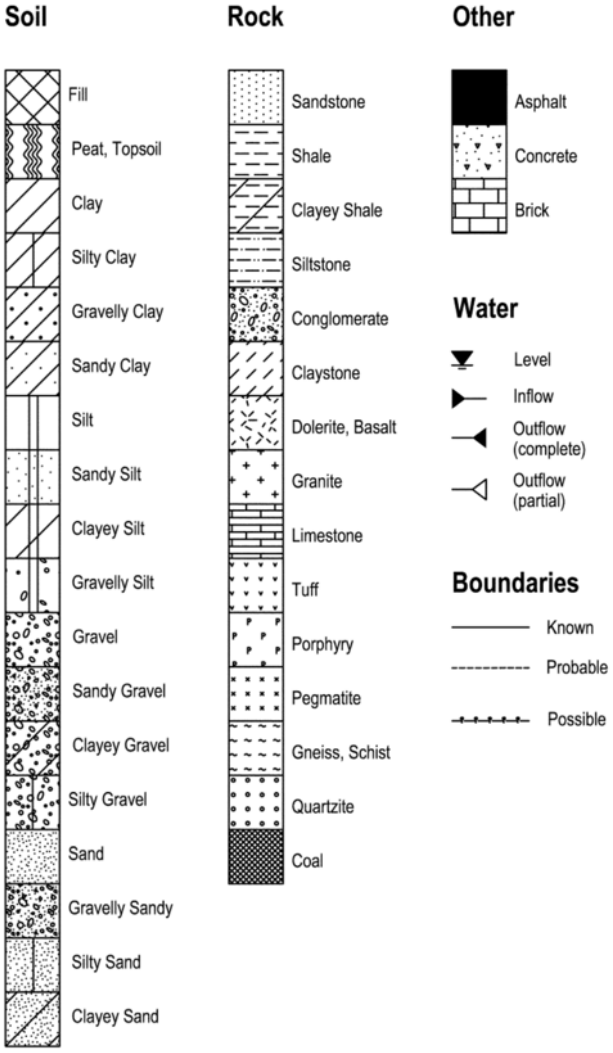
CONSISTENCY

VS	very soft
S	soft
F	firm
St	stiff
VSt	very stiff
H	hard
Fb	friable

DENSITY INDEX

VL	very loose
L	loose
MD	medium dense
D	dense
VD	very dense

Graphic Log



WEATHERING

XW	extremely weathered
HW	highly weathered
MW	moderately weathered
SW	slightly weathered
FR	fresh

STRENGTH

VL	very low
L	low
M	medium
H	high
VH	very high
EH	extremely high

RQD (%)

= sum of intact core pieces > 2 x diameter / total length of core run drilled x 100

DEFECTS:

type

JT	joint
PT	parting
SZ	shear zone
SM	seam

coating

cl	clean
st	stained
ve	veneer
co	coating

shape

pl	planar
cu	curved
un	undulating
st	stepped
ir	irregular

roughness

po	polished
sl	slickensided
sm	smooth
ro	rough
vr	very rough

inclination
measured above axis and perpendicular to core

Soil and Rock Explanation Sheets (2 of 2)

AS1726–2017

Soils and rock are described in the following terms, which are broadly in accordance with AS1726–2017.

Soil

MOISTURE CONDITION

Term	Description
Dry	Looks and feels dry. Fine grained and cemented soils are hard, friable or powdery. Uncemented coarse grained soils run freely through hand.
Moist	Soil feels cool and darkened in colour. Fine grained soils can be moulded. Coarse soils tend to cohere.
Wet	As for moist, but with free water forming on hand.

Moisture content of cohesive soils may also be described in relation to plastic limit (W_P) or liquid limit (W_L) [>> much greater than, > greater than, < less than, << much less than].

CONSISTENCY OF FINE-GRAINED SOILS

Term	Su (kPa)	Term	Su (kPa)
Very soft	< 12	Very Stiff	>100 – ≤200
Soft	>12 – ≤25	Hard	> 200
Firm	>25 – ≤50	Friable	–
Stiff	>50 – ≤100		

RELATIVE DENSITY OF COARSE-GRAINED SOILS

Term	Density Index (%)	Term	Density Index (%)
Very Loose	< 15	Dense	65 – 85
Loose	15 – 35	Very Dense	>85
Medium Dense	35 – 65		

PARTICLE SIZE

Name	Subdivision	Size (mm)
Boulders		> 200
Cobbles		63 – 200
Gravel	coarse	19 – 63
	medium	6.7 – 19
	fine	2.36 – 6.7
Sand	coarse	0.6 – 2.36
	medium	0.21 – 0.6
	fine	0.075 – 0.21
Silt		0.002 – 0.075
Clay		< 0.075

MATERIAL DELINEATION

Sand or gravel	>65% above 0.075mm
Clay or silt	>35% below 0.075mm

MINOR COMPONENTS

Term	Proportion by Mass:	
	coarse grained	*fine grained*
Trace	≤ 5%	≤ 5%
With	>15% ≤ 30%	>5% – ≤12%

SOIL ZONING

Layers	Continuous across exposures or sample.
Lenses	Discontinuous, lenticular shaped zones.
Pockets	Irregular shape zones of different material.

SOIL CEMENTING

Weakly	Easily broken up by hand pressure in water or air.
Moderately	Effort is required to break up by hand in water or in air.

USCS SYMBOLS

Symbol	Description
GW	Gravel and gravel-sand mixtures, little or no fines.
GP	Gravel and gravel-sand mixtures, little or no fines, uniform gravels.
GM	Gravel-silt mixtures and gravel-sand-silt mixtures.
GC	Gravel-clay mixtures and gravel-sand-clay mixtures.
SW	Sand and gravel-sand mixtures, little or no fines.
SP	Sand and gravel sand mixtures, little or no fines.
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SC	Sand-clay mixtures.
ML	Inorganic silt and very fine sand, rock flour, silty or clayey fine sand or silt with low plasticity.
CL, CI	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays.
OL	Organic silts
MH	Inorganic silts
CH	Inorganic clays of high plasticity.
OH	Organic clays of medium to high plasticity, organic silt
PT	Peat, highly organic soils.

Rock

SEDIMENTARY ROCK TYPE DEFINITIONS

Rock Type	Definition (more than 50% of rock consists of .....)
Conglomerate	... gravel sized (>2mm) fragments.
Sandstone	... sand sized (0.06 to 2mm) grains.
Siltstone	... silt sized (<0.06mm) particles, rock is not laminated.
Claystone	... clay, rock is not laminated.
Shale	... silt or clay sized particles, rock is laminated.

LAYERING

Term	Description
Massive	No layering apparent.
Poorly Developed	Layering just visible. Little effect on properties.
Well Developed	Layering distinct. Rock breaks more easily parallel to layering.

STRUCTURE

Term	Spacing (mm)	Term	Spacing
Thinly laminated	<6	Medium bedded	200 – 600
Laminated	6 – 20	Thickly bedded	600 – 2,000
Very thinly bedded	20 – 60	Very thickly bedded	> 2,000
Thinly bedded	60 – 200		

STRENGTH (NOTE: Is50 = Point Load Strength Index)

Term	Is50 (MPa)	Term	Is50 (MPa)
Very Low	0.03 – 0.1	High	1.0 – 3.0
Low	0.1 – 0.3	Very High	3.0 – 10.0
Medium	0.3 – 1.0	Extremely High	>10.0

WEATHERING

Term	Description
Residual Soil	Material is weathered to an extent that it has soil properties. Rock structures are no longer visible, but the soil has not been significantly transported.
Extremely	Material is weathered to the extent that it has soil properties. Mass structures, material texture & fabric of original rock is still visible.
Highly	Rock strength is significantly changed by weathering; rock is discolored, usually by iron staining or bleaching. Some primary minerals have weathered to clay minerals.
Moderately	Rock strength shows little or no change of strength from fresh rock; rock may be discolored.
Slightly	Rock is partially discolored but shows little or no change of strength from fresh rock.
Fresh	Rock shows no signs of decomposition or staining.

DEFECT DESCRIPTION

Type	
Joint	A surface or crack across which the rock has little or no tensile strength. May be open or closed.
Parting	A surface or crack across which the rock has little or no tensile strength. Parallel or sub-parallel to layering/bedding. May be open or closed.
Sheared Zone	Zone of rock substance with roughly parallel, near planar, curved or undulating boundaries cut by closely spaced joints, sheared surfaces or other defects.
Seam	Seam with deposited soil (infill), extremely weathered insitu rock (XW), or disoriented usually angular fragments of the host rock (crushed).
Shape	
Planar	Consistent orientation.
Curved	Gradual change in orientation.
Undulating	Wavy surface.
Stepped	One or more well defined steps.
Irregular	Many sharp changes in orientation.
Roughness	
Polished	Shiny smooth surface.
Slickensided	Grooved or striated surface, usually polished.
Smooth	Smooth to touch. Few or no surface irregularities.
Rough	Many small surface irregularities (amplitude generally <1mm). Feels like fine to coarse sandpaper.
Very Rough	Many large surface irregularities, amplitude generally >1mm. Feels like very coarse sandpaper.
Coating	
Clean	No visible coating or discolouring.
Stained	No visible coating but surfaces are discolored.
Veneer	A visible coating of soil or mineral, too thin to measure; may be patchy
Coating	Visible coating =1mm thick. Thicker soil material described as seam.